NATIONAL EDUCATIONAL ASSOCIATION of the United States

Journal

OF

Proceedings and Addresses

OF THE

FORTY-SECOND ANNUAL MEETING

HELD AT

BOSTON, MASSACHUSETTS

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CONSTITUTION

OF THE

NATIONAL EDUCATIONAL ASSOCIATION

PREAMBLE

To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States, we, whose names are subjoined, agree to adopt the following

CONSTITUTION

ARTICLE I—NAME

This association shall be styled the NATIONAL EDUCATIONAL ASSOCIATION.

ARTICLE II—DEPARTMENTS

SECTION 1. It shall consist of eighteen departments: first, of Superintendence; second, of Normal Schools; third, of Elementary Education; fourth, of Higher Education; fifth, of Manual Training; sixth, of Art Education; seventh, of Kindergarten Education; eighth, of Music Education; ninth, of Secondary Education; tenth, of Business Education; eleventh, of Child Study; twelfth, of Physical Education; thirteenth, of Natural Science Instruction; fourteenth, of School Administration; fifteenth, the Library Department; sixteenth, of Special Education; seventeenth, of Indian Education; and eighteenth, the National Council of Education.

SEC. 2. Other departments may be organized in the manner prescribed in this constitution.

ARTICLE III—MEMBERSHIP

SECTION 1. There shall be three classes of members, namely, active, associate, and corresponding.

SEC. 2. Teachers and all who are actively associated with the management of educational institutions, including libraries and periodicals, may become active members. All others who pay an annual membership fee of two dollars may become associate members.

Eminent educators not residing in America may be elected by the Directory to be corresponding members. The number of corresponding members shall at no time exceed fifty.

SEC. 3. Any person eligible may become an active member upon application indorsed by two active members, and the payment of an enrollment fee of two dollars and the annual dues for the current year.

Active members only have the right to vote and to hold office in the general Association or in the several departments.

All active members must pay annual dues of two dollars, and will be entitled to the volume of *Proceedings* without "coupon" or other conditions. The annual membership

fee shall be payable at the time of the annual convention, or by remittance to the Secretary before September 1 of each year. Any active member may discontinue membership by giving written notice to the Secretary before September 1, and may restore the same only on payment of the enrollment fee of two dollars and the annual dues for the current year.

All life members and life directors shall be denominated active members, and shall enjoy all the powers and privileges of such members without the payment of annual dues.

Associate members may receive the volume of *Proceedings* in accordance with the usual "coupon" conditions, as printed on the membership certificate.

Corresponding members will be entitled to the volume of *Proceedings* without the payment of fees or other conditions.

SEC. 4. The names of active and corresponding members only will be printed in the volume of *Proceedings*, with their respective educational titles, offices, and addresses, the list to be revised annually by the Secretary of the Association.

ARTICLE IV—OFFICERS

SECTION 1. The officers of this Association shall consist of a President, twelve Vice-Presidents, a Secretary, a Treasurer, a Board of Directors, a Board of Trustees, and an Executive Committee, as hereinafter provided.

SEC. 2. The Board of Directors shall consist of the President of the National Educational Association, First Vice-President, Secretary, Treasurer, chairman of the Board of Trustees, and one additional member from each state, territory, or district, to be elected by the Association for the term of one year, or until their successors are chosen, and of all life directors elected previous to July 10, 1895.

All past presidents of the Association now living (July 10, 1895), and all future presidents at the close of their respective terms of office, and the United States Commissioner of Education, shall be life directors of the Association.

The President of the National Educational Association, First Vice-President, Treasurer, chairman of the Board of Trustees, and a member of the Association to be chosen annually by the Board of Directors, which member shall hold office for one year, shall constitute the Executive Committee.

SEC. 3. The elective officers of the Association, with the exception of the Secretary, shall be chosen by the active members of the Association by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary for a choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

SEC. 4. Each department shall be administered by a president, vice-president, secretary, and such other officers as it shall deem necessary to conduct its affairs; but no person shall be elected to any office of the Association, or of any department, who is not, at the time of the election, an active member of the Association.

SEC. 5. The President shall preside at all meetings of the Association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, the first vice-president in order, who is present, shall preside; and in the absence of all vice-presidents, a *pro-tempore* chairman shall be appointed on nomination, the Secretary putting the question.

SEC. 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and all meetings of the Board of Directors, and shall conduct such correspondence as the directors may assign, and shall have his records present at all meetings of the Association and of the Board of Directors. The secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

SEC. 7. The Treasurer shall receive, and under the direction of the Board of Trustees hold in safe-keeping, all moneys paid to the Association; shall expend the same only upon the order of said board; shall keep an exact account of his receipts and expenditures, with vouchers for the latter, which accounts, ending the 1st day of July each year, he shall render to the Board of Trustees and, when approved by said board, he shall report the same to the Board of Directors. The Treasurer shall give such bond for the faithful discharge of his duties as may be required by the Board of Trustees; and he shall continue in office until the first meeting of the Board of Directors held prior to the annual meeting of the Association next succeeding that for which he is elected.

SEC. 8. The Board of Directors shall have power to fill all vacancies in their own body; shall have in charge the general interests of the Association, excepting those herein intrusted to the Board of Trustees; shall make all necessary arrangements for its meetings, and shall do all in its power to make it a useful and honorable institution. Upon the written application of twenty active members of the Association for permission to establish a new department, it may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the others. The formation of such department shall in effect be a sufficient amendment to this constitution for the insertion of its name in Art. II, and the Secretary shall make the necessary alterations.

SEC. 9. The Board of Trustees shall consist of four members, elected by the Board of Directors for the term of four years, and the President of the Association, who shall be a member *ex officio* during his term of office. At the election of the trustees in 1886, one trustee shall be elected for one year, one for two years, one for three years, and one for four years; and annually thereafter, at the first meeting of the Board of Directors held prior to the annual meeting of the Association, one trustee shall be elected for the term of four years. All vacancies occurring in said Board of Trustees, whether by resignation or otherwise, shall be filled by the Board of Directors for the unexpired term; and the absence of a trustee from two successive annual meetings of the board shall forfeit his membership therein. The Board of Trustees thus elected shall constitute the body corporate of the Association, as provided in the certificate of incorporation under the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, dated the 24th day of February, 1886, at Washington, D. C., and recorded in Liber No. 4, "Acts of Incorporation for the District of Columbia."

SEC. 10. It shall be the duty of the Board of Trustees to provide for safe-keeping and investment of all funds which the Association may receive from donations; and the income of such invested funds shall be used exclusively in paying the cost of publishing the annual volume of *Proceedings* of the Association, excepting when donors shall specify otherwise. It shall also be the duty of the board to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the Association acting under the authority of the Board of Directors; and, when practicable, the trustees shall invest all surplus funds exceeding one hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the Association for the previous year.

SEC. 11. The Board of Trustees shall elect the Secretary of the Association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of office for a period not to exceed four years.

ARTICLE V—MEETINGS

SECTION 1. The annual meeting of the Association shall be held at such time and place as shall be determined by the Board of Directors.

SEC. 2. Special meetings may be called by the President at the request of five directors.

SEC. 3. Any department of the Association may hold a special meeting at such time and place as by its own regulations it shall appoint.

SEC. 4. The Board of Directors shall hold its regular meetings at the place and not less than two hours before the assembling of the Association.

SEC. 5. Special meetings may be held at such other times and places as the board or the President shall determine.

SEC. 6. Each new board shall organize at the session of its election. At its first meeting a committee on publication shall be appointed, which shall consist of the President and the Secretary of the Association for the previous year, and one member from each department.

ARTICLE VI—BY-LAWS

By-laws not inconsistent with this constitution may be adopted by a two-thirds vote of the Association.

ARTICLE VII—AMENDMENTS

This constitution may be altered or amended at a regular meeting by the unanimous vote of the members present; or by a two-thirds vote of the members present, provided that the alteration or amendment has been substantially proposed in writing at a previous meeting.

BY-LAWS

*1. At the first session of each annual meeting of the Association there shall be appointed by the President a committee on resolutions; and at the third session of such meeting there shall be appointed a committee on nominations, consisting of one member from each state and territory represented, the same to be appointed by the President on the nomination of a majority of the active members from such state or territory present at the meeting called for the purpose of making such nomination; provided, however, that such appointment shall be made by the President without such nomination, when the active members in attendance from any state or territory shall fail to make a nomination.

The meetings of active members to nominate members of the nominating committee shall be held at 5:30 P.M. on the first day of the annual meeting of the Association, at such place as shall be announced in the general program.

2. The President and Secretary shall certify to the Board of Trustees all bills approved by the Board of Directors.

3. Each paying member of the Association shall be entitled to a copy of its *Proceedings*.

4. No paper, lecture, or address shall be read before the Association or any of its departments in the absence of its author, nor shall any such paper, lecture, or address be published in the volume of *Proceedings*, without the consent of the Association, upon approval of the Executive Committee.

5. It shall be the duty of the President, Secretary, and Treasurer of the Association to appoint annually some competent person to examine the securities of the Permanent Fund held by the Board of Trustees, and his certificate, showing the condition of the said fund, shall be attached to the report of the Board of Trustees.

ACT OF INCORPORATION

At a meeting of the Board of Directors of the National Educational Association, held at Saratoga Springs, N. Y., July 14, 1885, the following resolution was passed:

Resolved, That a committee of three be appointed to secure articles of incorporation for the National Educational Association, under United States or state laws, as speedily as may be.

*As amended at the meeting of active members held July 9 (see minutes in the *Journal of Proceedings*, p. 23).

N. A. Calkins, of New York; Thomas W. Bicknell, of Massachusetts; and Eli T. Tappan, of Ohio, were appointed such committee.

Under the authority of the resolution quoted above, and with the approval of the committee, and by competent legal advice, the chairman obtained a

CERTIFICATE OF INCORPORATION

We, the undersigned, Norman A. Calkins, John Eaton, and Zalmon Richards, citizens of the United States, and two of them citizens of the District of Columbia, do hereby associate ourselves together, pursuant to the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, under the name of the "National Educational Association," for the full period of twenty years, the purpose and objects of which are to elevate the character and advance the interests of the profession of teaching and to promote the cause of popular education in the United States. . . . . To secure the full benefit of said act we do here execute this our certificate of incorporation as said act provides.

In witness whereof, we severally set our hands and seals this 24th day of February, 1886, at Washington, D. C.

NORMAN A. CALKINS. [L. S.]
JOHN EATON. [L. S.]
ZALMON RICHARDS [L. S.]

Duly acknowledged before Michael P. Callan, Notary Public in and for the District of Columbia, and recorded in Liber No. 4, Acts of Incorporation for the District of Columbia.

CALENDAR OF MEETINGS

NATIONAL TEACHERS' ASSOCIATION

1857.—PHILADELPHIA, PA. (Organized.)
James L. Enos, Chairman.
W. E. Sheldon, Secretary.

1858.—CINCINNATI, O.
Z. Richards, President.
J. W. Bulkley, Secretary.
A. J. Rickoff, Treasurer.

1859.—WASHINGTON, D. C.
A. J. Rickoff, President.
J. W. Bulkley, Secretary.
C. S. Pennell, Treasurer.

1860.—BUFFALO, N. Y.
J. W. Bulkley, President.
Z. Richards, Secretary.
O. C. Wight, Treasurer.

1861, 1862.—No session.

1863.—CHICAGO, ILL.
John D. Philbrick, President.
James Cruikshank, Secretary.
O. C. Wight, Treasurer.

1864.—OGDENSBURG, N. Y.
W. H. Wells, President.
David N. Camp, Secretary.
Z. Richards, Treasurer.

1865.—HARRISBURG, PA.
S. S. Greene, President.
W. E. Sheldon, Secretary.
Z. Richards, Treasurer.

1866.—INDIANAPOLIS, IND.
J. P. Wickersham, President.
S. H. White, Secretary.
S. P. Bates, Treasurer.

1867.—No session.

1868.—NASHVILLE, TENN.
J. M. Gregory, President.
L. Van Bokkelen, Secretary.
James Cruikshank, Treasurer.

1869.—TRENTON, N. J.
L. Van Bokkelen, President.
W. E. Crosby, Secretary.
A. L. Barber, Treasurer.

1870.—CLEVELAND, O.
Daniel B. Hagar, President.
A. P. Marble, Secretary.
W. E. Crosby, Treasurer.

NAME CHANGED TO

NATIONAL EDUCATIONAL ASSOCIATION

1871.—ST. LOUIS, MO.
J. L. Pickard, President.
W. E. Crosby, Secretary.
John Hancock, Treasurer.

1872.—BOSTON, MASS.
E. E. White, President.
S. H. White, Secretary.
John Hancock, Treasurer.

1873.—ELMIRA, N. Y.
B. G. Northrop, President.
S. H. White, Secretary.
John Hancock, Treasurer.

1874.—DETROIT, MICH.
S. H. White, President.
A. P. Marble, Secretary.
John Hancock, Treasurer.

1875.—MINNEAPOLIS, MINN.
W. T. Harris, President.
M. R. Abbott, Secretary.
A. P. Marble, Treasurer.

1876.—BALTIMORE, MD.
W. F. Phelps, President.
W. D. Henkle, Secretary.
A. P. Marble, Treasurer.

1877.—LOUISVILLE, KY.
M. A. Newell, President.
W. D. Henkle, Secretary.
J. Ormond Wilson, Treasurer.

1878.—No session.

1879.—PHILADELPHIA, PA.
John Hancock, President.
W. D. Henkle, Secretary.
J. Ormond Wilson, Treasurer.

1880.—CHAUTAUQUA, N. Y.
J. Ormond Wilson, President.
W. D. Henkle, Secretary.
E. T. Tappan, Treasurer.

1881.—ATLANTA, GA.
James H. Smart, President.
W. D. Henkle, Secretary.
E. T. Tappan, Treasurer.

1882.—SARATOGA SPRINGS, N. Y.
G. J. Orr, President.
W. E. Sheldon, Secretary.
H. S. Tarbell, Treasurer.

1883.—SARATOGA SPRINGS, N. Y.
E. T. Tappan, President.
W. E. Sheldon, Secretary.
N. A. Calkins, Treasurer.

1884.—MADISON, WIS.
Thomas W. Bicknell, President.
H. S. Tarbell, Secretary.
N. A. Calkins, Treasurer.

1885.—SARATOGA SPRINGS, N. Y.
F. Louis Soldan, President.
W. E. Sheldon, Secretary.
N. A. Calkins, Treasurer.

1886.—TOPEKA, KAN.
N. A. Calkins, President.
W. E. Sheldon, Secretary.
E. C. Hewett, Treasurer.

1887.—CHICAGO, ILL.
W. E. Sheldon, President.
J. H. Canfield, Secretary.
E. C. Hewett, Treasurer.

1888.—SAN FRANCISCO, CAL.
Aaron Gove, President.
J. H. Canfield, Secretary.
E. C. Hewett, Treasurer.

1889.—NASHVILLE, TENN.
Albert P. Marble, President.
J. H. Canfield, Secretary.
E. C. Hewett, Treasurer.

1890.—ST. PAUL, MINN.
J. H. Canfield, President.
W. R. Garrett, Secretary.
E. C. Hewett, Treasurer.

1891.—TORONTO, ONT.
W. R. Garrett, President.
E. H. Cook, Secretary.
J. M. Greenwood, Treasurer.

1892.—SARATOGA SPRINGS, N. Y.
E. H. Cook, President.
R. W. Stevenson, Secretary.
J. M. Greenwood, Treasurer.

1893.—CHICAGO, ILL.
(International Congress of Education.)
Albert G. Lane, President.
Irwin Shepard, Secretary.
J. M. Greenwood, Treasurer.

1894.—ASBURY PARK, N. J.
Albert G. Lane, President.
Irwin Shepard, Secretary.
J. M. Greenwood, Treasurer.

1895.—DENVER, COLO.
Nicholas Murray Butler, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1896.—BUFFALO, N. Y.
Newton C. Dougherty, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1897.—MILWAUKEE, WIS.
Charles R. Skinner, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1898.—WASHINGTON, D. C.
J. M. Greenwood, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1899.—LOS ANGELES, CAL.
E. Oram Lyte, President.
Irwin Shepard, Secretary.
I. C. McNeill, Treasurer.

1900.—CHARLESTON, S. C.
Oscar T. Corson, President.
Irwin Shepard, Secretary.
Carroll G. Pearse, Treasurer.

1901.—DETROIT, MICH.
James M. Green, President.
Irwin Shepard, Secretary.
L. C. Greenlee, Treasurer.

1902.—MINNEAPOLIS, MINN.
William M. Beardshear, President.
Irwin Shepard, Secretary.
Charles H. Keyes, Treasurer.

1903.—BOSTON, MASS.
Charles W. Eliot, President.
Irwin Shepard, Secretary.
W. M. Davidson, Treasurer.

NATIONAL EDUCATIONAL ASSOCIATION

OFFICERS FOR 1902–1903

GENERAL ASSOCIATION

CHARLES W. ELIOT	*President*	Cambridge, Mass.
IRWIN SHEPARD	*Secretary*	Winona, Minn.
W. M. DAVIDSON	*Treasurer*	Topeka, Kan.

VICE-PRESIDENTS

*W. M. BEARDSHEAR, Ames, Ia.
ORVILLE T. BRIGHT, Chicago, Ill.
CHARLES F. REEVES, Latona, Wash.
JOSEPH KENNEDY, Grand Forks, N. D.
CHARLES F. THWING, Cleveland, O.
W. N. SHEATS, Tallahassee, Fla.
MISS MARION BROWN, New Orleans, La.
JAMES B. PEARCY, Anderson, Ind.
MRS. HELEN L. GRENFELL, Denver, Colo.
HENRY R. SANFORD, Penn Yan, N. Y.
J. H. FRANCIS, Los Angeles, Cal.
WALLACE G. NYE, Minneapolis, Minn.

BOARD OF TRUSTEES

(See *Art. IV, sec. 9, of the constitution.*)

ALBERT G. LANE, *Chairman*	Chicago Ill.	Term expires July, 1903
NEWTON C. DOUGHERTY	Peoria, Ill.	Term expires July, 1904
F. LOUIS SOLDAN	St. Louis, Mo.	Term expires July, 1905
NICHOLAS MURRAY BUTLER	New York, N. Y.	Term expires July, 1906
CHARLES W. ELIOT	Cambridge, Mass	*Ex officio*

EXECUTIVE COMMITTEE

(See *Art. IV, secs. 2 and 11, of the constitution.*)

CHARLES W. ELIOT	*President*	Cambridge, Mass.
ORVILLE T. BRIGHT	*First Vice-President*	Chicago, Ill.
W. M. DAVIDSON	*Treasurer*	Topeka, Kan.
ALBERT G. LANE	*Chairman of Board of Trustees*	Chicago, Ill.
W. T. HARRIS	*Member by election*	Washington, D. C.
IRWIN SHEPARD	*Secretary*	Winona, Minn.

BOARD OF DIRECTORS

Directors ex officio

(See *Art. IV, sec. 2, of the constitution.*)

CHARLES W. ELIOT, Cambridge, Miss.
ORVILLE T. BRIGHT, Chicago, Ill.
W. M. DAVIDSON, Topeka, Kan.
ALBERT G. LANE, Chicago, Ill.
IRWIN SHEPARD, Winona, Minn.

Life Directors

(See *Art. IV, sec. 2, of the constitution.*)

*BEARDSHEAR, W. M., Ames, Ia.
BICKNELL, THOMAS W., Providence, R. I.
BOARD OF EDUCATION, Nashville, Tenn.
BUTLER, NICHOLAS MURRAY, New York, N. Y.
CANFIELD, JAMES H., New York, N. Y.
COOK, E. H., Boulder, Colo.
CORSON, OSCAR T., Columbus, O.
DOUGHERTY, NEWTON C., Peoria, Ill.
GARRETT, W. R., Nashville, Tenn.
GOVE, AARON, Denver, Colo.
GRAHAM, H. A., Mt. Pleasant, Mich.
GREEN, J. M., Trenton, N. J.

* Deceased.

Life Directors—*continued*

GREENWOOD, J. M., Kansas City, Mo.
HARRIS, W. T., Washington, D. C.
HUNT, MRS. MARY H., Boston, Mass.
JEWETT, A. V., Abilene, Kan.
LANE, ALBERT G., Chicago, Ill.
LYTE, ELIPHALET ORAM, Millersville, Pa.
MARBLE, ALBERT P., New York, N. Y.
MARSHALL, T. MARCELLUS, Glenville, W. Va.
PARKER, CHARLES I., South Chicago, Ill.
PHELPS, W. F., Duluth, Minn.
PICKARD, JOSIAH L., Brunswick, Me.
PIKE, JOSHUA, Jerseyville, Ill.
SKINNER, CHARLES R., Albany, N. Y.
SOLDAN, F. LOUIS, St. Louis, Mo.
STRATTON, C. C., University Park, Ore.
TAYLOR, A. R., Decatur, Ill.
TEACHERS' INSTITUTE, Philadelphia, Pa.
WHITE, CHARLES G., Lake Linden, Mich.
*WHITE, E. E., Columbus, O.
WILSON, J. ORMOND, Washington, D. C.

Directors by Election

North Atlantic Division

Maine	JOHN S. LOCKE	Saco
New Hampshire	HENRY C. MORRISON	Portsmouth
Vermont	WALTER E. RANGER	Montpelier
Massachusetts	GEORGE H. MARTIN	Lynn
Rhode Island	WALTER BALLOU JACOBS	Providence
Connecticut	CHARLES H. KEYES	Hartford
New York	AUGUSTUS S. DOWNING	New York
New Jersey	H. BREWSTER WILLIS	New Brunswick
Pennsylvania	J. W. LANSINGER	Millersville

South Atlantic Division

Delaware	GEORGE W. TWITMYER	Wilmington
Maryland	M. BATES STEPHENS	Baltimore
District of Columbia	ALEXANDER T. STUART	Washington
Virginia	H. B. FRISSELL	Hampton
West Virginia	MISS LUCY ROBINSON	Wheeling
North Carolina	G. H. CROWELL	High Point
South Carolina	J. J. MCMAHAN	Columbia
Florida	W. N. SHEATS	Tallahassee

South Central Division

Kentucky	S. L. FROGGE	Frankfort
Tennessee	J. L. WRIGHT	Nashville
Georgia	W. F. SLATON	Atlanta
Alabama	J. W. ABERCROMBIE	Montgomery
Mississippi	E. E. BASS	Greenville
Louisiana	WARREN EASTON	New Orleans
Texas	ALEXANDER HOGG	Fort Worth
Oklahoma	DAVID R. BOYD	Norman
Arkansas	GEORGE B. COOK	Hot Springs
Indian Territory	JOHN D. BENEDICT	Muskogee

North Central Division

Ohio	J. K. BAXTER	Mt. Vernon
Indiana	T. A. MOTT	Richmond
Illinois	MISS CATHARINE GOGGIN	Chicago
Michigan	D. W. SPRINGER	Ann Arbor
Wisconsin	L. D. HARVEY	Madison
Iowa	A. V. STORM	Cherokee
Minnesota	CHARLES M. JORDAN	Minneapolis
Missouri	W. T. CARRINGTON	Jefferson City
North Dakota	W. E. HOOVER	Park River
South Dakota	C. M. YOUNG	Vermilion
Nebraska	EDWIN J. BODWELL	Omaha
Kansas	J. W. SPINDLER	Winfield

Western Division

Montana	J. M. LEWIS	Helena
Wyoming	MISS ESTELLE REEL	Washington, D. C.
Colorado	H. S. PHILIPS	Denver

*Deceased.

Directors by Election—*continued*

New Mexico	EDGAR L. HEWETT	Las Vegas
Arizona	F. YALE ADAMS	Tucson
Utah	W. J. KERR	Logan
Nevada	J. E. STUBBS	Reno
Idaho	WALTER R. SIDERS	Pocatello
Washington	F. B. COOPER	Seattle
Oregon	E. D. RESSLER	Monmouth
California	JAMES A. FOSHAY	Los Angeles

DEPARTMENT OFFICERS

National Council

WILLIAM R. HARPER	*President*	Chicago, Ill.
W. H. BARTHOLOMEW	*Vice-President*	Louisville, Ky.
J. F. MILLSPAUGH	*Secretary*	Winona, Minn.
JOSEPH SWAIN	*Executive Committee*	Swarthmore, Pa.
RICHARD G. BOONE	*Executive Committee*	Cincinnati, O.
NICHOLAS MURRAY BUTLER	*Executive Committee*	New York, N. Y.

Kindergarten

MRS. PAULINE AGASSIZ SHAW	*President*	Boston, Mass.
MISS STELLA L. WOOD	*Vice-President*	Minneapolis Minn.
MISS CLARA WHEELER	*Secretary*	Grand Rapids, Mich.

Elementary

MISS M. ADELAIDE HOLTON	*President*	Minneapolis, Minn.
FREDERICK TREUDLEY	*Vice-President*	Athens, O.
MISS ADDA P. WERTZ	*Secretary*	Carbondale, Ill.

Secondary

CHARLES F. WHEELOCK	*President*	Albany, N. Y.
REUBEN POST HALLECK	*Vice-President*	Louisville, Ky.
WILBUR F. GORDY	*Secretary*	Hartford, Conn.

Higher

BENJAMIN IDE WHEELER	*President*	Berkeley, Cal.
WILLIAM H. SMILEY	*Vice-President*	Denver, Colo.
JOHN H. MACCRACKEN	*Secretary*	Fulton, Mo.

Normal

LIVINGSTON C. LORD	*President*	Charleston, Ill.
ALBERT SALISBURY	*Vice-President*	Whitewater, Wis.
EDGAR L. HEWETT	*Secretary*	Las Vegas, N. M.

Superintendence

CHARLES M. JORDAN	*President*	Minneapolis, Minn.
CLARENCE F. CARROLL	*First Vice-President*	Worcester, Mass.
WARREN EASTON	*Second Vice-President*	New Orleans, La.
J. N. WILKINSON	*Secretary*	Emporia, Kan.

Manual

CHARLES F. WARNER	*President*	Springfield, Mass.
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Art

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REUBEN POST HALLECK	*Vice-President*	Louisville, Ky.
Miss MARY EILEEN AHERN	*Secretary*	Chicago, Ill.

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Miss MARY McCOWEN	*Vice-President*	Chicago, Ill.
Miss SARAH FULLER	*Secretary*	Boston, Mass.

Indian Education

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NATIONAL EDUCATIONAL ASSOCIATION

OFFICERS FOR 1903–1904

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IRWIN SHEPARD	*Secretary*	Winona, Minn.
McHENRY RHOADS	*Treasurer*	Owensboro, Ky.

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BOARD OF TRUSTEES

(See *Art. IV, sec. 9, of the constitution.*)

ALBERT G. LANE, *Chairman*	Chicago, Ill.	Term expires July, 1907
NICHOLAS MURRAY BUTLER	New York, N. Y.	Term expires July, 1906
F. LOUIS SOLDAN	St. Louis, Mo	Term expires July, 1905
NEWTON C. DOUGHERTY	Peoria, Ill.	Term expires July, 1904
JOHN W. COOK	De Kalb, Ill.	*Ex officio*

EXECUTIVE COMMITTEE

(See *Art. IV, secs. 2 and 11, of the constitution.*)

JOHN W. COOK	*President*	De Kalb, Ill.
CHARLES W. ELIOT	*First Vice-President*	Cambridge, Mass.
McHENRY RHOADS	*Treasurer*	Owensboro, Ky.
ALBERT G. LANE	*Chairman of Board of Trustees*	Chicago, Ill.
W. T. HARRIS	*Member by election*	Washington, D. C.
IRWIN SHEPARD	*Secretary*	Winona, Minn.

BOARD OF DIRECTORS

Directors ex officio

(See *Art. IV, sec. 2, of the constitution.*)

JOHN W. COOK, De Kalb, Ill.
CHARLES W. ELIOT, Cambridge, Mass.
McHENRY RHOADS, Owensboro, Ky.
ALBERT G. LANE, Chicago, Ill.
IRWIN SHEPARD, Winona, Minn.

Life Directors

(See *Art. IV, sec. 2, of the constitution.*)

BICKNELL, THOMAS W., Providence, R. I.
BOARD OF EDUCATION, Nashville, Tenn.
BUTLER, NICHOLAS MURRAY, New York, N. Y.
CANFIELD, JAMES H., New York, N. Y.
COOK, E. H., Boulder, Colo.
CORSON, OSCAR T., Columbus, O.
DOUGHERTY, NEWTON C., Peoria, Ill.
ELIOT, CHARLES W., Cambridge, Mass.
GARRETT, W. R., Nashville, Tenn.
GOVE, AARON, Denver, Colo.
GRAHAM H. A., Mt. Pleasant, Mich.
GREEN, J. M., Trenton, N. J.

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HARRIS, W. T., Washington, D. C.
HUNT, MRS. MARY H., Boston, Mass.
JEWETT, A. V., Abilene, Kan.
LANE, ALBERT G., Chicago, Ill.
LYTE, ELIPHALET ORAM, Millersville, Pa.
MARBLE, ALBERT P., New York, N. Y.
MARSHALL, T. MARCELLUS, Glenville, W. Va.
PARKER, CHARLES I., South Chicago, Ill.
PHELPS, W. F., Duluth, Minn.
PICKARD, JOSIAH L., Brunswick, Me.
PIKE, JOSHUA, Jerseyville, Ill.
SKINNER, CHARLES R., Albany, N. Y.
SOLDAN, F. LOUIS, St. Louis, Mo.
STRATTON C. C., University Park, Ore.
TAYLOR, A. R., Decatur, Ill.
TEACHERS' INSTITUTE, Philadelphia, Pa.
WHITE, CHARLES G., Lake Linden, Mich.
WILSON, J. ORMOND, Washington, D. C.

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New Hampshire	CHANNING FOLSOM	Dover
Vermont	WALTER E. RANGER	Montpelier
Massachusetts	LOUIS P. NASH	Holyoke
Rhode Island	WALTER BALLOU JACOBS	Providence
Connecticut	CHARLES H. KEYES	Hartford
New York	AUGUSTUS S. DOWNING	New York
New Jersey	JOHN ENRIGHT	Freehold
Pennsylvania	JOHN W. LANSINGER	Millersville

South Atlantic Division

Delaware	GEORGE W. TWITMYER	Wilmington
Maryland	M. BATES STEPHENS	Baltimore
District of Columbia	ALEXANDER T. STUART	Washington
Virginia	J. L. JARMAN	Farmville
West Virginia	MISS LUCY ROBINSON	Wheeling
North Carolina	MISS LYDIA A. YATES	Wilmington
South Carolina	W. K. TATE	Charleston
Florida	B. C. GRAHAM	Tampa

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Tennessee	D. J. JOHNS, JR.	Nashville
Georgia	W. F. SLATON	Atlanta
Alabama	JOHN W. ABERCROMBIE	Montgomery
Mississippi	E. E. BASS	Greenville
Louisiana	WARREN EASTON	New Orleans
Texas	A. CASWELL ELLIS	Austin
Oklahoma	ANDREW R. HICKAM	Alva
Arkansas	J. H. HINEMON	Little Rock

North Central Division

Ohio	W. H. KIRK	East Cleveland
Indiana	T. A. MOTT	Richmond
Illinois	MISS CATHARINE GOGGIN	Chicago
Michigan	D. W. SPRINGER	Ann Arbor
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Iowa	A. V. STORM	Cherokee
Minnesota	W. F. KUNZE	Red Wing
Missouri	BEN BLEWETT	St. Louis
North Dakota	W. E. HOOVER	Park River
South Dakota	C. M. YOUNG	Vermilion
Nebraska	E. J. BODWELL	Omaha
Kansas	J. W. SPINDLER	Winfield

Western Division

Montana	OSCAR J. CRAIG	Missoula
Wyoming	MISS ESTELLE REEL	Washington, D. C.
Colorado	LEWIS C. GREENLEE	Denver
New Mexico	HIRAM HADLEY	Las Cruces

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Utah	W. J. KERR	Logan
Nevada	J. E. STUBBS	Reno
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Washington	FRANK B. COOPER	Seattle
Oregon	E. D. RESSLER	Monmouth
California	THOMAS J. KIRK	Sacramento

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NICHOLAS MURRAY BUTLER	*Executive Committee*	New York, N. Y.
MISS ANNA TOLMAN SMITH	*Executive Committee*	Washington, D. C.

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MRS. O. S. CHITTENDEN	*Secretary*	Omaha, Neb.

Elementary

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Higher

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JOHN H. MACCRACKEN	*Secretary*	New York, N. Y.

Normal

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GRANT KARR	*Vice-President*	Oswego, N. Y.
MRS. GRACE H. SPROULL	*Secretary*	Greeley, Colo.

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EDWIN B. COX	*First Vice-President*	Xenia, O.
JOHN W. ABERCROMBIE	*Second Vice-President*	University, Ala.
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Manual

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Baroness ROSE POSSE	*Secretary*	Boston, Mass.

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WILLIAM GEORGE BRUCE	*Secretary*	Milwaukee, Wis.

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Miss MARY EILEEN AHERN	*Secretary*	Chicago, Ill.

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F. W. BOOTH	*Vice-President*	Philadelphia, Pa.
Miss ELIZABETH VAN ADESTINE	*Secretary*	Detroit, Mich.

Indian Education

Vacant (no election)	*President*	——
H. B. PEAIRS	*Vice-President*	Lawrence, Kan.
MISS ESTELLE REEL	*Secretary*	Washington, D. C.

TREASURER'S REPORT

TO THE

NATIONAL EDUCATIONAL ASSOCIATION

JULY 1, 1902, TO JUNE 30, 1903

FOR MEETING AT MINNEAPOLIS, MINN., AND ENSUING YEAR

W. M. Davidson, Treasurer, in Acct. with the National Educational Association

BALANCE ON HAND JULY 1, 1902

Cash received from Treasurer Keyes, as per last annual report			$2,287.14

RECEIPTS

From transportation lines:			
Account of Detroit meeting:			
Big Four (C., C., C. & St. L. Ry.)	$ 118.00		
Wabash Railroad	284.00		
Northern Steamship Co.	2.00		
Detroit & Cleveland Navigation Co.	68.00		
Grand Trunk Railway	23.00		
Lake Shore & Michigan Southern Railroad	18.00		
		$ 513.00	
Account of Minneapolis meeting:			
Northern Pacific Railway	$1,670.00		
Chicago Great Western Railway	716.00		
Minneapolis, St. Paul & Sault Ste. Marie Railway	522.00		
Seaboard Air Line Railway	8.00		
Wisconsin Central Railway	356.00		
Chicago, St. Paul, Minneapolis & Omaha Railway	2,717.00		
Great Northern Railway	1,258.00		
Minneapolis & St. Louis Railway	604.00		
Georgia Railroad	2.00		
Burlington Route	618.00		
Chicago, Milwaukee & St. Paul Railway	4,136.00		
Detroit & Cleveland Navigation Co.	29.00		
		12.636.00	
Total from transportation lines			13,149.00
From Board of Trustees:			
Interest on permanent fund			4,715.10
From Department of Superintendence			584.00
From annual meeting (Minneapolis):			
Advance memberships (Minneapolis teachers)		$ 2,252.00	
From Registration Bureau (Minneapolis):			
Dues of former active members	$ 376.00		
New active memberships (enrollment and dues)	677.00		
Associate memberships	1,216.00		
		2,269.00	
Total from annual meeting			4,521.00
From royalties on reports of Committees of Ten and Fifteen			68.30
Surplus from appropriation for purchase of Washington volume			17.00
From Secretary's office during the year:			
Memberships, enrollments, etc.		$ 4,452.24	
Sale of back volumes		830.25	
Sale of committee reports, etc.		122.47	
			5.404.96
Total receipts for the year			$30 746.50

DISBURSEMENTS

Board of Trustees:		
For permanent investment	$10,000.00	
For miscellaneous expenses	14.23	
		$10,014.23
Executive Committee expenses:		
For President	$ 175.63	
For Vice-President	70.80	
For Treasurer	317.20	
For Chairman of Trustees	54.91	
For member by election	65.95	
		684.49
General Secretary's office:		
Salary of Secretary	$ 4,000.00	
Postage	784.38	
Telegrams	69.73	
Freight and express	20.08	
Clerical services	792.15	
Exchange	32.45	
Stationery and office supplies	99.73	
Traveling	298.30	
Office rent (heating, lighting, and care included)	550.00	
Miscellaneous (refunds, etc.)	13.25	
		6,660.07
Printing:		
Volume of *Proceedings* (6,500 copies)	$ 5,197.94	
Reprints from volume	335.83	
Executive Committee bulletins	865.05	
Miscellaneous (letter heads, blanks, folders, envelopes, etc.)	510.02	
		6,908.84
Express and freight:		
Distribution of volumes	$ 1,809.52	
Miscellaneous	175.54	
		1,985.06
Special appropriations:		
Department of Superintendence		418.30
Annual Convention:		
Department expenses	$ 270.31	
State directors and managers	540.19	
Clerical services:		
Registration	499.80	
Stenographers	166.98	
Printing:		
Programs	199.05	
Miscellaneous	77.00	
Express and freight	2.95	
Stationery	12.86	
Telegrams	14.73	
Conference meeting of department presidents, Boston	621.81	
Expenses speakers, Minneapolis	346.50	
Miscellaneous	47.65	
		2,799.83
Expenses of depository:		
Rent, Washington, D. C.	$ 8.33	
Salary of custodian, Washington, D. C.	72.92	
Miscellaneous (removal of volumes from Washington to Winona, etc.)	388.42	
		469.67
Unclassified disbursements:		
Refunds on memberships	$ 160.00	
Miscellaneous (expenses President Beardshear, bonds of Treasurer and Secretary, etc.)	299.65	
		459.65
Total disbursements for the year		$30,400.14

SUMMARY OF DISBURSEMENTS

Total amount transferred for investment (as per vouchers Nos. 59 and 138)	$10,000.00	
Total expenses as per vouchers Nos. 1 to 143 inclusive (except Nos. 59 and 138)	20,400.14	
Total amount paid out		$30,400.14
Net receipts for the year	$28,459.36	
Total current expenses	20,400.14	
Net balance for the year		$ 8,059.22

GENERAL SUMMARY

Total receipts	$30,746.50	
Total disbursements	30,400.14	
Balance in treasury June 30, 1903		$ 346.36

TOPEKA, KAN., June 30, 1903. (Signed) WILLIAM M. DAVIDSON, *Treasurer.*

BOSTON, MASS., July 6, 1903.

The undersigned, Trustees of the National Educational Association, have this day examined and approved the foregoing accounts of William M. Davidson, Treasurer, with all statements of receipts and vouchers for disbursements.

(Signed)
A. G. LANE, *Chairman.*
CHARLES W. ELIOT.
NICHOLAS MURRAY BUTLER.
NEWTON C. DOUGHERTY.
F. LOUIS SOLDAN.

Executive Committee, National Educational Association of the United States:

GENTLEMEN: In accordance with instructions received from Mr. A. G. Lane, chairman of the Board of Trustees, we have examined in detail the books and accounts of the National Educational Association of the United States, as kept by the Secretary, Irwin Shepard, and the Treasurer, William M. Davidson, for the year ending June 30, 1903. We have verified the Treasurer's report, submitted by Mr. Davidson at the meeting of the Association at Boston, Mass., which we certify to be in accordance with the books.

We are pleased to be able to report that the books are correctly and carefully kept, and to state that in our opinion the system of bookkeeping and the check both on receipts and expenditure are very suitable to the needs of the Association.

Yours respectfully,
THE INTERNATIONAL AUDIT COMPANY.
By ROBERT NELSON, C. A., *Vice-President.*

SEVENTEENTH ANNUAL REPORT OF THE BOARD OF TRUSTEES

To the Board of Directors of the National Educational Association:

The Board of Trustees presents the following report of the Permanent Fund of the National Educational Association, and its income, for the year ending June 30, 1903:

Permanent Fund, July 1, 1902:		
Mortgages on real estate	$44,600.00	
Kansas school and municipal bonds	12,200.00	
Illinois and Indiana school bonds	28,000.00	
Cash on hand for investment	13,200.00	
Total		$98,000.00
Received from William M. Davidson, Treasurer, from proceeds of Minneapolis meeting, and income from Permanent Fund		10,000.00
Total		$108,000.00
Permanent Fund, July 1, 1903:		
Mortgages on real estate	$78,000.00	
Kansas school and municipal bonds	11,200.00	
Illinois bonds	18,000.00	
Total investments		$107,200.00
Cash on hand for investment		800.00
Total permanent fund		108,000.00

INVESTMENTS

Investments, July 1, 1902		84,800.00
Paid during the year:		
First mortgage, Providence, R. I.	$ 3,000.00	
First mortgage, 4802 Lake avenue, Chicago	3,100.00	
Ness county, Kan., S. D. 41	200.00	
Norton county, Kan., S. D. 95	200.00	
Eudora City, Kan., Bond No. 11	100.00	
Reno county, Kan., S. D. 51	500.00	
Noblesville, Ind.	5,000.00	
Chicago improvement bonds	5,000.00	
First Universalist Church, Englewood, Chicago	1,000.00	
		18,100.00
Balance of Investments		$66,700.00
Investments during the year:		
418–20 W. Adams street, Chicago, first mortgage	$ 10,000.00	
5526–28 Jefferson avenue, Chicago, first mortgage	11,000.00	
2268 Kenmore avenue, Chicago, first mortgage	2,500.00	
226 Central avenue, Chicago, first mortgage	3,000.00	
230 Central avenue, Chicago, first mortgage	4,000.00	
Wadhams' estate	10,000.00	
		40,500.00
Total investments, July 1, 1903		$107,200.00

INCOME STATEMENT

Receipts from interest:		
Ness county, Kan., S. D. 41	$ 6.00	
Ness county, Kan., S. D. 70	30.00	
Norton county, Kan., S. D. 95	6.00	
Reno county, Kan., S. D. 51	15.00	
City of Eudora, Kan.	60.00	
Hodgeman county, Kan	60.00	
McPherson county, Kan., Sharp's Creek township	60.00	
Noblesville, Ind.	163.19	
Morgan Park, Ill.,	162.50	
Lemont, Ill	337.50	
First mortgage, 1919 Wabash avenue, Chicago	306.48	
First mortgage, 5136 Hibbard avenue, Chicago	250.00	
First mortgage, 5603 Madison avenue, Chicago	250.00	
First mortgage, First Universalist Church, Englewood	500.00	
First mortgage, 4762 Lake avenue, Chicago	256.12	
First mortgage, 4802 Lake avenue, Chicago	134.80	
Chicago improvement bonds	814.70	
First mortgage, 312 N. LaSalle street, Chicago	250.00	
First mortgage, 1201 Irving Park boulevard, Chicago	262.50	
418-20 W. Adams street, Chicago	293.75	
5526-28 Jefferson avenue, Chicago	275.00	
2268 Kenmore avenue, Chicago	62.50	
Interest on bank deposits	159.06	
Total interest transferred to William M. Davidson, Treasurer		$ 4,715.10

EXPENSE ACCOUNT

Exchange for coupon collections	$ .75	
Accrued interest on loan	1.58	
Rent of box in National Safe Deposit Co.	10.00	
Expense examining loans	1.90	
Total		$ 14.23

STATEMENT OF SECURITIES BELONGING TO THE PERMANENT FUND OF THE NATIONAL EDUCATIONAL ASSOCIATION, JUNE 30, 1903

KANSAS COUNTY, MUNICIPAL, AND SCHOOL BONDS

County	Kind of Bond	Amount	Rate of Interest per Cent	Interest Payable	Bond Due
Douglass	Eudora City	$ 900	6	March	One due each year March 1
Garfield*	School District 24	800	6	Jan. and July	Jan., 1910
Grant*	County	2,000	6	Jan. and July	Feb., 1920
Hodgeman	County	1,000	6	Jan. and July	July 1, 1919
Lane*	County	3,000	6	Jan. and July	July 1, 1918
McPherson	Sharp's Creek Township	1,000	6	Jan. and July	Sept. 1, 1916
Ness	School District 70	500	6	Jan. and July	July, 1903
Reno*	City South Hutchinson	1,000	7	Feb. and Aug.	April, 1908
Seward*	With Bentley & Hatfield, Wichita, Kan.	1,000	...	Judgment obtained	.....
Total		$11,200			

ILLINOIS BONDS AND MORTGAGES

Bonds	Amount	Rate of Interest per Cent	Interest Payable	Bond Due
Village of Morgan Park, Ill	$ 2,500	4½	May and Nov.	Nov. 1, 1911
Village of Morgan Park, Ill	1,000	5	Mar. and Sept.	Sept., 15, 1904
Lemont, Ill., School Nos. 12, 14, 16, 18, 20, 22, 24, 30, 32	4,500	5	June and Dec.	$1,000 yearly Dec. 1
Chicago improvement bonds	10,000	6	December	Dec., 1903 and 1904
Total	$18,000			

REAL ESTATE

First Mortgages	Amount	Rate of Interest per Cent	Interest Payable	Bond Due
1919 Wabash avenue, Chicago	$5,000	5	May and Nov. 1	May 1, 1908
5136 Hibbard avenue, Chicago	5,000	5	May and Nov. 1	Nov. 1, 1903
5603 Madison avenue, Chicago	5,000	5	July and Jan.	July 1, 1904
First Universalist Church, Englewood, Ill.	9,000	5	Oct. and April	Oct., 1904
4762 Lake avenue, Chicago	5,000	5	Mar. and Sept.	Mar., 1905
312 La Salle street, Chicago	5,000	5	April and Oct.	Oct., 1906
1201 Irving Park boulevard, Chicago	3,500	5	Jan. and July	July, 1906
418 and 420 W. Adams street, Chicago	10,000	5	Jan. and July	July 1, 1907
5526 and 5528 Jefferson avenue, Chicago	10,000	5	April and Oct.	Oct. 1, 1907
5526 and 5528 Jefferson avenue, Chicago	1,000	5	April and Oct.	Oct. 1, 1904
2268 Kenmore avenue	2,500	5	May and Nov.	Nov. 15, 1907
Wadhams' Estate	10,000	5	Jan. and July	On demand
226 Central avenue, Chicago	3,000	5	Jan. and July	July, 1908
230 Central avenue, Chicago	4,000	5	Jan. and July	July, 1908
Total	$78,000			

Approved by the Board of Trustees and ordered transmitted to the Board of Directors.

ALBERT G. LANE, *Chairman*,
CHARLES W. ELIOT,
NICHOLAS MURRAY BUTLER,
NEWTON C. DOUGHERTY,
F. LOUIS SOLDAN.
Board of Trustees.

The foregoing securities (except those noted in my detailed report as being in process of collection thru the First National Bank of Chicago, Ill., and the Seward county, Kan., $1,000 bond in judgment) were examined at the National Safe Deposit Co. vaults, in the First National Bank building, in said Chicago, on Saturday, June 27, 1903, and I certify that the above is a correct statement of the investments belonging to the Permanent Fund of the National Educational Association in the custody of Albert G. Lane, chairman of the Board of Trustees. A detailed report on all the securities held was made by me to the Board of Trustees.

(Signed) GEORGE E. ADAMS, *Examiner.*

*Interest or principal in default.

JOURNAL OF PROCEEDINGS

OF THE

FORTY-SECOND ANNUAL MEETING

OF THE

NATIONAL EDUCATIONAL ASSOCIATION

BOSTON, MASS., JULY 6–10, 1903

FIRST DAY'S PROCEEDINGS

OPENING SESSION.—MONDAY, JULY 6, 8 P.M.

The forty-second annual session was opened in the auditorium of the Massachusetts Charitable Mechanics Association at 8 P. M. by President Charles W. Eliot.

A choral, from *Bach*, was sung by the St. Cecilia Society—B. J. Lang, leader.

Rev. Edward Everett Hale, D.D., asked a blessing and led the great audience in the Lord's Prayer.

Brief addresses of welcome were delivered by Hon. John L. Bates, governor of the commonwealth of Massachusetts; Hon. Patrick A. Collins, mayor of the city of Boston; and Henry S. Pritchett, president of the Massachusetts Institute of Technology.

Responses were made by Albert G. Lane, chairman of the Board of Trustees of the National Educational Association, Chicago, Ill.; and by Hon. W. T. Harris, United States Commissioner of Education, Washington, D. C.

A "Jubilee Overture," *Weber*, was rendered by the orchestra under the leadership of Mr. B. J. Lang.

The President's address, "The New Definition of the Cultivated Man," was delivered by the President of the Association, Charles W. Eliot, president of Harvard University.

Andrew F. West, dean of the Graduate School, Princeton University, addressed the convention on "The Present Peril to Liberal Education."

The following Committee on Resolutions was appointed by the President:

COMMITTEE ON RESOLUTIONS

NICHOLAS MURRAY BUTLER, of New York city, *Chairman*

Andrew S. Draper, of Illinois
James M. Green, of New Jersey
E. C. Branson, of Georgia
J. H. Van Sickle, of Maryland
Miss Bettie A. Dutton, of Ohio
Frank B. Cooper, of Washington
H. B. Frissell, of Virginia
Miss Laura Fisher, of Massachusetts
Mrs. Ella Flagg Young, of Illinois
Miss Clara A. Wilson, of Iowa
William H. Smiley, of Colorado

After announcements, the meeting adjourned.

SECOND DAY'S PROCEEDINGS

SECOND SESSION.—TUESDAY, JULY 7, 8 P. M.

The convention was called to order by President Eliot at 8 o'clock P. M.

The topic for the evening was, "Manual, Trade, and Technical Education."

Papers were read by Calvin M. Woodward, professor of mathematics and dean of

the School of Engineering, Washington University, St. Louis, Mo.; Thomas M. Balliet, superintendent of schools, Springfield, Mass.; and Henry S. Pritchett, president of the Massachusetts Institute of Technology, Boston, Mass.

After announcements, adjournment was taken to 8 o'clock Wednesday evening.

THIRD DAY'S PROCEEDINGS

THIRD SESSION.—WEDNESDAY, JULY 8, 8 P. M.

The convention assembled at 8 o'clock, and was called to order by President Eliot. The Committee on Nominations was announced by President Eliot, as follows:

COMMITTEE ON NOMINATIONS

L. D. HARVEY, of Wisconsin, *Chairman*

John H. Phillips.....Alabama	S. D. Largent.....Montana
W. H. Kramer.....Arizona	Carroll G. Pearse.....Nebraska
George B. Cook.....Arkansas	Vacant.....Nevada
Lyman Gregory.....California	James E. Klock.....New Hampshire
Aaron Gove.....Colorado	James L. Hays.....New Jersey
Nathan L. Bishop.....Connecticut	Edgar L. Hewett.....New Mexico
A. H. Berlin.....Delaware	William H. Maxwell.....New York
Miss Anna Tolman Smith.....District of Columbia	Charles D. McIver.....North Carolina
John F. Forbes.....Florida	W. L. Stockwell.....North Dakota
W. F. Slaton.....Georgia	John K. Baxter.....Ohio
James A. MacLean.....Idaho	Miss Elmira R. Greason.....Oklahoma
Miss Kate Starr Kellogg.....Illinois	E. D. Ressler.....Oregon
H. B. Brown.....Indiana	E. Oram Lyte.....Pennsylvania
John D. Benedict.....Indian Territory	David W. Hoyt.....Rhode Island
F. T. Oldt.....Iowa	D. B. Johnson.....South Carolina
I. L. Dayhoff.....Kansas	W. P. Dunlevy.....South Dakota
W. H. Bartholomew.....Kentucky	Thos. J. Gaillord.....Tennessee
N. L. A. Bauer.....Louisiana	L. E. Wolfe.....Texas
W. E. Russell.....Maine	William J. Kerr.....Utah
J. H. Van Sickle.....Maryland	John L. Alger.....Vermont
George H. Martin.....Massachusetts	H. B. Frissell.....Virginia
W. H. Elson.....Michigan	Charles S. Tilton.....Washington
C. H. Cooper.....Minnesota	Robert A. Armstrong.....West Virginia
J. G. Deupree.....Mississippi	L. D. Harvey.....Wisconsin
J. A. Whiteford.....Missouri	Miss Estelle Reel.....Wyoming

The President explained that a contest had arisen over the selection of a member of the Committee on Nominations from the state of Florida, and as the action of neither of the contesting delegations appeared to conform to the by-law governing such selection, he had, in accordance with his constitutional authority, appointed a member not belonging to either delegation.

The general topic of the session, "School Gardens, City School Yards, and the Surroundings of Rural Schools," was discussed in papers presented by Orville T. Bright, principal of the James R. Doolittle School, Chicago, Ill.; Henry L. Clapp, principal of the George Putnam School, Boston, Mass.; Charles R. Skinner, state superintendent of public instruction, Albany, N. Y.; and W. W. Stetson, state superintendent of public education, Augusta, Me.

At the close of the meeting W. N. Sheats, of Florida, presented a protest against the action of the President in the appointment of a member of the Committee on Nominations from that state. He was answered by Miss Clem Hampton, who represented the other of the two contesting delegations. The incident was closed by the remark of the President that the protest and the answer to it illustrated both the occasion and the expediency of appointing a third party.

MINUTES OF THE ANNUAL BUSINESS MEETING OF ACTIVE MEMBERS OF THE NATIONAL EDUCATIONAL ASSOCIATION HELD IN HUNTINGTON HALL, JULY 9, 1903

The meeting was called to order by President Charles W. Eliot at 12:30 P. M. About two hundred members were present.

The reading of the minutes of the last meeting at Minneapolis, July 8, 1902, was, on motion, omitted, and they were approved as printed in the volume of *Proceedings* of the Minneapolis convention.

The Treasurer, W. M. Davidson, of Topeka, Kan., presented his annual report, printed copies of which, bearing the certificate of approval of the Board of Trustees, were distributed to the members.

On motion of Charles H. Keyes, of Connecticut, the reading of the report in detail was dispensed with, and the report was approved and ordered printed in the annual volume.

The chairman of the Board of Trustees, A. G. Lane, of Chicago, Ill., presented the seventeenth annual report of that body and distributed printed copies of the same. A brief explanation was made by Chairman Lane regarding the Kansas bonds which were purchased about fifteen years ago. A large proportion of them were reported as paid, and confidence was expressed that most, if not all, of the others will be paid. Attention was called to that part of the report showing that in certain cases payment of either principal or interest was in default. Chairman Lane also reported that the Board of Trustees had authorized him to take legal steps to collect the overdue amounts in all cases where it may be found possible to do so.

On motion of J. M. Greenwood, of Missouri, the report was received and approved, and ordered printed in the annual volume of *Proceedings*.

The report of the Committee on Nominations was presented by the chairman, L. D. Harvey, of Wisconsin, as follows:

To the Active Members of the National Educational Association:

Your Committee on Nominations met pursuant to call in the official announcement, and beg leave to submit the report of nominations of officers for the year 1903–4, as follows: For—

President	JOHN W. COOK	Illinois
Treasurer	MCHENRY RHOADS	Kentucky
First Vice-President	CHARLES W. ELIOT	Massachusetts
Second Vice-President	EDWIN A. ALDERMAN	Louisiana
Third Vice-President	J. W. SEARSON	Nebraska
Fourth Vice-President	WILLIAM L. PRATHER	Texas
Fifth Vice-President	GEORGE B. COOK	Arkansas
Sixth Vice-President	HENRY R. SANFORD	New York
Seventh Vice-President	GEORGE M. SMITH	South Dakota
Eighth Vice-President	H. BREWSTER WILLIS	New Jersey
Ninth Vice-President	JAMES A. FOSHAY	California
Tenth Vice-President	FRANK B. DYER	Ohio
Eleventh Vice-President	DELOS FALL	Michigan
Twelfth Vice-President	MISS ELLOR E. CARLISLE	Massachusetts

FOR DIRECTORS

Alabama	J. W. Abercrombie	Illinois	Miss Catharine Goggin
Arizona	A. J. Matthews	Indiana	T. A. Mott
Arkansas	John H. Hinemon	Indian Territory	J. D. Benedict
California	Thomas J. Kirk	Iowa	A. V. Storm
Colorado	L. C. Greenlee	Kansas	J. W. Spindler
Connecticut	Charles H. Keyes	Kentucky	E. H. Mark
Delaware	No nomination	Louisiana	Warren Easton
District of Columbia	Alexander T. Stuart	Maine	J. S. Locke
Florida	No nomination	Maryland	M. Bates Stephens
Georgia	W. M. Slaton	Massachusetts	Louis P. Nash
Idaho	Miss May L. Scott	Michigan	D. W. Springer

FOR DIRECTORS — *continued*

Minnesota	W. F. Kunze
Mississippi	E. E. Bass
Missouri	Ben Blewett
Montana	Oscar J. Craig
Nebraska	Edwin J. Bodwell
Nevada	No nomination
New Hampshire	Channing Folsom
New Jersey	John Enright
New Mexico	No nomination
New York	A. S. Downing
North Carolina	Lydia A. Yates
North Dakota	W. E. Hoover
Ohio	W. H. Kirk
Oklahoma	Andrew R. Hickam
Oregon	E. D. Ressler
Pennsylvania	J. W. Lansinger
Rhode Island	W. B. Jacobs
South Carolina	No nomination
South Dakota	C. M. Young
Tennessee	D. J. Johns, Jr.
Texas	A. Caswell Ellis
Utah	W. J. Kerr
Vermont	Walter E. Ranger
Virginia	J. L. Jarman
Washington	F. B. Cooper
West Virginia	Miss Lucy Robinson
Wisconsin	L. D. Harvey
Wyoming	Miss Estelle Reel

Respectfully submitted,

(Signed) L. D. HARVEY, *Chairman.*

(Signed) WM. H. ELSON, *Secretary.*

On motion of I. C. McNeill, of Wisconsin, the Secretary was instructed to cast the ballot of the Association for the nominees as reported. The ballot was cast as ordered, and the nominees were declared elected for the ensuing year.

Nicholas Murray Butler, of New York, called attention to by-law No. 4, and moved the adoption of the following resolution :

Resolved, That, subject to the approval of the Executive Committee, as provided by the existing by-law No. 4, the memorial address upon the late President William M. Beardshear, prepared for the meeting of the National Council of Education by President William F. King of Mount Vernon College, Ia., be incorporated in the published *Proceedings*, despite the fact that the paper itself was not read, President King having been detained by serious illness in his family.

The motion was unanimously carried.

MR. BUTLER then asked permission to offer an amendment to by-law No. 1, and explained the necessity for the proposed amendment as follows :

The by law relating to the appointment of the nominating committee as it now stands is unworkable. [Reads the by-law.] It has been tried for six years. The records show that it has never been complied with, except possibly in one or two cases. The records of the meetings of active members held this year show that the merest handful attended the state meetings; in some cases fewer than 5 per cent. of those present here in Boston. That the by-law has broken down and is incapable of operation is, I think, the judgment of a large majority of the members of the Association from every state who have expressed an opinion upon this subject. The fact that the by-law is unworkable became apparent almost as soon as it was adopted. Each year it has been urged that the time had come to change it, but each year any proposal for a change has been withheld in order to obtain a wider experience. I know that I am stating a fact when I say that at this great meeting only an insignificant minority participated in any way in the action contemplated by the existing by-law. The President of the Association has found that nearly if not quite every certificate sent to him bore upon its face evidences of irregularity. I propose, therefore, that we meet the situation by striking out an impracticable and unworkable by-law, and go back to the condition of things which existed here in this Association for thirty-six years, by which the power to appoint this committee was placed in the hands of the President for the year. He can be held responsible for his action; he is known to all of us; and he is chosen because we know him and deem him worthy of the responsibility. This is the democratic and the effective method of procedure. I ask, therefore, that a two-thirds vote be given, as required by the constitution, for the following amendment to the by-laws, and I offer, Mr. President, a resolution to effect the amendment, as follows :

Resolved, That the by-laws of the National Educational Association be amended as follows:
Existing by-laws numbered 2, 3, 4, and 5 to be numbered 3, 4, 5, and 6, respectively.
For existing by-law numbered 1, the following by-laws numbered 1 and 2 to be substituted:

1. At the first session of each annual meeting of the Association there shall be appointed by the President a committee on resolutions.

2. Not later than the third session of each annual meeting of the Association there shall be appointed by the President a committee on nominations, consisting of one active member from each state and territory represented at the meeting.

I move, sir, the adoption of this resolution, noting at the same time that it requires for its passage a two-thirds vote of those present and voting.

MISS MARGARET A. HALEY, of Illinois: Mr. President, I rise to speak against that resolution and the proposed amendment to the by-laws. I am opposed to the centralizing of power any more than we have already done in the National Educational Association. I believe the proposed amendment would be a backward movement. It is against democracy; it is centralization. It would take away from the active members in each state the small measure of power which they now have and place it in the hands of one who is selected entirely apart from the action or choice of the state members. I am opposed to the proposed amendment on general principles, and I am opposed to it for special reasons. Illinois had 111 active members present on Tuesday morning at 9 o'clock at the state headquarters at the meeting of active members, and there were some ten or twelve more who came in a few minutes too late to vote. I do not know whether it is because the women of Illinois have awakened to the situation and to their power as shown by the vote cast at that meeting, 74 to 37, that this attempt is made to shut us out, but it looks like it. If you men pass this amendment, you certainly leave yourselves open to that charge, whether right or wrong. Under the present constitution and by-laws you have left an opening for the women. Why do you want to close it? The women pay about nine-tenths of the money in this Association, and they make up a corresponding proportion of the attendance at the convention. If such an important matter as this was intended to be brought before this body, at least one year's notice should have been given. It certainly should not be passed today. It should be postponed for one year, and if next year we cannot secure enough activity on the part of the members to make the present by-law operative, then bring up this amendment. But for myself, I think it is wrong in principle. I believe the proper people to make the selection of members of the nominating committee are the people from each state. If there were only three present at any meeting, you have no right to take away the rights of those three members. Do you think the people would tolerate for a moment the proposal to take away their right to vote at the primary elections because 95 per cent. of the qualified voters stayed at home? Not at all. You men would not do it. I move that the resolution be deferred for one year.

THE PRESIDENT: Miss Haley has made the motion that consideration of the resolutions presented by President Butler be postponed until next year.

CARROLL G. PEARSE, of Nebraska: I regret to see any attempt made in this Association to line up the men and the women on opposite sides of this question. I think this matter should be considered as one of principle, to be decided on its own merit, and not upon a division of the sexes. The by-law which it is now proposed to change was passed in response to what was regarded as essential in the conduct of the affairs of the Association. That by-law has in many instances been inoperative for lack of a quorum; still I believe that it is a useful rule. I should think it extremely unfortunate if this Association should take away from its members the right which they now enjoy of participating in this matter. I move, therefore, as an amendment to Dr. Butler's motion, that by-law No. 1 be so amended as to provide that a majority of the active members present at the meeting called for the purpose of selecting the member of the nominating committee, if more than three, shall have the right to select the member of the nominating committee.

THE PRESIDENT: Does President Butler accept the amendment?

MR. BUTLER: I should prefer the amendment to the existing by-law, but I should prefer my motion to either of them.

THE PRESIDENT: Does that mean that President Butler declines to accept the amendment?

MR. BUTLER: Yes.

S. Y. GILLAN, of Wisconsin: I rise to support Miss Haley's motion. I wish she had made the motion for indefinite postponement, instead of to postpone for one year. To me this seems to be a reappearance of the old spirit of centralization, which was scotched, but not killed, in 1897, when the meeting was held in Milwaukee.

THE PRESIDENT: It is entirely impossible to obtain evidence that the by-law has been conformed to during its existence; it was not conformed to in a single case in the meetings of this week for the election of members of the nominating committee.

MR. GILLAN, of Wisconsin: Why do you give that interpretation? May not that word "attendance" mean attendance at that particular meeting of the active members from that state? It is entirely a matter of interpretation.

THE PRESIDENT: The reading of the by-law is this: "The same to be appointed by the President on the nomination of a majority of the active members in attendance from such state or territory," etc. It is perfectly clear that the by-law expects an action in nomination by the majority of the active members present at the Association meeting, and I found that the expectation had not been realized in a single case this year. Moreover, it is next to impossible, even in a small convention, and it was absolutely impossible in this Boston convention, to ascertain in season what number of active members was in attendance from any particular state or territory. The Secretary could not furnish that information.

THOMAS W. BICKNELL, of Rhode Island: The principle of the present by-law is a correct one. Representatives of the various states should have the power to elect the officers called for by this by-law. Of that there can be no question. It seems to me we have reached the point in state and national life where that is recognized. It seems to me that this matter should go over for another year. It has now been brought to our notice. President Butler has very clearly set forth the condition of things, and I have no doubt that that condition will be removed, and, instead of three members being present, I believe the majority of active members from every state will be present hereafter. I hope, therefore, that the motion of Miss Haley will prevail, that action on this matter may be postponed, and that we may be allowed a year for the consideration of the question.

JAMES H. CANFIELD, of New York: I simply desire to say that what I have heard here today with regard to centralization and autocracy is just as absurd and as foreign to the spirit of this Association as the talk of deciding this question by a division of the sexes. I very earnestly desire that this matter shall be considered on its merits, and that a motion made here to amend the by-laws shall not immediately bring up someone who will speak about movements that have been "scotched, but not killed," and use language which certainly does not properly apply to the motives, the purpose, or the thought of any member of this Association as I have known it for over twenty years.

EUGENE BOUTON, of Massachusetts: I move an amendment to the motion offered by Dr. Butler so that the by-law shall provide that any number in attendance at this meeting of active members shall constitute a quorum.

MISS HALEY: Mr. President, I wish to accept that amendment in place of my motion.

THE PRESIDENT: Miss Haley withdraws her motion to postpone until next year. Does President Butler accept the amendment to his motion made by Mr. Bouton?

MR. BUTLER: No, sir, I do not. I prefer to have a vote upon my motion.

MISS GERTRUDE EDMUND, of Massachusetts: I wish to say that, altho I am a warm admirer of Miss Haley and the work she has done, I do not agree that we have not been fairly treated by the gentlemen of this convention. I want to thank the gentlemen who are present for all that they have done for the women who have shown an interest in the work of the Association.

MR. BUTLER: I trust that the members of the Association will consent to vote upon the pending motion solely from the standpoint of principle and of practical effectiveness,

and not be misled by wholly irrelevant matters. I should not have made any motion whatever had I not been very jealous of the Association's standards of effectiveness and methods of procedure. Nothing would please me more than to see 75 per cent. or 100 per cent. of the active membership of each state present at every meeting and co-operating to elect the member of the nominating committee from that state. But it is absolutely and utterly impracticable. Experience has shown this conclusively. Anyone who will examine the records of this year's state meetings and those of previous years will find that, under the guise of transferring a privilege to active members, this privilege has been transferred to one or two active members in many of the states. This is the very reverse of democratic. It is a concentration of power in a wholly irresponsible group of persons. I saw a certificate last year which was signed by a member of the Association saying that at the meeting the number of active members present was "one," that the meeting nominated for member of the nominating committee "himself," and he signed the certificate as chairman of the meeting. There are several certificates in my hand which show just about the same facts. That is not a proper condition of affairs. My proposition for a change is a purely practical proposition. This is a very large and businesslike association, and why shouldn't it do its business in a businesslike and responsible way? Why let ourselves be confused by an abstract and untrue proposition about "democracy" when we are faced by six years' experience of the most undemocratic action imaginable? During all of this time the President has appointed the nominating committee because of the illegality of the elections themselves or the illegality of almost every record that came to his hands. Therefore I do not see how the situation would be improved by decreasing the number of active members who are obliged to attend in order that this election may be legal, as would be the effect of the proposed amendment to my resolution; nor do I see the use of postponing action upon this question, now that it has been raised. I should prefer to see a direct vote taken in order that this matter may be settled.

THOMAS A. MOTT, of Indiana: To me it seems like a backward step to take away from the members of the several states the power to make the selections for the nominating committee. In my opinion, it is better that three who are interested shall make the nomination than that a by-law should be so carefully constructed that the members in attendance from the several states shall have no voice in this matter. State representation was the thing we fought for in Milwaukee, and I am in favor of voting for it here.

THE PRESIDENT: Before the question is put I will take the liberty of stating to the members just how the by-law has worked this year. I was simply an observer. I wished to conform to this by-law, of course. I immediately found that to be impossible. I found that I was obliged personally to appoint all the members of this nominating committee. If the amendment which is made by Mr. Bouton prevails, the appointing, however, will lie in the hands of whatever small number of persons attend the meetings by states, and the President of the Association will then accept and confirm those nominations. A very small number of persons will, presumably, attend those meetings. I think the active members here present would deceive themselves if they felt that under such a provision the state would really be getting any representation at all. That is the difficulty with the present situation. All of us, I suppose, would desire a real representation of the members by states in the selection of this nominating committee. The present arrangement gives no such real representation by states, and I conceive that Mr. Bouton's amendment will not give that desirable thing. The advantage of the amendment proposed by President Butler is that the nominations will be made by a responsible person, responsible to the Association. He is a person who is in office but a year, and he cannot have any motive for preferring one man to another in the representation on this nominating committee. He is a temporary official himself, immediately replaced after this act. The existing method and the method proposed in the amendment will inevitably result in the delegation of this appointing power to small irresponsible bodies, which I think our political experience has taught us is not a desirable method of nomination. What more

desirable method than the present can be arrived at I am not prepared to advise, but I have felt it my duty to say that it has seemed to me, from my experience this week, that the former method of nomination was certainly better than the present method. That is as far as my official experience enables me to go.

MISS HALEY: I should like to ask two questions, if I may. Under the plan presented by Dr. Butler, the President of the National Educational Association appoints the nominating committee, and the nominating committee in turn appoints the President, and then the President appoints the next nominating committee, and that nominating committee appoints the President. May I ask the chair if I am right?

THE PRESIDENT: The answer to Miss Haley's question seems to me to be this: One President appoints a committee to nominate all the officers for the ensuing year, and that committee nominates another President — a totally different person; but the election is by the general meeting of active members, and not by any committee whatever. It is important to notice, as a qualification of Miss Haley's argument, that the President of the year cannot be a nominee for re-election.

MISS HALEY: You have answered one question to the effect that we should have under Dr. Butler's amendment a self-perpetuating machine. The question that I desire next to ask is this: Does not the amendment presented by Mr. Bouton, the one which I accepted in place of my motion, remove the objection, which the President makes, that he was obliged to appoint, or did appoint, the members of the nominating committee, since none of the appointments made by the different states conformed to the provisions of the by-law? Is not that objection removed by providing that any number of active members present at the meeting shall constitute a quorum competent to do business?

THE PRESIDENT: The answer to Miss Haley's question is that Mr. Bouton's amendment will provide a legal mode of operation. Our present method cannot be legally operated.

At this point a general discussion ensued as to the effect of the amendment offered by Mr. Bouton to the resolution of Mr. Butler amending the by-laws.

A motion by A. S. Downing, of New York, to lay the question on the table for one year was defeated.

President Eliot explained, in answer to a question, that the adoption of Mr. Bouton's amendment and the subsequent adoption of Mr. Butler's motion by a two-thirds vote would amend the by-law to read, after the word "President" in the fourth line, as follows: "On the nomination of a majority of the active members from such state and territory present at the meeting called for the purpose of making such nomination;" and would eliminate the provision of the by-law requiring for a quorum the presence of a majority, not less than three, of the active members in attendance (on the convention) from each state or territory.

The amendment of Mr. Bouton was then passed.

A vote on the resolution of Mr. Butler, as amended, was then taken, resulting in: ayes, 123; noes, 43. The resolution as amended was declared adopted by a two-thirds vote.

In answer to a question as to the future relations of the President of the Association to the nominating committee, President Eliot stated that, as he understood the action just taken, the President under the new by-law will simply record the nominations made by the state meetings, and will then proceed to fill vacancies where state meetings have failed to make nominations.

The Secretary announced the receipt of a communication and resolutions from Miss Margaret A. Haley, president of the National Federation of Teachers, as follows:

RESOLUTIONS ADOPTED AT MASS MEETING OF TEACHERS HELD AT CHICKERING HALL, BOSTON, JULY 7, 1903, UNDER AUSPICES OF NATIONAL FEDERATION OF TEACHERS

WHEREAS, Demands are continually made on teachers for a higher scholastic and professional attainment; cost of living is steadily increasing, with stationary or decreasing salaries, insecure tenure of office, no provision for old age, and conditions generally under which teachers work such that further progress in education demands immediate betterment of these conditions; therefore

Resolved, That it is the sense of this mass meeting of teachers held under the auspices of the National Federation of Teachers that the time has come to bring the facts as to these conditions to public attention, and to this end that the subjects of Teachers' Salaries, Tenure of Office, and Pensions should be placed on the general program of the National Educational Association next year; and

Resolved, That a copy of these resolutions be sent to the Secretary of the National Educational Association with the request that they be brought to the attention of the body at its meeting July 9.

(Signed) MARGARET A. HALEY.

The communication and accompanying resolutions were referred to the Committee on Resolutions.

The meeting then adjourned.

FOURTH DAY'S PROCEEDINGS

FOURTH SESSION.—THURSDAY, JULY 9, 8 P. M.

President Eliot opened the session at 8 o'clock P. M., and introduced R. W. G. Welling, of New York city, who read a paper on "The Teaching of Civics and Good Citizenship in the Public Schools."

"The Justification of City Expenditure on Parks and Parkways — Material for Public Education" was discussed by Nathan Mathews, Jr., of Boston, Mass., and "The Nature-Study Movement" by L. H. Bailey, director of the College of Agriculture, Cornell University, Ithaca, N. Y.

FIFTH DAY'S PROCEEDINGS

FIFTH SESSION.—FRIDAY, JULY 10, 8 P. M.

The closing session of the forty-second annual convention of the National Educational Association was called to order by President Eliot at 8 o'clock P. M.

The topic for the evening was "Education in the Southern States." This subject was presented in addresses as follows:

"The Beginning and Aims of the General Education Board," by Wallace Buttrick, secretary and executive officer of the General Education Board, New York city.

"The Educational Needs of the Southern Negro," by Rev. Charles T. Walker, of New York city.

"Public Education in the South," by Edgar Gardner Murphy, executive secretary of the Southern Education Board, Montgomery, Ala.

Following the addresses, the President introduced Dr. Nicholas Murray Butler, President of Columbia University, New York city, chairman of the Committee on Resolutions, who presented on behalf of the committee the following

REPORT OF THE COMMITTEE ON RESOLUTIONS

The members of the National Educational Association, assembled in their forty-second convention, make the following

DECLARATION

1. The United States Bureau of Education has amply proved its usefulness to the nation. Its publications are standard works of reference for school officers and teachers everywhere. The Bureau of Education should be made an independent administrative department, such as were the Departments of Agriculture and of Labor before their elevation to cabinet rank. Sufficient appropriations should be made by the Congress to enable the Commissioner of Education to extend the scope and add to the usefulness of his work.

2. The condition of affairs in the Indian Territory, where fully three-quarters of the population are reported as being without schools for their children, demands the immediate attention of the Congress. Provision should be speedily made by which the people of the Indian Territory will have power to establish and carry on a system of public schools, so that all classes of citizens in the Indian Territory may have the educational opportunities which are enjoyed by their fellow-citizens in other parts of the country.

3. Teaching in the public schools will not be a suitably attractive and permanent career, nor will it command as much of the ability of the country as it should, until the teachers are properly compensated and are assured of an undisturbed tenure during efficiency and good behavior. A large part of the teacher's reward must always be the pleasure in the character and quality of the work done; but the money compensation of the teacher should be sufficient to maintain an appropriate standard of living. Legislative measures to give support to these principles deserve the approval of the press and the people.

4. The true source of the strength of any system of public education lies in the regard of the people whom it immediately serves, and in their willingness to make sacrifices for it. For this reason a large share of the cost of maintaining public schools should be borne by a local tax levied by the county or by the town in which the schools are. State aid is to be regarded as supplementary to, and not as a substitute for, local taxation for school purposes. In many parts of the United States a large increase in the amount of the local tax now voted for school purposes, or the levying of such a tax where none now exists, is a pressing need if there are to be better schools and better teachers.

5. The highest ethical standards of conduct and of speech should be insisted on among teachers. It is not becoming that commercialism or self-seeking should shape their actions, or that intemperance should mark their utterances. A code of professional conduct clearly understood and rigorously enforced by public opinion is being slowly developed, and will doubtless one day control all teachers worthy of the name.

6. It is important that school buildings and school grounds should be planned and decorated so as to serve as effective agencies for educating, not only the children, but the people as a whole, in matters of taste. The school is becoming more and more a community center, and its larger opportunities impose new obligations. School buildings should be attractive as well as healthful, and the adjoining grounds should be laid out and planned with appropriateness and beauty.

7. Disregard for law and for its established modes of procedure is as serious a danger as can menace a democracy. The restraint of passion by respect for law is a distinguishing mark of civilized beings. To throw off that restraint, whether by appeals to brutal instincts or by specious pleas for a law of nature which is superior to the laws of man, is to revert to barbarism. It is the duty of the schools so to lay the foundations of character in the young that they will grow up with a reverence for the majesty of the law. Any system of school discipline which disregards this obligation is harmful to the child and dangerous to the state. A democracy which would endure must be as law-abiding as it is liberty-loving.

NICHOLAS MURRAY BUTLER, of New York, *Chairman;*
ANDREW S. DRAPER, of Illinois;
JAMES M. GREEN, of New Jersey;
BETTIE A. DUTTON, of Ohio;
H. B. FRISSELL, of Virginia;
LAURA FISHER, of Massachusetts;
JAMES H. VAN SICKLE, of Maryland;
CLARA A. WILSON, of Iowa;
FRANK B. COOPER, of Washington;
WM. H. SMILEY, of Colorado;
ELLA FLAGG YOUNG, of Illinois;

Committee on Resolutions.

After submitting the above declaration, which was adopted by a unanimous vote, the following resolutions of thanks were offered by the committee and unanimously adopted by the convention:

Resolved, That the thanks of the National Educational Association be given with heartiness and sincerity to the citizens of Boston for their hospitable welcome, as graceful and as gracious as it has been generous; and particularly to His Honor the Mayor of Boston; to Mr. Edward R. Warren, chairman of the Local Executive Committee; to Mr. Grafton D. Cushing, chairman of the Boston School Committee; to Mr. Edwin P. Seaver, superintendent of schools; to the teachers of Boston, who have assisted in untold ways with effective service; and to the women who have assumed full responsibility for the admirable work of the Hospitality Committee. We are grateful, too, for the opportunities to hear stately music, to visit museums and collections of various kinds, and to enter private homes whose doors have been thrown open to us.

Recognition is also due to the newspapers, for their reports of proceedings; to the railroads, for their co-operation; and to the Remington Typewriter Company, for expert service so freely given to the officers and members of the Association.

Resolved, That the thanks of the Association be tendered to the retiring President, Charles W. Eliot, of Massachusetts, and to the retiring Treasurer, William M. Davidson, of Kansas, for their year of skillful and effective service.

President Eliot then introduced Dr. John W. Cook, president of the Northern Illinois State Normal School, De Kalb, Ill., as the President-elect for the ensuing year. President Cook briefly addressed the convention, expressing appreciation of the honor conferred upon him, and asking the members of the Association for their active co-operation in the work of the convention for the coming year.

President Eliot, after a few words of thanks to the members of the Association for their co-operation during the past year, declared the forty-second annual convention adjourned.

IRWIN SHEPARD, *Secretary.*

MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS FOR 1902–1903

BOSTON, MASS., JULY 6, 1903

The annual meeting of the Board of Directors was called to order in Trinity Chapel at 12:30 P. M., July 6, by President Charles W. Eliot.

The following directors answered to roll-call:

Charles W. Eliot, Massachusetts; William M. Davidson, Kansas; Albert G. Lane, Illinois; W. T. Harris, District of Columbia; Nicholas Murray Butler, New York; James H. Canfield, New York, Newton C. Dougherty, Illinois; Aaron Gove, Colorado; James M. Green, New Jersey; J. M. Greenwood, Missouri; E. Oram Lyte, Pennsylvania; Charles R. Skinner, New York; F. Louis Soldan, Missouri; Charles H. Keyes, Connecticut; Augustus S. Downing, New York; J. W. Lansinger, Pennsylvania; M. Bates Stephens, Maryland: Alexander T. Stuart, District of Columbia; H. B. Frissell, Virginia; G. H. Crowell, North Carolina; S. L. Frogge, Kentucky; J. W. Abercrombie, Alabama; J. L. Wright, Tennessee; E. E. Bass, Mississippi; Alexander Hogg, Texas; George B. Cook, Arkansas; John D. Benedict, Indian Territory; J. K. Baxter, Ohio; T. A. Mott, Indiana; Miss Catharine Goggin, Illinois; D. W. Springer, Michigan; L. D. Harvey, Wisconsin; A. V. Storm, Iowa; C. M. Young, South Dakota; J. W. Spindler, Kansas; W. J. Kerr, Utah; F. B. Cooper, Washington; E. D. Ressler, Oregon

Present, thirty-eight directors.

On motion, the reading of the minutes of the last meeting, held at Minneapolis, Minn., July 10, 1902, was dispensed with, and the minutes were approved as printed in the volume of *Proceedings* of the Minneapolis meeting.

The Secretary read communications from several absent directors tendering their resignations and nominating successors to be appointed by the board, as follows:

Warren Easton, of Louisiana, nominating Nicholas L. A. Bauer.
F. Yale Adams, of Arizona, nominating A. J. Matthews.
H. S. Philips, of Colorado, nominating Lewis C. Greenlee.
James A. Foshay, of California, nominating Thomas H. Kirk.
David R. Boyd, of Oklahoma, nominating A. R. Hickam.
John J. McMahan, of North Carolina, nominating P. T. Brodie.

Director N. C. Dougherty, of Illinois, moved that the Secretary be instructed to cast the ballot of the members present for the election of the nominees named to fill the vacancies occasioned by the several resignations which had been read.

After discussion concerning the authority of the board to fill temporarily a vacancy occasioned by the absence of a director, the chairman, President Charles W. Eliot, ruled that, while the board had authority under the provisions of the constitution to fill a vacancy, it had no authority to appoint a temporary representative of an absent director whose resignation had not been received.

The motion of Director Dougherty was then carried.

The Secretary reported that the ballot had been cast as ordered. The nominees named in the several letters of resignation were then declared duly elected to fill the respective vacancies.

On motion, the Executive Committee was authorized to appoint temporary representatives of absent directors to receive and distribute to members from the respective states the invitations to receptions and tickets of admission to various entertainments which the Local Executive Committee had arranged to distribute thru the state directors.

The report of the Treasurer, W. M. Davidson, of Topeka, Kan., for the year ending June 30, 1903, was then read.

The report was accepted and adopted by a unanimous vote.

The seventeenth annual report of the Board of Trustees was presented by the chairman, A. G. Lane, of Chicago, Ill., and, on motion, was accepted and adopted by a unanimous vote.

PRESIDENT ELIOT: As President of this Association I have had an opportunity to examine into the state of the property and the receipts and expenditures of this institution, and am glad to be able to assure the directors that the National Educational Association has on hand a substantial endowment of more than $100,000, the income of which meets its permanent expenses. Moreover, this is increasing, as you have heard. It increased $10,000 last year, and I am quite sure it will increase still more this year. Appreciating their responsibilities, the Board of Trustees have today decided upon an exceedingly conservative policy in the management of this property.

Director Charles H. Keyes, of Connecticut, member of the Committee of Eleven on Formulation of Contemporary Educational Doctrine, called attention to the action of the Department of Superintendence of the National Educational Association, at the recent Cincinnati meeting, requesting that an appropriation not exceeding $2,500 be made to said committee for expenses in pursuance of its work. Director Keyes urged the propriety of this appropriation, and reported the fact that the committee had already accomplished some work in the line of its duties.

On motion, the application was referred to the National Council for investigation and recommendation.

Director L. D. Harvey, of Wisconsin, offered the following resolution:

Resolved, That the National Council of Education be requested by the Board of Directors of the National Educational Association to appoint a committee to report to that body, after such investigation as may seem desirable, conclusions as to what should be undertaken in the field of industrial education in schools in rural communities, and to recommend such an appropriation as may be necessary for carrying on the investigation and preparation of the report.

DIRECTOR HARVEY, in support of his resolution, said: The reason for offering this resolution at this time is that all thru the middle West, in the South, and even in some of the New England states, the question of what can be done, especially in the field of elementary agricultural instruction in rural schools, is a live one. In a number of states laws have been enacted requiring teachers to pass examinations on that subject in order to teach. In other states laws have been passed making it mandatory that instruction in elementary agriculture be given in the rural schools.

There is a very widespread feeling that something should be done, but the difficulty is that nobody knows today what ought to be done, or what can be done. In Canada in 1872 they undertook by law to put the teaching of agriculture into the public schools, without a definite idea of what should be done. The result was a failure, and the movement dropped out of sight three or four years ago. They are now taking it up again. We are, however, undertaking certain lines of work from which we expect good results. A number of states — New York, Wisconsin, and others — are carrying on successful work in this field today. It seems to me there is no subject that is more important for our country schools than this. We are in danger of making a serious mistake in attempting this work without something definite being suggested as to what we shall do. It seems to me there is no more important work for the National Council than to appoint a committee of investigation on this subject and to recommend such an appropriation as may be necessary to carry on the work.

Director W. T. Carrington seconded Director Harvey's motion, which was unanimously carried.

The Secretary then read the following communication:

To the Board of Directors, National Educationl Association:

GENTLEMEN:— In view of the increased interest shown thruout the country in the matter of the condition of the teachers, as to salary, tenure of position, pensions, and cost of living;

In view of the remarkable increase in cost of the necessities of life;

In view of the rise of wages and salaries of workers of all other kinds above and beyond the increase in the salaries of teachers;

In view of the impossibility of maintaining the highest grade of instruction in the United States under present conditions of low salaries in the country;

You are respectfully urged to make the investigation of the condition of teachers thruout the United States a special order for the coming year. You are earnestly requested to appoint a committee for investigation and report. You are earnestly requested to appropriate from two to three thousand dollars for the expenses of correspondence, canvassing, tabulating, and printing. The New York delegation of members of the National Educational Association, having enjoyed a great improvement in the matter of salaries, etc., feels especially concerned for their brother and sister teachers of America, whose average yearly salary is shown by the last report of the Commissioner of Education to be less than $350 per year. We feel that we should do all in our power to contribute toward the improvement of the condition of the teachers thruout the country.

Respectfully,

NEW YORK MEMBERS OF THE NATIONAL EDUCATIONAL ASSOCIATION,
By

CHARLES R. SKINNER.
C. T. MCFARLANE.
HARRY F. TOWLE.
WM. MCANDREW.
KATHERINE BLAKE.
W. B. GUNNISON.

On motion, the communication was referred to the Committee on Investigation and Appropriations of the National Council for recommendation.

The Secretary made an explanation of the conflicting announcements in the Advance Program-Bulletin and the Official Program regarding the time for the meeting of active members to select members of the Committee on Nominations. The change of the opening of the convention from Tuesday afternoon to Monday evening had rendered inoperative the by-law which provides for the meetings to occur at 5:30 P. M. of the first day of the convention, since, if strictly followed, the meetings would occur before the opening of the convention, before the various state headquarters would be open for use, and before the arrival of many of the members. It had therefore seemed advisable for all interests to announce these meetings for 9 o'clock A. M. Tuesday morning; but, objection having been raised to this technical violation of the provisions of the by-law, the announcement was changed in the Official Program to the effect that the meetings be held at 5:30 P. M., Monday afternoon, and it was recommended in the announcement that the meetings adjourn, without action, to the more favorable time suggested in the Program-Bulletin, namely, 9 o'clock A. M., Tuesday, July 7.

Director Nicholas Murray Butler, of New York, gave notice that, in view of the impracticable provisions of by-law No. 1, he should, at the proper time at the regular annual meeting of active members, move an amendment to the by-law in question.

After announcements by the Secretary, the meeting adjourned.

IRWIN SHEPARD, *Secretary.*

MEETING OF THE NEW BOARD OF DIRECTORS FOR 1903–1904

BOSTON, MASS., JULY 9, 1903

The Board of Directors of the National Educational Association met in Trinity Chapel, Boston, at 4:30 P. M., President-elect John W. Cook, of Illinois, in the chair.

The following directors responded to roll-call:

President John W. Cook, Illinois; McHenry Rhoads, Kentucky; Charles W. Eliot, Massachusetts; Nicholas Murray Butler, New York; James H. Canfield, New York; Newton C. Dougherty, Illinois; Aaron Gove, Colorado; J. M. Greenwood, Missouri; Albert G. Lane, Illinois; Eliphalet Oram Lyte, Pennsylvania; F. Louis Soldan, Missouri; A. J. Matthews, Arizona; Charles H. Keyes, Connecticut; Miss Catherine Goggin, Illinois; T. A. Mott, Indiana; A. V. Storm, Iowa; E. H. Mark, Kentucky; J. S. Locke, Maine; M. Bates Stephens, Maryland; Louis P. Nash, Massachusetts; D. W. Springer, Michigan; W. F. Kunze, Minnesota; Ben Blewett, Missouri; Edwin J. Bodwell, Nebraska; A. S. Downing, New York; E. D. Ressler, Oregon; J. W. Lansinger, Pennsylvania; W. B. Jacobs, Rhode Island; Walter E. Ranger, Vermont; Miss Lucy Robinson, West Virginia; L. D. Harvey, Wisconsin; Miss Estelle Reel, Wyoming.

Number of directors present, thirty-two.

The reading of the minutes of the meeting of the former Board of Directors was, on motion, omitted.

Director A. G. Lane, of Illinois, called attention to the fact that no director had been elected for the state of Florida; that the member of the Committee on Nominations for that state, Dr. John F. Forbes, did not learn of his appointment until after the meeting of that body had adjourned; and that he now wished to address the board on the question of filling the vacancy.

No objection being made, Dr. Forbes was introduced by President Cook, and made a brief explanation of the conditions in Florida which led to the two contesting delegations from that state in the appointment of a member of the Committee on Nominations. He recommended that B. C. Graham, county superintendent of schools for Hillsborough county, be appointed director.

On motion, the recommendation of Dr. Forbes was accepted, and B. C. Graham was unanimously appointed director for Florida.

Director E. H. Mark, of Kentucky, stated that it had been his own wish and the wish of the entire delegation from that state that S. L. Frogge, of Frankfort, Ky., should be elected director; but, thru a misunderstanding, his own name had been entered for that office in the report of the Committee on Nominations, and he had been duly elected. He therefore tendered his resignation as director, with the request that S. L. Frogge be appointed to the vacancy.

On motion of Director Dougherty, of Illinois, the resignation of Director Mark was accepted, and S. L. Frogge was unanimously appointed director for Kentucky.

On motion, the chairman was authorized to appoint a committee of three to nominate members of the National Council.

Directors E. Oram Lyte, Newton C. Dougherty, and A. G. Lane were appointed such committee.

The next order of business being the election of a member of the Board of Trustees to fill the vacancy occasioned by the expiration of the term of service of A. G. Lane, Director James M. Green, of New Jersey, moved that Director A. G. Lane be elected trustee to succeed himself. The motion was unanimously carried.

On motion of Director Aaron Gove, of Colorado, Director Wm. T. Harris, United States Commissioner of Education, was elected to succeed himself as member of the Executive Committee.

A communication was received from the National Council transmitting the following reports to that body by its Committee on Investigations and Appropriations on certain applications to the Council for recommendation of appropriations by the Board of Directors. These reports were accompanied by resolutions embodying the action of the Council on the reports.

REPORT OF THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

To the Council:

The Committee on Investigations and Appropriations begs leave to report as follows relative to the several matters which have been before it either by reference from the Council or from the Board of Directors, or upon the initiative of the committee itself:

1. Action on the proposal of President Baker, of Colorado, to appoint a committee, and to ask for an appropriation to inquire into the contemporary judgment as to the culture element in education and the time that should be devoted to the combined school and college course, should await a clear definition of the topic to be studied and a precise indication of the methods of inquiry to be pursued. We recommend that the president of the Council be authorized to appoint a committee of five active members of the Association to undertake to define the question as presented by President Baker, the report of this committee to be printed and distributed in advance of the next annual meeting of the Council, and its discussion made a special order for that meeting.

2. In reference to the request of a number of active members of the Association, made to the Board of Directors and referred by that board to this committee, that an investigation be undertaken to determine the economic condition of public-school teachers thruout the United States, your committee feels that the time is ripe for the prosecution of such an inquiry. There is a great and growing interest thruout the country in matters relating to the condition of public-school teachers and their compensation, and there is every reason to believe that, if the facts could be correctly ascertained and lucidly set forth, the effect upon public opinion, and consequently upon the status of the teachers themselves, would be excellent. We, therefore, recommend that the president of the Council be authorized to appoint a committee of seven, to consist of active members of the Association, and of not more than two experts in statistical and economic science, who may or may not be members of the Association, to inquire and report to the Council upon the salaries, tenure of office, and pension provisions for public-school teachers in the United States. We recommend that an appropriation of $1,500, or so much thereof as may be necessary, be asked from the Board of Directors to defray the necessary expenses of conducting the work of this committee.

3. The committee is unable to recommend any appropriation to defray the cost of the work being carried on by the so-called Committee on Formulation of Contemporary Educational Doctrine. The attention of the Council is called to the fact that, by resolution of the Board of Directors, and by terms of the constitution of the Council, Art. IV, all investigations made in the name of the National Educational Association shall originate in the Council, or, if not, shall be made under its direction or authority. To the best of our knowledge and belief, no request has ever been made that the Council should authorize or approve the work of a Committee on the Formulation of Contemporary Educational Doctrine.

4. With reference to the request of the Board of Directors that this committee report upon the expediency of undertaking an investigation in the field of industrial education in schools in rural communities, we report that such an investigation seems to be urgently needed in view of the requests for information and advice that are reaching the school authorities in several states of the middle West. We recommend that the president of the Council be authorized to appoint a committee of five, consisting of active members of this Association, and of not more than one expert in agricultural education, who may or may not be a member of this Association, to undertake such an investigation and to report to the Council. We recommend that the Board of Directors be requested to appropriate $500, or so much thereof as may be necessary, to defray the cost of the investigation to be conducted by such committee.

5. Several times during the past few years the National Educational Association has explicitly declared in favor of strengthening the Bureau of Education, and of increasing its dignity and importance in the scheme of governmental administration at Washington. At a meeting of the Department of Superintendence held at Chicago February 28, 1900, upon motion of the Commissioner of Education, a committee of six members was appointed for the purpose of aiding the Bureau of Education to accomplish its work. This committee has from time to time had under consideration the needs and opportunities of the bureau. It has recently held a series of prolonged sessions for the purpose of giving careful consideration to the whole matter, and, in conjunction with the Commissioner of Education himself, has arrived at the conclusion that the time has now come when a determined effort should be made to secure from the administration and from Congress such action as will put into practical effect the oft-repeated recommendations of this Association relative to the Bureau of Education. It is the judgment of the committee referred to that the Bureau of Education should be speedily restored to the status which it had at the time of its formation, namely, that of an independent department—a status

which the Departments of Agriculture and of Labor had before they were raised to cabinet rank. Inasmuch as education in the United States is not a matter committed to the general government, the Bureau of Education can never become a strictly administrative office save in certain limited respects. The bureau should, however, have the dignity of a separate organization, and there is reason to believe that it would fare better if it enjoyed such status rather than continued in its present rank as a bureau of the Department of the Interior. The salary of the Commissioner of Education should be raised to at least $5,000, preferably to $6,000. He should be given two assistants, at salaries of $3,000 or $3,500 each, and the annual appropriation now made to the bureau should be increased by not less than $50,000, primarily to enable the commissioner to bring together and to make public a still greater and more practical amount of information than he now collects and brings to the attention of school officers and school-teachers in every state and territory. One assistant commissioner might well have charge of the division of statistics and reports—the work which has been so effectively carried on under Dr. Harris' personal direction for fourteen years. The second assistant commissioner should have charge of the administrative division of the Department of Education, whose duty it should be to deal more directly and more strongly than now with education in those parts of our domain that are not organized into states and territories, and where in consequence the matter of public education is either neglected or is under a local control which is not in touch with the experience and the resources of the educational system of the nation as a whole.

It is our belief that the National Council should take vigorous action in the matter of the status of the Bureau of Education, and that it should either assume as its own the committee appointed by the Department of Superintendence in 1900, as mentioned above, or should name a committee in succession to that one, whose duty it shall be to undertake an active propaganda before Congress and the country in favor of the upbuilding of the Bureau of Education into a department, as outlined above. We, therefore, recommend that the president of the Council be authorized to appoint such a committee, to consist of seven active members of the Association, and that the sum of $1,000, or so much thereof as may be necessary, be asked from the Board of Directors to pay the necessary expenses of the work.

Appropriate resolutions to carry these recommendations into effect are attached to this report.

Respectfully submitted for the committee,

(Signed) J. M. GREENWOOD, *Chairman.*

BOSTON, MASS., July 8, 1903.

RESOLUTIONS

1. *Resolved*, That the report of the Committee on Investigations and Appropriations, made under date of July 8, 1903, be accepted and its recommendations adopted.

2. That the Board of Directors of the National Educational Association be requested to make the following appropriations:

One thousand five hundred dollars, or so much thereof as may be necessary, for a committee of seven to inquire and report to the Council upon the salaries, tenure of office, and pension provisions of public-school teachers of the United States.

Five hundred dollars, or so much thereof as may be necessary, for a committee of five to investigate and report to the Council upon the subject of industrial education in schools in rural communities.

One thousand dollars, or so much thereof as may be necessary, for a committee of seven to urge upon Congress and the country the erection of the Bureau of Education into a separate administrative department and its adequate equipment and financial support.

The above report and resolutions were adopted by unanimous vote.

(Signed) J. F. MILLSPAUGH,
Secretary, National Council.

SUPPLEMENTARY REPORT OF THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

To the Council:

The Committee on Investigations and Appropriations begs leave to report as follows relative to the application made to it, upon reference from the Board of Directors by a committee of nine appointed by the Department of Superintendence on February 27, 1902. This committee was appointed "to formulate, on a sound educational basis, contemporary educational doctrines, submit statements covering contemporary educational experience, and indicate the tendencies of contemporary educational methods."

The committee has asked for an appropriation of $2,500 with which to meet the expenses of its work.

After a full hearing of representatives of the committee, your committee begs leave to report that in its judgment the Council should request the committee to designate a subcommittee of three of their own number, which subcommittee shall report to the Council at its next annual meeting—

1. A detailed and specific statement of the field of proposed investigation.

2. A precise indication of the method or methods to be pursued.

3. A careful estimate of the cost of the proposed investigation and the amount of time it will probably consume.

It is further recommended that an appropriation of $750 be placed at the disposal of the chairman of the Committee of Nine for the purpose of defraying the expenses of the subcommittee of three, as well as of meeting the cost of the work hitherto prosecuted by the full committee.

An appropriate resolution is attached to this report.

Respectfully submitted,

(Signed) J. M. GREENWOOD,
Chairman of the Committee.

BOSTON, MASS., July 8, 1903.

Resolved, That the Board of Directors be requested to appropriate the sum of $750, or so much thereof as may be necessary, in order to defray the expenses of the work of the subcommittee of three on a proposed investigation of the facts of contemporary educational experience, and the expenses already incurred by the Committee of Nine appointed by the Department of Superintendence on February 27, 1902.

The above report and resolution were adopted by the National Council July 9, 1903, and, under the direction of that body, are hereby referred to the Board of Directors for its approval.

(Signed) J. F. MILLSPAUGH,
Secretary, National Council.

On motion of Director Nicholas Murray Butler, of New York, seconded by Director Aaron Gove, of Colorado, the report and recommendations of the Council were accepted and approved, and the amounts named appropriated, respectively, for the expenses of the several committees.

The Secretary read a communication from Miss Laura E. Aldrich, delegate to the National Educational Association from the National Association of Elocutionists, asking for information as to the steps to be taken to become affiliated with the National Educational Association.

On motion of Director Charles H. Keyes, of Connecticut, the communication was received and referred to the Executive Committee.

Director Charles W. Eliot called attention to an action, taken by the Executive Committee at his request, for which perhaps there may not have been authority, as follows: "Last January 1 a meeting of the presidents of departments was held in Boston at my instance, in order that we might consult together concerning the preparation of the programs for the convention which is now in progress. That meeting, according to my observation, and also according to the testimony of the presidents of departments, was a useful one. The members of this board have had some opportunity of judging whether the programs on which we have been conducting our meetings have been good. The presidents of departments, I think, attributed some of the merits of the programs to the opportunity they had for consultation. In the interests of my successor, I believe it would be well to continue to hold a meeting of the presidents of departments about the 1st of January, and I venture to suggest that the Board of Directors authorize the Executive Committee to incur the necessary expenses of such a meeting."

On motion of Director Gove, the Executive Committee was authorized to incur the necessary expenses of a meeting of department presidents in accordance with the suggestion of Director Eliot.

Director Charles H. Keyes, of Connecticut, moved that $800 be appropriated for the expenses of the meeting of the Department of Superintendence which is to meet in Atlanta, Ga., in February next.

Some objections being raised to the appropriation of so large an amount, the motion was amended by Director A. S. Downing, of New York, to appropriate $400. The amendment was accepted by Director Keyes, and the amended motion passed by a unanimous vote.

Director E. Oram Lyte, chairman of the Committee on Nominating Members of the Council, reported as follows:

To the Board of Directors:

Your committee finds the following vacancies in the Council to be filled at this time, viz.:
Wm. T. Harris, by reason of expiration of term.
C. B. Gilbert, by reason of expiration of term.
William R. Harper, by reason of expiration of term.

George J. Ramsey, by reason of expiration of term.
Charles R. Skinner, by reason of expiration of term.
Emerson E. White, deceased.
R. B. Fulton, by reason of absence for two years.

The following nominations are submitted for your approval:
Wm. T. Harris, to succeed himself, term to expire in 1909.
William R. Harper, to succeed himself, term to expire in 1909.
Charles R. Skinner, to succeed himself, term to expire in 1909.
Ella Flagg Young, to succeed C. B. Gilbert, term to expire 1909.
Howard J. Rogers, to succeed George J. Ramsey, term to expire 1909.
Livingston C. Lord, to succeed Emerson E. White, term to expire 1906.
E. H. Mark, to succeed R. B. Fulton, term to expire 1907.

(Signed) E. ORAM LYTE, *Chairman.*
N. C. DOUGHERTY.
A. G. LANE.

On motion, the report of the committee was received and adopted, and the nominees were declared elected members of the Council for their respective terms.

The President announced the next order of business to be the consideration of invitations for the next place of meeting, and instructed the Secretary to call the roll of states.

When California was reached, the Secretary reported that he had received from President Benjamin Ide Wheeler and the authorities of the city of San Francisco an invitation to hold the convention for 1904 in that city.

At the call of Missouri, the Secretary reported that he had received a communication from Howard J. Rogers, of the department of education of the Louisiana Purchase Exposition, transmitting letters from the president of the exposition, the mayor of St. Louis, and the Business Men's League of St. Louis inviting the Association to hold its next convention in that city in 1904.

The roll-call of states was continued to the state of Washington. Director F. B. Cooper, of Washington, in behalf of the north Pacific coast, renewed the invitation presented at Detroit in 1901, and again in 1902 at Minneapolis, to meet in that section at such point as should be chosen by the Executive Committee. He also extended formal invitations from the chamber of commerce and the citizens of Seattle to meet in that city in 1904.

The roll-call of states was completed without other invitations being presented.

Director Ben Blewett, of Missouri, stated that he held in his possession an outline of certain facts, bearing on railroad concessions and other matters that would affect the pecuniary interests of the Association, should the next meeting be held in St. Louis, and that he would be pleased to present the same if the board desired to consider it at this time.

Director F. Louis Soldan, of Missouri, suggested that the statement referred to by Director Blewett be presented.

Director Springer, of Michigan, moved that, in accordance with the custom for some years past, all the invitations be referred to the Executive Committee, with full power to select the next place of meeting and make all arrangements for the same. The motion was seconded.

DIRECTOR SOLDAN: While I do not wish to oppose this motion, may I direct the attention of the board to the fact that this is perhaps an extraordinary occasion; that it may not be desired by the Executive Committee to have to settle this matter without some suggestions or advice from this body? I agree fully that its hands should be left untrammeled by any instructions; but should there not be some indication as to the pleasure of this body concerning the question of location?

Director Aaron Gove, of Colorado, stated that, since the selection of the place of meeting must ultimately rest with the Executive Committee, statements and arguments presented here will have little weight in determining the result. The Executive Committee have some months before it for the consideration and determination of this question

Director J. M. Greenwood, of Missouri, moved, as a substitute for the motion of Director Springer, that the board proceed to take an informal vote on the question of the next place of meeting; seconded.

A general discussion followed on the advisability of receiving at this time presentation of the facts referred to by Director Blewett relating to the invitations that had been presented from the city of St. Louis.

Objections being withdrawn, Director Blewett was recognized by the chair and said in part: "I wish to speak only of the financial questions involved in the invitations transmitted by Mr. Rogers. St. Louis will guarantee two thousand advance members. The exposition, in spite of the fact that it has placed the congresses of education in September and October, guarantees its best effort to make the gathering of teachers in July, if held in St. Louis, not only a national, but an international, affair. It guarantees to take care of any number, no matter if it be thirty thousand, that you may bring to St. Louis. I am authoritatively informed that it is the intention of the railroads to offer a half rate to St. Louis and return from the beginning of the exposition, if not on all trains, at least on certain trains, and that it will be impossible to add the $2 membership coupon to these tickets, as has been done in the past. I understand that it has been a matter of anxiety to the directorate as to what effect it will have on the relations of the Association with the transportation companies in the future. I hold in my hand a copy of a letter to Mr. C. S. Crane, general passenger agent of the Wabash road, conveying assurances that waiver of the collection of the membership fee for one year will not unfavorably affect the Association in its future relations with the railroads. I simply wish to assure this body that as a monetary consideration the Association need not fear coming to St. Louis, and she should not fear investing money in the educational advantages of a meeting in St. Louis, even if a financial loss followed.

Director Soldan said in part: "I wish to speak only of the one vital point. Is it not advisable for the National Educational Association to take cognizance of the fact that the largest educational exhibit that we have ever seen will be collected, arranged, and placed before the world at the St. Louis exposition in 1904? Is it expedient for this Association, representing the teachers of America, whose vital interests will center in that exposition, to appoint a meeting at the extreme end of the country, and seek to keep as far away as possible from the place of chief common interest? If such is the decision, let it go on record that for the first time in the history of any national exhibit the body of teachers chiefly interested in that exhibit takes its meeting as far away from it as it can go. Now, I shall not dwell on any other point. I shall not speak of the attractions or the asperities of the month of July in St. Louis. Shall it be the rule of the Association to draw a geographical line and say: 'Below that line we shall not take the Association in the future, because it is too warm?' Is the Association becoming a geographic body that transacts its business in a limited space, or shall we keep open the chance that all parts of the country may have the advantages of this Association, as has been the custom in the past? I plead that the reasons advanced for taking the Association away from the great exposition are not sound. I say that the Association should go to that place where there is to be the largest exposition and the largest educational exhibit ever organized."

After a brief general discussion, in which objections were again urged against the advisability of taking a ballot on the question of the next place of meeting, Director Greenwood withdrew his substitute motion, and the motion of Director Springer to refer the question to the Executive Committee, with full powers, was passed by a unanimous vote.

After an informal discussion of a proposition by Director A. V. Storm, of Iowa, that the board should make appropriations for the expenses of state headquarters, on which no action was taken, the board adjourned.

(Signed) IRWIN SHEPARD, *Secretary.*

GENERAL SESSIONS OF THE ASSOCIATION

ADDRESSES OF WELCOME

HON. JOHN L. BATES, GOVERNOR OF THE COMMONWEALTH OF MASSACHUSETTS

[STENOGRAPHIC REPORT]

Mr. President, Ladies and Gentlemen:

If I had the voice of Niagara, and of all its waters, I could not in the three minutes assigned to me express the welcome of Massachusetts, even tho I could speak ten thousand words a minute.

We are glad to see you within our borders. We hope you will receive pleasure from this coming together, and we hope as the result of your deliberations there will be profit for all mankind.

I welcome you as a phalanx that carries lanterns to bring light into dark places, as an army that carries swords to cut down superstition, and spears to defeat the enemies of the American republic.

I welcome you as men and women engaged in one great organization for the uplifting of humanity. I welcome you as men and women engaged in a calling that takes hold of the future, and thereby makes for immortality. I welcome you to the commonwealth of Massachusetts—to the land where the Puritans lived, who, forgetful of their poverty, built colleges for the expansion of the mind. I welcome you to the rocks that the Pilgrims trod, who, forgetful of the palaces of earth, built more stately mansions for the soul.

I welcome you to the state that has set in the place of honor at the right of the entrance of its capitol a bronze statue of Horace Mann, the educator.

Welcome to the old Bay State! And with this word of welcome take the hand, and with the hand goes the heart.

HON. PATRICK A. COLLINS, MAYOR OF THE CITY OF BOSTON

[STENOGRAPHIC REPORT]

Mr. President, Ladies and Gentlemen of the National Educational Association:

An official word of welcome to Boston is superfluous. Boston has already given you a welcome, louder, stronger, more genuine than any chief magistrate can speak. Indeed, I very much question whether you

need any sort of welcome, for in the freest way that I ever knew men and women to act, you have taken Boston by storm. Whether that was the intention, or whether it was contrived by the committee that prepared the most admirable plan of reception—and is executing it most admirably—or whether it came from your innate belief that Boston was an easy city to capture, it is hard to tell; but Boston is yours today.

Very little has Boston as a corporation been permitted to have as an agency in this reception. Thanks to the great organization that invited you here, thanks to the intelligence, the judgment, the spirit, and the enthusiasm of the gentlemen who have the management, there is very little for official Boston to do except to stand and look on—and admire.

It is common report that nine out of ten delegates to this convention are women. That is the most gratifying intelligence that has reached the city hall in School street since I have been mayor. Not that we are in great need of women in Boston, but we need just your kind of women.

I have noticed tonight, and I think it must have also passed under the observation of everybody on the platform, that Dr. Hale tested whether you, engaged in secular employment and in imparting secular education, have still a grip upon the spiritual. But that was settled when you joined in repeating Our Lord's Prayer.

I need say no more, because an official welcome is entirely unnecessary. One word, however: while you are in Boston if the state authorities, who have some control over the city, don't quite behave themselves to your liking, come down to the city hall, and we will try to rectify that, as we have rectified a good many other things.

HENRY S. PRITCHETT, PRESIDENT OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY, BOSTON

[STENOGRAPHIC REPORT]

Mr. President, Ladies and Gentlemen:

From his excellency, the governor, and from his honor, the mayor, you have already had a most cordial welcome to the hospitality of Massachusetts and of Boston. It remains for me only to tender to you the educational hospitality of the city as well; for just as there is an educational and an intellectual sincerity, a quality of mind which will not admit the idea which rings false, so also is there the intellectual hospitality and mental quality which welcomes cordially the new idea, which gives it an entrance at least to the antechamber of the mind, where it may find warmth, comfort, and shelter.

Boston will not be altogether immodest if she claims some pre-eminence in this intellectual hospitality. For a hundred years in politics, in religion, and, as you have heard so well said, in education, all those facile birds of the air which fly in the intellectual realm have been finding here

a homing place; for they know there is in Boston, for the idea at least, a friendly twig.

On the other hand, your convention represents such an intellectual gathering as no other body in this country can bring together. There is represented here, not only the college, the technical school, and the university, but the high school, the normal school, and the kindergarten. Every reach and every prospect of human study which man may undertake are within the province of those who belong to this organization; and therefore I think that my welcome ought to mean more to you even than that of the governor of the commonwealth or that of the mayor; for, after all, the welcome to the schools and institutions of Massachusetts and of Boston is the heartiest and greatest the state and the city can bring.

You will find here institutions which represent every phase of our educational development. Nowhere else in these United States can you study a college two hundred and fifty years old; and yet in this same community —and when I speak of Boston I mean always that greater Boston which includes some million and a half of people—in this Boston you will find one of the newest colleges, founded to increase the facilities for women to prepare for the practical callings of life.

You will find here in this greater Boston a college in the suburban quiet growing year by year in numbers and strength, and you will find a university also growing year by year in power—a university one of whose alumni has today greeted you as the governor of the commonwealth, and which stands in the very heart and in the midst of the city. You will find the old Boston Latin School, with its long roll of famous names, among them the name of him whose blessing and benediction you have just received, whom Boston loves above any other citizen, and who may well be called the friend of all the world. You will find this old Latin School, and you will find by the side of it the new Mechanics Art School, to represent the new idea in education.

And at all these institutions, whether they be of one kind or another, whether at Harvard or the Boston University, whether at the Institute of Technology or Tufts College, whether at Boston College, Radcliffe, or Simmons College, whether at the high school, the common school, or the kindergarten—to all of you who come to this convention there stands open the door of welcome.

Therefore, in behalf of all these educational institutions, I offer to you, in the most hearty, the most genuine, and the warmest possible spirit, the educational hospitality of greater Boston.

RESPONSES

ALBERT G. LANE, CHAIRMAN OF THE BOARD OF TRUSTEES, CHICAGO, ILL.

[STENOGRAPHIC REPORT]

Mr. President:

The cordial and gracious words of welcome from the governor of the commonwealth of Massachusetts, the mayor of the city of Boston, and the president of the Massachusetts Institute of Technology are gratefully received. On behalf of the members of the National Educational Association, I wish to extend to them, and to the citizens and teachers of this city and vicinity, the thanks of the Association for the successful preparations for this great meeting. Boston and Massachusetts have set standards in education that have been followed by the cities and states of this country, and especially of the great West. I may name as among these standards the first beginnings of the distinctively free-school system; the grading of schools; the establishment of normal schools; the plan of city supervision; of state superintendence; of the enforcement of the rights of children thru compulsory-attendance laws; the establishment of parental schools; the introduction of manual and technical training in education; the beginning of the kindergarten; the study of psychology and its application in teaching; and the strong, cultivating, diffusing, controlling influence of college training.

These questions are still before this country, and with other vital questions need consideration. Earnest, noble men and women thruout this land are studying these questions with reference to the development of the love of truth and of the higher life in the community. Twenty thousand at least of the teachers of this country come to join the thousands of progressive teachers of New England in discussing the questions presented on the program, which has been arranged by Massachusetts' most distinguished educator, the honored president of this Association.

WM. T. HARRIS, U. S. COMMISSIONER OF EDUCATION, WASHINGTON, D. C.

Your Excellency the Governor of the State of Massachusetts, and Your Honor the Mayor of Boston:

In response to the gracious welcome that you have extended to this national association of teachers, supervisors, and directors of education, I return thanks in the name of the nation. Some three hundred thousand educators have sent hither a tenth of their number to represent them on this occasion. More than seventeen millions of school children have been enrolled in the schools, public and private, of the nation during the past

year. The teachers of the middle and western states have mostly descended from ancestors that migrated from New England. They return bringing with them their dear friends, the teachers and superintendents of the south Atlantic and south central states, full of enthusiasm in the great work which they are accomplishing in the schools of their native states.

This Association comes to see the places which have been gilded by the imaginations of your native poets—places wedded by history to immortal deeds and marked by a grateful posterity with fitting and impressive monuments. They will not only visit the memorials of colonial history and of the War of the Revolution, but they will visit the beginnings of great educational movements, the parent of all our colleges and universities, as Ralph Waldo Emerson named Harvard University, which counts over six hundred Colleges and Universities in its progeny. The first public high school in the United States, the Boston Latin School, now counts in the United States over six thousand public high schools in the train of its followers; the first normal school founded in the United States now counts two hundred normal schools as its children; some forty thousand graded-school buildings have for their original model the Quincy schoolhouse built here in 1847, the first structure happily adapted to a large graded school, fitted so as to secure good order without harshness and brutal severity in discipline.

When one wonders at the educational reforms that have had their origin here, and have been gladly adopted from Massachusetts by the remotest cities of the land, he understands on a visit to your people why they were so successful; for they were purified here of their crudeness by a sevenfold heated furnace of intelligent criticism on the part of the advocates of the old order, and they had their dross of imperfection eliminated before they set out on their journey across the continent.

Thru your bountiful provision for us, which has extended even to prodigality, you have made our visit a festival of pleasure and profit both to body and soul never to be forgotten; and not only to our profit, but to the profit of millions of children living in distant states and territories.

ADDRESSES

PRESIDENTIAL ADDRESS

THE NEW DEFINITION OF THE CULTIVATED MAN

CHARLES W. ELIOT, HARVARD UNIVERSITY, PRESIDENT OF THE NATIONAL EDUCATIONAL ASSOCIATION

To produce the cultivated man, or at least the man capable of becoming cultivated in after-life, has long been supposed to be one of the fundamental objects of systematic and thoro education. The ideal of general cultivation has been one of the standards in education. It is often asked: Will the education which a given institution is supplying produce the cultivated man? Or, Can cultivation be the result of a given course of study? In such questions there is an implication that the education which does not produce the cultivated man is a failure, or has been misconceived, or misdirected. Now, if cultivation were an unchanging ideal, the steady use of the conception as a permanent test of educational processes might be justified; but if the cultivated man of today is, or ought to be, a distinctly different creature from the cultivated man of a century ago, the ideal of cultivation cannot be appealed to as a standard without preliminary explanations and interpretations. It is the object of this paper to show that the idea of cultivation in the highly trained human being has undergone substantial changes during the nineteenth century.

I ought to say at once that I propose to use the term "cultivated man" in only its good sense—in Emerson's sense. In this paper, he is not to be a weak, critical, fastidious creature, vain of a little exclusive information or of an uncommon knack in Latin verse or mathematical logic; he is to be a man of quick perceptions, broad sympathies, and wide affinities; responsive, but independent; self-reliant, but deferential; loving truth and candor, but also moderation and proportion; courageous, but gentle; not finished, but perfecting. All authorities agree that true culture is not exclusive, sectarian, or partisan, but the very opposite; that it is not to be attained in solitude, but in society; and that the best atmosphere for culture is that of a school, university, academy, or church where many pursue together the ideals of truth, righteousness, and love.

Here someone may think: This process of cultivation is evidently a long, slow, artificial process; I prefer the genius, the man of native power or skill, the man whose judgment is sound and influence strong, tho he cannot read or write—the born inventor, orator, or poet. So do we all. Men have always reverenced prodigious inborn gifts, and

always will. Indeed, barbarous men always say of the possessors of such gifts: These are not men, they are gods. But we teachers, who carry on a system of popular education which is by far the most complex and valuable invention of the nineteenth century, know that we have to do, not with the highly gifted units, but with the millions who are more or less capable of being cultivated by the long, patient, artificial training called education. For us and our system the genius is no standard, but the cultivated man is. To his stature we and many of our pupils may in time attain.

There are two principal differences between the present ideal of cultivation and that which prevailed at the beginning of the nineteenth century. All thinkers agree that the horizon of the human intellect has widened wonderfully during the past hundred years, and that the scientific method of inquiry, which was known to but very few when the nineteenth century began, has been the means of that widening. This method has become indispensable in all fields of inquiry, including psychology, philanthropy, and religion; and therefore intimate acquaintance with it has become an indispensable element in culture. As Matthew Arnold pointed out more than a generation ago, educated mankind is governed by two passions—one the passion for pure knowledge, the other the passion for being of service or doing good. Now, the passion for pure knowledge is to be gratified only thru the scientific method of inquiry. In Arnold's phrases, the first step for every aspirant to culture is to endeavor to see things as they are, or "to learn, in short, the will of God." The second step is to make that will prevail, each in his own sphere of action and influence. This recognition of science as pure knowledge, and of the scientific method as the universal method of inquiry, is the great addition made by the nineteenth century to the idea of culture. I need not say that within that century what we call science, pure and applied, has transformed the world as the scene of the human drama; and that it is this transformation which has compelled the recognition of natural science as a fundamental necessity in liberal education. The most convinced exponents and advocates of humanism now recognize that science is the "paramount force of the modern as distinguished from the antique and the mediæval spirit,"[1] and that "an interpenetration of humanism with science and of science with humanism is the condition of the highest culture."

A second modification of the earlier idea of cultivation was advocated by Ralph Waldo Emerson more than two generations ago. He taught that the acquisition of some form of manual skill and the practice of some form of manual labor were essential elements of culture. This idea has more and more become accepted in the systematic education of youth; and if we include athletic sports among the desirable forms of manual

[1] JOHN ADDINGTON SYMONDS, *Culture*.

skill and labor, we may say that during the last thirty years this element of excellence of body in the ideal of education has had a rapid, even an exaggerated, development. The idea of some sort of bodily excellence was, to be sure, not absent in the old conception of the cultivated man. The gentleman could ride well, dance gracefully, and fence with skill. But the modern conception of bodily skill as an element in cultivation is more comprehensive, and includes that habitual contact with the external world which Emerson deemed essential to real culture. We have lately become convinced that accurate work with carpenters' tools, or lathe, or hammer and anvil, or violin, or piano, or pencil, or crayon, or camels-hair brush, trains well the same nerves and ganglia with which we do what is ordinarily called thinking. We have also become convinced that some intimate, sympathetic acquaintance with the natural objects of the earth and sky adds greatly to the happiness of life, and that this acquaintance should be begun in childhood and be developed all thru adolescence and maturity. A brook, a hedgerow, or a garden is an inexhaustible teacher of wonder, reverence, and love. The scientists insist today on nature study for children; but we teachers ought long ago to have learned from the poets the value of this element in education. They are the best advocates of nature study. If any here are not convinced of its worth, let them go to Theocritus, Virgil, Wordsworth, Tennyson, or Lowell for the needed demonstration. Let them observe, too, that a great need of modern industrial society is intellectual pleasures, or pleasures which, like music, combine delightful sensations with the gratifications of observation, association, memory, and sympathy. The idea of culture has always included a quick and wide sympathy with men; it should hereafter include sympathy with nature, and particularly with its living forms, a sympathy based on some accurate observation of nature. The bookworm, the monk, the isolated student, has never been the type of the cultivated man. Society has seemed the natural setting for the cultivated person, man or woman; but the present conception of real culture contains not only a large development of this social element, but also an extension of interest and reverence to the animate creation and to those immense forces that set the earthly stage for man and all related beings.

Let us now proceed to examine some of the changes in the idea of culture, or in the available means of culture, which the last hundred years have brought about.

I. The moral sense of the modern world makes character a more important element than it used to be in the ideal of a cultivated man. Now, character is formed, as Goethe said, in the "stream of the world"—not in stillness or isolation, but in the quick-flowing tides of the busy world, the world of nature and the world of mankind. At the end of the nineteenth century the world was wonderfully different from the world at the beginning of that eventful period; and, moreover, men's means of

making acquaintance with the world were vastly ampler than they were a hundred years earlier. To the old idea of culture some knowledge of history was indispensable. Now, history is a representation of the stream of the world, or of some little portion of that stream, one hundred, five hundred, two thousand years ago. Acquaintance with some part of the present stream ought to be more formative of character, and more instructive as regards external nature and the nature of man, than any partial survey of the stream that was flowing centuries ago. We have, then, thru the present means of reporting the stream of the world from day to day, material for culture such as no preceding generation of men has possessed. The cultivated man or woman must use the means which steam and electricity have provided for reporting the play of physical forces and of human volitions which make the world of today; for the world of today supplies in its immense variety a picture of all stages of human progress, from the stone age, thru savagery, barbarism, and mediævalism, to what we now call civilization. The rising generation should think hard, and feel keenly, just where the men and women who constitute the actual human world are thinking and feeling most today. The panorama of today's events is not an accurate or complete picture, for history will supply posterity with much evidence which is hidden from the eyes of contemporaries; but it is nevertheless an invaluable and a new means of developing good judgment, good feeling, and the passion for social service; or, in other words, of securing cultivation. But someone will say: The stream of the world is foul. True in part. The stream is, what it has been, a mixure of foulness and purity, of meanness and majesty; but it has nourished individual virtue and race civilization. Literature and history are a similar mixture, and yet are the traditional means of culture. Are not the Greek tragedies means of culture? Yet they are full of incest, murder, and human sacrifices to lustful and revengeful gods.

II. A cultivated man should express himself by tongue or pen with some accuracy and elegance; therefore linguistic training has had great importance in the idea of cultivation. The conditions of the educated world have, however, changed so profoundly since the revival of learning in Italy that our inherited ideas concerning training in language and literature have required large modifications. In the year 1400 it might have been said with truth that there was but one language of scholars, the Latin, and but two great literatures, the Hebrew and the Greek. Since that time, however, other great literatures have arisen, the Italian, Spanish, French, German, and above all the English, which has become incomparably the most extensive and various and the noblest of literatures. Under these circumstances it is impossible to maintain that a knowledge of any particular literature is indispensable to culture. Yet we cannot but feel that the cultivated man ought to possess a considerable acquaintance with

the literature of some great language, and the power to use the native language in a pure and interesting way. Thus, we are not sure that Robert Burns could be properly described as a cultivated man, moving poet tho he was. We do not think of Abraham Lincoln as a cultivated man, master of English speech and writing tho he was. These men do not correspond to the type represented by the word "cultivated," but belong in the class of geniuses. When we ask ourselves why a knowledge of literature seems indispensable to the ordinary idea of cultivation, we find no answer except this, that in literature are portrayed all human passions, desires, and aspirations, and that acquaintance with these human feelings, and with the means of portraying them, seems to us essential to culture. These human qualities and powers are also the commonest ground of interesting human intercourse, and therefore literary knowledge exalts the quality and enhances the enjoyment of human intercourse. It is in conversation that cultivation tells as much as anywhere, and this rapid exchange of thoughts is by far the commonest manifestation of its power. Combine the knowledge of literature with knowledge of the "stream of the world," and you have united two large sources of the influence of the cultivated person. The linguistic and literary element in cultivation therefore abides, but has become vastly broader than formerly; so broad, indeed, that selection among its various fields is forced upon every educated youth.

III. The next great element in cultivation to which I ask your attention is acquaintance with some part of the store of knowledge which humanity in its progress from barbarism has acquired and laid up. This is the prodigious store of recorded, rationalized, and systematized discoveries, experiences, and ideas. This is the store which we teachers try to pass on to the rising generation. The capacity to assimilate this store and improve it in each successive generation is the distinction of the human race over other animals. It is too vast for any man to master, tho he had a hundred lives instead of one; and its growth in the nineteenth century was greater than in all the thirty preceding centuries put together. In the eighteenth century a diligent student, with quick powers of apprehension and strong memory, need not have despaired of mastering a large fraction of this store of knowledge. Long before the end of the nineteenth century such a task had become impossible. Culture, therefore, can no longer imply a knowledge of everything—not even a little knowledge of everything. It must be content with general knowledge of some things, and a real mastery of some small portion of the human store. Here is a profound modification of the idea of cultivation which the nineteenth century has brought about. What portion or portions of the infinite human store are most proper to the cultivated man? The answer must be: Those which enable him, with his individual personal qualities, to deal best and sympathize most with nature and with other human

beings. It is here that the passion for service must fuse with the passion for knowledge. It is natural to imagine that the young man who has acquainted himself with economics, the science of government, sociology, and the history of civilization in its motives, objects, and methods, has a better chance of fusing the passion for knowledge with the passion for doing good than the man whose passion for pure knowledge leads him to the study of chemical or physical phenomena, or of the habits and climatic distribution of plants or animals. Yet, so intricate are the relations of human beings to the animate and inanimate creation that it is impossible to foresee with what realms of nature intense human interests may prove to be identified. Thus the generation now on the stage has suddenly learned that some of the most sensitive and exquisite human interests, such as health or disease and life or death for those we love, are bound up with the life-histories of parasites on the blood corpuscles or of certain varieties of mosquitoes and ticks. When the spectra of the sun, stars, and other lights began to be studied, there was not the slightest anticipation that a cure for one of the most horrible diseases to which mankind is liable might be found in the X-rays. While, then, we can still see that certain subjects afford more obvious or frequent access to means of doing good and to fortunate intercourse with our fellows than other subjects, we have learned from nineteenth-century experience that there is no field of real knowledge which may not suddenly prove contributory in a high degree to human happiness and the progress of civilization, and therefore acceptable as a worthy element in the truest culture.

IV. The only other element in cultivation which time will permit me to treat is the training of the constructive imagination. The imagination is the greatest of human powers, no matter in what field it works—in art or literature, in mechanical invention, in science, government, commerce, or religion; and the training of the imagination is, therefore, far the most important part of education. I use the term "constructive imagination" because that implies the creation or building of a new thing. The sculptor, for example, imagines or conceives the perfect form of a child ten years of age. He has never seen such a thing, for a child perfect in form is never produced; he has only seen in different children the elements of perfection, here one element and there another. In his imagination he combines these elements of the perfect form, which he has only seen separated, and from this picture in his mind he carves the stone, and in the execution invariably loses his ideal—that is, falls short of it, or fails to express it. Sir Joshua Reynolds points out that the painter can picture only what he has somewhere seen; but that the more he has seen and noted, the surer he is to be original in his painting, because his imaginary combinations will be original. Constructive imagination is the great power of the poet as well as of the artist; and the nineteenth century has convinced us that it is also the great power of the

man of science, the investigator, and the natural philosopher. What gives every great naturalist or physicist his epoch-making results is precisely the imaginative power by which he deduces from masses of fact the guiding hypothesis or principle.

The educated world needs to recognize the new varieties of constructive imagination. Dante gave painful years to picturing on many pages of his immortal comedy of hell, purgatory, and paradise the most horrible monsters and tortures, and the most loathsome and noisome abominations, that his fervid imagination could concoct out of his own bitter experiences and the manners and customs of his cruel times. Sir Charles Lyell spent many laborious years in searching for and putting together the scattered evidences that the geological processes by which the crust of the earth has been made ready for the use of man have been, in the main, not catastrophic, but gradual and gentle; and that the forces which have been in action thru past ages are, for the most part, similar to those we may see today eroding hills, cutting cañons, making placers, marshes, and meadows, and forming prairies and ocean floors. He first imagined, and then demonstrated, that the geologic agencies are not explosive and cataclysmal, but steady and patient. These two kinds of imagination—Dante's and Lyell's—are not comparable, but both are manifestations of great human power. Zola in *La Bête humaine* contrives that ten persons, all connected with the railroad from Paris to Havre, shall be either murderers or murdered, or both, within eighteen months; and he adds two railroad slaughters criminally procured. The conditions of time and place are ingeniously imagined, and no detail is omitted which can heighten the effect of this homicidal fiction. Contrast this kind of constructive imagination with the kind which conceived the great wells sunk in the solid rock below Niagara that contain the turbines, that drive the dynamos, that generate the electric force that turns thousands of wheels and lights thousands of lamps over hundreds of square miles of adjoining territory; or with the kind which conceives the sending of human thoughts across three thousand miles of stormy sea instantaneously on nothing more substantial than ethereal waves. There is no crime, cruelty, or lust about these last two sorts of imagining. No lurid fire of hell or human passion illumines their scenes. They are calm, accurate, just, and responsible; and nothing but beneficence and increased human well-being results from them. There is going to be room in the hearts of twentieth-century men for a high admiration of these kinds of imagination, as well as for that of the poet, artist, or dramatist.

Another kind of imagination deserves a moment's consideration—the receptive imagination which entertains and holds fast the visions genius creates or the analogies of nature suggest. A young woman is absorbed for hours in conning the squalid scenes and situations thru which Thackeray portrays the malign motives and unclean soul of Becky

Sharp. Another young woman watches for days the pairing, nesting, brooding, and foraging of two robins that have established home and family in the notch of a maple near her window. She notes the unselfish labors of the father and mother for each other and for their little ones, and weaves into the simple drama all sorts of protective instincts and human affections. Here are two employments for the receptive imagination. Shall systematic education compel the first, but make no room for the second? The increasing attention to nature study suggests the hope that the imaginative study of human ills and woes is not to be allowed to exclude the imaginative study of nature, and that both studies may count toward culture.

It is one lesson of the nineteenth century, then, that in every field of human knowledge the constructive imagination finds play—in literature, in history, in theology, in anthropology, and in the whole field of physical and biological research. That great century has taught us that, on the whole, the scientific imagination is quite as productive for human service as the literary or poetic imagination. The imagination of Darwin or Pasteur, for example, is as high and productive a form of imagination as that of Dante, or Goethe, or even Shakespeare, if we regard the human uses which result from the exercise of imaginative powers, and mean by human uses not merely meat and drink, clothes and shelter, but also the satisfaction of mental and spiritual needs. We must, therefore, allow in our contemplation of the cultivated man a large expansion of the fields in which the cultivated imagination may be exercised. We must extend our training of the imagination beyond literature and the fine arts, to history, philosophy, science, government, and sociology. We must recognize the prodigious variety of fruits of the imagination that the nineteenth century has given to our race.

It results from this brief survey that the elements and means of cultivation are much more numerous than they used to be; so that it is not wise to say of any one acquisition or faculty: With it cultivation becomes possible; without it, impossible. The one acquisition or faculty may be immense, and yet cultivation may not have been attained. Thus, it is obvious that a man may have a wide acquaintance with music, and possess great musical skill and that wonderful imaginative power which conceives delicious melodies and harmonies for the delight of mankind thru centuries, and yet not be a cultivated man in the ordinary acceptation of the words. We have met artists who were rude and uncouth, yet possessed a high degree of technical skill and strong powers of imagination. We have seen philanthropists and statesmen whose minds have played on great causes and great affairs, and yet who lacked a correct use of their native language, and had no historical perspective or background of historical knowledge. On the other hand, is there any single acquisition or faculty which is essential to culture, except, indeed, a reasonably accurate

and refined use of the mother-tongue? Again, tho we can discern in different individuals different elements of the perfect type of cultivated man, we seldom find combined in any human being all the elements of the type. Here, as in painting or sculpture, we make up our ideal from traits picked out from many imperfect individuals and put together. We must not, therefore, expect systematic education to produce multitudes of highly cultivated and symmetrically developed persons; the multitudinous product will always be imperfect, just as there are no perfect trees, animals, flowers, or crystals.

It has been my object this evening to point out that our conception of the type of cultivated man has been greatly enlarged, and on the whole exalted, by observation of the experiences of mankind during the last hundred years. Let us as teachers accept no single element or kind of culture as the one essential; let us remember that the best fruits of real culture are an open mind, broad sympathies, and respect for all the diverse achievements of the human intellect at whatever stage of development they may actually be—the stage of fresh discovery, or bold exploration, or complete conquest. Let us remember that the moral elements of the new education are individual choice of studies and career among a great, new variety of studies and careers, early responsibility accompanying this freedom of choice, love of truth now that truth may be directly sought thru rational inquiry, and an omnipresent sense of social obligation. These moral elements are so strong that the new forms of culture are likely to prove themselves quite as productive of morality, high-mindedness, and idealism as the old.

THE PRESENT PERIL TO LIBERAL EDUCATION

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The cause of liberal education, like the cause of political liberty, is always worth preserving and always in peril. In such causes, if anywhere, men need to be ever resolute as well as intelligent; for only thus does it become possible, even when distressed, to face grave crises without becoming for an instant pessimistic, inasmuch as the priceless value of what we are seeking to defend assures us that our efforts are well worth making, and that no effort is too great in maintaining so good a cause.

We have such a cause today, the cause of liberal education. I need not argue in this presence that, as it prevails, our American life is lifted, and that, as it fails, our American life is degraded. It is today, as ever, in peril, but in unusual peril as embodied in its noblest representative, the American college.

Let us picture the situation in its worst possible outcome. Suppose the chances are that the college is to fail, to be crushed out between the upper and nether millstones of professional and secondary schools by reason of the violent demand for something more "practical." What then? If it must go, it must go, of course. But ought it to go? And above all, ought it to go without a struggle? Those who know most about colleges think not, while those who know least about them—and they form a huge majority—are often indifferent and sometimes hostile. Scarcely one in a hundred of your young men of college age has gone to college. They, at least, are with the college, and so is the rest of the better intelligence of the land. But educated intelligence does not always prevail over ignorance, even in deciding matters of education. One can hardly fail, when painting the danger at its blackest, to recall the great words of Stein, when appealing to his fellow-Prussians in the Napoleonic wars: "We must look the possibility of failure firmly in the face, and consider well . . . . that this contest is begun less in regard to the probability of success than to the certainty that without it destruction is not to be avoided."

It is by no means as black as that, nor does it seem likely to become so. But even if the peril were far greater than it is, there would be no good reason why we should not continue the struggle. There is good reason to believe that the forces with us are strong enough not only to save but to strengthen, the American college, and that, when once its real value is brought home anew to the minds and consciences of men, it will assert its rights with ample power.

Let us think for a moment of what the American college is. It has been evolved out of our own needs and has proved its extraordinary usefulness by a long record. It has been democratic in its freedom of access aud in the prevailing tone of its life. It has furnished our society and state with a small army of well-trained men. In it supremely are centered our best hopes for liberal education, both as focused in the college itself and as radiating outward on the secondary schools below and the professional schools above. It is the best available safeguard against the mechanical cramping of an unliberalized technical education. It is our one available center of organization for true universities. It has produced a class of men unequaled in beneficent influence by any other class of equal numbers in our history.

In the rush of American life it has stood us the quiet and convincing teacher of higher things. It has been preparing young men for a better career in the world by withdrawing them a while from the world to cultivate their minds and hearts by contact with things intellectual and spiritual, in a society devoted to those invisible things on which the abiding greatness of our life depends. By reason of this training most college men have become better than they would have been, and better in important respects than they could have been, had they not gone to college. Their

vision has been cleared and widened, and their aims have been elevated. Not least of all, they have been taught incessantly the lesson, so deeply needed to steady them in our fiercely practical surroundings, that the making of a good living is not so important as the making of a good life. The college has proved its right to live. To preserve, maintain, and energize it to its highest capacity for good, to prune its excesses, strengthen its weak places, and supply its needs, is therefore the bounden duty of those who care for the best interests of our nation.

The perils which beset it come from various sources: first, from the common defects of our American civilization; second, from the weaker tendencies in young men; and, third, from the confusion of counsels inside the college itself. The first two we must be prepared to encounter always, but the last one ought to be avoidable.

This is no place to draw up a catalog of our common defects as a people. Our virtues we know well. They are self-reliance, quick ingenuity, adventurousness, and a buoyant optimism. Our national faults are not so pleasant to think of — as, for example, the faults of boastful vulgarity and reckless excitability. Yet there are some that must be mentioned as being especially perilous to our college education. The chief one, I think, is commercialism — the feverish pursuit of what "pays" as the one end of life. Are we not subjected today, as never before, to demands for teaching the things of commerce as part of the college course? And are not the mechanical arts and crafts, admirable indeed in their true uses, trying to mix in with the other things, as tho they were of the same family of studies, and saying they must have room in the same house, even if other members of the family are pushed out? Are not technical studies being called liberal, and is not even the technique of the professions sometimes labeled liberal also, on the plea that all knowledge is liberalizing? So it is, but in what differing degrees and senses! The instinct for the useful is being perverted and exalted above the love of knowledge as a chief end. And why? Because what is wanted is something immediately, obviously, almost mercenarily useful. Is it not time we read again the books of philosophy to learn again that the true utility is the long utility which serves to make a whole life useful, and that it is the end for which men live that makes them useful and useless? Do we not feel that we are here coming close to the sanctions of religion, and need to answer that deep question, "What shall it profit a man?" once more?

Another peril is a companion and natural follower of commercialism, namely, illiteracy; not in the meaning of that word in the census tables, but in the meaning of ignorance of good literature. "No man can serve books and Mammon," said Richard de Bury long ago. Is it not a fact that the majority of college students today are not familiar with the commonplaces of literary information and the standard books of history, poetry, and so on? Do they know that greatest book of our tongue, the English Bible, as their

fathers did? What have so many of them been reading? The newspapers, of course, and fiction — not always the better fiction. As between books and the short stories in magazines, how few read the former! I am not now speaking of the handbooks of philosophy and science, or generally of the books that involve severe thought, but of the readable, delightful books, the pleasant classics of English. What a confession of the state of things it is that colleges have to make the reading of a few books of English literature a set task as an entrance requirement, and then ask formal questions on what ought to be the free and eager reading of every boy at home! How far it is true that the advocacy of teaching science may have operated, not to beget a taste for science, but merely a neglect of literature, is perhaps idle to ask. It is at least true that these neglecters of literature are not usually giving laborious hours to reading scientific works. Perhaps some day our schools generally will get "Readers" that have literature in them, and that will help matters a little. But the so-called students who do not care to read, or do not know how to read as all students should, are with us in abundance as an ever-present peril. The quiet book by the quiet lamp is a good charmer. Here the true student forms his friendships with the masters of thought and fancy; here they speak to him, not under the constraints of the class-room; here he may relax without weakness, adventure without limit, soar without fear, and hope without end. It is the old story. Books are, as Huxley put it, "his main helpers," and the free reading outside the set tasks is, perhaps next to music, his most ennobling pleasure. The loss of this is today the thing that does so much to deprive our college life and conversation of the fine flavor of that much misunderstood thing, Culture.

Another peril comes from the students themselves. It is a disposition to do the pleasant rather than the hard thing, even when the hard thing happens to be the best thing. This is most common among those whose main interest in college life is social. It is also fostered by the general absorption in athletics, tho it is not so much the athletes who are affected — for they are at least used to a vigorous discipline in things physical — as it is the mass of onlookers who attend the games and waste so much time discussing them. This social and athletic environment — with all its undeniable and, I believe, indispensable good — is just now doing much harm to the intellectual life of students. Because it is unduly exaggerated, it is operating powerfully to disperse the student's energies in a miscellany of things outside his studies. Things which should come second, as the relaxation of those whose first business is study, often come first, and studies must get what they can of what is left. How natural it is that such students should crowd into the easier courses! They have little interest left for anything intellectual. So far as this occurs, liberal education dies, and college students come to their manhood with men's bodies and boys' minds. What is being lost is

the development of virile intellectual power, a thing which simply cannot grow without exercise.

This is a matter which goes far below the question of one or another plan of studies, tho it is greatly affected by the relative wisdom or unwisdom of what the student is offered. If he finds a course which impels him and his comrades to regular effort day by day, and also gives him the immense help that comes to all young men of ordinary abilities from moving together with their fellows in the same direction, his progress in studies is part of the orderly advance of a march, with little chance for straggling or loitering. If he is confused by failure to discover that there is a rational order of studies, or that his college believes there is at least some preferable order for the mass of students, he thus loses much or all of a kind of help he ought to have. If the educated experience of his college cannot tell him, at least approximately, what things he ought to take, and some definite things which all college students ought to take, how is he to find out with any strong probability that he is going straight on the right road? Those who are ready to move an indefinite distance along any of the diverging directions of elective freedom may well pause to ask whether the keen words of Descartes on progress in knowledge are not worth heeding in this connection: "It is better to go a short distance on the right road than a long distance on the wrong one."

The love of freedom from control and of pleasure in our labor are splendid things. They are at once the charm and peril of student effort. The true freedom of the human spirit is the true end of the college course. This is not injured, however, by creating places where students may go, if they will, and where they must take some subjects of study which experience shows to be eminently fitted in their combination to serve this very end. We are asking simply for some of the central truths of literature, science, and philosophy, what Locke called the "teeming truths, rich in store, with which they furnish the mind, and, like the lights of heaven, are not only beautiful and entertaining in themselves, but give light and evidence to other things that without them could not be seen or known."[1] And as for the element of pleasure, why should we not desire it? How exquisitely did Aristotle say: "Pleasure perfects labor, even as beauty crowns youth."[2] Not the idle pleasure, however, but the achieved pleasure, the deep pleasure that comes from noble mastery, from winning on the hard-fought field of athletics of the mind, and, above all, from winning in the fight against intellectual sloth and easy-going indulgence—this is the crown of our best young college manhood.

A few words must suffice to set forth another peril which especially besets us at this time. It is the peril of confusion in college counsels. It

[1] *Of the Conduct of the Human Understanding*, 43. [2] *Ethics*, X, 4, 8.

has been inevitable because of the extreme diversity of educational conditions in our land and because of conflicting theories of college training.

The pole of law and the pole of freedom are the two contrasted standpoints, with many a halting-place between. It is clear that any attempt to cast all our colleges in one mold is foredoomed to failure. We must seek some other remedy. But if the present confusion cannot be cured, the colleges will be seriously and permanently weakened. Here at least we must do something, and do it soon. The colleges must at all events do one thing, and that is to make as clear as possible what it is they are severally seeking to accomplish. Certain very practical questions need to be answered. They are questions of the substance and aim of liberal education.

One of the questions is: Should a college exact a substantial amount of prescribed study for its degree? If so, there is room to organize one or more bachelor's degrees according to the types now slowly, tho imperfectly, evolving in our time. If not, the free elective plan with one bachelor's degree is the true alternative. There are many halting-places between, but none of them is a resting-place. Here, then, is a basis of clear division without confusion, and one that plain folk can understand. The nature of the answer given will depend on whether or not a given college believes that there are substantial studies above the stage of our preparatory schooling which are essential to the best liberal education. Intermediate or minimizing positions on this question will result in corresponding vagueness and uncertainty in organization, and will tend to perpetuate the confusion. It is worth sacrificing something, even in a transitional stage, for the sake of the assured gain that accrues to a well-defined plan. If it turns out to be a wrong plan, its defects become visible sooner and may be more promptly amended.

Let us ask a second question: Is there or is there not a proper field of college studies, exclusive of the fields of secondary, technical, and professional learning? If so, such studies alone should constitute the college course. If not, studies from the other fields may be brought in. It will not do to say no sharp line can be drawn between fields of education for the reason that the domain of knowledge is one and all knowledge is liberalizing. Follow this out consistently, and important distinctions, needed to effect a working scheme of division for the parts of education, are obscured. We may distinguish between great regions, even tho we are unable to settle all boundary disputes. There are enough college studies of undisputedly and eminently liberal character to fill the college course to repletion. Let those who believe this organize accordingly, and let those who believe that any respectable study possible to students of college age may be put in the college course put such studies in. The two kinds of colleges will then be distinctly discernible.

If the college is to prevail, the confusion, tho not necessarily a division of counsels, must cease. The two opposing tendencies indicate the two available lines for at least making the division clear to the country at large. Intermediate positions are unstable and transitional. They make confusion. What parents, teachers, and students need to know as definitely as possible is precisely what it is a given college stands for. Uncertainty here breeds loss of confidence in liberal education. It is to be hoped that most of the colleges will be able to stand together. If they do, I hope and believe they will stand for the conviction that there are college studies essential for all who take the college course; that it is the completion of these which opens to the student the best all-around view of the knowledge most serviceable for his whole after-life; and that the ideas of discipline and duty, in studies as well as in conduct, underlie any real development of the one true freedom of the human spirit.

THE OPPORTUNITY AND FUNCTION OF THE SECONDARY SCHOOL

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The curriculum of the secondary school must be broadened. The demand for it comes from new constituencies with increasing emphasis every year. Secondary education is rapidly becoming universal, and its form and content must take into account new fields of activity for educated people. The curriculum must adapt itself to modern requirements. It must touch modern life, modern conditions, modern forces, modern responsibilities. As Huxley expressed it, "It is folly to continue, in this age full of modern artillery, to train our boys to do battle in it equipped only with the sword and shield of the ancient gladiator." Sir Lyon Playfair changed the figure in protesting against the English system of secondary education, as follows: "In a scientific age and in an industrial section, an exclusive education in the dead languages is a curious anomaly. The flowers of literature should indeed be cultivated, but it is not wise to send men into our fields of industry to reap the harvest, when they have been taught to pick the poppies and push aside the wheat."

When the wide-awake, inquisitive boy knows that electricity, and steam, and heat, and the art of designing and constructing machines, can be studied and understood with no more effort and in less time than it takes to commit to memory a Latin grammar, or to read Demosthenes without a dictionary, and that those former things are ten times as interesting as the latter, and a hundred times as likely to be of service to him in the struggle for life and the battle for success—he will choose them, if he has a chance. And it is our business to give him a chance.

We want living languages and living issues. We must teach the duties of an American citizen rather than the manner of life of a slave-owner in Athens or Babylon; not merely what may be the solace and delight of a man of leisure, but what will increase his value and use in practical affairs. We must teach the mechanics, hydraulics, electricity, and chemistry of today, rather than the doctrines and fallacies of Aristotle and the alchemists. We must illustrate and explain the battle of Santiago, rather than the battle of Salamis. It is a thousand times more interesting and more useful to the average boy to know how modern engineers tunneled under the Alps, than to read the fabulous stories of how Hannibal made a road over them; to know how Eads built a railway bridge across the Mississippi, than to decipher Cæsar's foot-bridge over the Rhine; to analyze and comprehend the waterworks of Boston, St. Louis, or London, than the hydraulic system of ancient Rome, marvelous as it was; to master the universal language of drawing, than to get a smattering of a language which no one speaks and no one writes; to become familiar with modern methods of construction and the skillful use of tools and machinery, than to speculate over the tower of Babel or the pyramids of Egypt. As Emerson said, we must take the step from knowing to doing, and we must teach the rising generation to do the things that the world today wants done.

Here is the magnificent opportunity for the secondary school; to use a military phrase, let it change front and face the world of today. Let it open all its doors and windows to the humanities of today. Look around and look forward, not always backward. Weep not, as Ruskin did, for departed days, for the lumbering stagecoach, the storm-driven wooden ships, the hand-loom, the log-hut, and the good old days of blissful feudalism. I am amazed when I think how much we are spellbound by tradition. Perhaps I have been as foot-loose as any of you, yet I find myself continually approving of educational features for no good reason except that they are fashionable. We somehow seem to think it means far more and is in far better form to know that certain nymphs gave a Greek hero a helmet which Vulcan made for Pluto, and which rendered him invisible, than to know that Thomas A. Edison invented the incandescent lamp and made it possible for Niagara Falls to light a whole city with it, twenty-five miles away; and yet we don't believe one word of the former story, while we accept every word of the latter.

It is, of course, a matter of association. Sir Lecester Deadlock, in *Bleak House*, could not endure a man who experimented with a steam engine and who seemed quite at home with a coal-burning furnace. He drew inferences as you and I do. Sir Leoester inferred that the man who understood engines and power-houses must be ignorant of polite learning and unfamiliar with the ways of good society. So you jump to the conclusion that the man who knows all about Edison and the generation of

electricity by a waterfall is probably ignorant of Greek mythology and not very proficient in spelling.

Well, perhaps you are right and perhaps you are wrong. But this is certain: it is no longer safe to assume that your engineer or your electrician is an uneducated man, or that he lacks culture. There is more than one kind of culture. Emerson speaks of "having a mechanical craft for culture." By "culture" I mean a knowledge of some of the best things that have been said and done in the world; a certain refined and gracious spirit; a soul of honor; a depth of human sympathy; a wise and understanding heart; an all-pervading love for what is useful and true, and therefore good and beautiful. That kind of culture can be gained with or without much ancient literature; with or without much mathematics; with or without the physical, biological, or dynamic laboratory; with or without the art-room or the drafting-room; with or without the theory of typical tools and correct methods of construction. But there is no necessary divorce between the skilled hand and the cultured mind; both are needed for the highest culture.

President Woodrow Wilson says that the colleges are not planned for the majority; they are for the minority. When we consider colleges of the Princeton type, we must admit that he is right. They are not for the majority. So of the classical secondary school; it is not for the majority, and the majority know it and feel it.

I am not pleading tonight for the minority who are already in our secondary and higher schools. I am pleading for that vast majority who are not in them, who need and desire education, and who are coming in increasing numbers. The program which the majority want is fairly well known. It is in force in many cities; it is embodied in the manual-training high school; and it has been met with a hearty response. I need not quote St. Louis to prove this. The Manual-Training High School of Kansas City has doubled the high-school attendance of the city in six years. Similar results have been reached in other cities. The technical college or school of engineering logically follows this new kind of high school. It takes equal rank with the traditional college, and it will soon outstrip it in attendance.

When Hawthorne got thru college he wrote to his mother: "I cannot become a physician and live by men's diseases; I cannot be a lawyer and live by their quarrels; I cannot be a clergyman and live by their sins. I suppose there is nothing for me to do but write books."

Now, the majority who are coming will inherit no wealth; they expect and desire to earn their own living. We do not need them as lawyers, or ministers, or doctors; we hope they won't all write books; but we do need them as teachers, as engineers, as accomplished workmen in our industries and in our unhistorical methods of trade and commerce. Let us persuade them that education and skill dignify and adorn and enrich

every occupation ; that the legitimate fruit of a combination of literary and scientific culture and technical skill in dealing with materials and forces will be a generation of stronger, abler, and more successful men in industrial, commercial, and political life.

Let us begin, if you please, by training a part of this majority in the principles underlying crafts, rather than induce them to feel that they are superior to all crafts, and so be unwilling to be put to any.

Let us avoid the serious mistake of educating the majority as tho they were a privileged minority. Let us accept once and for all the doctrine that any occupation may be ennobled, enriched, and dignified by education, training, and skill ; that there is a score of new professions requiring a high order of intellect, and the close and continued study of subjects as difficult and as profound as are the branches which lead up to the so-called learned professions.

The educated and highly accomplished architect or engineer is a learned man, and he stands second to none in the forum and in the arena of activity today. There is a great and an increasing demand for such men in every city in the land. I have been training engineers for nearly half a century, and I know how inadequate the supply is. The other day I was told that there were twelve hundred educated engineers in Pittsburg, and the demand was continually for more. The number of students in the technical schools — that is, the schools for applied science in the various branches of engineering and architecture — ought to be as numerous as in colleges for letters and pure science; and they will be as numerous when the secondary schools recognize the majority as they now do the minority.

What has been done in Philadelphia, Kansas City, and in some other cities, and what is now being done in St. Louis, ought to be done in every city that can maintain a high school ; viz., offer facilities for a secondary education looking toward industrial occupations and technical professions equal at least to those offered for students looking forward to clerical or mercantile occupations and the traditional professions.

Are you doubtful about the intellectual, moral, and social standing of the graduates of schools which incorporate a thoro course of manual training, including practical drafting, with a modest academic course ? If so, it will be of value if I give you the record of the graduates of a high-grade manual-training school, which has been in existence twenty-three years and has graduated 960 men in twenty classes. I refer to the school connected with Washington University in St. Louis.

Before I read the list, please bear in mind that the school does not aim to produce mechanics. Not every boy is fit to be, or has the ability to be, a good mechanic. Many graduates who started life as mechanics have pushed along, and have been called up higher, to greater responsibilities and to larger rewards. At the start we do not pretend to know what a boy is by nature best fitted for, nor what opportunities his environment

will offer. We attach no value to the whims and fancies of a fourteen-year-old boy, and very little to the ambitious hopes of parents. When a boy stands four-square on a broad foundation-training at the age of seventeen or eighteen, he is pretty sure to build aright.

OCCUPATIONS OF THE GRADUATES OF THE MANUAL-TRAINING SCHOOL OF WASHINGTON UNIVERSITY, ST. LOUIS[1]

Agriculture and stock-raising	14	Mechanics	14
Architects	24	Merchants and manufacturers	90
Artists	4	Ministers	1
Bankers	7	Physicians	22
Bookkeepers, general assistants, and clerks	153	Real-estate men	18
Cashiers	5	Reporters	2
Chemists	9	Salesmen and agents	41
Contractors	2	Students in higher schools	75
Dentists	4	Superintendents of manufactories	44
Draftsmen	100	Teachers	39
Electricians	19	Technical engineers	65
Fieldmen	4	U. S. navy engineers	4
Foremen	3	Miscellaneous	15
General managers	32	Unknown	56
Insurance men	9	No. of graduates who have entered elsewhere upon higher education of some sort and have already taken degrees	159
Lawyers	30		
Librarian	1		

This outcome suggests an important function of a secondary school which I have not seen clearly stated. The secondary school should enable a boy to discover the world and to find himself. I use the word "discover" in the sense of *uncover* — that is, *lay bare* — the problems, the demands, the opportunities, the possibilities of the eternal world. A boy finds himself when he has taken a correct inventory of his inherited and acquired tastes and capacities.

If the secondary school shall do those two things, it will do what generally has never been done at all. This cannot be done with a single curriculum along any line. All your windows and doors must be open. This is a superb function of the secondary school, and every pupil should stay in school till he has secured the benefit of it. Nothing in education can outweigh the importance of these two discoveries: the external world and oneself. The elementary school comes too early, and the college and real life come too late. The secondary school is the place for discovery and intelligent choice.

When the whole boy has been put to school three or four years in a secondary school, he finds out what his strong points are, if he has any; and he works into the occupation where he is most likely to achieve success. In point of fact, the round plug gets into the round hole, and the

[1] Forty-five have died, so that, counting the class of last month, whose occupations are largely "unknown," there are 915 on the list, many only boys still.

square plug gets into the square hole, with an infinite sense of compatibility pervading both plugs and holes.

While I plead for the neglected majority and point out the glorious opportunity of the secondary school, I must speak a word for the benefit of the minority.

The great mass of American teachers has as yet no adequate conception of the fine invigorating effect of a correct system of manual training upon the mind and character of a healthy, normal boy. I do not refer to manual training falsely so called; to the wishy-washy tinkering with tools and materials, where the child is the victim of his own whims, and of his teacher's ignorance; where, under the pretense of developing originality, initiative, altruism, or concrete expression, the child is prematurely misled, misdirected, and mistreated, until the possibility of well-timed and well-regulated manual training is utterly lost. I regret that I must speak so strongly of a tendency utterly to emasculate manual training by a method of treatment which would be instantly condemned if applied to any other branch of study. We must, I suppose, excuse a great deal of sentimentalism and extravagance on the ground that the most recent converts are apt to be unbalanced by excess of zeal.

Manual training furnishes many of the elements of culture and discipline which are lacking in the ordinary secondary course of study. Contact with the concrete; clear concepts of materials, forces, and instrumentalities; exact knowledge of mechanical processes; analyses of complex operations; the idea of precision; habits of system, of foresight, and of intellectual honesty—these mental, moral, and physical elements are invaluable; and it is not strange that President Eliot said: "Manual training not only trains the eye and hand, but develops the habit of accuracy and thoroness in any kind of work. It develops the mental faculties of some boys better than books do." Professor James, of Harvard, says that "the most colossal improvement which recent years have seen in secondary education lies in the introduction of manual training." And Dr. Stanley Hall says: "No kind of education so demonstrably develops brain as hand-training."

The minority should have a chance at this improvement and enjoy these benefits most assuredly. So here is another splendid opportunity for the secondary school.

MANUAL, TRADE, AND TECHNICAL EDUCATION

THOMAS M. BALLIET, SUPERINTENDENT OF SCHOOLS, SPRINGFIELD, MASS.

Civilization rests at the present time far more than at any previous period upon an economic basis. The life and progress of nations are dependent on industry and commerce rather than, as formerly, on agri-

culture; and in the struggle for national supremacy these make for survival. There is a natural limit to the consumption of food products, but the demand for the products of manufacture, of industry, and of industrial art which minister to our comfort, our pleasure, and our higher needs is limited only by our means. With the rapid increase in wealth, the world's market for these products has in recent years become enormously enlarged; and the great nations of the earth are struggling in fierce, if bloodless, combat for the possession of it. In this contest for industrial and commercial supremacy, next to natural resources, the chief determining factor is industrial and commercial efficiency. The conflicts between nations are no longer religious, as they were in the seventeenth century, nor political, as they were in the eighteenth; but they have become economic; and economic strength has shifted from agriculture to manufacturing and commerce. Hence it comes to pass that the leading modern nations are rapidly becoming transformed from agricultural to manufacturing nations. This transformation in the case of England has been in progress for over a hundred years, and is well-nigh complete; while in Russia it has but scarcely begun, in Germany, Japan, and the United States it has made immense progress within a generation.

This radical economic change has created a new environment, to which nations and individuals must adjust themselves; and, as the adjustment has not kept pace with the changes, we are confronted with the problem of how to further this adjustment so as to increase both national and individual efficiency.

It is the function of education to fit for life; to make the individual intellectually, socially, morally, and industrially efficient; to adjust him to his environment. A change so revolutionary as the one described demands, accordingly, a radical change in the organization of schools as well as in the curriculum and the methods of teaching. It demands that, while the school must above all else aim to develop men and women, it must not stop with that; it must also train them to do with skill and effectiveness some form of work which has economic and commercial value in this complex environment, dominated by industry and commerce, in which they must live. The general development of mind and character, while it must always remain the chief aim of education, can no longer remain its sole aim; the schools must produce, not merely a good man, but a good man who is good for something — good for some specific thing. Economic efficiency as well as quality of mind and character must be made a test of education. This is a form of utilitarianism in education which is not only not antagonistic to the highest idealism, but which reinforces idealism by giving it specific content and an ethical quality which connects it closely with life. The idealism which should dominate modern education is not an idealism which is based on the life of the past, but an idealism which idealizes the life of the present and emphasizes its moral

problems and its duties. This was the idealism of the prophets and of Jesus himself; it is the only idealism which has ethical vitality.

The progressive nations of the world are rapidly readjusting their educational systems so as to meet these new demands of the age. The natural sciences, which have made the phenomenal development of modern industry possible, are emphasized as never before; and technical and commercial schools of all grades, as well as trade and industrial schools of every variety, have sprung up. In this movement Germany, France, and even Austria have outstripped England and the United States.

On a visit to Europe a few years ago, for the purpose of studying these schools, I found in Berlin alone twenty-eight industrial and trade schools, attended by over twenty-five thousand students. Almost every important trade was represented. Schools of the same kind are found in every city of the German empire, and the technical training which Germany gives to its industrial classes and skilled mechanics far transcends anything found in this country. The German army which this country will have to fear is not the army which carries guns, but the army which carries tools. All over Europe the apprentice system still obtains to quite a large extent, and this makes it possible to have trade schools in which expensive shops are not necessary, and in which academic and theoretical instruction is the important feature. This makes these schools comparatively inexpensive. Many small trades which have long since passed away here still survive in all European countries. Moreover, as is well known, many processes of manufacture are there still done by hand which in this country are performed by machines. These and other considerations make it inadvisable for us to copy their trade schools, altho we have many lessons to learn from them. On the other hand, their commercial schools and their technical schools are organized to meet conditions which are not radically different from our own and may safely serve as models for us.

There is no other country in the world that has accomplished as much in manual training as our own; there is no other country in which manual training has been made so extensively a feature of secondary education. The manual-training high school is an American institution, and it contains possibilities which have not yet been realized. There should be a sharp line of distinction drawn in our thinking between manual training whose aim is general education, and technical training in various industrial occupations and in trades. Manual training in some form should be an integral part of the course of study of all elementary and secondary schools, either as a required or as an optional study. There should be a workshop for this purpose connected with every high school. Moreover, a broad course in manual training should precede instruction in specific trades and form the basis of such instruction.

The manual-training high school, however, besides providing for a course in general manual training, ought to provide also courses in

strictly technical lines of work whose aim should be to train foremen, superintendents, and, in short, that large group of skilled experts who come between the engineer and the mechanic, and whose duty it is to superintend the work of the latter under the general direction of the former. In a word, our manual-training high schools should be converted into technical schools of high-school grade. We have enough engineering schools of college rank for our present industrial needs, but there is a very great demand for technical high schools in which thoro instruction may be given in English, in history, in the modern languages; and in mathematics, physics, and chemistry, especially in their applications to technical processes; together with courses in shop-work, beginning with a general course in manual training and ending in specialized courses leading to specific lines of technical work. Such schools ought to have a threefold function: first, to provide a general course in manual training for purely educational purposes; second, to serve as fitting schools for the higher technical schools; third, to give technical instruction of high-school grade for the purposes stated.

These should be the function of the day high school. But these schools may serve another purpose by ministering to the needs of an entirely different class of students from those of the day school. Its expensive shop equipments may be used for the purpose of giving instruction in trades to men employed during the day either as apprentices or as journeymen. These equipments, which would otherwise lie idle after the session of the day school closes, make it possible to organize, at comparatively small expense, evening trade schools for the broader training of men already at work at their trade.

An evening trade school of this kind has been conducted for the last four years at public expense in the city in which I reside, and I have been requested by the President of the Association to give a brief account of it.

Previous to 1898 manual training was taught as an elective in our Central High School. In September of that year a manual-training high school was organized as a separate and independent school. In October, 1899, when the equipment of the shops had become measurably complete, an evening trade school was organized, which has been continued every year since from October to March. The school is in session six evenings a week, from 7:15 to 10 o'clock, each class meeting two or three times a week. The first year only three departments were organized: (1) mechanical drawing, (2) machine-shop practice and tool-making, and (3) plumbing. During the past winter classes were conducted in the following subjects: (1) mechanical drawing, (2) machine-shop practice and tool-making, (3) plumbing, (4) wood-turning and pattern-making, (5) mechanics and applied mathematics, (6) electricity (lectures and laboratory work). Recognizing the fundamental character of

mechanical drawing for all the mechanical trades, the students in all the other classes are encouraged, tho not required, to join some class in drawing. The course in mathematics is arranged with reference to the special needs of mechanics, and includes such topics in arithmetic, algebra, geometry, and trigonometry as find a direct application in the mechanical trades. The course in electricity consists of a lecture course for persons who have only a scientific interest in the subject, and of a laboratory course whose aim is to offer practical instruction in electrical measurements and electrical construction to persons who are employed wholly or in part at such work, or who desire to fit themselves for it.

The instruction in mechanical drawing is given by a man who has occupied important positions as draftsman in manufacturing establishments. The instructors in machine-shop practice and tool-making are men who have had wide experience as mechanics and as superintendents of shops. The teacher of pattern-making had learned the trade as a young man and had practical experience in it for years. The teacher of plumbing is the plumbing inspector for the city, and is recognized as an authority in his trade. The teachers of electricity, mechanics, and mathematics are technically trained men. All of these teachers, except the teacher of plumbing and the assistant teacher in the machine shop, are employed in the day high school and are skillful teachers. The school is under the supervision of the principal of the day high school. I need not add that only technically trained teachers are available in a trade school, and I believe we shall demand such teachers in the future also for the shop-work in our manual-training high schools. This will remove a chief objection that is urged against the use of the equipments of these schools by evening trade schools, inasmuch as the same teachers will be in charge of the shops and the laboratories both of the day and of the evening schools.

The enrollment for the past winter was 311, and the percentage of attendance was 86.8, ranging in the different classes from 81.5 in plumbing to 89.5 in pattern-making. This will be recognized as a considerably higher percentage of attendance than is found in other types of evening schools. In enrolling students, when all applicants properly qualified cannot be accommodated, preference is invariably given to men already engaged at their trade either as apprentices or as journeymen; and such men constitute the large majority of students in the school. This policy recommends the school to manufacturers and other employers of skilled labor, because it educates their men and trains them to do a higher quality of work; it recommends the school to the workingmen, because it enables them to secure promotions and higher wages; and it wins for the school the good-will of the labor unions, because it does all this without appreciably increasing the labor market and becoming a means of depressing wages. I believe that such a policy is fundamental in the

organization of all public trade schools in this country at the present time. Any other policy is likely to incur the opposition of the labor unions.

The men ranged in age from fifteen to fifty-four, and their average age was 23.7 years—150 being below twenty-one and 161 above.

Springfield has, besides a limited number of large manufacturing industries, including the shops of the United States Armory, also a large variety of small industries requiring skilled labor. There were represented in the school fifty-eight different occupations, most of which could be roughly grouped under the following heads: iron-workers, wood-workers, engineers and draftsmen, men employed in electrical work, apprentices, laborers, and clerks employed in connection with various trades.

The reasons which the men gave in their application blanks for entering the school vary but little. They either want to prepare themselves to do a higher grade of work in their own trade, for the purpose of receiving a higher rating and increased wages, or they wish to change from the trade in which they are engaged to some other in which the remuneration is higher. Of the men enrolled in the machine shop 69 per cent. gave the former as the reason for joining, while only 9 per cent. gave the latter. On the other hand, of the men enrolled in the plumbing class only 43 per cent. had joined for the purpose of advancing in their trade, while 47 per cent. joined the class because they wished to change from their present trade to that of plumbing. A limited number entered the various classes for the sake of the indirect help which the instruction will give them in their trade. These are generally engaged in trades not taught in the school, but closely allied to those which are taught. A certain number of men who have had opportunity to learn only a small part of their trade in the shops, on account of the minute specialization which modern production makes necessary, enter the school in order to broaden their training. One of the men in the machine-shop class said that he had been working at a drill for fourteen years and could not run any other machine; another had worked about the same number of years on a shaper; and a third had been drilling on the same part of rifles in the United States Armory for eight years. These are but examples of many instances which might be cited where the broader training of the school supplements the narrow training of the shop. For such men the learning of a full trade is a liberal education.

This is a brief account of an experiment in teaching trades at public expense; it is a feature of our public-school work which has provoked but little criticism and is rapidly growing in favor; and I believe it is destined to become a permanent part—and a very important part—of the school system of our city. Our experience has convinced me that there is no insuperable difficulty in the way of organizing an evening trade school in every well-equipped manual-training high school in the country, and I believe that this is the point from which instruction in trades at public

expense can be most effectually developed with the least expenditure of money. Such evening trade schools can not only use the shop equipments of manual-training high schools, but they can have the free use of their laboratories, of their drawing-room with its equipment, and of other facilities for academic instruction. No trade school, even for men who are mature and are already engaged at their trade, ought to confine its instruction to shop-work; it must not lose sight of the man in training the mechanic. Thoro courses in mechanical drawing, in mechanics, in applied physics and applied mathematics, and if possible in other academic studies, should be offered; and every student in the shop-work classes should be encouraged to take as many of these courses as his time and his strength will permit.

THE PART OF THE MANUAL-TRAINING HIGH SCHOOL IN AMERICAN EDUCATION

HENRY S. PRITCHETT, PRESIDENT OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

The philosophy of education has changed but little in two thousand years. One might fairly describe the discussions of today's convention in the words of Aristotle: "What is education and how are we to educate, with a view either to perfect training or to the best life?" The systems of schools which exist in civilized countries today recognize the two functions of the school which Aristotle here suggests: (1) the part which the school takes in training men for effective work in some station in life, and (2) the part which it takes in educating them for the best life in that station.

During the past quarter-century increasing emphasis has been laid upon the first of these rôles, but never as divorced from the second. In European systems of schools a constant differentiation has taken place in the effort to meet the varying needs of different classes of citizens and with the purpose of making each citizen an effective economic unit. In America this differentiation has gone but a short distance, and far greater attention has been given to the training of the technical engineer of high grade than to the training of the foreman, the mechanician, or the commercial agent. The most distinctive effort to widen the work of secondary education is that found in the establishment of the manual-training high schools, which has now had a history in this country of some twenty-five years. They are, in my judgment, the forerunners of a more complete differentiation in our school system, and under the topic for this evening, "Manual Trade and Technical Education," I am inclined to think that twenty minutes can be spent in no better way than to attempt an estimate of the results which have accrued to American education from the establishment of such schools.

What service has the manual-training school done in the training of men for work and for their education in life, and what have been its contributions to pedagogic methods during the two or three decades which have elapsed since its transfer to this country? Such an inquiry will at least be definite rather than general. It will lead somewhither.

It may be fairly answered in the beginning that the manual-training high school, as it exists today, makes its contribution to the second rather than to the first of the functions of a modern school to which I have alluded. It does not fit men for the life of the foreman or the mechanician. It is in no sense a trade school. Few of its graduates gain their livelihood in any of the crafts. The facilities which it offers in shop-work lend themselves almost wholly to pedagogic ends. Manual training, as we have it in the high school, is a culture study, and it is upon this side of school work that one must look for its contribution to American education.

For many reasons it is to be regretted that the manual-training schools have not lent themselves more directly to the training of men who desired to better themselves in industrial callings and in the arts and crafts. In this country as yet almost nothing has been done to bridge over the gap which lies between the trained engineer and the untrained workman. The vast majority of pupils of necessity leave the public school at the end of the preparatory term. For them the manual-training school does not exist. If they enter industrial callings, their opportunities for improvement of their theoretical knowledge are limited to such hours as can be gleaned from evenings and holidays. Even in the most progressive American cities the opportunity for such instruction in subjects bearing directly on practical callings is most meager. The apprentice in Berlin may turn to an evening trade school in any calling, but the young mechanic in Boston can find only such as private foresight provides.

There is, to my thinking, no more suggestive fact in connection with our popular education than the lists of the thousands of students, drawn largely from ambitious men in industrial callings, who are enrolled in the correspondence schools. In my judgment, the manual-training school which will open its doors to this class of students, adapting the instruction to their needs, and using its expensive plant to its full value, will fill a much-needed place in our educational system.

When one studies the record of the manual-training high school from the second standpoint to which I have alluded, the educational function of the school, it becomes evident that the training school has made real and important contributions to our educational needs. Undoubtedly the most direct contribution to which one can point is the widening of our ideal of culture, and the new avenue which has been opened up for fresh quickening of the mind and of the imagination. The mind has,

indeed, a thousand eyes, and there are a thousand lanes by which the light may be let in. No school and no human agency can hope to offer to a youth all the opportunities by which these approaches to the soul may be utilized. The manual-training school has brought an intellectual quickening to a very large number who would never have responded to the teaching of the old-time school. To have furnished such an avenue of development for minds which failed to find such under older formal methods of instruction is a distinct and noteworthy gain.

The manual-training school has made also a great contribution to the cause of education by the fresh demonstration which it has given of the pedagogic value of mechanical and free-hand drawing. The value of this lesson it would be difficult to overestimate. There is no study, not even chemistry, which approaches drawing as a means for training the eye and for developing the power of observation. For the purposes of the school it is one of the ready and most available studies, and it ought to form a part of the curriculum of every high school. The manual-training schools owe, in a very large degree, the measure of pedagogic success which they have attained to the presence in their curriculum of well-taught courses in drawing. And one of the reasons for this has been that this subject, altho taught in an elementary way, has been made to conform to an accurate standard of scholarship.

These and other positive contributions of the manual-training high school have not been rendered without results on the negative side. The manual-training school has shared with all other educational efforts in America the characteristics of our time and of our people. Enthusiastic friends have claimed for it more than it has done or can do. While it is true that some, nay many, students find in the manual instruction new means for intellectual quickening, it is also true that this school is no more fitted to the needs of all boys than is the school of any other type. And no school has shared more fully in the dilution of scholarship which comes from trying to teach many subjects in a short time than the manual-training school. The motto, "The cultured mind, the skillful hand," which one finds over the doorway of every manual-training school, is adopted in the spirit of Paul's definition of faith: "the substance of things hoped for, the evidence of things not seen." The evidence which the average boy has to furnish of the possession of this culture and skill consists of a very limited knowledge of his own language, a smattering of German, French, or Spanish, a very fair grounding in plane and solid geometry and elementary algebra, excellent training in drawing, a note-book containing forty experiments in some one or more of the natural sciences, and a very limited knowledge of and experience with tools in a well-appointed shop, which last he is inclined to consider of greater value than all the rest.

There are two popular impressions concerning the work of the manual-

training school which are, to my mind, somewhat misleading. One is the belief that the practice and the instruction which a boy receives in the school shop are an equivalent for the experience which he obtains in dealing with the physical problems of an outdoor life, such, for instance, as comes to a boy raised on a farm. The experience which a boy gets in the use of tools in the school, as well as that which he gets in the use of tools on a farm, falls short of skill; but in the one case he deals with the actual problems and difficulties of daily life, and his resourcefulness and ability to solve a problem with the means at hand are constantly strengthened. For most city boys the work in a well-kept shop is as much apart from the daily problems of life as are the lessons in Latin; and, while they appeal in a new way, and often a most successful way, to the boy's intelligence, they do not take the place of the experience with living problems.

The other impression to which I refer is that voiced in the attractive phrase: "Send the whole boy to school." Whatever this may mean, it has no significance with respect to a manual-training school which it does not have with respect to any other well-conducted school. While it is true that for certain boys the manual-training school furnishes just the opportunity needed to call out their latent powers, the whole boy goes to school there in no greater sense than to any other school. What does it mean to send the whole boy to school? If the boy is to grow up to be a whole man or a citizen of the state, in the best sense, it means that his moral nature is to be developed, that his mind is to be trained to think clearly, that his sympathy with his fellow-man is to be quick and true, and that all these qualities are to join in effective work.

An infinite number of agencies contribute to this end, of which the school is one of the most important, and is the only one which is devoted to the formal training of the mind. Doubtless the school will always continue to give its best service by developing the intellectual power of men. It no doubt contributes most directly to all human progress by teaching men to think; for clear thinking lies at the base of all right progress. A school which gives a part of its instruction by means of manual training may prove the very place to develop a particular boy, but it no more puts the whole boy to school than does any other school. West Point and Annapolis, in this narrow sense, come nearer to putting the whole boy to school, because they require him to give attention, not alone to the training of the hand, but to the training of the foot as well; and their experience has shown that dancing as a required course has no small value.

Let me say one word concerning the work of the manual-training high school as a preparation for the technical training of the engineer. More and more in the past decade the tendency has strengthened to regard the manual-training high school as the natural fitting school for the school of technology, while the regular high school leads to the college, just as in Germany the *Gymnasium* is the door to the university, while the *Real-*

gymnasium leads to the technical school. I do not believe that in this country our educational progress has yet come to the point where this can be assumed. Assuredly it is true that for some boys the manual-training high school is the most inspiring school of preparation, but it is equally true that for a very large number of boys its training will be one-sided, and will tend to put the emphasis on the wrong place. The question as to whether the boy who is looking toward the profession of the engineer should go thru the manual-training high school, or the English or classical high school, is one which depends largely on the boy's temperament, preparation, and attitude of mind. It goes without saying that when a large proportion of the school day is given to hand-training, this part of the education will have, in the boy's estimation, a very large value, and there will not only be left less time for other studies, but they are likely to receive less relative emphasis.

It is only fair to parents who have boys to educate to set these facts clearly before their eyes and let them judge in the light of their knowledge of the boy whether he should get his preparation in the one school or in the other.

I hesitate to speak from my own personal experience, and yet such experience is after all a real test. For sixteen years I taught mathematics in a western university whose pupils were drawn almost wholly from three schools. One was a city high school of high grade, offering courses with the classics, and also courses without Latin and Greek; one was a similar high school of high grade, conducted under private control; and the third was a manual-training high school of wide reputation. As a teacher of mathematics I came in contact with all students. My observation was — and the experience of my colleagues coincided with my own — that the students who came to us from the city high school were uniformly the best prepared in respect to those matters which have to do with general scholarship, such as correct use of English, neatness and accuracy of work, and scholarly interest in all subjects. In these matters the students coming from the manual-training school were, on the whole, the most backward. The reason for this may have been partly found in the difference in the quality of the students, but on the whole it seemed to me to be in large measure due to the two causes which I have mentioned — the smaller amount of time spent on such subjects, and the higher importance very naturally given by the pupils to manual training.

There are, in my judgment, many cases in which the manual-training school is better fitted to take the boy who is to enter college than the boy who is to enter the school of technology. It is also a question whether a student who is to enter the technical school may not better get at least a part of his instruction in the mechanic arts in the technical school itself. While elementary work in wood and metal may well be given in the high school, advanced wood-work, such as pattern-making and work with

machine tools, will mean much more after the student has reached a greater maturity and has studied mechanism, and the mature student will attain in less time a higher skill and a far more definite and practical point of view.

It seems to me, therefore, that in trying to estimate the value of the manual-training school in American education we must not only give it credit for the really great service it is doing in the way of preparing men for business life, or as a school of preparation for college and the technical school, but we must also recognize clearly its weaknesses and its limitations. It has opened a new door to intellectual and moral progress for a class of students who under the old régime would never have found their way to scholarship, and it has shown the way to improved pedagogic methods. But its ministry has as yet been almost wholly on the side of pedagogics. It has not reached down to serve the great mass of youth to whom mechanical training and manual skill would mean most of all. Its advocates have taken pride rather in supplanting the old instruction than in serving a class of citizens for whom in America no instruction that is available has been offered. The manual-training school is no educational specific. It is no better adapted to meet the wants of all boys than is any other school. And, finally, the manual-training school must share with most American educational projects the responsibility for that dilution of scholarship which comes from the effort to teach a great many subjects in a limited time.

Our schools reflect, or possibly account for, the national tendency to make a little knowledge go a great way. The American is alert, energetic, resourceful, and superficial. He can make a little knowledge go farther than the citizen of any other country, and this lesson he has had every opportunity to learn in the school. Initiative, resourcefulness, and nervous energy were great factors in our pioneer work, and they are great factors still; but they will not endure in competition with efficient training, patient study, and exact knowledge. The pioneer epoch has passed.

To my thinking, an American boy who has a good knowledge of his own language — a knowledge which has led him to read and to love good books — who is master of his elementary mathematics, whose accuracy of observation has been trained by a good elementary course in drawing, and who knows well Latin or some modern language, with such familiarity with natural science as his own reading and simple laboratory talks and experiments supply; such a boy has a better education with which to go into the world, and is better prepared to enter the college or technical school, than a student who knows in a partial and superficial way four times as many things, even tho these include subjects of such apparent significance as the shop and the workbench suggest. In a word, the study of the manual-training school suggests, as will the study of any other American school, that those who have to do today with American

education must turn their eyes, not so much toward the making of new schools for fitting men for college, as toward providing simple and effective schools which may reach those who never go to college; and that, so far as pedagogic methods are concerned, it is not to a multiplication of such methods which we should look, but rather turn our faces and the faces of the American people toward simplicity, sincerity, and thoroness in education.

SCHOOL GARDENS, CITY SCHOOL YARDS, AND THE SURROUNDINGS OF RURAL SCHOOLS

ORVILLE T. BRIGHT, PRINCIPAL OF THE JAMES R. DOOLITTLE SCHOOL, CHICAGO, ILL.

When one considers that all sustenance for animal life comes directly or indirectly from the plants that grow out of the ground; that all clothing for human beings, and most of their shelter, are derived from the same source; and that these same plants, more than all else combined, are responsible for the beauty that makes the earth so pleasant a dwelling-place, the indifference of the schools of the United States to plant culture as matter for study is, indeed, cause for amazement.

Whether this culture is considered from the economic, botanic, or æsthetic standpoint, the indifference is much the same. To be sure, the subject of botany has been in the curriculum of the secondary schools for many a year, but the study, in so far as it has affected the lives and characters of students, has been comparatively barren of results. It has been a study in dissection and classification rather than of growth. Colleges here and there have very effectively engaged in the scientific study of agriculture; but these are so few, and the classes have been so poorly attended, that their influence has scarcely affected the masses or practices of the farmers. This may be because the lavish supply of land has led to the vicious waste that has obtained in American farming. Fortunately the vast acreage that has been had almost for the asking is no longer available. Consequently, with increasing population farming must become more intensive, scientific, and economic.

When we come to the study of plants, because of their value in enhancing the beauty of city, village, or country, neither the college, high school, nor elementary school has as yet to any extent felt even the thrill of movement. The school garden is a thing almost unknown in the United States. As compared with European countries, we have assumed superiority in public-school education, and in some respects perhaps with justice; but in this regard we have no standing for comparison. Long before public schools had an existence, the value of the school garden was recognized in Europe, and we are told that by the middle of the six-

teenth century almost all of the Italian universities and many Italian cities possessed botanical gardens. Two hundred and fifty years ago brave old Comenius said: "A garden should be connected with every school, where children can at times gaze upon trees, flowers, and herbs, and be taught to enjoy them." As if in response to this prophetic declaration, his native country, two hundred years later, was the first to require by law the establishment of school gardens in connection with elementary schools. The Austrian imperial school law of 1869 prescribes that, "when practicable, a garden and a place for agricultural experiments shall be established with every rural school." Today Austro-Hungary can boast of nearly twenty thousand school gardens. In the province of Styria every school has a garden. Bohemia has four thousand five hundred, and its enormous crops of fruit are by many ascribed to school instruction.

In Sweden in 1869 a royal proclamation required school gardens, varying from seventy to one hundred and fifty square rods, to be appropriately laid out for the children of elementary schools. In 1876 Sweden had one thousand six hundred such gardens, and now the number is nearly five thousand. It is quite worthy of note that, while the Swedish system of manual training and gymnastics has been deemed so worthy of study and exploitation by American teachers, the school gardens, of vastly greater importance, seem entirely to have escaped their notice.

In Belgium the school law of 1873 provides that every school shall have a garden of at least one-fourth acre, and a royal decree of 1897 requires that all teachers shall be able to give theoretical and practical instruction in botany, horticulture, and agriculture.

In Switzerland this has been a live question for twenty years past. Most of the cantons have encouraged the establishment of school gardens thru prizes and other financial aid, and ample provision has been made for suitable instruction in the normal schools. The effect on the home surroundings has been marked. Indeed, this is true wherever the gardens have been established for any length of time.

France has rapidly developed the higher teaching of all forms of agriculture during the past twenty years, and now has at least one hundred institutions for this purpose, among the finest in the world. There are botanical gardens almost without number, and nomadic lecture courses for the public schools have been established. In 1882 the teaching of agriculture in the public schools was made obligatory. Today France has nearly thirty thousand elementary-school gardens, and no new school can receive governmental aid without such equipment.

Even Russia, with all her inherent barbarism, is making great headway in school instruction in gardening. In a single province in southern Russia 257 out of 504 schools have gardens aggregating 300 acres. In 1895 these gardens contained, among other things, 111,000 fruit trees,

240,000 forest trees, and more than 1,000 beehives. Almost every form of economic gardening is carried on.

Germany has not as yet made the garden an organic part of its school system, but thousands of schools are trying the experiment. A charming description of one of these, by Dr. Herman Lukens, may be found in the *Educational Review* for March, 1899. This garden contains four-fifths of an acre, in the form of an irregular oblong well laid out, with gravel walks along the sides and center lengthwise, and with three cross-walks. In the center is a fountain, and at the intersections of the walks are circular plantings. At the north end, one-tenth of an acre is planted with specimens of native trees, some exotics, and common ornamental shrubs. Every tree and shrub has label with name and habitat. Next is the botanical division, containing plants for special study in the school. The remainder of the garden is divided into six large plats, each surrounded by dwarf fruit trees or fruit bushes. Each of these six plats is divided into individual gardens, one meter wide and two long, or about twenty square feet. One garden in each plat is allotted to the teacher. During the year 1898–99 six hundred pupils from the *Bürgerschule* planted and cared for six hundred of these little gardens, cultivating either vegetables or flowers, as they chose.

The work is optional, but one hour a day is expected from each young gardener who undertakes it. On Sundays the garden is open all day as a park, and parents have shown great appreciation of this element of school training; and it is a proud event for the child when the product of his own labor and care first finds its way to the family table. Pupils who show marked ability are chosen as helpers to the teachers, and it is their business to see that everything is in order at the close of the day. They also settle all matters of dispute and behavior. In one end of the garden is a rustic shed for recitations, whenever such are desirable. Each of the eight grades is well represented, the instruction being adapted as in other school work.

What do the six hundred children get out of the garden? The teaching of the school is brought into contact with life, and, best of all, with the lives and experiences of the children. The point of contact reaches the home interests just as directly as those of the school. The tiny garden of the school is almost sure to be duplicated at the home — probably on a larger scale; and this alone is worth the whole effort.

The interest of the parents in at least one phase of the school work of the children will be immediate and certain, because here is something sure to be inspected and understood, the inspection being made possible on Sunday and other holidays. This interest will naturally extend to the other school work and be the cause of its betterment. The little garden is the child's own, and whatever it is comes as the certain sequence of his care or neglect. This is as evident to his parents as to his teachers. The responsibility of the garden develops strength and independence in charac-

ter. Nothing but honest effort can win, and this effort involves judgment as well as physical exertion. The great variety of plants, including trees all in healthy growth, and in which the children are personally interested, makes ideal conditions for nature study; and it will be study of life and growth rather than of death and dissection. In other words, after study, the plants remain for greater interest and love instead of being thrown away because destroyed.

The beauty of school-garden arrangement develops taste, which is sure to react upon the home premises—doubly so because both parents and children are interested. Related topics of study, as reading, music, drawing, painting, language and composition, literature, geography, and number, almost of necessity range themselves alongside the garden lessons. The healthy out-of-door physical exercise of itself would justify all that the garden costs; and this is all the better because the motive is something else besides mere exercise, which is always more or less stupid when pursued for its own sake. The school becomes a rational factor in the economic life of a people in something sweeter and more wholesome than commercialism. The children learn to love and respect Mother Earth and the honest labor which she rewards so fully and so freely. New phases of child-nature are opened up to the teacher—phases which the ordinary work of the schoolroom might effectually obscure. The more complete the sympathy between teacher and pupils, the richer the results in character on both sides. Lastly, thru school and home improvement and beautiful environment the young people become interested in civic improvement of neighborhood, ward, or city, and thus begin the study of civics at the right end—because they are in touch with something that has to do with better civic life.

If the results indicated are at all attainable, they are well worth the gravest attention of this splendid organization of American teachers. Europe has well toward one hundred thousand school gardens of all kinds. The United States has not one-half of one per cent. of that number. The subject has as yet received no serious attention even from educators, and, so far as I can ascertain, has in no way found its way into the school code of any state.

Can we make the school-garden idea a factor in our free school education? The few scattered efforts already made give only one answer to this question—a most enthusiastic "Yes."

Some fundamental principles must be determined upon. The all too common notion that any old place will answer for a school site must be exterminated root and branch. The plat of ground that nature has made most attractive in any city, village, hamlet, or rural district is just good enough for the public school.

Every schoolhouse should be supplied with adequate playgrounds, at whatever cost. The yard will be adequate only when there is ample space

for games, and for characteristic trees, flowering shrubs and plants, and clinging vines as an integral part of the playgrounds. With the school garden added, the out-of-door conditions will be ideal.

"But the cost!" is the cry of the taxpayer; and the politician takes up the cry to further his selfish aims. In some cases it costs more not to spend money than to spend it, and this is one of the cases.

We read that the first motive for the establishment of "common schools" in America was that the children might learn to read the Bible, and from our records of Puritan character in Massachusetts we may safely assume this to be correct. Recently Bishop John Spaulding gave utterance to these words: "In the midst of all this noise and rush of business, of expansion and success, we are rapidly growing incapable of taking or loving the deeper views of life. Our faith in education is, at the bottom, the faith in its power to enable us to get more money." I think the truth of this statement will hardly be questioned. Have not we Americans reached a point in our tremendous development of wealth where we may pause to consider the children?

Our schools cost enormously, to be sure, but scarcely more than our penal and reformatory institutions, taken in their entirety; and we may well turn some of the millions poured out for the latter purpose into attempts for prevention.

"Can't afford it!" is a stock cry that may well be analyzed and carefully considered. During the past thirty years Republican Philadelphia and Democratic New York have squandered money enough on political parasites to furnish ample playgrounds and gardens for every public school in either city. Cities that can afford Tweeds, Crokers, and Quays need scarcely talk about the expense of schools. In the same manner, tho not to the same extent, more than half of the great cities of this country are luxuriating in corrupt political bosses. One party is as deep in this robbery of the taxes as the other.

"Can't afford it?" A few years ago Chicago spent twenty millions on a world's fair, and nobody regrets the vision of exquisite beauty then created. At the same time there is not a beautiful school yard in the city, and many magnificent school buildings have no playgrounds at all. Now St. Louis is indulging the same luxury, to say nothing of past enterprises of Buffalo, Atlanta, and Charleston, and the same public-school yard conditions may be pointed out in these cities as in Chicago.

The question of expense is secondary, the first and dominant question being, "What do the children need?" Education into good citizenship with high ideals will be genuine economy, no matter what the cost.

In connection with one of the vacation schools in Chicago last summer a garden was established on an adjoining lot. The preparation and planting were by the children of the public school before vacation; the cultivation, by the charity vacation school; and the harvest gathered after

vacation, all or mostly by the same children. Each pupil had his individual garden, and each took to his home the product of his labor, thus becoming a responsible factor in the home institution.

The children worked persistently and enthusiastically, many making application where one could be admitted. Mr. Frank Darling, the superintendent, told me that in point of genuine educational value, viewing character as the product, this garden experience was the greatest he had ever known.

Bloomington, Ill., a city of 25,000, has during the past two years experienced a genuine educational inspiration. His name is J. K. Stableton, one of those schoolmasters whom God occasionally sends into the work to make us wonder why he does not send more. Mr. Stableton determined that the unsightly school grounds of Bloomington should be beautified with flower gardens thru the work of the school children, and that the influence of the school planting should extend to the homes of the pupils to make them more beautiful along with the schools. The account of the first year's work reads like a fairy-story. Wiseacres said: "You can't do it! The children will destroy your flower beds, and the boys will steal your plants." And the children and the boys did nothing of the kind. The cussedness and total depravity of the children exist mainly in the imagination of the elect. Give the children a chance, and we shall know more about them. They were enthusiastic in making the ugliest spots in the yards the most attractive; and they did it. Volunteers cared for the plants during the summer vacation. Hundreds of home gardens were planted, and in September a flower show from school and home plants brought together thousands of delighted parents and patrons, whose views of the mission of the public schools underwent a mighty change. Space forbids any detailing of the process, and it is not necessary. A consecrated man, a devoted band of teachers, and willing children can solve any problem.

What results? All of the school work felt the impulse; discipline took care of itself; the lessons were illuminated; the loveliness of child-nature grew with the growing plants and blossomed with the flowers; and the sum-total of happiness of children, teachers, and parents was vastly increased. This work was accomplished in one year, and is possible in any village or small city in the country even under present conditions. Mr. Stableton wrote me recently: "I did not at first know just how, but I knew that we should do it." That tells the whole story.

This enterprise was from the school seeking the co-operation of the people. Cleveland has had a similar experience, but from the people seeking the co-operation of the schools. Overtures were heartily met by Superintendent Jones and the teachers, and the "Home Gardening Association of Cleveland Public Schools" was the result. A study of flowering plants was made, and seeds procured and put up in packages, which were

sold to the school children at one cent each for home planting. This covered the entire expense, including printed directions for planting and cultivation. The first year (1900) nearly 49,000 packages were sold and planted. The second year nearly 122,000 packages, or 458½ pounds, were sold, besides several thousand bulbs. Three annual reports have been issued, and they are very interesting reading. To speak of the effect on schools and homes would but repeat the experiences of Bloomington.

The *Outlook* for May 2, 1903, contains a fascinating article entitled "The First Children's School Farm in New York City." I imagine there could be few more hopeless undertakings than this garden, begun late in the season of 1902, on a patch of land only one-fourth of an acre, hitherto used as a dumping-ground for rubbish, in one of the most congested districts of New York. But it was a triumphant success. The land was cultivated by children in individual gardens three feet by six, and the effect of these gardens on a neighborhood where before only vandalism reigned is absolutely startling. I pray you find the article and read it.

"Afford it?" What sort of investment would be too large for such returns? A bonded debt upon every village and every city of this country, sufficiently large to provide a suitable yard with garden attached for every public school, would be an obligation that the next generation might well afford to meet and be thankful for.

And what of the country schools? From one end of our great country to the other the most unlovely, lonesome, forlorn, uncared-for, and God-forsaken premises to be found are the country schoolhouses and school yards; and this in the older as well as in the younger states. A country school can be identified as far as it can be seen by its ugliness.

The life of the farm in no way enters into the instruction of the school. We teach the country girls and boys about banking, brokerage, stocks and bonds, and the foreign exchange peculiar to schoolhouses. We teach obsolete compound numbers and compound proportion which never existed outside of a schoolhouse. Days and weeks of instruction are given to the greatest common divisor and to four-story complex-fraction monstrosities; but never a word about the soil; the growth of crops, which make the farm life possible; or of trees, shrubs, and flowers, which may make the farm home so beautiful. The country school has undoubtedly been a considerable factor in the mighty exodus from the farms to the villages and cities. It is time that a halt and an about-face be called in the great procession. The possibilities of comfort, freedom, and health; of competence and happiness; of the dignity and beauty of labor as connected with farm life—should be exploited in the country schools. Fill the curriculum with material having to do with country life and give the business processes of city and village a rest. They need it, and so do the children.

The rural delivery of mail, the daily paper, and the telephone will lend their aid in making the isolation of the farmer's home less acute. The school and the home must come into close sympathy thru what is taught in the school, and the knowledge of the teacher as to the farm and its interests.

These must be brought close to the school thru the planning and planting of the school ground, which shall have ample space for playgrounds and a garden. The average price of land surrounding country schools does not exceed fifty dollars per acre. The very minimum yard should contain an acre. There are several in Cook county, each containing ten square rods or less. I know of many quarter-acre school yards laid out when land was at government price—31¼ cents for a school yard for a hundred years or even longer.

In a way country children are familiar with growing plants, but rarely are the plants of interest to them as matter for study, either as to their wonderful growth or their beauty. They are taken as a matter of course in the getting of the farm living; and it comes to pass that hill, vale, and prairie, with their abundance of trees, shrubs, clambering vines, flowering plants, and grasses, make little impress upon the characters of the children. Hence the wealth of natural beauty in the farm surroundings is rarely counted as an asset of the farm life.

Here is the opportunity for the country school. The school yard should be an object-lesson in attractiveness to all dwellers of the district, because it is more beautiful than any other yard. Its trees should be the handsomest, its trailing vines the most tasteful, its shrubs the most thrifty, and its flowers the most beautiful. The taste and appreciation of the children should be as vitally the care of the teacher as is their learning to spell or to add and subtract.

The sordid scramble after dollars, the long hours of monotonous toil, especially on the part of farmers' wives, have more than any other one cause furnished the inmates for insane hospitals; and the number and magnitude of these hospitals are frightful. What is needed in the farmers' homes is healthful mental stimulus; and this must be the outgrowth of the schools.

A schoolmaster in Sangamon county, Ill., had an idea, and it grew into a country school garden—the only one I know of in the state with its twelve thousand country schools. The school was closed from May 13 to September 1, which fact would seem to preclude success; but the idea of the schoolmaster meant business, and it succeeded. In all of the wonderfully fertile prairie of that portion of the great state, that little garden 38 by 40 feet is the most significant thing and promises to make Cottage Hill and Schoolmaster Pruitt famous. It has revolutionized the spirit of the school and the sentiment of the district. Suppose that twelve thousand Pruitts should bless the twelve thousand country

districts of Illinois for the next ten years. The results in scholarship, in manners and morals, in good health and good citizenship are almost beyond the power of imagination.

Who shall be equal to these things? The teachers of America, of course. What can be done in Sweden and Austria can be done in the United States. For the scholars, an admixture of Mother Earth, growing plants, fresh air, and blue sky, with their book lessons, will make healthier and happier children. For the teachers, a part of the lessons out of doors, the making of beautiful school yards and school gardens, the preparation in healthful study and planning necessary thereto, and less of school-room drudgery and examination papers on subjects often uninteresting either to pupil or teacher, will make healthier, happier, and more effective teachers.

SCHOOL GARDENS

HENRY LINCOLN CLAPP, PRINCIPAL OF THE GEORGE PUTNAM SCHOOL, BOSTON, MASS.

I have noticed, during the last twenty years especially, that most city children have few responsibilities placed upon them, do exceedingly little manual labor, and get almost no physical exercise in that way. So physical exercises are required of them in the schoolroom. "Shoulder arms!" and "Hips firm!" are overworked commands. Here compulsion has the whole field; spontaneity nothing.

Several years ago, as I was thinking over the nature of physical exercises in the schoolroom, I thought of the possibilities of the garden in view of my own experience with it for more than half a century. I said to myself: Here is the thing for the children. Here is an opportunity for spontaneity, responsibility, and the exercise of every muscle in the body that needs to be exercised. Here the children can dig in the earth, as nearly all children like to do; can study plant growth under the most favorable conditions; and can take vigorous physical exercise without being conscious of it or being forced to it.

So three years ago a vegetable garden was established for the instruction and exercise of some of the children in the George Putnam School, Roxbury District, Boston. The lot used was four rods square. Formerly a man had used it for a garden; but, having lain fallow for a number of years, it was overgrown with stout turf when the thought of converting it into a school garden occurred. A friend plowed it free of charge, and the children of the seventh grade, averaging about thirteen years of age, did the remainder of the work. The surface after the plowing was very rough. Elevations and depressions were to be brought to a common level. There were sods to turn under; grass roots to bury beyond the prospect of

trouble; beds and paths to mark out and make; fertilizing material to bring in and work into the soil; and finally many kinds of vegetable and flower seeds to plant in various ways. A great deal of hard work was done with evident pleasure in making and planting the beds.

Eighty-two beds, each eight feet long and three and a half feet wide, were made and planted with seeds of lettuce, radish, beet, turnip, parsnip, parsley, carrot, cabbage, kohl-rabi, onion, peanut, beans, peas, corn, tomatoes, potatoes, and a great variety of flower seeds.

Potatoes were raised only one year, on account of the advent of a multitude of potato bugs. Altho the beetles were treated with Paris green and the most persistent hostility, what we raised that year were "pretty small potatoes and few in a hill." The devotion of the children was not sufficient to cope with the insect pests.

Why is it that in the widespread awakening to the educational value of the school garden the vegetable garden or the flower garden is generally admitted? The vegetable garden commends itself as a practical thing. The produce can be eaten or sold for money, which can be put in a bank or used for purchasing various desirable things. In other words, it will pay. Cultivated flowers—roses, pinks, pansies, nasturtiums, and chrysanthemums—make a fine display of color, can be used for decoration, and sold readily even by school children. Their cultivation will pay.

No doubt we should use motives that will move; but there are motives better than mercenary ones. Generally one who studies shells, minerals, mosses, lichens, algæ, ferns, the flowers of the field, color, music, literature, and similar subjects does not associate them with money values, but he studies them for the pleasure they bring, with the desire to know, to understand, to lay up resources for happiness, and to be of service to those interested in such studies. It is happiness and satisfaction which should be provided for to a degree by the establishment of the school garden.

In this regard the German school gardens seem to have a more philosophical basis than ours. They are intended to furnish the most direct means of teaching school children, not only to raise vegetables and cultivated plants, but to know the flora of their own province—the trees, shrubs, ferns; medicinal, coloring, oil-bearing, aromatic, poisonous, fibrous, and other kinds of plants, classified according to their uses in the arts, as well as those illustrating botanical families. There is nothing uncertain about that kind of nature study, nothing lifeless about that sort of botanical instruction. So the scope of their gardens is very much broader than that of ours. They take in more than the market gardener and the professional florist attempt. Botany is considered worth teaching in the higher institutions of learning, its educational value is recognized and provided for, and so it is introduced early and in the proper manner in the common schools. There is a practicality about the whole system

that we in America have not yet reached. The vegetable garden or cultivated flower garden, without the botanical garden, does not complete the scheme of outdoor instruction which the German educator has in mind. He prizes sound scholarship more than land, more than something to eat, more than something for decoration.

With the botanical part of the German school garden in view, our wild-flower garden, now including about one hundred and fifty species of native plants, was begun in 1890. The purpose was to acquaint teachers and pupils with the life-history of the common wild flowers and to furnish some available material for plant study in the schoolroom.

For eight years pupils of the ninth grade in the George Putnam school have studied ferns delightedly, and therefore successfully, by means of an excellent equipment consisting of a fine collection of herbarium specimens for winter use, a collection of one hundred and fifty lantern slides illustrating nearly every phase of the life-history of ferns for use at any time and, best of all, all the species studied growing in the fernery for observation during the spring and fall. So the pupils studied the cycle of fern life from the spore thru the prothallus, crozier, and frond with its sori forward to the spore again. Annulus, sporangium, indusium, pinna, and pinnule were as familiar to them as chalk, pencil, and paper. So they studied fifteen species, most of which they recognized at sight in their habitat, not only by their specific characteristics, but by the generic as well. More than half the members of each class made fern gardens at their homes. During their summer vacations they sought out the well-known species in woods and meadows, made herbarium collections, took prizes on them at Horticultural Hall, and even interested and assisted teachers in the study of ferns.

The number of women who raise flowers and are fond of gardening, without any regular schooling therein, is well-nigh countless. So city children especially should have all possible opportunities to find out whether they have natural tastes for such work.

The Boston Normal School is training teachers in garden work in a fine garden established two years ago on the grounds of the English High School, Dartmouth street, Boston.

About three centuries ago Francis Bacon wrote: "God Almighty first planted a garden, and, indeed, it is the purest of human pleasures; it is the greatest refreshment to the spirits of man, without which building and palaces are but gross handiworks." During the past three hundred years our city-bred people apparently have made little or no progress toward realizing Bacon's idea of the purest form of human pleasure. They try to find pleasure in nearly everything except gardens, perhaps for the reason that in childhood they had no opportunities to acquire a taste for gardening. City school gardens, and teachers trained in normal schools to conduct them, will change this unfavorable condition and

create more and purer sources of enjoyment than are common now in our cities.

We read in that delightful little book, *Elizabeth and Her German Garden*, this statement for our encouragement: "If Eve had had a spade in Paradise and known what to do with it, we should not have had all that sad business of the apple."

One who has given special attention to this subject could not fail to observe how much more common private gardens are in large German cities like Dresden, Leipsic, and Munich than in our large cities. He would note the delight which the German citizen of this country finds in his garden and the great number of skillful German gardeners in charge of the gardens of our wealthy men. This is the result of training in the German school gardens. The garden ought to be valued here as it is in Germany. So give city children spades and hoes, and teach them what to do with them in order to increase the sources of pure pleasure and diminish the sources of mischief. It has been said that of all the people who love gardening ninety-nine out of a hundred are good men and women.

To leaven the great masses of foreigners coming to our shores in increasing numbers every year, and make good citizens of them, much dependence is placed on the public schools. The schools cannot do much with the adults, but they can influence the children powerfully; and to do their best work, it seems to me their aim and conduct should be changed somewhat. We now aim at concentration on furnishing the best condition for efficiency; but the concentration of people in cities is attended with fearful evils; and crowded people thrive no better than crowded plants.

Our instruction now tends more to gentility than to the sweat of the brow, because it is brainy rather than brawny. All our young people are proud to work with their brains, but too many of them are ashamed to work with their hands. Greater respect for manual labor should be inculcated somehow. We need, in our high schools especially, more unquestioning obedience and less military disobedience, more interested work and less competitive parade, and in all our schools more productive labor and less unproductive motion. We must really believe that work, with the hands as well as with the brains, out of doors as well as indoors, is the greatest civilizer, and conduct our schools accordingly.

Gardening conduces directly to all the desirable results indicated; gardening induces a desire for room, light, air, and sweetness; gardening will do more than the whole curriculum of the present time to turn away the turbid current of human life from the city toward the country, to the inconceivable advantage of both.

SURROUNDINGS OF RURAL SCHOOLS

CHARLES R. SKINNER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, ALBANY, N. Y.

What we need in education today is not an enriched curriculum or greater intellectual activity, but more attention to some of the simple things connected with the everyday life and experience of the pupils in our schools. It has been truthfully said:

> The public school is the place to which we should turn our chief attention in the effort to promote a more beautiful public life in America. The schoolhouse and school grounds should be beautiful, and the child should be surrounded by beauty in the schoolroom from first to last. Trained in the habit of seeing beauty and knowing it, he will come instinctively to hate ugliness in the house and in the street, as he goes out in life.

To do better mental work, not more, and to do it easier, we need more wholesome school surroundings. Millions of the future citizens of this republic are getting their education under most wretched conditions. Thousands of our schoolhouses do not present a single attractive feature, but even repel the child who has any sense of order, cleanliness, or beauty. If the schoolhouse is forbidding, the school grounds, often located as if by design in the worst possible spot, are made to correspond with it in ugliness. There is absence of the influences which inspire to higher conceptions of life, or ennoble and enrich human action. Said Whittier:

> Still sits the schoolhouse by the road,
> A ragged beggar sunning.

How many school grounds today are fit only for such a "ragged beggar!" Fifty-eight years ago a school officer in New York referred to a large number of schoolhouses in his district as "miserable apologies with gaping roofs, yawning walls, stilted benches, highway playgrounds, and, in fine, every accompaniment calculated to make them all objects most loathsome and repulsive to the juvenile mind." Has the half-century or more of experience and progress wholly removed these conditions? Grand old Harvard boasts of her two hundred and fifty years of life and usefulness. There are thousands of schoolhouses all over the country, in city, village and hamlet, which, judged by appearances, are much older than Harvard.

In respect to our school buildings, our school grounds, our outbuildings —in fact, our whole system of school surroundings—for many years we have been traveling in a well worn rut. We are still there, struggling with uncleanliness and deformity. It is in the power of teachers, parents, pupils, and all friends of education to change these conditions, correct these abuses, and get us out of this rut. The situation is a disgrace without excuse. This great Association, which has already done splendid service in improving our rural schools, reaching out in every state and territory, is the right agency to bring about a much-needed reform. Mr. Bright says we are behind Europe. We are certainly behind the times as well.

Teachers of the republic, will you help in this movement? Will you agitate this question among your people until every schoolhouse in the land shall be an attractive building, standing on attractive grounds, leading attractive pupils and attractive teachers to higher ideals of beauty and order? The teachers of the country must take the initiative. Public opinion must be educated; then the people will respond. The expense will not be great. Order and cleanliness need not increase the tax rate. A little well-directed energy and effort will oftentimes be all the expenditure required.

Man is able to use for his advancement only such material as has become valuable thru experience. He sees a piece of machinery, but it has no value to him for intellectual growth unless he can comprehend the principle of its construction. He may pronounce the words of a masterly essay; but unless he follows the author's reasoning and weighs his arguments, his mind fails to act in consonance with that of the author, and there is no growth. He may look upon a work of art; but if he fails to catch the spirit of the master, it will bring to him no culture.

The public school aims at a development of all the faculties, with the ultimate purpose of leading to better citizenship and nobler character. It must not, therefore, neglect any opportunity for broadening and deepening the experience upon which to build the essentials of a complete life.

The child judges by comparison, and, as he begins to reach out into the real world beyond the teacher's influence, his natural tendency is to compare the new things with the old ones made familiar in the years of his school life. How can we expect children to have pleasant memories of school life when these memories are associated with constant contentions on the playgrounds with animals and tramps? I pity the man or woman who has not pleasant recollections of school days—of the schoolhouse and its surroundings, as well as of teacher and associates. There is a prime necessity for correct ideals and motives during the school period. If the teacher guides and develops, if the schoolroom is the place for creating and directing, it is on the school grounds that the principles taught are put into execution; it is here that elementary problems of society and of citizenship are worked out thru the independent action of the child in play. On the result of these problems depends the future of the child-life.

Dr. Bailey tells us: "Children cannot be forced to like the school. They like it only when it is worth liking, and when they like it they learn. The finest school apparatus will not atone for a charmless school ground."

We are making progress in education. Altho the steps are short and the pace is slow, we need to look back but a few years to see how truly we have advanced. It is not many years since the popular conception of school was only a place where book-lore is to be acquired; then, later, we began to realize that school is a preparation for life; and now slowly—

and it seems sometimes very slowly — but surely we are becoming conscious that school *is* life; and if the broader and deeper life of maturity is to be worthy the name, this earlier life must have such stimulus and be nourished in such environment that the greater life will come forth as naturally and as vigorously as the oak comes from the acorn.

It is unfortunate that so many school sites have been selected for other reasons than adaptability. The first essential is a healthy location. Then it is desirable for the needs and comfort of the children that the grounds should cover at least an acre. A part should be set aside for play and a part for adornment. Play is too vital an element in child-growth to be hampered even at the expense of beautiful lawns and artistic flower beds. On the other hand, the child is entitled to a knowledge of the beautiful; and it lies within the power of the teacher to see that in this he receives justice; and the teacher's reward will be a realization that the child has not only caught a glimpse of that world of beauty that makes his life more worth the living, but has felt its influence and knows its pleasures. School grounds may be made beautiful without restricting free play, and the work may be so done as to bring rich returns to hand, head, and heart. Our teachers will teach more effectively; our pupils will study with happier spirit and with better results.

One difficulty in carrying on this work is lack of definite purpose. Trees are planted where they are liable to injury, or where children must play. Flower beds are sometimes placed where they are sure to be trampled upon. The loss of the tree or the flower in such cases is of far less consequence than is the spirit of negligence and discouragement which follows.

There should first be a well-considered plan. In forming this the children should have a part, not only because it is their right, but also because they will be able to make valuable suggestions that will not occur to one who does not make use of every part of the grounds.

We have been slow to realize that a child is educated by every influence with which he comes in contact. We have been too much inclined to look upon the church and Sunday school as the sole source of religious and moral inspiration — the school as a place to acquire skill in book-learning, and the home as a place where the child is fed and clothed. What today, in the discussion of educational problems, we need most to feel is that the child is being educated; being changed somehow for better or worse, every moment of his life. We cannot pour into his consciousness religion today, mathematics tomorrow, and manual training on the following day. But every day contributes to his whole living.

Those of us who were reared on farms can readily recall the feeling of interest and pride that came to us when we were given some pet animal or some plot of ground that we could call our own. It was ours. We rejoiced in this individual ownership, and there came pleasure and satis-

faction in caring for our own. To have the same kind of interest, the child needs but to feel this sense of ownership in the school grounds. Encourage parents and patrons properly to fence and improve their grounds so as to make this ownership possible; then encourage the children to realize that the school grounds belong to them, that they have an opportunity to make them what they should be—and we have taken an important step toward giving principles taught inside the schoolhouse an opportunity for expression in the life of the child. Here we may have the awakening of real enthusiasm in school work in patron, pupil, and teacher. When we talk of enriching courses of study, let us not forget how much of life's course of study is furnished by environment, and that its enrichment makes possible nobler tastes, more refined ideals. As Ruskin has said: "What we like determines what we are; and to teach taste is inevitably to form character."

Not long ago I heard an address by a superintendent of schools of one of our cities on the subject we are now discussing. He was urging the necessity of school gardens for cities, but said he saw no necessity for them in rural districts. This man was bred on a farm; he is today a celebrated educator, yet he has either forgotten his early training, or it was exceptional. Today, thruout this country we have the rural-school problem. The well-to-do farmers are moving to town, where better facilities for education may be furnished their children, and the problem is how to furnish the best education to those who cannot go. Economic conditions have changed both in town and country since forty years ago. Then the town boy spent his vacation in the local shoe-shop, grist-mill, tannery, or general store; and the boy on the farm learned to make sugar, to plow, and to harvest. The girls could dye, weave, and spin. Then there was an education of the hand, closely correlated with that of the head. Now these local industries are practically all absorbed by large corporations, and the child lacks the training that came from them. Towns and cities have appreciated the conditions, and manual training has come to take the place of what is gone. But in the rural districts we do not yet fully appreciate that there is education outside the four walls of the schoolroom. The shop and the school have been brought together, but the farm and the school are still apart. The farm boy goes to school to be *e-du-cated*, literally "led out," away from the farm to desire and seek employment in some bank, office, or factory in the city; and the country girl is trained to look upon home, not as an integral part of her education, but only as a place where she may be housed while being educated as a stenographer, a clerk, or a teacher. As a result, thruout my own state and thruout New England the old homestead is no longer a place of life and youthful activity. There is a tenant on the farm; or the old father and mother, if they are there, are alone. The boys and girls have been drawn away by the charms and attractions of city life. Telephones, rural free delivery,

and trolley cars have done much to increase the attraction of rural life; but this is not enough. All these will fail to hold the boys and girls to the farm, unless they are made to feel the interrelation between school and home; made to feel that the farm is as much a means of education as is the schoolroom.

It is far from my purpose to discourage the ambitious youth who seeks a business or professional career. Let the boy who would be a lawyer or the girl who would be a teacher strive for that end; and, with a true conception of the educational value of a rural home, that goal will be all the more easily attained; and, in addition, those without such ambition may see something of the possibilities on the farm of a life rich in physical, intellectual, and spiritual content.

The study of the natural sciences has until recently been static—a study of what plants and animals *are;* it is now becoming kinetic—of what they *do.* We are doing valuable work in nature study in our schools, but we need to go a little farther and show how this study finds its highest and noblest expression on the school grounds—which must be the link that binds the schoolroom to the home and the farm.

In this matter of improving and beautifying school grounds there is a growing interest and general awakening thruout the country. The press generally is lending its great influence to encourage the efforts made. The *Youth's Companion*, of this city, one of the purest and most helpful publications in the world, is doing a service which deserves the fullest recognition. Speaking every week to nearly a million subscribers and five million readers, it is keeping up constant agitation for better school surroundings. It is doing more than this. In every part of our country it is rendering assistance in practical ways. It has given hundreds of American flags as rewards for honest effort. In New York state alone this year it is giving five hundred sets of six historical engravings and more flags to school districts which will demonstrate that they are doing all they can in this direction.

In my own state, too, a philanthropist (Mr. William A. Wadsworth, of Geneseo) has for several years offered annually two prizes—one of one hundred dollars for the best-kept school grounds in the state, and one of fifty dollars for the second best.

From 1889 to 1902 the school children of New York state planted 265,637 trees—enough to set a forest of 8,000 acres. Last year alone they planted 19,320 trees, which, if set forty feet apart, would reach from Boston to New Haven. In New York state this year there has been offered a prize of one hundred dollars to the school commissioner in whose district there is the largest number of school sites of not less than one-fourth acre, entirely surrounded by a tasty and substantial fence, built since January 1 last.

If we educate our children amid wretched surroundings, will not

such education forever taint the knowledge they acquire? If we expect them to love the beautiful and live the beautiful, we must surround them with beautiful influences in home and school. From the beauty of nature they will learn to distinguish beauty in life and character. We must have greater activity in this cause. Those who train teachers must impress upon them the importance of this work. Local school authorities must be reached. One of the best means of doing this is thru the grange and farmers' institutes. We have had opportunity of doing something in this line during the past year, and I assure you that when the farmers see the value of this work they give it hearty indorsement. By all means enlist the interest of the women. Mothers' clubs can be made a powerful factor in the work. The mothers' co-operation with the teacher will add many fold to the efficiency of the school, and will help to bring the home and school into closer bonds of sympathy. Horace Mann, the great educational inspirer, whose memory we revere and whose service the world recognizes, pointed the way to better schools. He inspired the people to know the value of better school buildings, the uplifting influence of better school surroundings. He called upon the women of the nation to teach the youth. They came, they taught, they conquered.

In this movement we must call upon the women of the country to arouse public sentiment, to educate public opinion in the direction of beauty in our school surroundings. In our educational work we have never called upon the women in vain. They will come now; they will perform this service; they will help to bring about better conditions. Let them organize clubs in every community to visit the schools, inspect schoolhouses and grounds, and arouse sleeping patrons to the importance of taking action.

One great obstacle which confronts us is the long period of drought and neglect during the summer vacation. Trees and flowers have been planted in May only to wither and die in the hot days of July and August. When school opens in September, the children behold what remains of their work of the spring—the withered plant and the broken tree, specters of indifference and neglect. We could afford to lose the plant or tree, but not the lesson its life would teach. If we can educate a child to love a flower, cultivate a plant, or care for a tree, we have helped to lay the foundation of character. Provision should be made for keeping up the interest during these summer months. In some districts this has been successfully accomplished by "school-ground committees," consisting of both boys and girls, and chosen by the school. These take turns during the summer in caring for the grounds. This is an important point, because if when school opens again in the fall the work of the spring has been wasted, the purpose of the work has largely failed; for we must keep ever in mind that it is human life rather than plant life which to us is of most value.

This matter of improvement of school grounds is not the work for a day. It must become an integral part of our school system. Our hopes are in our children. Let us remember that, while attractive grounds will have a beneficent influence upon the community, their great value is in the ethical culture of the child. It must not be forgotten that this is the children's work, and that it is thru the hand that the head and the heart are reached. I am reminded of a story:

It was a little old schoolhouse in a newly cleared section. The children of this school knew little of the joys or comforts of culture and means, but they had a teacher who could make the most of what there was. The little girls had gone out among the mosses, in the shade of the birches and hemlocks, and gathered spring flowers. They had brought loam, too, and on the shady side of the schoolhouse had planted these flowers.

They pointed them out to me with an air of honest pride, and I asked them: "Why do you plant these common flowers?"

One little girl replied: "You see, we don't know how to take care of *store posies*, but we can go right out here and see how these want to grow."

"But," I said, "don't you get tired of taking care of such common flowers? There are so many of them here, all around in the brush."

Quickly, one replied: "Oh, no. Out there in the brush God makes them grow all alone; but here we help him."

Let me read to you from a teacher's recent letter, telling how a small rural school laid out its work:

We, as a school, wish to tell you what we have done toward beautifying our school grounds since last March. Our school ground is 181 feet by 115 feet, inclosed by a fence and nearly surrounded by shade trees. On the first day of school we began to clean the grounds, and have kept very busy doing something each day to improve the appearance of the grounds. First we cleaned the terrace on the outside of the fence, raking together all the old leaves and débris which lay about. After this was done (which took our recesses for several days) we made a bonfire. Then we succeeded in getting the fence painted. Then we began inside the fence and went through the same process as we had on the outside, and pulled up one old dead tree which we deposited on the bonfire. On Arbor Day we all went to the woods and brought two maple trees and planted them in our school yard. We water them every day and mean to have them grow. Besides this, we made two large flower beds, with a little stone wall around each one. In these beds we have planted some shrubs and sowed some seeds. All this extra work we did during our recess time and before and after school hours.

From many states of the Union, especially from the South, come similar letters, showing an aroused public spirit concerning school surroundings. One teacher significantly writes: "I had no idea that making the schoolhouse and grounds more attractive would have so marked an influence on the behavior of the pupils. Teaching has become a delight."

President Roosevelt said, at the dedication of the Central High School at Philadelphia last October: "It is a poor type of school nowadays that has not a good playground attached."

It is in helping nature that the child feels this influence which makes for his greatest good. And this influence is not temporary. In later life

his ideals of the true and the beautiful are measured by these early impressions. He is to be a home-maker; he is to be a citizen; and it is within the power of the school to make him feel and appreciate something of the influence of beautiful surroundings, so that he will use that influence for his own benefit and that of others.

Shall we not catch from this great meeting something of the spirit of New England culture, and let it work out in our own homes a clearer conception of courtesy, cleanliness, order, and beauty?

SCHOOL SURROUNDINGS

W. W. STETSON, STATE SUPERINTENDENT OF SCHOOLS IN MAINE

[STENOGRAPHIC REPORT]

The homes of America are to be domestic universities. The schools of this country should be the social, literary, and art centers of the communities in which they are located. When that day has come, the safety of the nation will not be in the hands of its rulers, but in the lives of its common people. We shall then have learned that the world's best servant is he who knows the past, lives in the present, foresees the future, and is ready for the next thing. To bring about this quartet of consummations I believe we need better physical surroundings, best books for all, and art in the schoolroom.

It is time for us to realize that the home and the school hold the hope of the future. He who runs may know that the people are reading and studying and thinking on what we are pleased to call *our* problem.

We should rejoice to find that the world has finally stumbled thru the twilight of things on to the vantage-ground it holds today. If we had reached our altitude sooner, we should not be as strong as we are. It will not be wise or best to try to reform the world the first week of next September. It will be well for us to stop for a moment, stand still for a while and settle upon a few things to do, and then do them. We have had altogether too much direction and instruction by people who have not been willing to spend a little time in studying conditions and are content to devote all their energies to formulating their fulminations.

Would it not be worth while for us to know something about the country home and the rural school and the children therein, and the parents and teachers having charge of them, before we assume to say what these conditions are or what means are needed to improve them? These people, living in isolated places, are not asleep, and they are not wanting in a comprehension of the day in which they live and the demands the world is making on them. If changes are to come, they will come because the people have intelligence enough to go forward from the point

where they stand, with a full knowledge of what is behind them, about them, and before them.

One of these days we are to be large enough so that we shall be willing to put our shoulders to the wheel without asking to have our names in the newspapers. We will join our forces to those found in the local communities, and, joining with them, bring about the results we are all seeking. These changes will be late and long in coming, unless they come largely thru the planning, effort, and sacrifices of the people who need them. I have scant faith in things which come to us without effort on our part. It would not be a blessing to Maine to have all of our unfit school buildings replaced by suitable ones thru the gift of some millionaire. If the people in these communities can be led to see what is needed, and stimulated to make these improvements slowly, patiently, then the largest gains will not be found in more extensive grounds, more beautiful furnishings, more attractive buildings, but will be manifest in a wiser public spirit, truer sense of responsibility, and finer fitness for citizenship.

It is not necessary for me to speak of the thousands of dollars that have been put into our school buildings in the past few years, the number of school grounds that have been enlarged and beautified, the buildings that have been furnished with a thousand and one appliances. We rejoice in all these evidences of better days, but our rejoicing is due to the change in the point of view—to that strength which comes to the doer, rather than to the physical changes that have been wrought.

In one community in our state all the buildings have been rebuilt, the rooms refurnished, the grounds enlarged and improved. One of the mothers told how these changes had brought into her home light and life. Her children now have a larger outlook, and the future is more hopeful because of the effort made by that community to do for themselves the things they had come to realize needed doing.

We are living in a fast age. We are working under testing conditions. We are passing thru great changes. We need to understand that life is something more than surroundings, and that work is something more than getting things done. We must understand that the home, the school, and the church have one great mission, and that is to fit boys and girls to become men and women; to live worthily in a larger day than the one in which we work.

If the home is true to its mission, if the school is faithful to its duty, if the community realizes its responsibility, then we shall have fitness to live and ability to serve.

The last suggestion I have to offer is somewhat in contradiction to those I have presented, and it is this: There come times in the administration of the school, in the working out of those problems given us to solve, when it is necessary for us to follow the advice given us by a distinguished English clergyman when he said: "Never explain, never apologize, never retract; get the thing done and let them howl."

THE TEACHING OF CIVICS AND GOOD CITIZENSHIP IN THE PUBLIC SCHOOLS

R. W. G. WELLING, NEW YORK CITY

It may be presumptuous for one who is not a teacher to prescribe for teachers the proper method of instruction in a subject so important as civics and good citizenship; but we who take part in political campaigns have a long-standing quarrel with you, the instructors of youth, because in this great department your work is not better done.

Thruout the country today, in the great majority of instances, you are merely teaching the rules that govern the organization or form of government, and this, as you must realize, is scarcely more than the very beginning of civics. Children may be able to state glibly the functions of the various officers of government, while yet having formed in their minds no picture even remotely resembling the real activity of these officers, and being therefore quite unable to recognize them and reason about them in real life. When you have taught the rules of grammar and arithmetic, you do not for one moment delude yourself into thinking the child knows his grammar and arithmetic until he has had practice in applying these rules. Also what interest has a child in the mere machinery of government? Can one readily call to mind a drier topic for children? How can it be made interesting without in some way bringing them in contact with its working? And how can they be inspired with the responsibilities as well as the privileges of citizenship?

There is a noble effort making in the "school city"—a sort of George Junior Republic for public schools, designed to bring about that very contact by converting the school itself into a municipality, with mayor, common council, judges, police and other departments, and so to bring the children into such actual relation with those offices that ignorance of their functions will be no longer possible.

The "school city," in some form or other, appears to be not unlike the practical example in arithmetic, or the law clubs for the trial of cases in a law school, to which we were recommended in my day to give about half our working time. I accept it at once as an excellent foundation on which to build further. Unquestionably, in matters relating to discipline and order, it is a step far in advance of the authority of a single teacher. It inculcates habits of self-control, and each student is made to feel his share in the maintenance of order. Fear as an inducement to good conduct has been almost wholly eliminated. The development of the instinct of citizenship and the acquaintance with the machinery of government are acquired in the course of actually performing some of the functions of government.

The first of these cities was put in operation in 1897. The plan has

been widely advertised, and yet I doubt if there are more than a very few at present in the country. In the hands of a zealous teacher its possibilities are many. It contemplates ultimately a school state government and a school national government. In one instance,[1] I note that a petition was handed in from the common council of the school to the faculty "to bring before the student body such information regarding village and school improvement as will serve to help make us more intelligent and useful citizens, not only in New Paltz, but also when we go elsewhere to live."

Here we have a suggestion that the "school city" branch out and take part in the affairs of the community in which the school is located. It may be cleaner streets, or new parks, or smoother pavements, but there must always be some activity largely removed from politics and open to the children to share, under the guidance of their teachers. They become readily interested in the object to be attained. Their own department or commissioner of public buildings or public works has, perhaps, made changes in their own playgrounds, thru their own initiative. Their teacher now instructs them in the difference between the school city commissioner of public parks and the actual commissioner of the town in which they lived. It is rarely that any reform or innovation of the kind I have in mind affects but one department of the city. If at all momentous in character, several departments and several years are needed for its accomplishment. Some insight will thus be given them into the machinery of nominations and the considerations that should influence appointments to office; and thus also a feeling of responsibility is aroused.

This is no theory, but has actually been done, tho outside of the public schools. It can and should be done in the schools. In New York city, in some of our East Side settlements, boys of fourteen and upward have been organized to agitate for cleaner streets, new small parks, and better housing in the crowded districts. They were foreigners and the sons of foreigners, and yet such a familiarity have they acquired with the working of city, state, and national government, and such a splendid zeal has inspired their actions, that one must conclude that the way to acquire civics and good citizenship is to engage in those activities that in themselves constitute good citizenship. Recently I was struck, in attending a debate among them, to hear a youngster of sixteen, born in Russia, without affectation and with a fervor that was unmistakable, in quoting from the United States constitution, repeatedly say: "*Our forefathers* in their wisdom provided." And yet in some quarters not long since there was the deepest distrust lest the type represented by this youth was altogether unfit for American citizenship. The country is safe indeed if we can only have enough young men like this lad of sixteen, only ten years in the country, and yet so imbued with the true spirit.

[1] *Gill System at the State Normal School at New Paltz, New York*, p. 118.

As soon as a child has learned to think, it should be made to understand the politics of the country, and current events, branching out gradually from the minor interests and activities of the "school city." We have a striking illustration of what can be accomplished in this direction in the school conducted by Mr. McAndrews in New York city. After a few months of instruction and practice, girls are so trained that fifteen minutes' perusal of the daily paper enables them to give a thoroly intelligent account of the subject assigned to them, whether relating to foreign, national, state, or municipal affairs. And this leads me to say that girls as well as boys must be instructed in civics and good citizenship. The state may deny them a vote — I do not propose to discuss that question — but their influence is needed ; and in New York on more than one occasion have I seen the opponents of woman suffrage glad enough to accept all the help that could be had from intelligent and public-spirited women.

Another plan is that of Mr. Waldo H. Sherman, of the Young Men's Christian Association, New York city. He has had in operation for almost eight years a system differing somewhat in scope from Mr. Gill's "school city." It is intended for young men beyond the school age, of sixteen and over. He organizes a class into a community that performs not only the functions of government, but those of business and banking as well. With many charts to give picturesqueness to the work, he introduces the students as emigrants who settle as farmers on the land, society being organized according to the historical development of our government. Instead of finding a city built to hand, he begins with farmers living in the township and county, the student himself choosing his quarter section of land, 160 acres. Gradually a village is formed, and this, growing into a city, has relations later on with state and nation. The varied relations of men and property are shown by actual transactions.

The New England township is taken as an example, officers being elected at the town-meeting. The schoolhouse is then built, highways and public works are taken up, and the treatment of the poor and the insane, and the question of high license or prohibition. At a certain stage in the town's development the pupils inherit a considerable sum of money, and become depositors and stockholders in a bank. Corporations are formed, and finally plans are made for a railroad. This is, of course, a great event in the life of the community ; and from this point dates the life of the village, known as Collegeville Center, with a population of 5,000. A post-office, bank, hotel, and other buildings are erected, and the population finally reaches the figure of a city with an area of nine square miles, divided into wards, assembly districts, senatorial and congressional districts.

A vigorous campaign is carried on before election day, and meetings

are held at which candidates are called on to express themselves on all local, state, and national issues. All details of primaries, conventions, and finally the Australian ballot system are faithfully carried out.

At least twenty-five lessons, of one hour and a half each, are required to cover the course, and at least twenty-five students to compose a class. I am glad to say that we may expect a book from Mr. Sherman giving in detail this method.

Collegeville, however, is a fictitious institution gotten up only for the purpose of more conveniently teaching the workings of the government of an industrial community, while the "school city," whether confined to school affairs or branching out, as above indicated, in some form of civic or neighborhood campaign work, is an actual institution in which it is attempted to make the children play a real part, and in which their interests are vitally affected. In one case it is government by illustration; in the other, it is actual government. Therein lies the essential difference.

In both, however, the child is taught by being required to exercise some of the functions of civil government; in other words, it is the teaching of applied civics; and in both the child finds pleasure in the work. Also the appreciation of privileges and responsibilities, which constitutes good citizenship, is best acquired by taking part in some form of civic government.

Your work avails nothing, however, if you omit the invaluable inspiration arising from the reading of history, poetry, and stories in which work for the good of the state is made the measure of heroism. I knew a lad who was kept reading and re-reading Roman history until the deeds of prowess and valor, all for the glory of Rome, were stamped into his very character. While others read of the courage and daring of pirates and robbers and mere adventurers who incurred dangers and suffered wounds wholly for their personal glory, this student of Roman history came to appreciate the greatness of enduring all these things for his country's sake. The repeated admonition to a child to be unselfish, to show a self-sacrificing spirit for the good of the state, not only fails to stir in him the proper spirit, but may even poison his mind or set his heart against the very qualities that wear these virtuous labels. His imagination must be stirred and his capacity to idealize must be developed by the reading of poetry, biographies, and great novels.

The American people are at present preoccupied with their own great industrial growth. The politicians plow and sow and harrow and fertilize and look after the crops thruout the year, and on election day the citizen voter bears a hand with the reaper, and assists at the gathering of such crop as the politician has left to be gathered. This, of course, is the crux of the whole situation.

The new generation must be imbued with a new spirit of civic patriotism; and the situation is one that you, above all others, are bound to meet.

How can this be accomplished? First of all you must teach the machinery of government by means of some form of applied civics; and altho it may entail great trouble and pains, especially if it includes, as it should, a class in current events, and taking some part in civic affairs, yet it is not easy to think of work that will bear more valued results. Then you must impart a knowledge of the country's history and the great principle of democracy, together with the tremendous responsibilities it entails upon individuals —our own peculiar message to the world. In addition to this you must inspire some of the idealism that comes from the study of the lives of great men, and the reading of great books, some of the spirit that once belonged to the Hebrews, the Greeks, and the Romans, to whom patriotism was religion.

JUSTIFICATION OF CITY EXPENDITURE ON PARKS AND PARKWAYS—MATERIAL FOR PUBLIC EDUCATION[1]

HON. NATHAN MATTHEWS, JR., BOSTON, MASS.

Mr. President, Ladies and Gentlemen:

I have been asked to prepare a paper for the Association upon the relation of public parks to public education, and to describe for your benefit, as strangers to Boston, what is being done in this community for the creation, maintenance, and utilization of municipal parks.

The public park, as we understand it, is a modern institution. The gardens of the ancient world were private estates created and maintained for individual pleasure. The parks and forests of the Middle Ages were the hunting-grounds of kings and feudal lords. It was not until comparatively recent days that the royal domains on the outskirts of the chief cities of Europe were opened to the general public and made the nucleus of those great systems of suburban parks which go so far to bring happiness and contentment to the urban dwellers in the Old World; and it was only in the past century that the people of central Europe began to appreciate the full value of their municipal forests.

Our New England ancestors devoted themselves during eight or ten generations to a struggle for material and intellectual development which left little room for pleasure or æsthetics, and which took no thought of what succeeding generations might require in this regard. The land, which cost them nothing, was given away for nothing, and given in its entirety. Even the common lands, which the towns retained in great part throughout the seventeenth century, were in the next century parceled out to bodies of commoners and by them transferred to individual ownership; so that when the great awakening came, some fifty years ago, and the

[1] By request of the author the amended spellings adopted by the Board of Directors do not appear in this address. (See resolution of the Board of Directors adopted at Los Angeles, July 13, 1899.)

people looked about them for the forest areas which might so easily have been preserved, they found that the land was gone. And the forests also. The struggle of the Puritans with nature was untempered by any love of beauty, and was prosecuted with regard only for the present. To them the forest was an enemy, to be got rid of as soon and as completely as possible. The result we see in the treeless wastes, the shrunken streams, the denuded rocks, the wornout soil, and the general disregard for the beautiful and permanently useful which has helped to drive the descendants of the Puritans away from the old homes, and has tended to prevent the newer immigrants from taking their places. These immigrants, at least those from the continent of Europe, were familiar with conditions of infertility not unlike our own, and had learned to keep the forest at the village gates. They were also accustomed to public parks as an important feature of city life; and it is largely to their increasing numbers that we owe the success of the first attempt to create an American park — in New York city just before the Civil War. The conditions of the problem in that and other cities were not favorable. There were no inherited public lands; and the only private estates available for suburban parks had first to be purchased at great expense, and then, at still greater cost, to be restored to a condition approximating nature and otherwise worked over to fit them for the intended use. The difficulties which confronted our American cities half a century ago were great; but they did not deter our people, when once convinced of the necessity of public parks, from attempting to re-create at large cost those conditions which a little forethought a few generations back would have preserved to us without expense. The situation was distinctly American in its origin, and the remedy was characteristically American. Beginning with Central Park in New York, the municipal authorities of this country have devoted a large part of the taxes of the past half-century to correcting the errors of their predecessors, and to supplying, before it was too late, ample areas for urban and suburban pleasure grounds. Then, public parks in the common sense of the word having been provided, attention was directed to the desirability of securing still larger and more distant areas for municipal forests, such as prove a great source of pleasure and profit to so many of the cities of northern Europe. Two at least of our American cities, New York and Boston, as well as Essex county in New Jersey, have attacked this problem also, and have secured great tracts of rural land comparable today in size, and a few generations hence in beauty, with the municipal forests of Germany and France.

Public parks have now become an important branch of American municipal administration; and the question is whether the enormous cost for construction and maintenance is or can be justified by the results.

Before discussing this question let me briefly describe to you, as strangers to this city, what you will find today in the parks of Greater

Boston, and what the system will consist of when completed. Our many institutions which by common understanding are educational in scope are of course known to you by repute, and probably by inspection. You have doubtless already visited the schools, hospitals, museums, libraries, and universities by means of which we have tried to make of Boston the foremost center of learning in the country. What, however, you probably do not know—for most of our own citizens do not know it—is the extent, variety, beauty, and educational value of our public parks. Whatever place Boston may occupy, now or hereafter, in the friendly rivalry with other cities for commercial, industrial, or intellectual advancement, she stands, in my opinion, pre-eminent among all the cities of the world for what she has done in the way of municipal parks.

In describing the Boston parks I shall exclude the several hundred smaller grounds and open spaces which, though invaluable to a crowded city, are not within the scope of this paper, but shall include the parks established by the state, at the instance of Boston, for the benefit of the city and surrounding towns, and also certain large areas belonging to Cambridge, Newton, and Lynn, contiguous to or to be connected with the Boston or metropolitan park systems.

First a word as to their origin and history. Entering upon the work some twenty-eight years ago only after mature deliberation, lasting six years and involving two popular elections, the city authorities determined to lay out, under the best professional advice that could be had, a permanent, complete, and comprehensive plan for a system of urban and suburban parks, which should be constructed from time to time as the people were willing to vote the money in accordance with this predetermined plan. Fortunate in procuring the services as landscape engineer of Mr. Frederick Law Olmstead, who found here his greatest opportunity and did his greatest work, the city has been equally fortunate in having been able to secure an unbroken series of upright and intelligent men as park commissioners; the result being that, however great the cost, there has been little or no money wasted or misused, and the original plan has been adhered to with almost literal fidelity. Authorized by the people in 1875, the work was begun in 1877, and was substantially completed in about twenty years.

In the meantime Harvard University had been enabled through private generosity to found an arboretum within the city limits, and by an arrangement between the university and the city this undertaking, which has already achieved a world-wide influence and renown, has for twenty years been a part of our park system.

Then, about ten years ago, the establishment of forest reservations on the sparsely wooded hills in the vicinity of Boston was pressed upon the legislature by the city authorities and other persons interested in the subject, and the result was the creation of a metropolitan park system.

Here again the community was fortunate in having the advice of Mr. Olmstead, supplemented by the services of the late Charles Eliot, whose work was as valuable to greater Boston as Mr. Olmstead's has been to the city proper.

Since the acquisition of these large tracts several public beaches and some smaller parks have been added to the metropolitan system; some connecting parkways have been provided and others authorized by the legislature; and the improvement of the lower reaches of the Charles River, begun in 1880 by the city of Boston, is to be completed upon a plan, authorized by the legislature of 1903, which contemplates the construction of a dam between Charlestown and the city proper, and the conversion of the present tidal estuary into a fresh-water park.

Large areas of land along the Charles river in Dedham and Newton are held for public water-supply purposes, and can at any time be incorporated in the Metropolitan Park System, as was done in 1894 with similar lands in the Middlesex Fells. Near the latter is a large tract of woods owned by the city of Lynn, partly procured about fifteen years ago for water-supply purposes and partly acquired from private gifts.

The history of the Boston parks, both local and metropolitan, discloses a systematic, orderly, and consistent development along plans conceived in the rough by municipal officers and individual citizens, pressed by them upon the public, adopted in principle by the people or their representatives, worked out in detail by the foremost specialists in the country, and executed by successive boards of unpaid commissioners with absolute honesty, with a minimum of waste, and in strict conformity to the original plans. Taking into account their originality, magnitude, and results, we may fairly point to the Boston parks as an achievement in municipal government of which we have a right to be proud and as an illustration of what American democracy can accomplish at its best.

Passing now to a description of our parks in their physical details, let us first reflect upon the possibilities of the situation. What other great city in the world has the advantage of fresh-water streams, diversified rural scenery, and the ocean all within its limits? Marseilles, Naples, Venice, Constantinople, and San Francisco border on the sea, but have no large bodies of fresh water within their bounds. London, Paris, Hamburg, Washington, Philadelphia, and St. Louis have their rivers or fresh-water basins, but miss the ocean. New York has no fresh-water river, and, although situated on tide water, is too remote from the sea. Chicago has the lake, but interior streams, attractive scenery, and salt water are absent. Boston — Greater Boston, as we call it — is the only large city in the world which comprises within its territorial limits the hills, the rivers, and the ocean. It is pleasant to be able to state that all these natural advantages have been utilized for recreation purposes and that some of them have been bodily incorporated in our parks.

Beginning with the ocean, we have six public beaches, one on the harbor and five on the open bay, aggregating eight miles in length, which are under the management of the Metropolitan Park Commission; and the city of Boston has seven parks on the harbor front, aggregating one-hundred and forty acres in extent, and will shortly have about two miles of parkway skirting the harbor.

Going up the Charles we shall, as soon as the improvement recently authorized is completed, enter a lock in a dam between the city proper and Charlestown, and thence pass into a fresh-water basin bordered by embankments and parks stretching up into the country a distance of nearly ten miles and comprising with its embankments an area of over a thousand acres. Above this basin the river is already emparked for the greater part of the way to Dedham. The shores of the Neponset have been acquired for a distance of about nine miles; and two parks, comprising over nine hundred acres, have also been secured along its banks. The banks of the Mystic are public nearly all the way from its mouth to the lakes, as is also one shore of the upper lake. Besides these lakes there are some ten large ponds within the park limits, some of natural origin, and some artificially created for water-supply purposes. The aggregate water surface of the fresh-water ponds is about fourteen hundred acres.

We then have a series of urban and rural parks extending from the Charles river to Jamaica Pond, and thence through the Arboretum to Franklin Park and Mount Bellevue, all connected (except the last named) by parkways which include driveways, bridle paths, etc. These parks —the Boston system proper—comprise about thirteen hundred acres. Cambridge, Newton, and Brookline have parks and reservations of their own, aggregating more than a thousand acres in extent.

Finally, there are the three forest reservations of the Metropolitan Park Commission, comprising over seven thousand acres of woodland, which in time will be connected with each other and with the intervening Boston parks by parkways; and in Lynn we find an additional two thousand acres of woods surrounding the ponds from which the city gets its water supply.

In all there are, or will be, about ten thousand acres of forest lands, four thousand acres of urban and suburban parks, two thousand acres of fresh-water ponds, thirty miles of river, ten miles of sea beach, and forty miles of connecting parkways.

It is to be hoped that the members of the Association will take the time to inspect the one thing to be seen in Boston that is distinctly superior, we think, to anything of the same sort to be found elsewhere in the world, and will visit the principal points in our park system—say Marine Park, the parks stretching from the Charles river to Blue Hill avenue, the Arboretum, and the Blue Hill or Middlesex Fells reservations. In them you will find facilities for every sort of rational open-air sport and recreation—riding, driving, bicycling, picnicking, rowing, sailing,

swimming, bathing, gymnastics, golf, tennis; but the feature to which I would direct your special attention is the success which has attended the effort to convert suburban farms, wood lots, and pastures into the most beautiful and typical New England scenery. You will also note the absence, even in the urban parks, of artificial structures and incongruous effects, the simplicity of the planting, and the obviously light cost of maintenance.

Now, what is the justification for all this work, for the forty millions of public money it will have cost for construction, and the half million a year for maintenance? It certainly cannot be the mere pleasure of those who can afford fast horses and automobiles, or the mere amusement of the masses in boating, sailing, etc.. Expenditures for public parks are not to be likened to the Roman largess, to be incurred for any purpose that promises temporary enjoyment to the people. The justification for park expenditure must be found in the conditions of modern city life; and in the necessity, in the interest of the public health, morality, and happiness, of providing means by which the depressing influence of these conditions may be minimized. The human race was not created to live in the artificial and unwholesome atmosphere of the city; but the modern tendency to concentration is nowhere so apparent as in the increase in the urban over the rural element in our population. However much we may regret it, the present destiny of the greater part of our race seems to be to reside in cities of ever-increasing size and of more and more forbidding aspect. Many of the problems which this domination of the city has created have been reasonably well handled; in the matters of drainage, water supply, lighting, transportation, and other necessities, the modern city is so well provided that it can welcome many times the number of residents that could safely congregate in one community in former times; but until recent years comparatively little had been done to make our cities agreeable and happy places to reside in.

City life is unwholesome, both physically and morally, for all ages, sexes, and conditions; and in particular for the young. The city schools and the daily press are poor substitutes for the education of the farm; and the opportunities for wholesome and rational enjoyment are deficient or altogether lacking. Young people in the city learn little except from books, and they grow up and go through life without learning to extract from it that measure of happiness and contentment which they ought in their own and others' interest to enjoy.

It is in supplying this great deficiency of urban life that we find the function and justification of a well-planned and properly managed system of public parks. The remedy for the demoralizing effects of city life is to be found in the companionship of nature, and in the natural beauty of the land, which, in the words of Bacon, are "the greatest refreshment to the spirit of man."

The function of the public park is partly to furnish convenient places for wholesome sport and recreation for the young, partly to supply attractive resting-places for their elders, and above all to inculcate in all ages and classes that fondness for nature and the country which, when once acquired, becomes a never-failing source of health, contentment, and happiness. An hour or so a day, a half day or a whole day once a week, spent in the beautiful and secluded scenes of a well-planned park not only brings rest and a sense of contentment to the overworked toilers in the city, but should result in stimulating or creating that love of nature which, when the opportunity exists to satisfy it, is the surest means of securing health and happiness. There is in every human breast an inborn love of nature, which needs only to be quickened into consciousness to exert a benign and happy influence throughout a man's whole life. The city boy who has spent a summer in the woods spends the rest of his life in trying to get back there. The demoralizing atmosphere of the modern city can suppress, but not wholly eradicate, this longing for the beautiful in nature; it can be revived; and the means of gratifying it and of utilizing it for the amelioration of conditions and the advancement of the race are to be found in the establishment of public parks.

It is here that we see the connection between parks and education; for unfortunately it is the fact that those who live in cities, particularly those who are born there, must be made familiar by personal experience and contact with the enjoyment to be obtained from nature before they realize the opportunities for rational pleasure to be found in the parks; and they should be encouraged to acquire that fondness for country scenes and open-air recreation which, when once acquired, is never forgotten, and which will furnish the means of wholesome and inexpensive enjoyment throughout the rest of their lives.

Speaking more especially of this particular community, it is evident that the people must be educated to appreciate the beauties of our parks and the use that can be made of them. At the present time not over a small fraction of the people seem to understand what our parks consist of or what they were acquired for. The facilities for boating, skating, bathing, gymnastic work, and the playing of games are known and appreciated, although not so much as they might be; the drives are fairly well patronized in spring and autumn; the beaches are crowded on hot summer days; and on Sundays and holidays in pleasant weather a certain number of picnic parties may be found here and there scattered throughout the parks. A few stray lovers of nature may also occasionally be found in the woods and wilder reservations. Generally speaking, however, it may be said that the woods, meadows, hills, and rivers which comprise nine-tenths of our parks and which constitute in extent, beauty, and accessibility a park system which has no rival in the world, are unknown to the public except by name, and are not fulfilling the purpose for which they were established.

It is clear that information, instruction, education are necessary in order that the people may understand and profit by the endless opportunities for recreation and improvement which our parks afford. It seems evident also that the best place for this education to begin is in the schools. Some steps in this direction have already been taken in the school gardens which have been established in this and other cities, and in the greater attention devoted to horticulture, to botany, and to what has been termed "nature study." The things which cannot be taught by books, the ordinary things of life, are equally important with the learning of the schoolroom, and can be learned only out of doors. Our parks afford an endless field for instruction of this sort, which, as well as information in gardening, arboriculture, and forestry, might be given, it would seem, by means of regular inspection trips conducted by persons competent to teach the children to look about them and to take an interest in what they see. The parks themselves should be a school, not only for education in the arts connected with plant life, but in the appreciation of the beauties of nature and in that greatest of all arts, the art of enjoying life.

American political methods have furnished American educators with unequaled opportunities for inculcating in the young that love for the beauties of nature which, when acquired, will greatly enlarge their capacity for wholesome enjoyment, and thus ameliorate the conditions of modern city life. Our city governments would seem to have done their duty in the premises; public parks have been furnished by our democratic communities upon a scale of liberality unknown elsewhere in the world. It remains for those specially interested in the cause of education to devise the means by which these splendid facilities for improving the health, morals, and happiness of the people may be utilized as intended by those who are responsible for their establishment.

THE NATURE-STUDY MOVEMENT

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The nature-study movement is the outgrowth of an effort to put the child into contact and sympathy with its own life.

It is strange that such a movement is necessary. It would seem to be the natural, and almost the inevitable, thing that the education of the child should be such as to place it in intimate relation with the objects and events with which it lives. It is a fact, however, that our teaching has been largely exotic to the child; that it has begun by taking the child away from its natural environment; that it has concerned itself with the subject-matter rather than with the child. This is the marvel of marvels in education.

Let me illustrate by a reference to the country school. If any man were to find himself in a country wholly devoid of schools, and were to be set the task of originating and organizing a school system, he would almost unconsciously introduce some subjects that would be related to the habits of the people and to the welfare of the community. Being freed from traditions, he would teach something of the plants and animals and fields and people. Yet, as a matter of fact, what do our rural schools teach? They usually teach the things that the academies and the colleges and the universities have taught—that old line of subjects that is supposed, in its higher phases, to lead to "learning." The teaching in the elementary school is a reflection of old academic methods. We really begin our system at the wrong end—with a popularizing and simplifying of methods and subjects that are the product of the so-called higher education. We should begin with the child. "The greatest achievement of modern education," writes Professor Payne, "is the gradation and correlation of schools, whereby the ladder of learning is let down from the university to secondary schools, and from these to the schools of the people." It is historically true that the common schools are the products of the higher or special schools, and this explains why it is that so much of the common-school work is unadapted to the child. The kindergarten, and some of the manual-training, are successful revolts against all this. It seems a pity that it were ever necessary that the ladder of learning be "let down;" it should be stood on the ground.

The crux of the whole subject lies in the conception of what education is. We all define it in theory to be a drawing out and developing of the powers of the mind; but in practice we define it in the terms of the means that we employ. We have come to associate education with certain definite subjects, as if no other sets of subjects could be made the means of educating a mind. One by one new subjects have forced themselves in as being proper means for educating. All the professions, natural science, mechanic arts, politics, and last of all agriculture, have contended for a place in educational systems and have established themselves under protest. Now, any subject, when put into pedagogic form, is capable of being the means of educating a man. The study of Greek is no more a proper means of education than the study of Indian corn is. The mind may be developed by means of either one. Classics and calculus are no more divine than machines and potatoes are. We are much in the habit of speaking of certain subjects as leading to "culture;" but this is really all factitious, for "culture" is the product only of efficient teaching, whatever the subject-matter may be. So insistent have we been on the employing of "culture studies" that we seem to have taken the means of education for the object or result of education. What a man is, is more important than what he knows. Anything that appeals to a man's mind is capable of drawing out and training a man's mind; and is there any subject that does not appeal

to some man's mind? The subject may be Sanskrit literature, hydraulics, physics, electricity, or agriculture—all may be made the means whereby men and women are educated, all may lead to what we ought to know as culture. The particular subject with which the person deals is incidental, for "A man's a man for a' that and a' that."

Is there, then, to be no choice of subjects? There certainly is. It is the end of education to prepare the man or woman better to live. The person must live with his surroundings. He must live with common things. The most important means with which to begin the educational process, therefore, are those subjects that are nearest the man. Educating by means of these subjects puts the child into first-hand relation with his own life. It expands the child's spontaneous interest in his environment into a permanent and abiding sympathy and philosophy of life. I never knew an exclusive student of classics or philosophy who did not deplore his lack of touch with his own world. These common subjects are the natural, primary, fundamental, necessary subjects. Only as the child-mind develops should it be taken on long flights to extrinsic subjects, distant lands, to things far beyond its own realm; and yet, does not our geography teaching often still begin with the universe or with the solar system?

In the good time coming, geography will not begin with a book at all, as, in fact, it does not now with many teachers. It may end with one. It will begin with physical features in the very neighborhood in which the child lives—with brooks and lakes and hills and fields. Education always should begin with objects and phenomena. We are living in a text-book and museum age. First of all, we put our children into books, sometimes even into books that tell about the very things at the child's door, as if a book about a thing were better than the thing itself. So accustomed are we to the book-route that we regard any other route as unsystematic, unmethodical, disconnected. Books are only secondary means of education. We have made the mistake of making them primary. This mistake we are rapidly correcting. As the book is relegated to its proper sphere, we shall find ourselves free to begin with the familiar end of familiar things.

Not only are we to begin with common objects and events, but with the child's natural point of contact with them. Start with the child's sympathies; lead him on and out. We are to develop the child, not the subject. The specialists may be trusted to develop the subject-matter and to give us new truth. The child is first interested in the whole plant, the whole bug, the whole bird, as a living, growing object. It is a most significant fact that most young children like plants, but that most youths dislike botany. The fault lies neither in the plants nor in the youths. A youth may study cells until he hates the plant that bears the cells. He may acquire a technical training in cells, but he may be divorced from objects with which he must live, and his life becomes poorer rather than richer. I have no objection to minute dissection and analysis, but we

must be very careful not to begin it too early nor to push it too far, for we are not training specialists, but are developing the power that will enable the pupil to get the most from his own life. As soon as the pupil begins to lose interest in the plant or the animal itself, stop!

There is still another reason for the study of the common things in variety: it develops the power to grasp the problems of the day and to make the man resourceful. A young man who has spent all his time in the schoolroom is usually hopelessly helpless when he runs against a real circumstance. I see this remarkably illustrated in my own teaching, for I have young men from the city and from farms. The farm boy will turn his hand to twenty things where the city boy will turn his to one. The farm boy has had to meet problems and to solve them for himself: this is sometimes worth more than his entire school training. Why does the farm boy make his way when he goes to the city?

It is no mere incident to one's life that he be able to think in the thought of his own time. Even tho one expect to devote himself wholly to a dead language, he should study enough natural science and enough technology to enable him to grasp living problems. I fear that some of our institutions are still turning out men with mediæval types of mind.

Now, therefore, I come again to my thesis — to the statement that the end and purpose of nature study is to educate the young mind by means of the subjects within its own sphere, by appealing to its own sympathetic interest in them, in order that the person's life may be sweeter, deeper, and more resourceful. Nature study would not necessarily drive any subject from the curriculum; least of all would it depreciate the value of the "humanities;" but it would restore to their natural and proper place the subjects that are related to the man. It would begin with things within the person's realm. If we are to interest children — or grown-ups, either, for that matter — we must begin by teaching the things that touch their lives. Where there is one person that is interested in philology, there are hundreds that are interested in engines and in wheat. From the educational point of view, neither the engine nor the wheat is of much consequence, but the men who like the engines and who grow the wheat are immeasurably important and must be reached. There are five millions of farms in the United States on which chickens are raised, and millions of city and village lots also where they are grown. I would teach chickens. I would reach Men by means of the Old Hen.

How unrelated much of our teaching is to the daily life is well shown by inquiries recently made of the children of New Jersey by Professor Earl Barnes. Inquiries were made of the country school children in two agricultural counties of the state as to what vocation they hoped to follow. As I recall the figures, of the children at seven years of age 26 per cent. desired to follow some occupation connected with country life. Of those at fourteen years, only 2 per cent. desired such occupation. This

remarkable falling off Professor Barnes ascribes in part to the influence of the teacher in the country schools, who is usually a town or city girl. The teacher measures everything in terms of the city. She talks of the city. She returns to the city at the end of the week. In the meantime, all the beauty and attractiveness and opportunity of the country may be unsuggested. Unconsciously both to teacher and pupil, the minds of the children are turned toward the city. There results a constant migration to the city, bringing about serious social and economic problems; but the serious part of it from the educational point of view is the fact that the school training unfits the child to live in its normal and natural environment. It is often said that the agricultural college trains the youth away from the farm; the fact is that the mischief is done long before the youth enters college.

Let me give another illustration of the fact that dislike of country life is bred very early in the life of the child. In a certain rural school in New York state, of say forty-five pupils, I asked all those children that lived on farms to raise their hands; all hands but one went up. I then asked all those who wanted to live on the farm to raise their hands; only that one hand went up. Now, these children were too young to feel the appeal of more bushels of potatoes or more pounds of wool, yet they had this early formed their dislike of the farm. Some of this dislike is probably only an ill-defined desire for a mere change, such as one finds in all occupations, but I am convinced that the larger part of it was a genuine dissatisfaction with farm life. These children felt that their lot was less attractive than that of other children; I concluded that a flower garden and a pleasant yard would do more to content them with living on the farm than ten more bushels of wheat to the acre. Of course, it is the greater and better yield that will enable the farmer to supply these amenities; but at the same time it must be remembered that the increased yield itself does not awaken a desire for them. I should make farm life interesting before I make it profitable.

Of course, nature study is not proposed merely as a means of keeping youth in the country; I have given these examples only to illustrate the fact that much of our education is unrelated to the circumstances in which the child lives—and this is particularly true of teaching in the rural schools. Nature study applies to city and country conditions alike, acquiring additional emphasis in the country from the fact that what we call "nature" forms the greater part of the environment there. But the need to connect the child with itself is fundamental to all efficient teaching. To the city child the problems associated with the city are all-important; but even then I should give much attention to the so-called "nature subjects;" for these are clean, inspiring, universal. "Back to nature" is an all-pervading tendency of the time.

We must distinguish sharply between the purposes of nature study and

its methods. Its purposes are best expressed in the one word "sympathy." By this I do not mean sentimentalism or superficiality or desultoriness. The acquiring of sympathy with the things and events with which one lives is the result of a real educational process — a process as vital and logical and efficient as that concerned in educating the older pupil in terms of fact and "science." Nature study is not "natural history," nor "biology," nor even elementary science. It is an attitude, a point of view, a means of contact.

Nature study is not merely the adding of one more thing to a curriculum. It is not co-ordinate with geography or reading or arithmetic. Neither is it a mere accessory, or a sentiment, or an entertainment, or a tickler of the senses. It is not a "study." It is not the addition of more "work." It has to do with the whole point of view of elementary education, and therefore is fundamental. It is the full expression of personality. It is the practical working out of the extension idea that has become so much a part of our time. More than any other recent movement, it will reach the masses and revive them. In time it will transform our ideals and then transform our methods.

The result of all this changing point of view I like to speak of as a new thing. Of course, there is no education that is wholly new in kind; and it is equally true that education is always new, else it is dead and meaningless. But this determination to cast off academic methods, to put ourselves at the child's point of view, to begin with the objects and phenomena that are near and dear to the child, is so marked just now, and is sure to be so far-reaching in its effects, that I cannot resist the temptation to collect these various movements, for emphasis, under the title, the "new education."

"Nature study" is another name for this new education. It is a revolt from the too exclusive science-teaching point of view for the young, a protest against taking the child first of all out of its own environment. It is a product of the teaching of children in the elementary schools. The means and methods in nature study are as various as the persons who teach it. Most of the criticism of the movement — even among nature-study folk themselves — has to do with means and methods rather than with real ideals. We are now in the epoch when we should overlook minor differences and all work together for the good of a common cause. There is no one subject and no one method that is best.

While it is not my purpose to enter into any discussion of the methods of teaching nature study, I cannot refrain from calling attention to what I believe to be some of the most important dangers. (1) I would first mention the danger of giving relatively too much attention to mere subject-matter or fact. Nowhere should the acquiring of mere information be the end of an educational process, and least of all in nature study,

for the very essence of nature study is spirit, sympathy, enthusiasm, attitude toward life. It is these results that the youth gets naturally when he associates in a perfectly free and natural way with objects in the wild. Science-teaching has fallen short of its goal in the elementary schools — and even in the colleges and universities — by insisting so much on the subject-matter as to forget the pupil. In standing so rigidly for the letter, we have missed the spirit. President Eliot has recently called attention to this danger: "College professors heretofore have been apt to think that knowledge of the subject to be taught was the sufficient qualification of a teacher; but all colleges have suffered immeasurable losses as a result of this delusion." (2) A second danger is the tendency to make the instruction too long and too laborious. A child's mind cannot be held to a subject profitably for more than a very few minutes. As soon as the child becomes weary of giving attention, the danger-point is reached; for thereafter there is loss in the spirit and enthusiasm, however much may be gained in dry subject-matter. I believe that even in high schools and colleges we make mistakes in demanding too long continued application to one subject. Short, sharp, enthusiastic exercises, with pith and point, of five to ten minutes' duration, are efficient and sufficient for most purposes, particularly with beginners. (3) A third danger is the practice of merely telling or explaining. Set the child to work, and let the work be within its own realm. Pollen, lichens, capsules, lymphatics, integuments — these are not within the child's range; they smack of the museum and the text-book. Yet it appears to be the commonest thing to put mere children at the subject of cross-fertilization; they should first be put, perhaps, at flowers and insects. I wish that in every schoolroom might be hung the motto, "Teaching, not telling." (4) A fourth point I ought to mention is the danger of adhering too closely to the book habit; this I have already touched on. We are gradually growing out of the book slavery, even in arithmetic and grammar and history. This means a distinct rise in the abilities of the teacher. Of all subjects that should not be taught by the book, nature study is chief. Its very essence is freedom from tradition and "method." I wish that there were more nature-study books, but they are most useful as sources of fact and inspiration, not as class texts. The good teacher of nature study must greatly modify the old idea of "recitations." I wish to quote again from President Eliot: "Arithmetic is a very cheap subject to teach; so are spelling and the old-fashioned geography. As to teaching history in the old-fashioned way, anybody could do that who could hear a lesson recited. To teach nature studies, geometry, literature, physiography, and the modern sort of history requires well-informed and skillful teachers, and these cost more than the lesson-hearers did." (5) Finally, we must come into contact with the actual things, not with museums and collections. Museums are little better than books unless they are made to be very secondary means. The

museum has now become a laboratory. The living museum must come more and more into vogue—living birds, living plants, living insects. The ideal laboratory is the out-of-doors itself; but for practical school purposes this must be supplemented. The most workable living laboratory of any dimensions is the school garden. The true school garden is a laboratory plat; time is coming when such a laboratory will be as much a part of a good school equipment as blackboards and charts and books now are. It will be like an additional room to the school building. Aside from the real school garden, every school premises should be embellished and improved as a matter of neighborhood and civic pride; for one cannot expect the child to rise above the conditions in which it is placed. All these dangers cannot be overcome by any "system" or "method;" they must be solved one by one, place by place, each teacher for himself. Whenever nature study comes to be rigidly graded and dressed and ordered, the breath of life will be crushed from it. It is significant that everywhere mere "method" is giving way to individualism.

In time, the methods of teaching nature study will crystallize and consolidate about a few central points. The movement itself is well under way. It will persist because it is vital and fundamental. It will add new value and significance to all the accustomed work of the schools; for it is not revolutionary, but evolutionary. It stands for naturalness, resourcefulness, and quickened interest in the common and essential things of life. We talk much about the ideals of education; but the true philosophy of life is to idealize everything with which we have to do.

THE BEGINNING AND AIMS OF THE GENERAL EDUCATION BOARD

WALLACE BUTTRICK, SECRETARY AND EXECUTIVE OFFICER OF THE GENERAL EDUCATION BOARD, NEW YORK CITY

The General Education Board is an outgrowth of the Conference for Education in the South, an organization which had its beginning at Capon Springs, Va., in 1898. At the fourth annual meeting of that conference, held at Winston-Salem, N. C., the president, Mr. Robert C. Ogden, was authorized to appoint seven men who with himself should be a permanent and self-perpetuating executive board. The original members of the board thus appointed were: Robert C. Ogden, Jabez L. M. Curry, Charles W. Dabney, Edwin A. Alderman, Charles D. McIver, Hollis B. Frissell, George Foster Peabody, and Wallace Buttrick. Since the organization of the board the following additional members have been elected: William H. Baldwin, Jr., Walter H. Page, Albert Shaw, Hugh H. Hanna, and Edgar Gardner Murphy. Upon its organization in November, 1901, the

board took the name "Southern Education Board" and elected the following officers:

President — Robert C. Ogden.
Treasurer — George Foster Peabody.
Secretary — Charles D. McIver.
Executive Secretary — Edgar Gardner Murphy.
Supervising Director — Jabez L. M. Curry.
District Directors — Edwin A. Alderman, Hollis B. Frissell, Charles D. McIver.
Director Bureau of Investigation and Publication — Charles W. Dabney.
General Field Agents — Booker T. Washington, G. S. Dickerman.

The following quotation from a brief published statement shows the scope of the Southern Board's work:

> Under the instructions of the preamble and resolutions, the board has decided that no portion of the fixed sum of money it hopes to secure for current expenses shall be applied to the assistance of any institution or school, but that it shall be expended exclusively for the purpose of stimulating public sentiment in favor of more liberal provision for universal education in the public schools.
>
> The practical work of the board is in the form of a popular propaganda, through its own printed issues, the public press, and more especially public speech — the living epistle.

In the course of time the northern members of the board became convinced that something more than an educational propaganda was needed. They came to appreciate the heroic earnestness of the South in its effort to promote universal education. They saw also the peculiar difficulties which hinder and limit the development and support of free schools for all the people in the southern states.

Let us for a few minutes consider some of these conditions and hindrances peculiar to the south central and south Atlantic states.

1. *The serious results of the war between the states.* — It is not easy for us to realize the condition of the southern people after the surrender at Appomattox. Some of us recall the rejoining at the North as our boys came marching home, singing the songs of victory. We recall the tremendous wave of business prosperity that set in at the North even before war had ceased. Not so was it at the South. I have sat in the homes of these southern heroes and listened to their stories of the desolation and almost despair of the people as the returning soldiers began anew the works of peace. One-tenth of the white male population had been lost on the field of battle; the entire accumulated capital of the South had been swept away; in many places their houses had been burned and their fields were wasted; the very institutions of their civilization had been uprooted and destroyed. Then followed the period of reconstruction, when good men made mistakes and bad men ran riot. During this unhappy period the already impoverished states were loaded with added burdens of bonded debts, amounting in some cases to practical confiscation. And, what was even worse, prejudices were formed and animosities aroused that

have lasted to the present day, and still stand in the way of progress. The war, with the awful aftermath of reconstruction, involved the building anew of an entire civilization.

2. *Eighty-five per cent. of the population of the South is rural.* — The north Atlantic states average one hundred and thirty people to the square mile; the south central and south Atlantic states average but thirty-one to the square mile. The former Confederate states have but twenty-six cities with a population of 25,000 or over; the single state of Massachsetts has twenty-three such cities. The sparse population of the South necessitates small schools, widely separated and with inadequate support. This difficulty is seriously aggravated by the poor roads which are always found in sparsely settled regions.

The cities and larger towns of the South have excellent school systems, in the development of which the trustees of the Peabody Education Fund have borne a large and honorable part. But the average term of the rural schools is less than eighty days, and the entire school life of the average child but three of these short terms, or 240 days in all.

3. *The necessity of supporting two systems of schools.* — The South, with its limited wealth, its inheritance of debt, and its sparse population, has the added burden of supporting two distinct systems of schools — one for the white and another for the colored children. The decision of the people of the South regarding this matter of separate schools is final, and admits of no challenge. Experience shows that it works to the advantage of the colored race as well as of the white. Without separate schools the negro would have little, if indeed any, opportunity for the development of that race leadership which is the great necessity of race progress. It is the sphere of the teacher that has furnished the negro his largest opportunity for demonstrating his power of leadership. This necessity for a dual system of schools involves an expense nearly twice as large as would be necessary for the education of one race.

4. *Other hindrances less general.* — *a*) Traditional sentiment regarding public education. Before the Civil War the people of the South regarded the obligation to educate as belonging to the parent, and not to the state; education, therefore, was looked upon as the privilege of a favored few rather than as the right of all. Private schools educated the sons and daughters of a select class, while the great mass of the people had little schooling, and many of them none at all. A great change in sentiment and conviction has taken place in recent years, until "free schools for all the people" has become a political shibboleth in several states; but a careful observer of conditions and sentiment in the South sees that the old aristocratic ideal of society still hinders the progress of universal education at public expense.

b) Indifference to education in many rural regions, due to the present inefficiency of the schools, the ignorance of parents, the supposed need of

child-labor at home and on the farms, and a conservatism that fights against change. The awakening of these regions progresses rapidly, but only as the result of the most earnest effort and much patience on the part of educational leaders.

c) An exaggerated individualism which looks with disfavor on central boards of direction and control. For this reason both state and county superintendents have to meet considerable opposition before they can attain to any position of recognized authority.

d) A dislike and dread of taxation. The present sentiment in this respect is due in large part to the unhappy experiences of the reconstruction period, but, as regards support of schools by local taxation, it is also due to the fact that from the beginning of the public-school system schools have been supported by the funds of the states at large rather than by funds raised locally. Initiative at the North has been on the part of the local community, while at the South it has been by the state. As a result the school term is only as long as the state apportionment will maintain. Furthermore, this dependence for the support of the schools on a remote source of revenue has deadened the sense of local responsibility. One of the great problems of the South, therefore, is that of the education of a public sentiment favorable to local taxation for school purposes.

These are some of the hindrances that have come under my personal observation, as I have met the state and county superintendents of nine of the southern states during the past year. For the most part they are peculiar to the South, and, taken together, they constitute a peculiar problem inviting interest, sympathy, and help.

WHAT THE SOUTH HAS DONE

Let us now see and consider what the South has done in the face of these difficulties.

Soon after the war the different state legislatures undertook the development of free public schools, in the belief that the education of all the people would be the greatest means of reconstructing their shattered fortunes and of rehabilitating their broken civilization. The aristocratic view of education is slowly yet surely yielding to the democratic, until now every state has a well-defined system of public free schools, and a sentiment favoring "free schools for all the people" pervades the social and political life of the South.

This change in public sentiment is traceable to several causes:

1. The influence of denominational schools, i. e., schools founded and maintained by the several Christian denominations. Dr. Walter H. Page, in his *Rebuilding of Old Commonwealths*, has traced the influence of the denominational school as an intermediate step between the aristocratic private school and the democratic public school, emphasizing the change that has taken place in favor of the latter. The past, present, and future

value of the denominational schools must not be underestimated. Established for public rather than for sectarian ends, supported by personal and financial sacrifices, they have been one of the great forces in the educational advancement of the South, supplying teachers of the free schools and leaders of public thought.

On the other hand, and along with these favorable influences, both the private and the denominational schools have retarded somewhat the growth of public education by meeting the needs of their respective communities with such satisfaction that the larger needs of free, democratic, all-embracing schools were overlooked.

2. The work of the Peabody and Slater Education Funds, the former in promoting school systems in cities and towns, and schools for the training of teachers, the latter in promoting schools for negroes. The influence of these two funds has been far-reaching — a patriotic philanthropy of the most practical and enduring character.

3. Appreciative mention should also be made of the wide influence on public education of such great schools as Hampton and Tuskegee, and likewise of many schools for negroes that have been founded and maintained by Northern philanthrophy. These schools — no longer "forts in an enemy's country," to quote the felicitous phrase of Dr. Alderman — have gained the respect and won the co-operation of the school authorities of the South, and have made much public sentiment favorable to universal education.

4. The enthusiastic leadership of a company of young men, who, often at personal sacrifice and always with genuine heroism, have campaigned the South, their war-cry being, "Free schools for all the people." You know many of them. A few are here participating in your counsels; others are conducting and teaching summer schools for teachers in several southern states, where at this moment over ten thousand earnest men and women are spending their vacations in seeking to improve the character of their work as teachers in the public schools. I wish you could appreciate the amount of devoted heroism and personal self-sacrifice implied in those ten thousand teachers thus hard at work during their vacations. They are giving their time, and in many cases their entire savings. I believe that the public-school teacher is the hope of the South.

A BRIEF SUMMARY OF PRACTICAL RESULTS

Since 1870, $690,000,000 have been raised by taxation for public schools, of which amount $130,000,000 have been devoted to the education of the negroes. The public expenditure for both races is now nearing $40,000,000 a year.

Enthusiasm for common schools is seen in public, private, and denominational conferences called for the discussion of problems connected with the promotion of public education. This enthusiasm is also seen in

the speeches and messages of governors; the emphasis of the press, the platform, and the legislatures; the rapid spread of local taxation and consolidation of schools; the general advocacy of manual and industrial training; the increase of high-school studies in the public schools (heretofore secondary education has been almost exclusively under private or denominational auspices); the development of agricultural and mechanical colleges; the growth of public and private normal schools, teachers' training classes, summer institutes, and summer schools for teachers.

In a word, the paramount question in the southern states is that of the promotion of public education. It is the chief plank in all political platforms, the shibboleth of men and women of light and leading.

THE GENERAL EDUCATION BOARD

The knowledge of such facts as these led to the formation of the General Education Board.

In a nation such as ours, where all initiative is with the people, no problem is ever strictly local. No locality in our country ever "liveth unto itself." "When one member suffers, then all members suffer," is involved in the very idea of our peculiar national life.

The General Education Board was organized in February, 1902, and issued the following

BRIEF STATEMENT OF POLICY

The underlying principle of the association is the recognition of the fact that the people of the southern states are earnestly engaged in the promotion of public education, and that in this effort they should receive generous aid; and to this end, and in pursuance of the following named and kindred objects, the association will seek gifts, large and small, from those in sympathy with its plans.

It is the purpose of the board:

1. To promote education within the United States of America without distinction of race, sex, or creed.

2. To co-operate with other organizations interested in educational work, and to simplify and make effective the general work of education, avoiding unnecessary duplication.

3. To develop the public-school system, especially in rural districts.

4. To aid in the maintenance and improvement of educational institutions already established.

5. To further the establishment of training schools for teachers, especially those designed to educate teachers of industrial and manual training.

6. To develop the principle of self-help by urging increased local taxation, local contributions, or by other means.

7. To collect full information and statistics in respect to educational matters in the districts covered by the operations of the board, which shall be kept at a general office.

8. To furnish the public with information, suggestions, and counsel, and for this purpose to act somewhat as a clearing house for educational statistics and data to be collated by the board.

9. To educate public opinion in all matters pertaining to the general cause of education by publication of reports through the daily press and by other means.

10. To promote by all suitable means every form of valuable educational work.

For nearly a year the board worked under articles of association, until, in January, 1903, it organized under a charter granted by the Congress of the United States.

The board now consists of the following-named men: William H. Baldwin, Jr., chairman; George Foster Peabody, treasurer; Wallace Buttrick, secretary and executive officer; and Frederick T. Gates, Daniel C. Gilman, Morris K. Jesup, Robert C. Ogden, Walter H. Page, John D. Rockefeller, Jr., and Albert Shaw.

The late Hon. Jabez L. M. Curry was a member of the board from its organization to the time of his death.

The offices of the board are at 54 William street, New York city.

At the time of its organization the board was underwritten in a moderate amount by a friend of the work. This sum, about one hundred thousand dollars a year for ten years, will enable the board to proceed with its investigations, and also to render aid in small amounts. As implied in its statement of policy, however, the board will seek other funds from various sources as its plans are developed.

During the fifteen months of its existence the board has made a few conditional gifts to such objects as the consolidation of rural schools, the equipment of schools for the training of teachers, the support of selected schools for negroes, the maintenance of summer schools for teachers for both races, the holding of conferences with county and city school superintendents, etc.

The main work of the board thus far, however, has been that of a careful and comprehensive study of educational conditions and needs in each of the southern states, including such subjects as public and private schools of every grade and class; school population and average attendance; amount of public and private funds devoted to education; length of school terms and means taken to lengthen the same; the supply of teachers, their training, time of service, and pay; public-school administration, supervision, etc.; and in general all facts bearing on the educational conditions and needs of the south central and south Atlantic states.

At the offices of the board a carefully selected library of educational reference has been collected, including a few general reference works, reports of school boards and school superintendents, reports of the National Educational Association and other educational societies, the various state school laws, catalogs and circulars of nearly all of the southern institutions, and, by the courtesy of Commissioner Harris, a full set of reports of the United States Bureau of Education. These publications have been carefully classified and cataloged, and are at the service of the general public.

In gathering information the board has availed itself of this published material, and in addition has sought first-hand information thru its own agencies. The secretary and school visitors of the board have visited and

carefully inspected some three hundred individual schools, attended summer schools and other gatherings of teachers, arranged and attended special conferences of state, county, and city superintendents of schools in eight of the southern states, and in general have sought the acquaintance and counsel of leading educators thruout the country, especially in the South.

Questions covering educational facts have been prepared and sent to county school superintendents and to individual schools of all grades. Some thousands of these blanks have been filled out and are now on file, together with stenographic reports of the proceedings and discussions of the conferences above referred to. The board has also secured on its own blanks detailed information regarding the existing supply of teachers, covering such questions as their professional training, grade of license, time of service, etc. The information secured in these various ways is carefully verified by comparison with published reports and then edited, classified, and indexed, so as to be readily accessible at the offices of the board; and maps are being prepared which show at a glance the educational equipment of each state, including elementary, secondary, normal, professional, technical, and university instruction.

On the basis of such accurate knowledge the board hopes to develop a constructive program that will appeal strongly to people of wealth who share this sense of responsibility for the education of all the people of our country.

In a word, thru funds that may be placed at its disposal, and by furnishing the public with information, suggestion, and counsel, the General Education Board will seek "to promote education within the United States of America, without distinction of race, sex, or creed."

THE EDUCATIONAL NEEDS OF THE SOUTHERN NEGRO

REV. CHARLES T. WALKER, PASTOR OF MOUNT OLIVET BAPTIST CHURCH, NEW YORK CITY

Mr. President, Members of the National Educational Association, Ladies and Gentlemen:

I am gratefully sensible of the honor you have done me, in permitting me to represent the educational interests of my race before this intelligent audience.

I am to speak for and in behalf of a race peculiarly situated; a race born amidst persecution, disciplined in the school of slavery nearly two hundred and fifty years, emancipated forty years ago without education, experience, money, competent leaders, and in some instances without names. I represent a race that has been true and loyal to America

from the revolutionary struggle to this period of the twentieth century. My race has not only stood by the American flag, but has been true to America's interest. The American people, in order to do effective work in the elevation of my race, must believe in the manhood of the negro, and have faith in his moral, spiritual, and intellectual possibilities.

The negro has made wonderful progress since his emancipation in the development of knowledge, character, and the acquisition of property. The South has done well in her appropriations by the various legislatures for education, when are remembered the poverty, devastation, and bad feeling which came with that period of *mis*construction called *re*construction.

The leaders of my race recognize the responsibility devolving upon them to lead into the possession of intelligent, honorable citizenship. They have commenced the serious and difficult task, and with divine guidance, and the assistance and encouragement of the friends of popular education, success is absolutely certain. Judging the future by the past and present, negro illiteracy will be reduced to a greater extent in the next twenty years than it has been in the entire forty years of freedom. The past has been foundation work, and much foundation work remains to be done. We are indebted to northern philanthropists for the foundation of negro education; foundation work is not always conspicuous; to be permanent and durable much of it is out of sight; but that work is appreciated as the building in process of erection assumes proportions and gradually arises toward completion. The negro has reduced his illiteracy 50 per cent.; we have 2,500,000 negro children in the public schools, 35,000 negro teachers, 45,000 students in higher institutions, 30,000 students learning trades, and 3,000 students pursuing classical and scientific courses. Negroes have given out of their poverty for education $13,065,000. They have expended for school property $15,000,000. Negro students have taken high rank at Harvard, Yale, Brown, Oberlin, and other representative institutions. The negro's progress is remarkable when you remember the short time in which this progress has been made and the adverse circumstances under which the race has had to labor.

The negro is behind; not because he is incapable of intellectual growth and development; not because he differs essentially from other races. He is simply a man like other men. The negro race has the vices and virtues, abilities and disabilities, of other men. He loves freedom; he hates oppression. He is an ardent admirer of justice; he has no love for injustice, having known it intimately for two hundred and fifty years. The negro is patient under the most exasperating and trying circumstances. He has been loyal to every trust committed to him both in war and in peace. He stood guard over southern homes during the Civil War, supporting and defending helpless children and defenseless

women. He wept over the grave of his master as sincerely as Jacob mourned for Joseph. At the close of the war he returned to the white men their wives and children untouched, unharmed, and unblemished. There is no record of a single negro betraying the trust committed to him during the four long years of bloody conflict.

There is no essential difference between the negro and any other race. While he is charged with being imitative, there are some things in which he does not care to imitate his white brother. He does not believe in committing suicide. He rarely ever makes assignments. He does not believe in bankruptcy, or in emigration. It is often claimed that the negro should return to Africa, just as the Jews returned to Canaan after their liberation. In the case of the Jews, God ordered the march, furnished leaders, gave supplies, and cut a path across the sea; but up to this time, so far as regards my race, no arrangement has been made for our transportation. The negro is behind other races because of lack of time and opportunity. Some few have done admirably; many have done well.

The educational needs of the negroes of the South can be summed up briefly as follows:

1. A better system of public schools—which means longer terms and better teachers. I mean thoroly educated, professionally trained teachers, who will follow teaching as a profession, and not as a stepping-stone to something else. We need a well-regulated system of public schools for the rural districts. Professor Kelly Miller says in his report: "In the rural districts of the South the school fund is woefully inadequate to support a satisfactory system. The object of the public school is to benefit the masses; their plan and scope should be adapted to the capacity and condition of those for whose welfare they are intended." Connected with our public-school system there should be the kindergarten institute.

2. We need trade and technical schools for the masses. The question, "What sort of education does the negro need?" finds its answer in the economic law of supply and demand, and not in his ethnological characteristics, inherent ability, and political status. Broadly speaking, the negro needs every sort of education necessary to the conduct of every phase of civilized life; but the ratio of lawyers, doctors, skilled artisans, etc., needed for the entire race is, owing to conditions peculiar to the present time, not proportional to that of the white people either north or south. The reason for this disparity is that the negroes' greatest and most imperative need is the ownership of good homes and the accumulation of wealth, moral and intellectual training, and skilled ability in the production of staple raw material for the world's commerce. Reckoning on the basis of a negro population of nine millions in this country (adult 3,500,000 or 4,000,000), an approximate estimate shows that there

are needed 10,000 or 12,000 educated negro preachers, about 10,000 physicians, 5,000 lawyers, 135,000 teachers, and 1,000,000 skilled artisans, merchants, etc. Eliminating about 5,000,000 children, and subtracting the 1,160,000 accounted for in the estimate just given, there remain 2,840,000. These should engage in agriculture and other productive work. They represent the greatest educational demand of the race, and therefore this demand should be more largely supplied than that of any other class. That is, industrial training, preferentially agricultural, should be given to three out of every four persons in the race. It goes without saying that the industrially trained should also have a good common-school education as a prerequisite to their special training in the industries and to intelligent citizenship. And when I refer to industrial and agricultural schools, I mean real schools; not shams and fakes. The skilled mechanic and the scientific farmer can find remunerative employment in the South as he cannot find it anywhere else. The South has as yet set up no barrier to prevent a man from making an honest living on account of the color of his skin. We need several more institutions in the South like Hampton and Tuskegee. The governor of Georgia believes that $3,000 should be appropriated by the legislature of that state for an agricultural and mechanical college for young white men in each of its eleven congressional districts. The distribution of these schools would give a greater impetus to agriculture in the state, and would reach a larger class of young white men.

Every southern state needs a number of industrial and agricultural schools for the colored young men and women. I do not think there need be any fear for an overproduction of industrially or mechanically trained colored people. I am quite sure there is an imperative need for scientific farmers thruout the South. Professor Miller has wisely said: "The greatest need of the negro is to bring the wild energy of his muscle under the guiding intelligence of his mind."

3. In the third place we need high-grade normal schools and colleges for the training of teachers, leaders, and professional men. We need industrial training for the masses — practical education. But in order to have competent leaders, cultured and intelligent educators, professional men of skill and ability, I plead not only for the higher education of the negro, but for the highest. I believe it to be the order of divine Providence that the negro shall maintain and preserve his racial identity. The race must produce intelligent leaders; no race can succeed by allowing another race to do its thinking. We are going to advocate industrial education for the masses; and the best people of my race believe in the great work that Booker T. Washington is doing at Tuskegee. He is the great apostle of industrial education; and I for one wish we had one thousand Tuskegees, and ten thousand Booker Washingtons. But, while we love Hampton and Tuskegee, we also honor those institutions that

stand for the higher education of the race. We shall still send the ambitious, aspiring students to the best northern universities, where they have proven themselves susceptible of the highest intellectual development. Negro students from the South, sons of slaves, have entered Harvard, Yale, and Brown, and crossed intellectual swords with the sons of America's most cultured citizens; and those negro boys, with no centuries of civilization and culture behind them, no two hundred and fifty years of the white man's opportunity, have plucked laurels and won well-merited honors in the greatest schools of America.

The negro race needs the most highly educated men and women to train and prepare the future leaders of the race; to give encouragement and inspiration to the aspiring young men and women who will make these instructors their ideals; because these teachers, members of the same race, have come in possession of the moral and intellectual qualities which fit men and women for usefulness, and entitle them to the respect and confidence of mankind.

The black man in the South, with well-regulated public schools in the rural districts, with protection to life and property, will purchase and cultivate lands, and will, by the aid of industrial education, become an important factor in the development of the almost boundless resources of the South. It is said that the colored laborer does four-fifths of the agricultural labor of the southern states, and all of the unskilled labor. It is estimated that his share in the cotton, corn, wheat, rice, oats, etc., amounts to $610,786,182—a sum equal to $8.14 for every inhabitant of this country, or $61 per capita for every individual of the race. If we divide the total amount of these products made in the entire country by the population, it will be found that the per capita production is only $27.80, whereas the colored man's part is $61 per capita; thus showing his great activity as an agricultural laborer, and the splendid part he is playing in the industrial development of the nation. This vast contribution to the wealth of the nation is made without disturbing the industrial and commercial tranquillity of the country by strikes or labor riots of any class whatever. The colored man never strikes unless he is forced to do so.

As the colored man is trained industrially, and learns the science of agriculture, his contribution to the national wealth will be much larger. The leaders of my race recognize the present as the most critical period of our history as a race. It is the period of adjustment, and we know that our success will not depend upon conflict, but upon concord and co-operation with the best thought and sentiment of this American nation. The southern negro is becoming serious; he is beginning to think; he is striving earnestly to better his condition. These lines of Ella Wheeler Wilcox, in "The Black Man's Claim," express very pathetically the condition of my race:

Out of the wilderness, out of the night,
Has the black man crawled to the dawn of the light;
Beaten by lashes, and bound by chains,
A beast of burden with soul and brains,
He has come through sorrows and need and woe,
And the cry of his heart is to know, to know.

Out of the wilderness, out of the night,
Has the black man crawled to the dawn of light;
He has come through the valley of great despair;
He has borne what no white man ever can bear;
He has come through sorrow and pain and woe,
And the cry of his heart is to know, to know.

Finally, I believe in the possibilities of my race because I have faith in God. The negro is in America by the providence of God; he has a mission to perform.

I am hopeful of my race because I have faith in the American people. The trend of public sentiment in this country, as expressed by its best citizenship, moves in the right direction. God will keep on hand a sufficient number of humanitarians—statesmen, educators, and philanthropists—as the salt of the earth to season the masses, and America will become more and more an ideal nation. The organization of the General Education Board and the Southern Educational Board, with such distinguished men in charge, means much toward the blotting out of ignorance, and will do much toward the elevation and enlightenment of the masses.

I am hopeful of the negro's future because I have faith in my race. We made a record as slaves for a loyalty and a devotion to every trust committed to us that is without a parallel in history. The old plantation melodies revealed the inward condition of the race; they breathed the spirit of peace and good-will, and expressed as best they can the sentiment of the angelic anthem that was sung on Bethlehem's plain, that was to be the prophetic music of the ages. A race that can carry the heaviest burdens without murmuring and complaining must ultimately succeed. A people that can see the star of promise on every storm cloud deserves encouragement. The race asks for time, help, opportunity, and simple justice. Do not expect us, in less than forty years, with very limited opportunities, to measure up with the white race with two hundred and fifty years of unlimited opportunities. Give the negro the same opportunity you give to other races, and we promise you a negro citizenship of which the world will be proud.

We believe in the theory of the unity of the human family, and that it is the order of divine Providence that the three brothers who separated in the plain of Shinar are to meet again and hold a family reunion. When they separated, Shem went into Asia and became the high-priest of humanity. Japheth went into Asia Minor, and thence into Europe, and was the genius of war, commerce, and government; his children are still

invincible and unconquerable. Ham went into Africa, and inaugurated a system of industrial and mechanical education; he reared the pyramids, and built Thebes and Karnak. At the reunion Shem will be represented by the despised Chinamen and the crafty Japanese; Japheth will be present in the person of the proud and cultured Caucasian; and Ham will be represented by the hated, rejected, and despised negro; we promise you a creditable showing on the part of the representatives of Ham, when the grand reunion takes place.

THE SCHOOLS OF THE PEOPLE

EDGAR GARDNER MURPHY, EXECUTIVE SECRETARY OF THE SOUTHERN EDUCATION BOARD, MONTGOMERY, ALA.

Any description of the conditions of public education at the South must involve certain confessions of inadequacy and certain hearty celebrations of substantial progress.

While our public-school system at the South has been necessary as an attempt—an attempt which has had the consecrated intelligence and the heroic industry of our noblest souls—we cannot say that it has yet been wholly an achievement. Its aspiration, however, is one of the great unifying and constructive forces in the life of the South today, an aspiration which, already expressed in the deliberate and official policy of every southern state, would include within the opportunities of a free school at the public charge all the children of its citizenship, rich and poor, white and black. And that aspiration, in its generosity and its justice, is itself, I submit to you, an achievement of ennobling and splendid augury.

For this policy of public education at the South has called us to no holiday emprise. The way is thronged with difficulties. The task has first involved a problem of population. Ours is a double population, a population divided by the felt and instinctive diversities of race. The land is occupied by two families of men between whom the difference in color is perhaps the least of the distinctions which divide them. The differences in racial character are accentuated by the differences of social heritage—one is the population of the freeborn, one has been the population of the slaveborn.

The doctrine of race integrity, the rejection of the policy of racial fusion, is, perhaps, the fundamental dogma of southern life. It is true that the animalism of both races has at times attacked it. The formative dogmas of a civilization are reflected, however, not in the vices of the few, but in the instincts, the laws, the institutions, the habits of the many. This dogma of the social segregation of these races, challenged sometimes

by fault of the black man, challenged sometimes by fault of the white man, is accepted and approved and sustained by the great masses of our people, white and black, as the elementary working hypothesis of civilization in our southern states.

The great masses of our colored people have themselves desired it. It has made our public-school system, however, a double system. It is inevitable that it should often have made the negro schools inferior to the white schools. But the social and educational separation of these races has created the opportunity and the vocation of the negro teacher, the negro physician, the negro lawyer, the negro leader of whatever sort. It has not only preserved the colored leader to the negro masses by preventing the absorption of the best negro life into the life of the stronger race; it has actually created, within thirty years, a representation of negro leadership in commerce, in the professions, in church and school and state, which is worthy of signal honor and of sincere and generous applause. The segregation of the race has thrown its members upon their own powers and has developed the qualities of resourcefulness. The discriminations which they have borne in a measure by reason of their slavery, and which have established the apartness of their group-life, are the discriminations which are curing the curse of slavery—an undeveloped initiative—and are creating the noblest of the gifts of freedom, the power of personal and social self-dependence. The very process which may have seemed to some like a policy of oppression has in fact resulted in a process of development.

Our problem of population has thus involved a double system of public education. If the duality of the system has been of advantage to the weaker race, it has been more than an advantage to the children of the stronger. It has been indispensable and imperative. In social as in personal achievement the necessities must precede the charities. The primary necessity of life in its every stratum of development is the preservation of its own genius and its own gains. The matured manhood of a more developed race may have something to give, should have something to give, thru helpful contact, to the life of the undeveloped. But the more highly developed race must not make this contact thru its children. In the interest of our own further development and of our own larger achievement, in the interest of all that our achievement and development may mean in a nobler, juster, and more generous guidance of a lowlier people, the point of helpful contact must not be placed among the masses of the young, and the leverage of interracial co-operation must not seek its fulcrum upon the tender receptivities and the unguarded immaturities of childhood.

It is not merely that the marked differences of race suggest marked differences of method. We at the South are dealing with the negro, not as an individual, but as a multitude. In hundreds of our southern coun-

ties the negro population is greater than the white. In my own home county, the county of the capital of the state of Alabama, our colored people outnumber our white people almost three to one. In an adjoining county the proportion of the colored population to the white population is six to one. Under such conditions the abandonment of the dual system of public education and the enforcement of a scheme of coeducation for the races would involve, not the occasional sending of a few negro children to a white school—as is your custom here—but the sending of a few white children to the negro school. It would not mean—as some would mistakenly advise—the training of the children of the weaker race in the atmosphere and under the associations of the stronger, but the attempted training of the children of the stronger race in the atmosphere and under the associations of the weaker. Such a policy would give neither promise nor advantage to the stronger race, to the weaker race, nor to any far-reaching and constructive interest of civilization. A double system of public education is, with all its burdens and its varied difficulties, an inevitable and unchangeable issue of our problem of population at the South.

But our problem of population—turning now with more especial consideration to the white population of the South—includes a formidable problem of distribution. It is not only predominantly rural; it is relatively more meager in its numbers than many have yet attempted to realize. There are almost as many cities of 25,000 people in the one small state of Massachusetts as in all the states of the secession put together. Taking our figures—as thruout this address—from the twelfth and latest census of the United States, we find in the single state of Massachusetts twenty cities having a white population of more than 25,000—almost half again as many as the total number of such cities in all the states of the late Confederacy. There are, including the state of Texas, in all our states of the secession only twelve cities having a *white* population of over 25,000.

The one state of Massachusetts alone has forty-seven cities with a white population of over 10,000. All the states of the late Confederacy, taken together, have but thirty-eight such cities.

The total aggregate white population of the states of Alabama and South Carolina does not equal the white population of the city of Chicago; and the white population of the present city of New York exceeds the aggregate white population of the states of Alabama, Florida, Louisiana, Mississippi, and South Carolina.

I have dwelt thus upon the relative meagerness of the white population of the South because it is inevitable that that population will have to bear for many years the larger share of the burdens of education and of government. Of direct taxation the negro contributes little. Of indirect taxation he contributes an honorable and increasing share. The rents pay the taxes, and the negro tenant helps to pay the rents.

In a press telegram of the current week I am therefore glad to find a characteristic illustration of the temper of the South in reference to the common schools of our colored people. It is the recorded refusal of the legislature of Georgia to divide the educational appropriations between the races on the basis of the taxes paid by each. This would probably have involved the destruction of the state-supported negro school. Georgia's action is not unique. The vote of her legislature reflects the settled and established policy of every southern state.

Returning to the fact that the white population of New York city exceeds the aggregate white population of Alabama, Florida, Louisiana, Mississippi, and South Carolina, you will observe that our problem of population has thus brought clearly into view some of the phenomena and some of the difficulties of isolation. Ours is not only a rural population; in many sections it is a population so small in numbers as to be but thinly distributed over large areas; with poor roads; with inadequate recourse, therefore, to strong centers of social organization, and without that consequent social efficiency which easily secures the creation and the administration of the efficient school.

In the United States at large 20 per cent. of the school population live in cities of 25,000 population or over; in the South our cities of 25,000 contain but 6 per cent. of the children of our public schools.

The East has suffered, perhaps, from an over-municipalization of life, from the tendency of population cityward. The South has suffered from the under-municipalization of life, from that too general dependence upon agriculture which has kept almost 85 per cent. of our population in the country, and has given us cities few and small. The building of good roads, the development of manufactures, the policy of school consolidation, the increasing tendency to apply the educational qualifications of the suffrage to white men as well as black, the policy of our legislatures reinforced by the educational patriotism of all our people, will at length give us southern schools adapted to southern needs.

Those needs will slowly but surely have more adequate response. Our people are resolved to have their schools, despite the difficulties presented by our problems of population — a population which is, as we have seen, bi-racial in character, comparatively small in number, comparatively rural in its distribution — and despite the fact that our task of public education involves, not only these grave problems of population, but as grave a problem of resources.

At the close of the war period, such had been the shrinkage in values in the South, such had been the relative increase of values in New England, that the one small state of Massachusetts had more than one-half as much of taxable property as the combined wealth of all our southern states.

The very theory of emancipation was that the fate of the black man

was the responsibility of the nation; yet the issue of war left the negro in his helplessness at the threshold of the South; and the South, with the gravest problems of our civilization challenging her existence and her peace, was expected to assume the task of the education of two populations out of the poverty of one. I confess that I think the conscience of the South has something to say to the conscience and the opulence of the nation when, with millions for battleships, tens of millions for armaments, millions for public buildings, and tens of millions for rivers and harbors, the nation allows the academic fabric of paper theories to stand between the vast resources of its wealth and the human appeal, north or south or east or west, of the children of its citizenship.

A democracy which imposes an equal distribution of political obligation must find some way to afford a more equal distribution of educational opportunity. To a national philanthropy or to our national legislation there should be an appealing significance in the fact that the annual expenditure for public education in the United States at large is, per capita of the enrollment, $21.14, that in the great states of the West the average expenditure is $31.46, while for such states as Alabama and the Carolinas this expenditure is approximately but $4.50. In Alaska, where almost 60 per cent. of the children are the children of the Eskimo, where citizenship does not yet mean the suffrage, the annual expenditure per capita of the enrollment is $17.45; and it is no more than a democracy should spend upon its wards. In Alabama, where every child is today the heir of a national citizenship, voting upon the issues of national life and determining the fate of the national character, the annual expenditure on public education, per capita of the enrollment, is but $4.42; and it is less, I submit, than a democracy should spend upon its own. Let us not, in contrasting these figures, forget the educational heroism of the South. Unquestionably the South must call more freely and more generally into play the policy of local taxation by the county, but of the state revenues for general purposes 50 per cent. in Alabama and the Carolinas is appropriated to the support of public education.

It is inevitable, however, that our problems of population, our problem of an isolated rural life, and our problem of resources should have resulted in the illiteracy of the present. If I dwell for a few minutes upon the figures as to the illiterate, I do so with the reminder that there are worse things in a democracy than illiteracy, and with the passing assurance that I shall soon be able to turn to the brighter side. But remedies and congratulations will not avail us save as we frankly and resolutely face the facts.

There are in our southern states more than 3,500,000 souls, ten years of age and over, who cannot read and write; more than 50 per cent. of the colored population, and nearly 16½ per cent. of the white. Of the native white population of our whole country, ten years of age and over, the

South has 24 per cent., but of the native white illiteracy of our country the South has 64 per cent.

There are in the United States 217 counties in which more than 20 per cent. of the white men of voting age cannot read and write. Of these 217 counties, 212 are in our southern states.

It is not as a prophet of calamity that I have dwelt upon some of the facts as to our illiteracy. The problem is formidable, but no problem need be the occasion of discouragement so long as that problem is apparently yielding to the forces of its reduction. Relatively and actually, illiteracy is not gaining upon the schools. The schools, in spite of all our difficulties, are gaining upon our illiteracy. Taking our population of prospective or possible voters, the male population, white and black, ten years of age and over, we find that there is not a state in the South which has not largely reduced its illiteracy within the twenty years from 1880 to 1900.

Upon the other hand, as I take some kindly satisfaction in reminding you, there is but one state in New England — Rhode Island — which has not added both to the aggregate and to the percentage of its male illiteracy since 1880. Your percentages of general male illiteracy are very much lower than our own, but they are a little greater today than they were twenty years ago. If your figures must include the foreigner, ours include the negro. New York had over 47,000 more male illiterates in 1900 than in 1800; Pennsylvania had in 1900 over 62,000 more such illiterates than in 1880; Massachusetts over 23,000 more than in 1880; and the percentages have grown with the aggregates. Totals have grown a little in some of the states of the South, but, including even the colored population, the percentage of male illiterates has been reduced in Alabama from 49 to 32 per cent.; in Tennessee, from 36 to 20 per cent.; in Georgia, from 48 to 29 per cent.; in North Carolina, from 46 to 27 per cent.; in Arkansas, from 35 to 19 per cent. In our southern states our public schools, with all their embarrassments, are overtaking our illiteracy; in some of our eastern states the illiteracy of future voters has gained just a little upon the range and contact of the public schools. Illiteracy is, in fact, not a sectional, but a national, problem; and I think that we must everywhere declare that a democracy which still comprises more than 6,000,000 of people who cannot even read and write has not yet adequately solved the problem of popular education.

I find, however, no hopelessness in the illiteracy of the South, because, as I have suggested, we are now making decisive reductions in its volume. I find no hopelessness in it, because it is the illiteracy, not of the degenerate, but simply of the unstarted. Our unlettered white people are native American in stock, virile in faculty and capacity, free in spirit, unbroken, uncorrupted, fitted to learn, and worthy of the best that their country and their century may bring them.

To speak hopefully of the taught is to speak even more hopefully, even more confidently, of the teacher. The relative poverty of the South has its compensations. It places at the command of the public-school system of the southern states a teaching force of broad ambitions, of real culture, and of true and generous refinement. The high social standing of our teaching personnel is our assurance that the training of the children of the South is in the hands of worthy representatives of its thought and feeling. We know that in its public-school system the South of today is touching thru its *best* the life and the institutions of tomorrow.

The crowning argument of our hopefulness lies, however, in the educational enthusiasm of all our people. Alabama, within five years, has doubled her general appropriations for public education. The masses of a sincere people are taught the great realities of order, liberty, and culture, not merely by what they have, but by what they long to have. The things that a whole people, in the passions of their sacrifice, have *resolved* to do, are of more significance and of more importance in the history of a democracy than anything that they may have failed to do.

But the nation must be considerate of the South, and the South must be patient with herself. The burden of responsibility among us must long fall heavily upon the few. We have seen that there are in our southern states 212 counties in which more than 20 per cent. of the white men of voting age cannot read and write. Place to one side the great unlettered masses of our colored population, add to these the unlettered numbers of our white population, and you will at once see that the number which remains has a part to play which is so serious in its responsibilities, and so far-reaching in its moral and civic significance, that the South may well receive the large-tempered understanding of all the lovers of mankind and of all the wise befrienders of the state.

A final and happy element of hopefulness lies in the thought that if our system of public education is largely uncompleted, we can build, in completing it, by the light of the gains and the errors of older commonwealths. Tardiness should save from false starts and should protect us from traditional mistakes. I trust that we shall build in such a manner as more largely to practicalize and moralize the general system of public education. I trust that our consciousness of the problem of illiteracy will not lead us to the mistaken conclusion that the supreme task of any system of schools is the mere removal of illiteracy. The school must stand rather for a larger and larger measure of trained intelligence, of controlled and sobered will, of sound, resourceful, and efficient life.

I trust that we shall realize, moreover, that the fullest duty of the modern school, of the public school in a democracy, is a duty, not only to culture, but to citizenship. The state-supported school must give the state support — support as it teaches with a healing wisdom and an

impartial patriotism the history of the past; support as it looks out into the track of an over-freighted destiny and clears and steadies the vision of the future; but, first of all, support to the nation in this day, because this day is not supremely our fathers' or our children's, but uniquely and supremely ours.

The schools of a people, the schools of a *real* people, must be, primarily, not the moral gymnasia of reminiscence or the transcendent platforms of future outlook. They must touch this day's earth and this day's men thru the truths and the perils of today. They must be instructors of the contemporary civic conscience. And in this hour, I take it, they must help the state to bring to men a profounder and therefore a simpler reverence for the institutions and the processes of public order. For a long time we have heard that democracy is an institution of liberty; but, if democracy be not also an institution of public order, liberty will not long be an institution of democracy. Where minorities, mob minorities—north or south or east or west—presume to administer the laws of the majority, the elementary compact of democracy is dissolved. The mob which abandons the processes of social self-control weakens the personal self-control which stays and conquers crime, and increases by its ferocities the very animalism it has attempted to destroy. Its instructions in horror touch the minds of tens of thousands, its barbarities burn today the guilty, and set aflame the hates and humors which tomorrow burn the innocent.

Such spectacles are national phenomena, challenging everywhere the national forces of American good sense, and demanding of us whether the mere gravity of the crime or the mere weakness of the constabulary is enough to excuse any American community in abandoning the safeguards of justice and the solemn processes of trial for the processes of a social hysteria which divides its noisome interest between the details of the crime and the souvenirs of the execution. Are these the august and reverend trappings of Justice in a democracy?

Our schools must teach our children what their country is. Our schools, north and south, must help men to see that liberty of government means that there is no liberty except thru being governed; that being governed and being governable are largely the measure of our distance from the jungle; that a governed and governable people, when challenged by the sickening atrocities of crime, by the torturing spectacles of lust and hate, first have a sober recourse to the thought, not of what is due the criminal, but of what is due to their civilization, their country, and their children.

For we may be well assured that, whether we teach thru the school or not, the teaching is being done; for society itself is the final educational institution of our human life. Not only thru school and home and church, but thru books, thru each day's press, thru our billposters on the streets, the music in our parks, our amusements and our recreations; above all,

thru that great enfolding, effectual instrument of our social self-projection, the public opinion of our day — are our children being put to school.

I pray that within these varied orbits the people's schools may do their schooling well, not as detached or isolated shops of truths and notions, but as deliberate and conscious factors of a sounder social equilibrium. I pray that they, north and south and east and west, may take their places as the organs of that force of social gravity, that moral dynamic, which in the university of the world keeps the poise of factions and classes, upholds the authority of institutions, the majesty and the happiness of government, the worth of laws, the high securities of freedom — that moral dynamic which wise men have called the fear of God, a force of affection and sobriety which holds life to reverence and reverence to reason.

DEPARTMENT OF SUPERINTENDENCE

CINCINNATI MEETING, 1903

SECRETARY'S MINUTES

FIRST DAY

MORNING SESSION.—TUESDAY, FEBRUARY 24, 1903

The department was called to order in the auditorium of the St. Paul M. E. Church, Cincinnati, O., at 9:30 A. M., President Charles M. Jordan, superintendent of schools, Minneapolis, Minn., in the chair. The audience sang "America." Prayer was offered by Rev. C. W. Blodgett.

Superintendent L. E. Wolfe, of San Antonio, Tex., read a paper on "The Human Side of Geography." The subject was discussed by Superintendent William H. Hatch, Oak Park, Ill., and Jacques W. Redway, Mount Vernon, N. Y.

President Lewis H. Jones of the State Normal College, Ypsilanti, Mich., spoke on the topic "The Best Methods of Electing School Boards;" and Superintendent John W. Carr, Anderson, Ind.; Superintendent W. W. Chalmers, Toledo, O.; Superintendent C. G. Pearse, Omaha, Neb.; and Superintendent F. Louis Soldan, St. Louis, Mo., discussed the subject.

AFTERNOON SESSION

Charles B. Gilbert, Rochester, N. Y., read a paper on "The Freedom of the Teacher." It was discussed by Superintendent James H. Van Sickle, Baltimore, Md., and Superintendent John Richeson, East St. Louis, Mo.

The chair announced the following committees:

COMMITTEE ON NOMINATIONS

Livingston C. Lord, of Illinois. Warren Easton, of Louisiana.
L. D. Bonebrake, of Ohio. W. H. Elson, of Michigan.
E. L. Stevens, of New York.

COMMITTEE ON RESOLUTIONS

A. K. Whitcomb, of Massachusetts. F. Louis Soldan, of Missouri.
C. G. Pearse, of Nebraska. W. W. Chalmers, of Ohio.
L. D. Harvey, of Wisconsin.

Principal E. W. Coy, of Hughes High School, Cincinnati, read a paper on "A Readjustment of the High-School Curriculum." The subject was discussed by Superintendent Edwin G. Cooley, Chicago, Ill.; Superintendent F. Louis Soldan, St. Louis, Mo.; and Dr. Charles DeGarmo, of Cornell University.

EVENING SESSION

Richard G. Moulton, professor of English literature, University of Chicago, delivered a lecture on "The Revelation of St. John from a Literary Point of View."

SECOND DAY

MORNING SESSION.— WEDNESDAY, FEBRUARY 25

Vice-President Clarence F. Carroll, Worcester, Mass., presided at the opening of the session. State Superintendent Alfred Bayliss, of Illinois, read a paper on "Industrial Education in Rural Schools." L. D. Harvey, of Wisconsin, and W. W. Stetson, superintendent of public instruction, Maine, discussed the subject.

President Jordan took the chair at this time, and announced that he would ask consent to the reading of the paper of Mrs. Alice W. Cooley, assistant in the department of pedagogy, University of North Dakota, Grand Forks, she being necessarily absent. Miss Mary E. Nicholson, of the Indianapolis city schools, read Mrs. Cooley's paper on "Literature in the Grades and How to Use It." The subject was discussed by Mrs. Josephine Heermans, principal of Whittier School, Kansas City, Mo., and Miss Florence Holbrook, principal of Forestville School, Chicago, Ill.

The following communication was read:

C. M. Jordan, President, Department of Superintendence, National Educational Association:
DEAR MR. JORDAN:

In behalf of our respective state educational associations, we wish through you to ask the attention of the department to the inclosed resolutions, particularly to the sixth, inviting consideration of the question how it can best co-operate with our associations in promoting the cause of simplified spelling. Will you kindly send us notice of what action is taken in regard to this matter, so that we may report it to our associations?

Very truly,
DAVID FELMLEY, Normal, Ill.
R. H. HALSEY, Oshkosh, Wis.

The following is resolution No. 6 referred to:

That we respectfully suggest to other educational, literary, scientific, or philanthropic organizations the advisability of taking this subject under consideration and of actively co-operating with us in the promotion of simplified spelling.

Moved by President L. H. Jones, State Normal School, Ypsilanti, Mich.:

"That the communication, and the question it raises as to what steps this department may wisely take in co-operation with the state associations of Illinois and Wisconsin to promote the cause of simplifying our spelling, be referred to a committee of five, to report next year."

The following committee was subsequently appointed by the president:

Superintendent W. H. Elson, Grand Rapids, Mich., *Chairman.*
Superintendent E. B. Cox, Xenia, O.
Superintendent C. N. Kendall, Indianapolis, Ind.
Superintendent F. T. Oldt, Dubuque, Ia.
State Graded-School Inspector A. W. Rankin, Minneapolis, Minn.

Frank A. Hill, chairman of the committee of nine appointed a year ago to formulate contemporary educational doctrine, asked, in the name and by the order of the committee, that Dr. Paul H. Hanus, of Harvard University, and United States Commissioner of Education W. T. Harris be added, making a committee of eleven. The request was granted by vote. Mr. Hill further explained that the work of this committee will necessitate money for expenses, and the department voted to request the Board of Directors of the Association to grant an appropriation for this purpose not exceeding twenty-five hundred ($2,500) dollars.

E. O. Vaile offered the following resolutions:

Resolved: (1) That a committee of five be appointed by the chair to invite, in the name of this department, like committees of conference from the Modern Language Association and the American Philological Association to consider the need and possibility of a universal system of key notation for indicating pronunciation, and to recommend for the indorsement of the societies such a system, or at least a simple, practical phonetic alphabet as the universal basis of such a system.

(2) That the Board of Directors of the National Educational Association and the proper committee of the Council of Education be requested to authorize and appropriate $100 for the use of this committee in preparing the report.

The resolutions were adopted as read, and the following committee subsequently appointed by the president:

E. O. Vaile, Oak Park, Ill., *Chairman.*

President William R. Harper, Chicago, Ill. Superintendent F. Louis Soldan, St. Louis, Mo.
Superintendent Aaron Gove, Denver, Colo. Superintendent T. M. Balliet, Springfield, Mass.

The Committee on Nominations reported as follows:

For *President* — Henry P. Emerson, Buffalo, N. Y.
For *First Vice-President* — Edwin B. Cox, Xenia, O.
For *Second Vice-President* — John W. Abercrombie, University, Ala.
For *Secretary* — John H. Hinemon, Little Rock, Ark.

The officers as nominated were elected by acclamation.

The chair announced that the selection of a place for the next meeting would be the next business.

Kansas City, Mo., San Antonio, Tex., Atlanta, Ga., and Chicago were proposed. The department decided by vote to limit the choice to Atlanta and Chicago. Atlanta was selected by formal vote.

The proposed constitution for the department, upon which action was deferred from the meeting of last year, was then taken up. By vote of the department, consideration of the report was indefinitely postponed and the committee discharged.

AFTERNOON SESSION

The afternoon session was devoted to round-table meetings as follows:

A. ROUND TABLE OF STATE AND COUNTY SUPERINTENDENTS

The meeting was called to order at 2 P. M. by the leader, Mrs. Helen L. Grenfell, state superintendent of public instruction, Denver, Colo.

The subject, "To What Extent and in What Form Should the Manual-Training Idea Be Embodied in Public-School Work?" was presented by William O. Thompson, president of Ohio State University, Columbus, O. In the absence of State Superintendent Schaeffer, of Pennsylvania, who was to have opened the discussion, the subject was at once thrown open for general discussion, and Principal E. W. Wilkinson, Cincinnati, O; State Superintendent Charles J. Baxter, of New Jersey; Supervisor George H. Martin, Boston, Mass.; and State Superintendent Delos Fall, of Michigan, participated.

The topics for general discussion announced on the program were used as suggestions to guide the informal meeting which followed.

B. ROUND TABLE OF STATE NORMAL SCHOOLS AND CITY TRAINING SCHOOLS

The meeting was called to order at 2 P. M. In the absence of the leader, Homer H. Seerley, Cedar Falls, Ia., President Livingston C. Lord of the State Normal School at Charleston, Ill., presided.

Wilbur H. Bender, supervisor of the advanced training department, State Normal School, Cedar Falls, Ia., read a paper on the "Organization and Function of Training Departments in State Normal Schools." A general discussion followed, after which the Round Table adjourned.

C. ROUND TABLE OF CITY SUPERINTENDENTS

Leader, Calvin N. Kendall, superintendent of schools, Indianapolis, Ind.

An address by A. B. Blodgett, superintendent of schools, Syracuse, N. Y., on "The Most Effective Use of the Superintendent's Time." was presented and was discussed by Z. H. Brown, superintendent of schools, Nashville, Tenn., and Charles S. Foos, superintendent of schools, Reading, Pa.

An address by J. K. Stableton, superintendent of schools, Bloomington, Ill., on "Public Opinion and Good Schools," was discussed by W. S. Rowe, superintendent of schools, Connorsville, Ind.; W. W. Chalmers, superintendent of schools, Toledo, O.; R.

A. Ogg, superintendent of schools, Kokomo, Ind.; and H. V. Hotchkiss, superintendent of schools, Akron, O.

The address of Clarence F. Carroll, superintendent of schools, Worcester, Mass., on "What Should Be the Features of a Modern Elementary-School Building?" was followed by the adoption of the following resolution, presented by Superintendent James K. Beck, Bloomington, Ind.:

Resolved, That "It is recommended to the business management of the National Educational Association, by the Round Table of City Superintendents, that a commission of three or five members be appointed for the practical consideration of school architecture. This commission shall investigate, and report in detail, on the best means of planning, building, and equipping school buildings. Since school architecture is very important, and school boards and superintendents need helpful and practical information in the minutest detail, this commission should investigate and put forth the best sources and means of getting this information."

EVENING SESSION

An address was given by Charles W. Eliot, President of the National Educational Association, Harvard University, Cambridge, Mass., on "The Full Utilization of a Public-School Plant."

THIRD DAY

MORNING SESSION.—THURSDAY, FEBRUARY 26

On motion of Superintendent R. A. Ogg, the department directed its president to send the following telegram:

HON. O. T. CORSON, COLUMBUS, O.:

The Department of Superintendence sends sympathy to you as a brother beloved and hopes for your speedy recovery.

James M. Greenwood, superintendent of schools, Kansas City, Mo., read a paper on the subject, "Reduction of Time in the Elementary Schools." It was discussed by Richard G. Boone, superintendent of schools, Cincinnati, O.; Dr. Frank M. McMurry, Teachers College, Columbia University, New York city; Clarence F. Carroll, superintendent of schools, Worcester, Mass.; J. W. Carr, superintendent of schools, Anderson, Ind.; and E. W. Coy, principal of Hughes High School, Cincinnati, O.

Dr. W. T. Harris, Commissioner of Education of the United States, Washington, D. C., read a paper on "The University of Oxford and the Rhodes Scholarships."

AFTERNOON SESSION

The department convened at 2 o'clock; President Jordan in the chair.

"Some Practical Problems in Manual Training" was the subject of a paper by C. R. Richards, Teachers College, Columbia University, New York city. The subject was discussed by Gustav Larsson, Sloyd School, Boston, Mass.

"Coeducation in High Schools and Universities," as announced in the program, was modified as the subject of a paper presented by Albion W. Small, of the University of Chicago.

After discussion by Aaron Gove, superintendent of schools, Denver, Colo., the subject was further discussed by Superintendent Edwin P. Seaver, Boston; Superintendent E. A. Gastman, Decatur, Ill.; Superintendent J. F. Keating, Pueblo, Colo.; Superintendent L. E. Wolfe, San Antonio, Tex.; and Dr. John T. Prince, West Newton, Mass.

The department unanimously adopted the report of the Committee on Resolutions as follows:

Resolved, That the Department of Superintendence expresses its deep sorrow at the sad loss it has sustained thru the death, during the past year, of many of its most esteemed members. W. M. Beardshear, Emerson E. White, Edward R. Shaw, Francis W. Parker, are no longer in our midst. Their memory, however, as cherished associates and devoted friends of the cause of education, will abide with us.

Resolved, That the Department of Superintendence has listened with deep interest to the reports presented during the present session on the great success of the reforms in the school administration of several of the large cities, and the great gain to the cause of education which has resulted therefrom. The various plans

which have been put into practice have several features in common. They vest the management of schools in relatively small boards of education, elected by the people on a ticket at large, nominated in such ways as to avoid the contentions of party politics. Under each of the reform plans, the executive duties of school administration are carried on, subject to the legislative and supervisory control of the board of education, by salaried officers who are vested with sufficient powers by law so that they may be held responsible for the proper conduct of school affairs.

Resolved, That this department reaffirms the resolution passed by it a year ago to the effect that all speakers discussing a paper shall speak without manuscript.

Resolved, That the Department of Superintendence extends sincere thanks to the citizens of Cincinnati, to her clubs and business organizations, to school officers, teachers, and local committees, for the courteous and most hospitable reception accorded to this meeting.

Resolved, That this department acknowledges gratefully the painstaking administration of its affairs by the officers of the past year, and expresses its special appreciation of the interesting and important program prepared for this meeting.

F. Louis Soldan,
C. G. Pearse,
L. D. Harvey,
Committee.

The department then adjourned.

J. N. Wilkinson, *Secretary.*

PAPERS AND DISCUSSIONS

THE HUMAN SIDE OF GEOGRAPHY[1]

LLOYD E. WOLFE, SUPERINTENDENT OF SCHOOLS, SAN ANTONIO, TEX.

In this paper an attempt will be made to maintain the thesis that geography in the grades should include those industrial steps, or processes, in manufacture and transportation in which capital and labor are applied to commodities for the purpose of adding utility. The term "commodity" is used in order to exclude those industrial steps in manufacture, transportation, mining, and agriculture in which capital and labor are applied, not to commodities, but to natural resources. The best authorities on geography already recognize that geography includes those initial industrial steps which deal with natural resources — with what the political economists call "natural agents." But there is no recognition, either in theory or practice, that geography includes those subsequent industrial steps that add value to commodities thru the application of labor and capital. It is true that many of the recent text-books on geography give more space to the naming and locating of industries than was formerly given; but no adequate emphasis is given to the great motive for these industrial steps, namely, the adding of utility to a commodity that it may more perfectly minister to human well-being in the form of a finished product. It is this motive that gives life and interest to industrial and commercial processes. Under the inspiration of this motive, the race has conquered its physical environment to its well-being. In other words, as a rule, text-books on geography locate and incidentally describe industries and industrial products, rather than explain or interpret them.

[1] A review of a paper read by Professor W. M. Davis at the Minneapolis meeting of the Society for the Scientific Study of Education.

Professor W. M. Davis, in his paper on "The Progress of Geography in the Schools," read before the National Society for the Scientific Study of Education at the Minneapolis convention in July last, on p. 17 thus defines the subject: "Geography involves the knowledge of two great classes of facts: first, all those facts of inorganic environment which enter into relationship with the earth's inhabitants; second, all those responses by which the inhabitants, from the lowest to the highest, have adjusted themselves to their environment." The use of the expression "inorganic environment" shows the author's intention to exclude from geography those subsequent industrial processes which transform commodities into finished products. According to this definition, geography would include the raising of wheat, but not the harvesting, threshing, grinding, or making of the flour into bread, because in each of these subsequent industrial processes labor and capital are applied, not to inorganic environment, but to organic commodities. In like manner, the culture of cotton, which deals with an inorganic fact, or natural agent, would be geography, while ginning, spinning, weaving, dyeing, and making into garments would not be geography. This definition, strictly construed, would include in geography transportation by water so far as it employs the inorganic environment of river, lake, or ocean; but would exclude from geography transportation by railroad or artificial waterway; and, even on natural waterways, the mechanism of the vessel would be excluded. It is true that Professor Davis, on p. 18, incidentally enlarges his definition by the use of the following sentence: "It is not only to the inorganic parts of the earth that man is related, but to the organic parts as well." But the examples that immediately follow this statement show clearly that the author did not intend to extend his definition beyond the inclusion of organic natural resources, such as forests and insect and other animal life that are injurious or beneficial to man. It is true that on the same page he employs the following sentence: "The relation of population and industries to the cotton, corn, and wheat crop of the United States is a standard geographical problem." But there is nothing in his paper to indicate his intention to include the industrial processes that bring cotton, corn, and wheat into finished products. As cotton, corn, and wheat rest upon physical environment, this sentence seems but little more than illustrative of his definition.

So much for Professor Davis' position on this subject, and for the theory and practice of the makers of text-books on geography. What of the definition of geography? By general consent, geography is the science which deals with the earth as the home of man. Finished products that minister to human well-being in the form of food, clothing, shelter, and fuel are the things that make a home for man. But we have found that these finished products are a result of the application of labor and capital to commodities. To define geography as the science which

deals with the earth as the home of man, and then to exclude from its subject-matter all those industrial processes that deal with commodities, is but little less than a travesty upon the expression "as the home of man." To confine the subject-matter of geography to the initial industrial process which has to do with a natural agent would leave the intractable ore unsmelted at the mouth of the mine and the wheat, cane, and cotton standing in the field. Shall we give stones for bread? The human race has been out on a long journey, during which it has risen from primitive ignorance, penury, and weakness to culture, wealth, and power. During its long and triumphant march there has been no period when "the making of the earth a home for man" has not been its master-motive, its "pillar of cloud by day, and pillar of fire by night." At every step of human progress the race has conceived for an ideal some form of well-being, and has gone about devising means to realize this ideal. With the transportation of passengers and freight by water as an ideal, there have followed in succession the swimmer, the oarsman, the sail, the steam engine. Under the inspiration of the clothing of man with vegetable and animal fibers as an ideal, there have followed, as a realization, ginning, spinning, weaving, sewing, dyeing. The utilization of ores for weapons and utensils as an ideal has created mining, smelting, casting, and forging. James Watt creates the ideal that steam shall lift the burden from the muscle of man and beast, and we have the steam engine. George Stevenson conceives the idea of hitching Watt's power to transportation by land, and Fulton's to transportation by water, and we have the locomotive, the train of cars, and the steamboat.

Again, these secondary industrial processes appeal strongly to the self-activity of the child, because they concern so vitally his well-being. The fact that human well-being has been the master-motive of the race in inventing these industrial processes is a guarantee that the same motive and processes would appeal strongly to the interest and self-activity of the child. In fact, the child is doing every day just what the race has done — forming ideals of human well-being and devising means for the realization of these ideals.

It has been previously stated that these industrial processes that deal with commodities should be taught in the grades. I wish now to state that they should not only be taught in the grades, but should begin in the lowest grades, with the elementary interpretation of the industrial activities that form the child's immediate environment. In this way his interest and self-activity will be assured.

Let us now consider a little more in detail the character of the course of study that would result from a compliance with the foregoing principles and discussion — with human well-being as the center. It is easy to awaken the six-year-old child's interest in regard to the different kinds of meat used in the home, the methods of cooking and serving these meats,

and their source in the animals from which they are obtained; also in a comparison of the different meats and domestic animals as to use. The child, having traced the meats back one step — to the animals from which they come — is curious to go back another step, to the foods upon which the animals depend — the grains and grasses. Back of these grains and grasses are the soil and climate.

So much for meats. In a similar manner the child is led to trace bread back thru the industrial steps of baking, grinding, threshing, harvesting, cultivating, and seeding. Again we are back to the soil and climate. Fruits, vegetables, nuts, and dairy products lend themselves to a similar treatment. The self-activity of the pupil can be readily called forth in the study of the kitchen and dining-room utensils used in cooking and serving the above foods.

But little less close to a pupil than his food is his shelter — the materials of a house and the parts of obvious utility. His mind is self-active as he traces the lumber of a house back to the log at the sawmill, and the log back to the tree in the forest; as he sees the clay back of the brick. His interest can be readily awakened in the parts of a house — in the walls, floors, and roof that shut out the weather and secure privacy; in the doors, hinges, locks, windows, window-shades, shutters, and curtains; in the stairways, wardrobes, and different rooms of the house.

As in the case of food and shelter, so in that of clothing, the pupil is led back to the source in the soil and climate. Back of shoes is leather; back of leather, hides; back of hides, the animal subsisting on the products of the soil. All textile fabrics are traced back, thru sewing, weaving, spinning, dyeing, ginning (in case of cotton), to the two animal and three vegetable fibers — all resting ultimately upon soil and climate. Fuel lends itself to a like treatment.

On every hand the pupil comes in contact with metals — in the utensils of the kitchen and dining-room, in cutlery, in coin, and in the street-car and railroad tracks. He is pleased to recognize their superiority, in strength and durability, over wood and many other materials.

But back of these forms of metal, so variously and ingeniously fashioned to serve man, are the two fundamental processes of shaping metals — casting and forging. Back of cast iron, wrought iron, and steel, that are shaped by forging and casting, is pig iron as it comes from the blast furnace. Back of pig iron is the ore that was fed to the furnace. Again we are back to a natural resource — the ore. The quarrying, cutting, and polishing of building-stone present an interesting and instructive industrial line.

Under proper direction the pupil soon learns to appreciate the terrace that lifts the home from the dust of the street and to a broader view; the trees, grass, flowers, vines, and pictures that add comfort and beauty to the home, the school, and the community; the parks and other pleasure resorts of the city.

The self-activity of the pupil asserts itself, not only in tracing the forms that minister to human well-being — food, clothing, shelter, fuel — back to their origins in the raw material and the physical resources, but in hunting them back to the places from which they come; first to the store, then back of the store to the factory, the farm, and the mine. With interest in the *whence* of the products that minister to human well-being comes an interest in the agencies that carry away the surpluses of one community and bring in those of another; namely, transportation.

Here his interest naturally begins with local transportation — with the wagons that deliver coal, wood, meat, groceries, dry-goods; that haul rock, brick, lumber, grain, hay; with local vehicles for persons; and gradually extends to the hucksters' wagons and the farmers' wagons bringing in the surpluses of the immediate country vicinity, and carrying away, in exchange, what the stores of the city and town have to offer. As the pupil advances in maturity his circle of the *whence*, with its corresponding circle of transportation, enlarges till it covers the earth, thus introducing him to every kind of transportation by land and water.

As a means to transportation are sidewalks, streets, pavements, highways, railroads, waterways. The pupil sees how man facilitates transportation by making streets and sidewalks and paving streets; by cutting a highway thru the forest, grading it, or macadamizing it; by constructing an iron roadbed or canal.

With ideas of the *whence* and its accompanying idea of transportation come ideas of exchange, thru which man commands the commodities of the globe. With ideas of the *whence* necessarily go ideas of the *whither*. Man naturally desires to know whence come the articles that contribute to his physical well-being, and whither those go that he gives in exchange. Closely allied to the exchange and transportation of commodities is the communication of intelligence by mail, by telegraphy, by telephone.

The above discussion has been one of interpretation, from the finished product which ministers to the child's well-being back thru the essential industrial steps to the raw material and the natural resource in soil, ore, and climate. More logical, and perhaps but little less pedagogic, is the method that passes from the natural resource and raw material to the finished product. Here we notice that each industrial step adds utility to the preceding raw material, makes this material answer man's needs more and more perfectly. The iron ore, incapable of being shaped by either casting or forging, thru smelting and other processes becomes man's willing servant. Every step in transportation adds a like utility as the surplus product is carried away from where it is wanted least to where it is wanted most. This rising of raw material of low utility step by step to the finished product of high utility appeals strongly to the pupil's self-activity, because it vitally concerns his means of subsistence — his very existence.

Of no less educational value than the tracing of the raw material to the finished product is the tracing, chronologically, of the history of important industrial processes, such as spinning, weaving, smelting, reaping, grinding, from their primitive and simple beginnings. Nothing appeals more strongly to the child than man's crude and simple beginnings to conquer his physical environment to his well-being. These beginnings are the arts of the childhood of the race, and therefore appeal strongly to child-nature. How delightfully interesting and simple these primitive arts! Laying the foundation of the great art of pottery by shaping clay with the unaided hands, to be followed later by the potter's wheel; anticipating the spinning-wheel, the spinning-jenny, and the mule-spinner by making threads with the fingers; paving the way for the hand-loom and the power-loom by stretching the warp threads between two parallel sticks; inaugurating the age of iron by separating a handful of the metal from the ore; securing the co-operation of the forces of nature by constructing a rude waterwheel or sail; beginning his dominion over the soil by stirring it with a stick and planting seeds of species not yet domesticated. As the pupil passes in thought from the crude tools and primitive methods to the most improved, the great motive that has inspired the race in the conquest of its physical environment lays hold of him.

There is great danger that the study of industrial and commercial geography, in unskillful hands, will become as mechanical as place geography. To prevent this, the teacher must firmly grasp the master motive that has controlled the race in its material progress; namely, a desire for human well-being. He must be able to see clearly the essential ends of an industrial process and the application of means to these ends. For instance, the essential ends of spinning are (1) drawing out the fiber, (2) twisting it. This Arkwright and Hargreaves did when they invented sets of parallel rollers revolving at unequal rates, to draw out the fiber, and turning-spindles to twist it. The ideal or purpose in smelting iron ore is to separate the metal from the valueless rock contained in the ore. It was found that limestone would form a flux with this worthless rock, which could be drawn off as it floated on the heavier molten metal. The essential ends in brick-making and pottery are (1) shaping, (2) hardening by drying or burning. Where the construction and operation of a machine are too difficult for explanation to the pupil, the teacher must be content to let him see that the general industrial purpose has been accomplished by means of the machine.

In the preceding discussion we have seen that each series of industrial steps takes its rise in natural forces and resources — in inorganic environment; in the soil, the ore, the clay, the stream, the wind, the stone in the quarry. How, then, shall these inorganic facts be taught so as to appeal most strongly to the self-activity of the pupil? Evidently from the economic, industrial, and commercial standpoint — from the human center.

The order of interest is as follows: (1) in the finished products that minister to human well-being; (2) in the industrial steps that have created these finished products out of raw material; (3) in the initial industrial steps in mining, agriculture, and lumbering that have transformed natural resources into raw material; (4) and, lastly, in the origin of the natural resources.

To illustrate: agriculture rests upon soil, heat, and moisture; but whence this earth envelope of soil which is the chief support of agriculture? It awakens the self-activity of the pupil to learn that it, too, has been made as well as the bread, the knife, the dish, the textile fabric; that it is earth waste — the result of erosion, transportation, and deposition; that these forces which have covered the globe with soil are everywhere still actively at work.

But agriculture rests, not upon soil alone, but upon heat and moisture. Back of the rains are the vapor of water and the mountain chains that have condensed the moisture and have made the precipitation possible. Back of the vapor of water are the winds that have drunk their fill from the distant seas and have borne their burden into the continent. From an interest in heat as a fundamental condition of agriculture, the pupil passes naturally to heat zones, and consequently to latitude, altitude, winds, and ocean currents in their bearing upon heat zones; later, to the obliquity of the sun's rays upon the earth's surface; and finally to the revolution of the earth in its orbit and the inclination of its axis in their relation to the obliquity of the sun's rays, the heat zones, and the seasons.

The pupil also learns that building-stone has been slowly made as it is being made today, and that the same is true of ores; that mountain folds and erosion have their human side in exposing valuable ores. The pupil's interest in transportation leads to an interest in the physiographic environment which facilitates or retards transportation. Who shall estimate how much mountain, plateau, and desert barriers militate against commercial intercourse between communities and nations? How much this same intercourse is furthered by valleys, mountain passes, and gaps? What it means commercially for a river, on the one hand, to have its mouth in the frozen north or its channel choked with silt, or on the other hand to have its mouth in the tropics or its channel deep and rock-lined? The oceans, once the barriers to commerce, are now its highways, and the inorganic wind and water currents lay hold upon the vessel and hie it into the port of destination. But back of mountain, plateau, valley, mountain pass, river channel, wind and water currents are the physiographic processes that brought them into being.

Back of the port giving life to ocean commerce is the harbor — a physiographic fact. Back of the harbor is the sinking of the coast and the consequent drowning of the river valley. Back of the river valley are the erosive forces and processes that created it. Back of water power are

rapids and falls; back of these rapids and falls is the meeting, on the "fall line," of two geological formations of different hardness. An interest in lakes from a commercial and scenic standpoint leads to an interest in the process by which the glaciers carved them out. The pupil's interest in coal as a great factor in our industrial and social life leads to an interest in its formation in the swamps, marshes, and bogs of bygone ages.

The contraction of the globe envelope that has lifted its surface into mountain and plateau fold, thus diversifying it, and the running, freezing, and thawing waters that have sculptured down relief forms, carved out valleys, and built up plains have a further human well-being side in ministering to man's sense of the beautiful; likewise have the oceans, bays, rivers, and clouds.

My conclusions, therefore, are that, in order to appeal most strongly to the self-activity of the pupil, the human side of geography should be attacked first, because it is of deepest interest and is simplest; that, in the main, physiographic facts should be approached from their human side; that when the teacher does come to investigate, with the pupil, a physiographic fact—a mountain, a river, a plain—from a physical standpoint, it should not be treated as a dead form, but as something that has been made and is now making. Just as in human geography man is the unifying center, so in physical geography the genesis and growth of the physiographic fact are the unifying force. In the light of modern geography every physiographic fact has its life-history. Mountains, rivers, valleys, and plains have an infancy, a youth, a maturity, and an old age. The life-story of even an inorganic existence lays strong hold upon the pupil's self-activity. The burden of Professor Davis' scholarly paper is a plea for such mature study of geography by the teaching force as will lead to the teaching, in our elementary and secondary schools, of the classes, or categories, of relationships that exist between the earth and its inhabitants. I am pleading in this paper for the same emphasis upon the secondary industrial processes that he puts upon the initial processes and upon the explanation of physical phenomena. The last few decades have witnessed a great improvement in text-books of geography in the explanation, or interpretation, of physiographic facts, especially of land forms. Professor Davis has been a leader in this reform.

Such is geography from the human side. But the practice in the making of geographies and in the teaching of the subject is to put the emphasis on place geography—in the locating of cities, rivers, mountains, valleys, capes, boundaries, and land and water forms in general. In many cases, however, when an attempt is made to teach industrial and commercial geography, the economic content is overshadowed by place geography. Recently some very high authorities, on the ground of the more vital connection of railroads than rivers with commerce, have recom-

mended that the former be taught; but the instruction suggested consisted in locating some great trunk lines. Railroads are vital to commercial geography in that they are the culminating term in a long series of human means to annihilate space, whose first term was the rudest of wooden-wheeled conveyances drawn upon improvised dirt roads. The starting-point in the study of railroads is the surplus commodities at the respective termini that seek exchange at minimum cost in the shortest time. What appeals to the self-activity of the pupil is how railroads, decade by decade, have hauled larger loads, with greater speed, by means of straighter tracks, better grades, steel rails of heavier weight, more powerful locomotives, and larger, stronger cars. The chief point of interest in the Great Lakes is not where they are, but that they constitute the greatest inland waterway in the world. The pupil is stirred to creative power when he grasps the fact that a half-century of canal construction, dredging, and blasting has given twenty feet of water around the St. Mary's Rapids, on the St. Clair Flats, and at the Lime Kiln crossing, thus enabling a freighter drawing twenty feet of water to transport iron ore, wheat, and lumber thru this wonderful waterway at marvelously low rates.

The theory of the old geography is that the eight years below the high school should be devoted largely to laying a broad foundation in place geography for future economic geography. This future comes to but few pupils. The doctrine of this article is that place geography should follow largely as an incident to industrial and commercial geography. Thus it is with the child when he begins to explore his environment; thus it has been with the race. The places the child learns are those that serve his self-active interest — his well-being. The tourist studies his map in obedience to the same motive. The study of place geography much in advance, and in excess, of human interest tends strongly to crush out self-activity. We would realize the full force of the above sentence were we called upon to memorize the streets and wards of a city in which we had no interest.

I anticipate the objection that the adoption of the doctrine of this article would overload geography. This would undoubtedly be true if land and water forms, cities, products, etc., were taught as dead facts; that is, separate from the physical and human processes and forces that give them being. A simple fact of location is more easily taught with its human or physical setting than alone. The location of Minneapolis can be more readily and firmly fixed in the mind in connection with the Falls of St. Anthony, the milling industry, and the proximity of the wheat fields of Minnesota and the Dakotas than as an isolated fact. The objection to the overburdening of the course of study would be further removed by the adoption of Professor Davis' recommendation to use the items, or details, of geography to illustrate fundamental relations or

categories; also, by the use of the carefully selected list of rich type-studies contained in the course of study on geography prepared by Dr. Charles A. McMurry.

I anticipate the further objection that this treatment of geography deals with causal relations that should be postponed to the high school. But let it be borne in mind that these relations all focus, directly or indirectly, in human well-being — the mainspring of human interest and human action. Force, movement, motive, making, doing, appeal strongly to the child. Lifeless form and dead products do not. A fact is explained, or interpreted, when its causal relations are traced. It is but recently that geographies for the grades did much in the way of explaining the physiographic facts. This was reserved for the physical geography in the high school, and even the physical geography did not give much interpretation to land forms. All this is changing as to physiographic facts in the new geographies for the grades. While these recent geographies are giving an increasing amount of space to facts of human geography — to industries and products — these facts, as a rule, do not receive adequate interpretation. It is hoped and believed that the geographies of the near future will give as rich interpretation to the human side of geography as to the physiographic side. In a word, the chief criticism to be brought against the geography of the past, especially in the grades, is that the children have been too much confined to dead facts, thus rendering the instruction formal, uninteresting, and of low educational value. Land forms, rivers, lakes, and products have been located as fixed facts, instead of hunting down the force that gave them being and is still shaping them. That such lifeless instruction is of low educational value is not difficult to see. The race, during all its past, has been conquering its environment to its well-being. Education, therefore, should not be content with introducing the child to the dead products of this conquest, but should bring it in touch with the ideals as ends and the efforts as means that have created these products out of environment; otherwise the child cannot become an active heir in the race-heritage, much less add to that heritage. As the child catches the swing of the centuries toward an ever larger and larger measure of human well-being, the probabilities are greatly increased that he will co-operate efficiently in utilizing the race-heritage and will add to this heritage. The learner cannot, in any true sense, be said to have been led into the civilization of the race, at least self-actively led, unless he has caught the spirit of human progress, thru insight into motive, means, and resulting commodity.

The comprehension of the relations necessitated by the proper interpretation of facts in human and physical geography would be greatly facilitated by the careful selection of pictures for text-books and for projection apparatus. The movement in this direction is already very grati-

fying; but still there is much to be done, especially in the line of the selection of a series of pictures illustrating the growth of an industrial step from its primitive beginning, the bringing of a natural resource into a finished product, or the transportation of a commodity. Following are examples of such series: mining of Lake Superior ore, transportation of this ore in cars to the lake ports, loading of lake steamers at the great ore docks, locking the steamers thru the "Soo" canal, unloading the ore at the lake ports of destination; a lumber camp, floating the logs down the streams to the falls, sawing the logs into lumber by water power at the falls, loading this lumber on steamers at tide water; charging a blast furnace, drawing off the pig iron, iron-casting, forging; a series of pictures illustrative of the growth of spinning. In many cases, in order to bring the pictures within the ready comprehension of pupils in the grades, it would be necessary to simplify industrial steps by conventionalizing them, and to show sections of machinery, such as blast furnaces, molds for casting, cotton gin, etc. This paper is but a part of a larger question, namely, a plea for enriching instruction in the grades by bringing the pupils into contact with forces, relations, processes, life. They have been fed upon dry husks long enough. Here in the grades the great body of our future citizens is to be instructed. Let us give them something that is worth while; something that will give them an inspiration to do and be in the life-battle that is before them.

I anticipate the criticism that this paper is utilitarian. Is it, in the sense that it is out of harmony with the highest categories of philosophy? There is no higher or sounder category of philosophy than that of Infinite Spirit unfolding itself creatively in a material universe; that is, giving form and organization to what was without form and organization. The only approach to this infinite creative act is finite spirit creatively, as it were, conquering its physical and social environment to its material, intellectual, and spiritual well-being. So far from being objectionably utilitarian, the interpretation here advocated goes step by step from the finished product back thru human processes and purposes to finite spirit, or forward, from spirit manifesting itself as the purpose of the individual or race, to finished products whose ultimate end is to minister to spirit thru the sustenance of the body.

DISCUSSION

WILLIAM H. HATCH, superintendent of schools, Oak Park, Ill.—Mr. Davis' paper treats the subject of geography from the standpoint of the mature student. This treatment is important to the teacher in considering his preparation for the work of teaching the subject, since he should secure as complete knowledge as possible of any subject that is to be taught. There is, however, another phase of the question of vital importance, and worthy of the consideration of this body of superintendents, under whose direction this subject is to be taught in the public schools; and with that I wish to occupy the

few minutes at my disposal. What shall be the method of approach in the presentation of the subject in the elementary schools?

In the study of a science the mature mind may approach it thru the fundamental elements and work from what may be called the simple to the concrete. With the child the logical approach is thru the concrete that lies at his hand and is already within his experience. The mature scholar accumulates a body of material that can never come into his work with the child. It may be of the greatest value in preparing him for the work of teaching the subject, but may never be given to the child.

The early study of our subject was confined to what Dr. Harris has well denominated "sailor geography;" that is, the naming of capes, bays, etc., enlivened with pictures and accounts of such curiosities and oddities as would naturally be the subject of sailor yarns. To this was added the boundaries of states and the location of capitals, still considered of so much importance. The study of mountains, watersheds, valleys, and commercial routes followed. Map-drawing became a part of the work. All of this was almost entirely locative.

The study of the natural sciences revealed a large body of material that, from its close relation to the subject-matter of geography, rightfully became a part of the study. Added to this has been the increase of man's knowledge of the surface of the earth gained from exploration and discovery. He has spread over a large portion of the earth. His history has largely augmented our subject. The changes that have taken place in our country within the memory of many in this audience are an illustration of the rapid increase in the subject-matter of geography study. This has crowded into a subject a great body of material none too well classified and sometimes seeming a conglomerate mass.

The great influence of the laws of nature upon the location of the homes of man, their influence upon transportation, agriculture, and manufacture in all man's early history, and even to the present time, led the teacher to feel that, reasoning from cause to effect, the proper point of attack in the study of geography was thru nature or the physiographic side. To the mature mind this seems at first sight the scientific and logical method of approach.

The advance of civilization with the changes brought about by invention and discovery has placed man and the laws of nature in a different relation. He is no longer their slave, but their master. His artificial means of transportation, his *unnatural* harbors, his irrigated desert places, make it necessary to study his home and his works upon the surface of the earth from a different standpoint. The human side comes to have ever larger consideration in the study of geography. The report of the Committee of Fifteen estimates that about one-fourth of the material in geography relates to geography proper, one-fourth to the sciences of botany, zoölogy, etc., and one-half to the inhabitants, their manners, customs, institutions, occupations, etc. Following are a few of the reasons why geography should be approached from the side of human interest and activity:

1. The child is a social being, and all material, whatever its character, must be made social by its relation to the child before it will appeal to him. He is not a lone item to be considered apart from others, but is of a social whole. The growing importance of the political and social sciences in the life of the individual must have consideration in the selection and arrangement of the matter in the course of instruction. The content of geography approached from the human side contributes in a marked degree to this social material. No other subject so well impresses the close relation of the various parts of the world and the interdependence of nations and communities. It has much to do with organized society. The great questions are the social questions, and the study that brings the child into touch with them, in a manner however simple, leads him early into the richest fields of thought.

2. The motive with which a child approaches a subject is the valuable element in influencing character. His first motive is interest. This is most active when dealing

with what man has done and what he is now doing. With man as the central figure, and the problems to be solved dealing with his relations to his fellows and the forces of nature about him, geography touches the life of the child more vitally than any other subject. During the last ten years a marked change has come over the results attained in the teaching of reading during the first year of a child's life in school. The methods of handling the form have not materially changed. There has, however, come a marked change in the attitude of the child toward the work, in his motive. The skillful teacher leads him to the printed or written lesson in such way that he feels that there is something there that he must have. The character of the material used has been an important factor in this change. The two elements suggested are the motive of the child and the character of the matter. These two well cared for, good results are almost certain. Geography, skillfully handled as suggested, satisfies these conditions. If the subject leads the child to a purposeful search for something, and in the results obtained gives him something that secures to him a better understanding of his relation to his fellows and the laws of nature acting about him, it surely will react upon character; and the measure of value of any subject of study is the degree to which it affects character.

3. Treated from the human side, geography shows what man has done in controlling the forces of nature, and leads the child to feel that he can do the same. Even more than history, it has to do with the changes that touch the life of the individual. It gives him confidence in his ability to bring things to pass. Youth is ever inspired by the achievements of man in dealing with nature's laws.

4. As almost no other subject, it furnishes opportunity for constructive thinking. What we want in this subject, as well as all others, is fewer facts and more thinking.

Geography as a science does not limit geography as a subject of study in our elementary schools. Nor does it determine the order of procedure in the selection of material. The interest of the child and the material and the order of presentation that will give the best results in his appreciation of his relation to his fellow-beings and all the works of nature must determine the method of presentation. If any small part of the contention set forth is true, the point of attack of our subject from the side of the work and life of man on the earth is pedagogically correct, and the subject is worthy the consideration of those who direct the teaching of geography in the schools of our country.

JACQUES W. REDWAY, Mt. Vernon, N. Y.— The question of the nature of the study of geography is gradually settling itself into one that inquires into the proper basis and scope of the subject. During the past twenty years we have seen public opinion throw aside the notion which summed up the concept of geography as a "description of the earth's surface," and substitute therefor a very broad idea, "the study of the earth as the home of man." The author of the paper just presented has given us one of the very best definitions I have yet heard, namely, the earth in relation to the well-being of man. If I felt myself called upon to add still further to the literature of definition, I should put it as "the study of man and his environment," or perhaps "life and its environment."

A moment's reflection serves to show that no very great fundamental distinctions between these three definitions exist; it is a question only whether we would make the man or the earth the central feature; and this question settles itself when their mutual relations are understood. Let us look for a moment at these relations.

In the first place, the most important function of physical life is nutrition. Nutrition involves a score or more of the substances known as chemical elements which are derived either directly or indirectly from the earth. When subjected to the action of light and warmth, these are sooner or later transformed into living tissue. Thus we have two general, but highly diverse, factors; namely, earth substances and solar energies.

But before these earth substances are available for nutrition many things must have happened: the sediments carried from the highlands must have been transported to the sea, folded into mountain ranges, and thrust above the level of the sea; the ranges and uplifts must have been cut, carved, and disintegrated; the products of erosion and cor-

rasion must have been transported by running water and spread broadcast; and the material thus made, transported, and deposited must have been converted into soil.

After all this has occurred, the other set of factors becomes active. Under the influence of solar energies, earth particles become endowed with that mysterious force called life, and a thousand million forms are modulations of its rhythm.

Let us look first at the earth factors which are concerned in the environment of life — more especially that of man. We have been counseled to regard physical geography as the proper basis for the study of man in his relations to the earth, and indeed the basis thus chosen has much to commend it; especially is this the case when we emphasize the physiographic aspect of the study. Until within a few years we studied practically a fixed earth — an earth both unchanging and unchangeable. The interpolation of physiographic geography, and its sister-science meteorology, was a great step in advance, for it carried us beyond the very dead ideas about a very dead earth; it brought us many steps nearer to the now central thought of life and its relations to environment.

But in the study of physiographic geography we are constantly looking for anterior causes and for the greater exhibitions of earth-movements upon which physiographic processes depend. For these we must give precedence to dynamic geology on the one hand and to astronomy on the other. In other words, if geography — if the study of the environment of life — has any earth-science for its ultimate basis, that science is geology pure and simple. Physiography and meteorology have each a place, but the place of each is secondary.

Let us now glance at the astronomical basis of geography and see what it affords in the solution of the problems of man's environment. Both heat and light are necessary to life, and both come from the sun; both are distributed, moreover, under conditions that are essentially the same. To these conditions life and its activities are extremely sensitive. Even a very slight change in the length of the period of the earth's rotation would be fatal to some species, while it would disturb the habitats of many others; all species, moreover, would of necessity be compelled to adapt themselves to the changed conditions, or else perish. Even the curvature of the earth's surface becomes a factor of enormous importance, and because of it a very large part of the earth will always be uninhabitable at any one time.

The self-parallelism of the earth's axis and its angle of inclination give rise to the existence of zones, each pair of which is marked by characteristics very broadly distinct from those which distinguish the others. It also nearly doubles the belt of maximum warmth, setting its limits into latitudes that otherwise would be unhabitable because of intense cold. It puts the northern limit of wheat into the region that otherwise would be arctic. It tempers the heat of a tropical zone, keeps a tropical rain belt in oscillation, sets the limits of a forest belt, and creates a "corn belt." In other words, the astronomical basis of geography is the main factor in making climatic conditions, for it determines the distribution of heat and moisture upon the earth.

Now a brief study of the distribution of life will show that climate has a far greater influence in the habitability of a region than is exerted by conditions of topography; and if this be true, then the astronomical basis of geography should take a rank in importance at least equal to that of physiographic geography.

In the preceding paragraphs man has been considered as a passive factor — as a creature controlled by his environment. To a certain extent this is true; there are certain limits of temperature and moisture — limits of environment — beyond which he cannot long survive; indeed, all life is more or less controlled by conditions of environment. A camel is a camel because of the desert. There would be no fish were there no water; and if there were no impounded waters, ducks would not be ducks — at least they would not be swimmers. So, to, were the grass within a given region to die, the cattle also would die; they are without the kind of knowledge that enables them to move to the region in which grass is to be found.

But man is not merely a passive entity; he is a most active factor in geography. Other animals, other life-forms, are slaves to their environment; man may, and does, rise superior to his. Controlled wholly by the conditions of his environment, he is a savage; having mastered those conditions up to the limit of his mental powers, he is civilized; moreover, he is civilized because of it, and not in spite of it. A region may be naturally too dry to produce foodstuffs; it may be lifeless. Man brings water there and forces it to become productive. The herd of cattle cannot cross the snow-covered highland, because they cannot carry their food supply, but the man will build a railway and carry them across. They cannot swim across the sea, but the man will build steamships and transport them. The camel alone, of all dumb animals, can cross the desert, because he is built that way; but the man will surmount it unaided, because he knows how.

The whole story of the evolution of mankind, from a savage to a highly enlightened condition, is a story of his struggles to overcome the conditions of his environment. The records of unwritten history tell us that primitive man in western Europe needed a cutting tool; and so he made knives and spearheads out of chips of volcanic rock. The chips of basalt were too brittle, and he substituted flint for lava. But jade took a better edge than flint, and so he took jade instead. But jade must be brought from mines five thousand miles away, far beyond the Karakorum, over snowy ranges and burning deserts. The transportation of jade a distance of so many thousand miles was a tremendous effort, but the resistance that was to be overcome was far greater. There was a distinct gain; in other words, it paid. The man was not only better equipped, but his active powers were increased and he knew more. Now, the tools that primitive man used were merely levers and wedges to enable him to overcome the obstacles which beset him; and in getting his jade knife-blades from beyond the Karakorum, he was creating commerce to help him in his struggle. And commerce was to be his greatest helpmeet, because it brought to him knowledge — knowledge that the other man miles and miles away had gathered in his struggle with his environment.

Then the man learned that fire would separate the metal from the dross, and that not even jade was comparable to bronze or to steel as a material for the tool. And so, as man's desires became greater, the tools he employed gave him powers that were growing constantly greater and greater. Each succeeding generation saw him breaking down the obstacles that had defied his forefathers, and he therefore became the dominant force of the earth, until there were but few earth-obstacles left that he could not overcome.

Now, I put in a most positive protest against restricting the study of geography to merely the study of man's environment, because to me the man himself — to say nothing of his commodities — is the active, the intelligent, and the more interesting factor of the two. I grant that the environment is an important feature, but the man himself is the greater one. I can see how the dungeon walls that held Monte Cristo may possess interest, but I gain greater inspiration in the struggle by which he surmounted those dungeon walls. And so the story of the man battering down the obstacles that beset him in the struggle that has civilized him is a far more interesting factor than a systematic dissertation about the bonds that environed him.

The Rocky mountains once prevented a trade between the United States and the people of the Orient. Each had a message for the other, and the delivery of those messages meant knowledge and enlightenment to both. Year after year that great fastness lifted its snowy crests as if to say: "Nay, nay; thus far shalt thou go, but no farther." But the man persisted, and little by little that tremendous barrier was overcome. The greatest of all trade routes has been opened and a tremendous stream of human thought and intellect is flowing between the Occident and the Orient. Each will be a great gainer. And which has conduced most to the happiness and enlightenment of mankind — the study of the physiographic geography of that great earth-obstacle, or the story of man's efforts to level it and to bring the two halves of the world into touch with each other?

THE BEST METHODS OF ELECTING SCHOOL BOARDS

LEWIS H. JONES, PRESIDENT OF STATE NORMAL COLLEGE, YPSILANTI, MICH.

We do not, in this country, have any national system of education. So far as we may be said to have any system, it is a state system. In fact, when we speak of a city system, we mean certain phases of the state system. The appeal for plans for local management must be made to the legislature of the state. The discussion of what should be the best method of electing school boards must be the discussion of what should go into the state law.

1. Any good school law passed by the general assembly of a state should limit the possible number of board members to five — no less, no more — whether the locality covered by the board is large or small, because, if all are present, they can act in committee of the whole on every subject, and you can always have three out of the five for a quorum.

2. Each should serve five years, necessitating the election of one member every year, and only one.

3. This election should be by the voters of the city at large. For this there are two reasons: first, it does away with the necessity of having any one portion or committee legislate for a part of the district, and places on all the responsibility for all the district; secondly, it induces better men to stand for election, and one hour per week of the service of a good business man is worth more than all the time of a ward politician.

The work of the school board thus elected should be taken out of certain relations with politics. I have no sympathy with the thought that schools should be taken out of politics, but I may have with the thought that the saying expresses. I wish to remove the nomination of school boards from the control of the national organizations. No one should be eligible to the school board who has ever held office under the national organization of the great parties. Something should be done to get strong men not connected with national politics to take service in school boards. We could secure these men by separating the election from national politics. These men should be nominated thru petition. In localities with few electors, one hundred names should place a name on the ticket; in larger communities, five hundred names. No citizen should be allowed to sign more than one petition, and the first three names receiving the number of signers required for the nomination should be put on the ticket. The election should be open to the legal voters of the entire municipality.

Lastly, the function of the school board should be limited strictly to legislative work. The board should take action for the raising of revenue to support the schools, for the building of schoolhouses and their equipment, and for the fixing of the salaries of teachers. They should have

the added function of the election of a superintendent of instruction, and the period of his tenure should be fixed by state law at six years. This is better than the life tenure. It frees him from many of the charges that can readily be made when it is understood that he is in a life position and cannot be removed. No man should fear appeal to his board once in six years, if he has done his work faithfully and well. His powers and duties should be specified in the law. He should have charge of the selection, promotion, and discharge of teachers. No appeal from his decision in this matter should be allowed. There should be definite and fixed means allowing the community to displace a superintendent who should commit malfeasance in office. This would simply involve the specification of grounds on which impeachment might be based. A fair trial should be all he would ask, and thus he would be freed in the administration of the office from the annoyances that come to a man who is talked of as a czar. We must give him temporarily all the privileges and duties of a czar. This is what will produce in him conservative action.

The state law should provide for one other officer in the election on the general ticket at the same time as member of the school board. This should be an executive officer, known as "director," "business manager," or something of that kind; and his term should be three years.

These are really the essential elements belonging in any school law, and an early application for such a law should be made directly to the assembly of the state.

There is a local interest in Ohio, because the people of this state must seek from the general assembly a modified enactment of the system for the government of the state. This law should include, not only the city system, but that of villages and rural communities. The supreme court has decided that the present city charters are repugnant to the constitution of the state. This will involve the rural systems, if they are attacked. This is liable to occur at any time. There should be an appeal to the general assembly at its next session.

I believe that, if the principles I have pointed out were made applicable and adapted to the differences among communities, we should find the best methods of electing school boards.

I believe I have pointed out the direction in which all reform movements in the next few years must proceed.

DISCUSSION

SUPERINTENDENT JOHN W. CARR, Anderson, Ind.: In discussing this subject it seems appropriate to ask two questions: (1) What are the characteristics of a good school-board member? (2) What is the best method of election in order to secure the services of good men on school boards?

I doubt if two of us would agree on an answer to the first question. I sometimes

think, when listening to a discussion of this topic, that the summation of all school-board virtues consists in the board electing a superintendent — a professional expert, if you please; just such a fellow as I was when first elected superintendent; or am yet, for that matter — and then saying to the newly elected: "Here, Mr. Superintendent, are our schools; take them and run them after your own fashion; nominate, elect, and retain teachers; levy taxes, pass on questions financial and pedagogical; and we will ratify whatever you do. We will even anticipate your wishes, if you will only indicate them, and then take all the kicks and cuffs that come this way. We feel that we fulfilled our entire duty to the schools when we elected you!"

But this is travesty. None of us believe such things, and we only talk this when away from home. We are meek enough in the presence of our boards. We all know that no other part of the school system is more important than the school board. It is the school board that has the power to collect and expend money. It is the board that decides who shall and who shall not superintend and teach in the schools. It is the board that determines the policy of the schools; whether merit and efficiency, or politics, nepotism, and favoritism shall be dominant. It is for the members of the board to decide for themselves whether or not, with the advice and assistance of their own experts, *they* will control the schools, or surrender their rights and prerogatives to crafty and designing, but irresponsible, men, who seek power for plunder or the gratification of other selfish ambitions. The members of the school board are the trustees, the guardians, of the rights and privileges of little children, and their duties as such cannot be neglected or surrendered without betraying a most sacred trust.

In order to make a good member of the school board, a man must be honest, fearless, discreet, firm, unselfish. He must have business ability, sound judgment, common-sense, and the good of the schools at heart. He must also be able to command the respect of the community. As a member of the board, he should know nothing but the interest of the children, and, so far as his official acts are concerned, their welfare should be paramount to party, family, church, or even self. He should be progressive, willing to build and equip schoolhouses, willing to buy necessary apparatus and school supplies, and especially willing to employ and retain competent teachers. He should have the courage of his convictions — courage to support superintendents and teachers, courage to pay good salaries, courage to withstand the importunities of friends and the threats of enemies, courage to tell the political boss to his teeth to keep hands off, courage to do what he knows to be right and for the best interest of the schools. It is not difficult to find men who *know* enough to make good school trustees; the chief difficulty is to find men courageous enough to do the right under pressure.

The second question is: What is the best method of election in order to secure the services of such men on school boards, and to retain them when once elected? This question has not and cannot be fully answered. No system can be devised that is so perfect as to insure the election of good men at all times; neither is any system now in use so poor as to prevent good men from being elected occasionally; yet some methods of election are superior to others. I agree with President Jones that the board should be small. He suggests five members. For all towns and small cities I think three preferable. The advantages arising from a small board are obvious. Responsibility is fixed; each member becomes acquainted with his associates, with the superintendent, and with many of the teachers. Meetings can be held in an informal way, which is the best for the transaction of business with care and dispatch. Each member becomes acquainted with *all* departments of school administration, which is highly advantageous. The superintendent is able to consult with each member of the board without consuming too much of his time and energy. I also agree with Mr. Jones that each member should represent the city, and not a ward or district. Each member would then feel responsible for the schools of the entire city, and not simply for those in the locality in which he resides. His services would not be valued by the amount of improvements and the number of

appointments he is able to secure for his district, but by the efficiency of his services to the whole system.

Many of the evils of the school-board administration are due to two causes — large boards and ward representation. Large boards means administration by committees. This means rivalry, and in many instances jealousy and combinations. If a member gets a new building for his district, each other member thinks he must have an equivalent for his own. It is impossible for a member to serve on all committees; hence he knows but little about some departments of board work, and as a consequence is often indifferent or hostile.

But I have serious doubts about the superiority of the mode of election advocated by Mr. Jones. As far as my observations go, the plan does not have much to commend it. But few cities have tried the experiment of choosing members at special election, nominations having been made by petition. When the experiment was tried in Indianapolis a few years ago, it was found that the persons whose names appeared near the head of the ticket ran far in advance of others who had even better qualifications than they. This was due to the fact that many voters did not know the candidates personally, so they voted for the persons whose names were first on the ticket. To my mind this is sufficient to condemn this mode of election.

I am acquainted with no method of electing school boards superior to the Indiana plan. This plan, of course, is not perfect, but it has stood the test of time and is regarded as one of the best parts of the educational system of the state. The law provides that the school board of each city, other than Indianapolis, shall consist of three members, elected by the common council. Each member represents the entire city, and is elected for three years. The law further provides that one member shall be elected each year; so, unless there is a death or resignation, there are always two experienced members. The board has the absolute power to levy taxes, not to exceed a certain per cent., and has great freedom in expenditures for school purposes. Each member must give heavy bond, and no money can be expended without the consent of a majority of the board and the knowledge of all. An itemized report of all receipts, expenditures, and debts must be made to the county auditors annually, which report is open to public inspection. While it is possible for the boards to be dominated by politics, and the individual members to be influenced by unworthy motives, yet, so far as I am aware, there are fewer scandals, less jobbery and corruption, and more efficiency than in boards appointed or elected in any other way. I do not claim that the Indiana system is perfect; yet it has much to commend it.

But neither this nor any other method of election or appointment will always insure the election of honest, capable men. If councils wish to elect competent members of school boards, they usually have no difficulty in finding them. The same is true if the people elect or the mayor appoints. So, in the last analysis, we find that *public sentiment* is the dominant factor in choosing good or bad members of school boards. If the most influential classes in a city really want good members of school boards, they will find some way to get them. If they are indifferent or do not want such members, bad boards will be the rule.

In molding public sentiment, many factors are to be considered. The public press is important. The pulpit is also a factor. Leading business and professional men exert a powerful influence. The acts of the different members of the board itself are very important. Not only may a system of schools, but the sentiment of an entire community, be changed by the aggressive acts of one honest, fearless school-board member — a man who is broad enough and big enough to perform his whole duty toward the schools. And finally, the efficiency of the superintendent and teachers is most powerful in molding public sentiment. Let the people once have a concrete example of good schools — schools economically administered and free from politics and favoritism of every kind; schools in which superintendent, teachers, and janitors are really efficient — and public sentiment will as a rule demand good school boards.

SUPERINTENDENT W. W. CHALMERS, Toledo, O.—I have the pleasure of representing a city organized on the general plan described by President Jones. I want to differ with the last speaker in his statement that good members of school boards are more often secured by election by city councils or appointments by the mayor. Our city is organized on the general plan of just five members, each selected for five years by the city at large, and was so organized before Indianapolis adopted the plan. One of the best men on our board of education today could not have had the position with the approval of the city machine representing both the political parties. He could not have been elected by the city council, nor would he have been appointed by the mayor; yet, when nominated by petition, he received more votes than all of the other three candidates combined. I believe you can always trust the people to select good school-board members, if you keep them informed what the schools are doing. I believe you can keep politics out of the schools better by nomination by petition than by election by the city council, appointment by the mayor, or election by wards. I have had many years of experience with the old plan, and now I have had five years' experience in a city organized upon the plan outlined in Mr. Jones' paper, except that the business manager is elected by the board of education instead of being elected by the people. This plan has been tried long enough to be thoroly tested, and in practical operation it has given to Toledo a school board whose personnel cannot be excelled by any school board in the country.

SUPERINTENDENT C. G. PEARSE, Omaha, Neb.—We have had, I think, a little broadening of the topic set down in the paper. We have touched upon what sort of men to put on school boards, what they should do when elected, and what sort of superintendents they should choose. I listened with much interest to what President Jones and Superintendent Chalmers said, but I do not think I can quite agree to all the superintendent said about how to get good members on the board. His remarks might imply that superintendents sometimes have something to do with these selections, and we all know, of course, that superintendents never mix in anything of that sort. We must remember that this is a representative government—a government by all the people, not by those we think are the best people; and we cannot always have members all of the kind who move in the highest circles of society. We find that legislatures always represent al classes—good, bad, and indifferent; and school boards are likely to be the same. I am not sure but that the residents of "Hell's Half Acre" are sometimes entitled to representation. All citizens should be directly interested in the schools, and one of the best ways to have them interested is for them to have some voice in the selection of the men who manage the schools. The educative influence in the community of a general election of school-board members, in which general school policies are discussed, is good.

Elected boards are more independent. Public bodies usually heed their masters. If the school board is selected by the mayor, that board bows to him; if selected by the city council, the board bows to the council; if the board is elected by the people, no one man or twenty men can command the board's obedience. The elected member can say: "I serve the people."

Another important matter is the levy of taxes—the determination of how much money shall be raised in taxes to carry on the schools. The people are unwilling to give the power to fix taxes to any body whose members are not elected by the people direct. I fear my friend from Indiana will find, if members of boards are not elected by direct vote of the people, that the next step proposed will be to take away from this appointed board the power to fix the amount needed for school purposes and place that power in the hands of some other elected body. This seldom fails to result disastrously for the schools.

President Jones says after the superintendent is elected let him appoint, promote, and dismiss teachers. That sounds well, and is an easy way to fix it, but I hardly think it is a wholesome power for a superintendent to have, absolutely. Sometimes we make mistakes: it is an advantage for us to have some counsel in these things. You as

superintendents do not want your boards to appoint or reward with promotion teachers whom you feel you ought not to recommend; you can very well afford to refrain from appointing those your board is unwilling to approve. Why not let this power remain joint—you to nominate, they to approve? Even the president of the United States does not have absolute power of appointment.

A serious menace to good school administration is the bi-headed system proposed this morning—the schools administered by two men, one a business manager, one a superintendent of instruction. With such an arrangement the two parts of the organization will soon be found, in most cases, to be working at cross-purposes—pulling apart like two unwilling oxen under the same yoke. The school is first of all a business organization; the man who controls the business side is master; he should have charge also of the instruction; he should be the superintendent of schools—all departments of the schools; not a business manager merely or a superintendent of instruction merely. If your business manager should be, by chance, a wise and sympathetic man, he might be in fact a superintendent of schools, and encourage and assist the department of instruction to do its work well. But if he proves like most, he will be anxious chiefly to manage the schools economically; the superintendent anxious to make them as good as possible.

To do the best, school systems, like other business organizations, must have a single responsible executive head. The board will be back of him, and he will manage the schools subject to its general direction and approval. To him will report the heads of the various departments in all lines of the school administration. He will be in reality the superintendent of schools.

SUPERINTENDENT F. LOUIS SOLDAN, St. Louis, Mo.—I think it will be of interest to glance at a school system which differs from the types mentioned, both as to the number of members of the board and the manner of election. So far as I know, it cannot be said of any other plan that it has been in operation for five years without any friction to hinder its success.

The typical features are in brief: Number of members, twelve, elected on a general ticket. Election of a board on a ticket at large takes the schools out of ward politics. Ward elections frequently result in giving representation, not so much to the good citizens of each locality, but to the ward politician. A board elected at large represents the whole city, and is not likely to allow the impression to obtain that the parts of the city in which they happen to reside get more attention. In my city, if there is any discrimination at all, we give more attention to those parts of the city happening to have no local representatives on the board.

In administrative matters, it is the plan to have as many departments as there are distinct functions. One officer has charge of the administration of the schools themselves, instruction, teachers, etc.; another, of buildings, including janitors; another, of finances; another officer has charge of school supplies. If there is anything wrong, say in the janitor service, the responsibility does not lie with the board, in the first place, but with one man who has charge of the appointment and dismissing of janitors. If there is anything wrong with the instruction, if there are incompetent teachers, the responsibility lies with the superintendent, who has power to correct the evil. The principle underlying this plan of having independent heads of departments is that of localizing and fixing responsibility.

The law gives the superintendent power to nominate, not to appoint, teachers; he has not the power to adopt text-books, but he takes the initiative in recommending them; the same is true in the matter of school furniture.

The fears of my friend from Omaha are not realized. There is no tendency to make one department domineer over the rest. I believe, judging from an experience of five years, that this type deserves equal consideration with other plans described.

THE FREEDOM OF THE TEACHER

CHARLES B. GILBERT, ROCHESTER, N. Y.

In the organization of great school systems, which is the passion of the hour, there is danger that the teacher shall become the submerged fraction.

We superintendents need a baptism of the spirit of true education. It is said, justly or unjustly, that this age is materialistic. Certain it is that we are in danger of having our minds forced to dwell too continuously upon the material side of life. We schoolmen are no exception. There is grave danger that in the organization of systems, with the intrusive demands of the architect, the doctor of medicine, and the statistician, we shall, like Martha, forget the higher things.

Dr. Arnold Tompkins, whose fine definition, "The school is a spiritual union between teacher and pupils," is classic, has also said that "the school in its last analysis consists of the self-educating pupil." I cannot but think that Dr. Tompkins, usually so astute and exact, has here slipped. The self-educating pupil is not a school at all; he is simply a self-educating pupil. An aggregation of self-educating pupils does not constitute a school any more than do any other aggregations of people. The one characteristic which distinguishes the school from other collections of people is the presence of the teacher. In more senses than the popular one it is the teacher who makes the school.

The world is full of people who are educating themselves, consciously or unconsciously; who are utilizing all the great agents and forces of life as means of spiritual growth; but only in a figurative sense is the world itself a school. The figure consists in the personification of these various agents and forces, and even of life itself, and treating them as teachers. There is no school without a living teacher entering to some degree into the lives of the pupils, forming some sort of spiritual union with them. It is as true in a practical sense as in a philosophical that the teacher is the school.

Every school administrator knows that his one serious business is to secure good teachers. Courses of study are important, and a good school is more easily secured with a good course of study than with a poor one. Proper organization is important; good schoolhouses are important; good text-books are important—and all the appliances which may be used to further education; but none of these alone, nor all of them together, constitute a school, nor can they make a good school; but the good teacher *can* make a good school, if any or all of these concomitants, these aids, are lacking. Hence it becomes the chief duty of the executive authorities of school systems everywhere first of all to secure the best possible teachers, and then to remove, in so far

as possible, all obstructions from their paths, to give them free scope, and to aid them in their work in every conceivable way. All the machinery of great school systems—local, state, and national—has for its aim, properly, this one thing: to make it easier for the teacher to teach well.

In the small private school, and in the rural school especially, the teacher is all in all. The teacher makes the school; he is expected to make the school. If the school is good, it is to his credit; if bad, it is his fault. This is not merely theoretically, but practically, true. The best type of school, depending wholly upon the teacher, is the rural school. Here the interference with his work is very slight indeed; he is compelled to employ his own initiative, make his own plans, organize his institution, and execute his plans. Young teachers, coming from training institutions, are frequently urged to teach a rural school for a while in order to develop the power of initiative, of independent action, thru their necessary exercise in the professional solitude of the country schoolhouse; and it is good advice.

Many of the strongest and best teachers and educational leaders that the country has ever known have received their first impulse, their versatility and breadth of view, and their ability to meet new difficulties, which have made them great, in the small, unpainted schoolhouse in the remote country district where they began their discouraging work. Here they were required to study their pupils and give them work suitable for them, to devise their own methods, to meet emergencies—often serious—quickly and firmly. In the country school that is good for anything the teacher is "it." Alas, that in any system of schools he should ever cease to be "it"! But there is, unfortunately, in the development of large institutions a tendency to subordinate the individual and to destroy individuality. This is particularly true in great school systems. The tendency seems almost inevitable. The demands of the organization itself are so great, it requires so much executive power to keep the machine running, that the machine itself attracts undue attention and we are in danger of forgetting that the business of the school is to teach individual children. This worship of machines is the most debasing kind of fetish-worship; it destroys the power to judge of values, and, like all worship of inferior gods, it subordinates the higher ends to the lower.

Frequently, in our great city systems, teachers are judged by their ability to run along smoothly in a well-oiled machine rather than by their power of inspiration, their ability to uplift, encourage, strengthen, and really teach children. I have known teachers full of love of youth, possessed of extraordinary inspirational power and ability to make children think, work, and learn, driven from the school system because they did not readily untie red tape. We too often forget that the school system is useful only in so far as it makes it easier for the teacher to teach;

that every unnecessary burden, every extraneous demand upon the teacher's energies, everything which distracts his mind or takes his time away from the one purpose of his work — that of teaching the children — is a positive injury. When the machine grinds out the power of initiative from the teacher and makes him a mere tool, granted the privilege of imparting a little carefully prepared desiccated information, and freezes his soul out of the work, then it is time to smash the machine; and there are countless machines all over this land that need to be smashed.

There is a constant tendency to organize school systems like factories, with a boss, sub-bosses, and hands.

I repeat: The only function of the school system is to help the teacher to teach; not to do it for him, but to remove every unnecessary obstacle and to provide every possible aid, in order that he may exercise to the full his highest powers for the sole purpose of helping children.

Perhaps the worst form of machine domination is that which places undue stress upon statistics and makes of the teacher a mere compiler of figures. Great marking schemes have been devised by school boards, school superintendents, and the devil to prevent teachers from teaching with their whole souls—schemes for marking children upon all conceivable points, which require brain-racking study, burning of the midnight oil, and, it must be confessed, even imagination, to an awful extent.

As such systems lead children to study for marks, to behave for marks, to cheat and lie for marks, as well as to be hateful and narrowly exacting, so they lead teachers to teach for marks, control for marks, to put the whole stress of their work upon the getting of marks; and they, too, sometimes are led to cheat for marks and to lie for marks.

The evil of this thing is easy to see. Any method of organization or of work which distracts the attention from the real end and forces it upon a secondary end is immoral. Many great evils in life result from placing undue stress upon secondary ends; upon the accumulation of wealth instead of upon the proper expenditure of wealth; upon acquiring power instead of upon the proper use of power; upon getting rather than giving.

To force teachers continually to drill along narrow lines in order that marks may be secured is to take away their spiritual freedom and to degrade them. The teacher who is forever harassed lest her pupils shall not pass naturally is unable to give her whole attention to the needs of the children and to supplying them. .

The rural school-teacher, if of the right sort, studies John and William and Susan, and decides that for John's good he should do this; William, for his good, should do that; and Susan, for her good, should do that; but the machine-made, machine-driven teacher, in a system having no such freedom of action, treats John and William and Susan all alike (they must all take the same brimstone and treacle because it is

good for somebody), and is not allowed to exercise his own natural judgment and his natural interest in their spiritual well-being. This is not only bad for the children, but it is, if possible, worse for the teacher. The children may recover, because their school days fortunately end sometime; the teacher's fate becomes fixed, as his school days never end.

Another evil which is finding its way into our larger cities is the formal and frequent marking of the teachers themselves after a brief and valueless visitation. A superintendent and a body of supervisors or a body of superintendents are employed, not to instruct, inspire, and help the teachers, but to mark them. I know of cities in which supervisors go about from schoolroom to schoolroom, notebook and pencil in hand, sitting for a while in each room like malignant sphinxes, eying the terrified teacher, who in her terror does everything wrong, and then marking her in that little doomsday book. I have known many teachers fairly to shrivel when the supervisor with his instrument of torture enters, and, besides doing their very worst during his presence, to be thoroly unfit for work during the remainder of the day, and to be sick for days afterward. Who will venture to say that such a system of torture, depriving children of the teachers' best work for at least a time and breaking the teachers' hearts for all time, is justifiable? Such supervisor's paths, like those of reckless automobilists, are strewn with the dead bodies of hopes and ambitions and nerves. The reasons given are that some teachers will do wrong, and hence a system of espionage and terrorism is extended, like the clouds of heaven, over all alike. This, of course, instead of correcting the evil, extends it and creates new ones undreamed of before.

The most precious possession of a school system, rightly viewed, is the teacher's devotion to his work. Any plan of organization, any method of administration or supervision, which lessens that, which diverts the teacher's energy into any foreign channel, is an evil.

The teacher in the schoolroom should always feel that his first duty, and almost the sum of his duties, is to ascertain and to meet the needs of the individual children under his care. In the machine system the tendency is always to center the thought of the teacher upon, not the children, but the higher authorities, so that, instead of feeling responsible to them and being anxious to serve them, he becomes over-anxious to "stand in with" the administration, and to sacrifice his own obligation to the higher law, to the demands of his superior officers for uniformity. This shifting of conscience is not only encouraged, but is almost necessitated, by some prevalent systems of administration.

When a teacher ceases to feel that he is there primarily and wholly to serve the children, and begins to feel that he is there to serve somebody else — school superintendent, school board, local politician — he ceases then and there to be as good a teacher as he might be.

In the office of every superintendent and in the notebook of every supervisor should be written: *The teacher is the school;* and the daily inquiry of every such officer should be: How can I stimulate in all the teachers under my supervision love for their work, self-respect, a feeling of independence, and an ambition to do better teaching than ever before or than anybody else?"

I recall one superintendent whose favorite phrase was: "I will put the screws on." This phrase might have suggested the thought he was a carpenter; but he was not; he was an inquisitor.

The school system is but an aggregation of schools, that is, of classes of children with their teachers so organized as to raise to the maximum the efficiency of each teacher; that, at least, is the theory. The great essential to real efficiency is freedom. I do not mean by "freedom" license, or even liberty, to do as one pleases, but the ability and the possibility to direct one's energies with intelligence and purpose to the highest results possible for him. Such freedom is primarily internal rather than external, and for the teacher it begins far back of the organization, far back even of the act of teaching. The first steps in freedom must be taken by the individual. The teacher must be free from ignorance, from prejudice, from undue pride, from the debasing pressure of false ambition, from unwillingness to learn or be guided; that is, the teacher must have a free soul in the Pauline sense. This internal freedom must be achieved by the teacher alone. It is the result of study; of hard work; of moral struggles and victories; and it results in broad intelligence and enlarged intellect and strengthened will. Now, suppose such a teacher has been selected to a position in a school system; this internal freedom must be preserved, but added to it must be a certain amount of external freedom — freedom to exercise native and acquired powers without undue restraint or perversion.

There is a higher freedom than that of the individual in solitude. It is the freedom that comes from association and co-operation.

The evolution of freedom in all society necessarily goes thru three stages. The first is the state of isolation, which appears to be freedom, but which is not. It is a mere pseudo-freedom. The individual alone finds himself the slave of innumerable vast forces, which, except in rare cases, overwhelm him. The first stage of real freedom comes with co-operation; two are stronger than one; many are stronger than two; and, when properly combined, each contributing all his strength to the common good and all sharing the common good, true freedom is obtained. But in the evolution of society there is an intermediate stage. With the beginning of combination comes also tyranny. An individual or a few individuals make use of the enlarged strength of the many in combination for their own good, and so each, while more free than in the state of isolation, finds himself dominated by forces outside of himself, and

so deprived of a part of his freedom. The final stage comes from the overthrow of all unnecessary external domination, the reassertion of individual initiative, and the free combination of free souls for common ends.

An individual who has become an intelligent and conscious member of society, contributing of his best freely to the common good, is free to draw upon the community for a vast increment of power. He is enormously magnified, is a very much larger being than the same individual in solitude. The society becomes his larger self thru which he can do greater things than when alone; by its protection and help he has become free from innumerable trammels and hindrances with which he was unable to cope alone. A true society is a great instrument of freedom thru which each one is able to render vastly greater service than when alone.

It ought to be possible in a school system for each teacher to do vastly better work than a rural teacher can do, because, while contributing his part to the general stock of knowledge and skill and inspiration, he can draw without limit upon that accumulated stock himself. Each teacher can learn from the other teachers; for wisdom is communicable. If the heads of the system are wise and possessed of inspirational force, he can add to his power from their wisdom and inspiration. A system properly conducted substitutes co-operation and common interests for isolation and individual interests. The urban teacher ought to be a very much larger and wiser and better teacher than the rural teacher. In some instances this is the case. Our greatest teachers are not country-school teachers, but city-school teachers, because it is possible in an urban system to become greater; there are more aids, more stimuli, more nutriment available. But the teacher may avail himself of these only when the method and plans of organization and supervision make it possible; when the school board and the school superintendent and supervisors consider it their part primarily to contribute the largest share of inspiration and wisdom to the common stock, and secondarily to act as distributors of this common stock to the teaching forces. And it is a sad sight to see such enormous possibilities for good sacrificed by the pettifogging, red-tape methods prevalent in so many of our systems; to see machines exalted above the free-souled teacher.

How may the school system reinforce the teacher and conserve his freedom? Possibly I should first answer the negative question: How may a system be so conducted as not to interfere with the work of the teacher?

My answer to the question is, first: By reducing the machinery to the minimum consistent with a reasonable degree of unity, eliminating all unnecessary red tape, and all demands upon the teacher, in addition to his work of teaching, that it is possible to get along without.

A certain amount of detail is, of course, necessary; records must be kept and some statistics must be gathered, for statistics do not always lie

and sometimes are even useful. Information regarding the attendance of children and conditions prevailing in and about the schools, which throw light upon the educational problem, is important, and must be secured thru the teachers, if at all. But there are many kinds of information secured thru the compiling of figures which are of no value to anyone, or at least of not sufficient value to justify the sacrifice of time and effort required to secure them.

The passion for statistics which dominates some school superintendents is a dangerous one, and easily runs into statistical dissipation and that dread disease, statisticitis.

My second answer to the negative question is: Avoid every device of method or organization which tends to lessen the teacher's individuality and sense of personal responsibility to the children.

But there is a positive side to this question. A school system, properly organized and conducted, can directly and positively help the teaching and aid in conserving the teacher's freedom. In the first place, it can, by a proper process of selection, secure and retain the best teachers; and this does not require formal, arbitrary, and elaborate systems of marking, but merely the exercise of ordinary good judgment and the maintenance of a rigid backbone.

Of course, in very large systems some plan of marking teachers is necessary for the protection both of the teachers and of the supervising force; that is, there should be put down in black and white from time to time some record of the teacher's qualifications, and of the efforts that have been made for his improvement; but such a record should be exceedingly simple and unostentatious, and the marking should be done by those who know the teacher's work thoroly, not by the supervisor, whose visits are infrequent, and whose markings would be under circumstances unfair to the teacher. The markings of the visiting supervisor are of very little value, and the making of them renders it impossible for the supervisor himself to fulfill his true function; that is, to help, stimulate, and inspire the teachers; and he becomes a dreaded visitor. I have seen such supervisors, and it always impresses me that they have fallen from their high estate. No supervisor can do really good work as such if his visits are dreaded by the average teachers. Until his aim and purpose to be a helpful friend and nothing more become so fixed in the mind of the teacher that his visit is welcome, he cannot do his best work.

Most of the formal systems of marking teachers are cowardly; they are simply devices to make possible the shirking of responsibility. Given a reasonably good process of selection, helped by proper civil-service rules, we shall have a reasonably good corps of teachers in any system.

Now, how can the system make this reasonably good corps better, keep the teachers up to the highest standards possible, and secure from them their best work? First, by making them feel that they are persons

of consequence, whose judgments are worth considering, and who may justly be supposed to possess reasonably tender consciences, some professional ambition, and at least a fair degree of devotion to their work. I hold that the first duty of school superintendents and other officials is to lead the teachers to respect themselves, to feel that they are trusted, and to impress upon them that the school officers, taking it for granted that they want to do their best, are anxious to help them.

The supervising powers can help the teachers by supplying them with a good course of study. A proper course of study properly administered does not diminish the freedom of the teacher, but increases it; but that this may be true the course must be broad, suggestive, and stimulating. It should make it necessary for the teacher to study for self-improvement in order to teach successfully. It should aim, not at uniformity, but at unity. It should require teachers to arrive at certain results in their own way, and these results should be the growth of the children rather than the accumulation of a few meager and prescribed facts. Too many courses of study aim at uniformity of method and uniformity of output. Uniformity of method kills teachers. Uniformity of output, if possible —which, thank the Lord! it is not—would produce corpses of children.

The course of study should be based upon sound philosophy, and should encourage the teachers to master this philosophy. In its administration the supervising force should definitely instruct the teachers in the principles involved, and should inform them as to the best methods for achieving the desired results, which is a very different thing from forcing these methods upon them. Such treatment would tend to make teachers free in the true sense; that is, to produce inner freedom—freedom of spirit from ignorance, prejudice, and low ideals.

In administering schools, and especially in instructing teachers as to the course of study, there are several possible means. The most common are the teacher's meeting, schoolroom visitation, and the private conference. The former is the most widely used, and perhaps the most badly used. Meetings for the instruction of teachers should have a definite purpose—should bring together teachers who are doing similar work, and should be held when the minds of the teachers are fresh and unwearied. Grade meetings are the best, but these meetings should be held during the school hours, and should be a part of the teacher's regular work. The after-school meetings to which the teachers come fagged, forcing themselves to keep awake and listen, are better than nothing, but they are not the best.

The ordinary teachers' institute, as conducted in most of our states, with its heterogeneous program, its large element of entertainment, its professional conductor with his stock of professional jokes, its hit-or-miss efforts to meet the teacher's needs, is almost a travesty.

After many years of experimenting I have found the most effective

plan for treating teachers' meetings to be this: All the schools of a certain grade are dismissed for a day, and the teachers are assembled in a central place for definite instruction in the work of their particular grade. By having one such grade institute a week during the greater part of the year, it is possible to have four or five days given to each grade; and they are days of hard work, in which the needs of the teachers are definitely and exactly met. But, whatever the plan, such meetings should be held and should be devoted to specific instruction, for the most part, as to the course of study.

Schoolroom visitation is another very good means of helping or hindering teachers. There is not time to discuss it in detail. I have referred to it somewhat in another place. Suffice it to say that such visitation should be for the sake of becoming acquainted with the teacher and his work, and helping him by suggestions and by giving model lessons. It should not be for the sake of marking him.

Naturally the most helpful feature of the school organization to this end is some degree of personal acquaintance between the officials and the teachers. While this is easier to secure in a small system than in a large one, it is entirely possible in even the biggest system. Very large systems should be so organized as to distribute the supervising forces in such a way that some officers of consequence may come in contact with every teacher. Condensing the entire supervising force into a great board, who sit in common sessions and legislate and adjudicate, is a waste of energy, even in the largest systems. Supervising officials should be scattered where at least some of them may come in personal contact with the teachers, and know their ambitions and aims and their merits as well as their faults and weaknesses, and may give the sort of inspiration and strength which is given only in personal contact. Any system that is so organized as to fail to secure this personal contact between the teachers of the class-room and the officials who are to direct them and pass upon them in so far fails to do its duty; and this applies equally to systems large and small. The personal, sympathetic intercourse of those who know more with those who know less, of the stronger directing minds with the directed minds who need help, is the *sine qua non* of good school administration. This secured, it is possible to take cognizance of the ideas which the teachers themselves have.

The assumption, even tho it be tacit, that the superintendent or the body of supervisors and the principals know it all, is most pleasant to those officials, but it is an assumption contrary to fact. In nine cases out of ten the good teachers know more about what ought to be done with the children than all the supervisors together. I am sure that if we omniscient superintendents were to confess, we should admit that the best things that we know in regard to teaching we have learned from good teachers in the class-rooms; and one reason why some superintendents

holding high positions have not manifested any evidence of growth for years is that they have ceased to think that the opinions of the teachers are worth anything, and have ceased to consult them. There is much wisdom allowed to go to waste because supervising officials are too proud to use it.

I do not mean that the school officers should not, in the common phrase, "run their schools;" of course they should; but they should do it very modestly, remembering that the sum of the wisdom possessed by all the teachers is doubtless greater than that contained even in their enlarged craniums.

A very fine teacher said to me recently, rather sadly, that she was not altogether happy in her school. On close inquiry I drew from her the information that the trouble was that she found no sympathy in the principal. She was ambitious and capable; she wanted to do something rather more than the ordinary; her heart was in her work; but she felt that her principal's heart was not there, but was rather in the machinery of the school. He would visit her occasionally, was never unkind, and she had, after repeated efforts, secured a half-hour in which they might sit down together and talk over her ambitions and her schemes for work; and the result was a chill and a disheartenment which, unless the inner fire burned very strongly, would in the end impair her efficiency. He wanted good work in his school and expected his teachers to teach well, but he was so concerned with the mechanical side of administration that he could not get into the heart of any of his schoolrooms. The teacher had the freedom of isolation, not that of society.

The supervising officer is a distributing agent, receiving what teachers can give and giving what is received to those who need it; and he must not, if he would be worthy of his office, let any amount of detail work, any consideration for the mechanical part of the administration, stand in the way of this personal co-operative work with the individual teachers. For let us remember that the school is a society in which all share the good or ill; and this is as true of the teachers as it is of the children.

Recall that individual freedom is often impaired by the excessive demands of the social whole and the obliterating of the individual, but that true freedom is to be secured, not by a return to isolation, which is in reality extreme bondage, but rather by a proper use of society. The individual teacher should be strengthened, not weakened, by belonging to a system. The strength and the wisdom of the whole are greater than that of the individual, but only when each individual is encouraged to exercise his own strength and also to share with others. So that, for teachers as for children, a school system should be a co-operative society, having for its motto "Each for all and all for each;" and the administrative forces fulfill their function when they so distribute the common good that each individual has all of his own and all that he can receive from the others. And this is social freedom.

DISCUSSION

SUPERINTENDENT JAMES H. VAN SICKLE, Baltimore, Md.—In spite of some contradictory statements and some others that seem extreme, I am in sympathy with the general trend of Mr. Gilbert's paper. It emphasizes the supreme importance of the teacher, and reduces to a secondary position machinery and organization. It recognizes freedom as an inward growth, something not conferred upon the teacher, but arrived at thru the efforts of the teacher himself. Any domination that deprives the teacher of responsibility and initiative results in injury to the school system, because it deprives the schools of the thought of many and limits them to the thought of one. A superintendent or principal who minutely prescribes what shall be done and how it shall be done defeats the very purpose he has in view. Such prescription tends to make automatons of teachers, instead of alert contributors to the enterprise in hand. The worst possible thing that can be done for a school system is to release the teacher from the responsibility for originating something.

But, after all, the freedom of the child is at stake. He, too, must assume responsibility as a condition of liberty. Despotism at the top produces servility all the way down, and it is the child who is chiefly oppressed. The educational principles which are to guide must be definitely set forth, and there must be enough of organization and direction to secure unity and harmony of effort; but, in matters of device and detail, diversity is to be encouraged. A traveling companion said yesterday: "Any device is good which shuts the mouth of the teacher and opens the mouth of the pupil." Carry this idea back to apply to the relations between superintendent and teacher, and it means that the superintendent should provide favorable conditions for work, see that underlying educational principles are understood, and then insist that the teacher do his own thinking. The teacher who develops under such a system will, in turn, have the pupils do their own thinking. It is only in this way that the growth can take place which results in freedom.

The paper is constructive as well as destructive. Definite ways of improving the work of teachers are pointed out. The grade-meeting plan is especially worthy of consideration. By the plan suggested the superintendent can come into personal relations with the teachers and explain his views in a more effective way than by means of printer's ink. In the large cities the problem of meeting the teachers so that they may know the superintendent's views at first hand is not an easy one. His opinions upon vital questions are too often filtered thru several officials before they reach the schoolroom, and, when they finally reach the teacher, they exhibit a progressive departure from his exact meaning. The larger the school system, the greater the tendency to subordinate the individual to the organization. There should be but one set of middlemen. The principal is the key to the situation. He it is who is in daily communication with the teachers. The superintendent must have the co-operation of the principal, or he will plan in vain. The machine principal will make a machine school. Mr. Gilbert says: "Smash the machine." In this he does not seem to me consistent, as in another part of his paper he develops very carefully the value of the machinery of school organization. A better remedy is to reform the machine principal. Wherever you find a liberal-minded principal, one who has himself arrived at freedom, you will find free teachers and self-reliant children. Therefore it is absolutely necessary for the superintendent to secure the harmonious co-operation of the principals. By principals' meetings and by private conference this must be brought about, not by written orders. The course of study may be broad and liberal, the rules may allow the teacher large discretion, yet the purpose of both be nullified by a principal who insists upon tradition. If I did not know a few cases like the following, I should think Mr. Gilbert had been guilty of exaggeration:

A teacher of my acquaintance, fully capable of taking charge of the work of her

room so that no supervising officer need worry about the results, reports this experience upon being assigned to a building controlled by a principal of this petrified type:

I was given notebooks of other teachers showing exactly how each part of each subject was taught, and was obliged to copy these and follow them in every detail. Every Friday before leaving we were all obliged to make out a plan for the week, stating what we should teach each period of every day — every word in spelling, every problem in arithmetic, and every sentence in language study. At the end of the month we were to make out "progress books," showing what had actually been taught.

A composition was required of each pupil each week. I worked to get thoughts and felt that I had succeeded in a measure. As I had to deal with a fourth-grade class, I found it difficult to get free expression of thought and a perfect chirography. These compositions were rejected, and short, stilted ones of ten lines or so, beautifully written, were accepted.

The discipline was as rigid and unsympathetic as the instruction, and the monitor system was in full force. A grade was to move as a unit, and individual work of all kinds was discouraged. All written work, compositions, dictations, and the like, drawings, etc., were bound in sets, duly inscribed with lots of red-ink linings and interlinings, and put on file. The "plan book," "progress book," "notebooks," and the filing away of all the writing and drawing took a large part of my time, so that I got in a very little real teaching. I found that the only course open to me was to follow directions implicitly. The teachers would not change their methods unless compelled. They follow their notebooks year after year, merely adding the new things that the changes in the course demand.

We have here in some detail a view of the narrowing process as actually carried on in some schools. The last sentence but one exhibits the logical result: "The teachers would not change their methods unless compelled." Monotonous routine inevitably ends in intellectual and pedagogical death. A superintendent who permits it is blind and culpable. One who prescribes it should be retired from the profession. His proper sphere is a factory. In the instance cited, the trouble, if one may judge by reading the course of study and the rules, lay with the principal of the school, not with the school system — "the machine." Thus may the spirit of fairly liberal courses and printed directions be destroyed by a stickler for form for form's sake. If the superintendent happens also to be a mere executive, the system is doomed till the time arrives when the "cake of custom," as Walter Bagehot calls it, is broken by a vigorous and thorogoing reform.

I place a higher value upon the supervisors' estimates of the efficiency of teachers than Mr. Gilbert does. He speaks of their "brief and valueless" visits. I cannot conceive it possible that a supervisor can come away from a schoolroom without a pretty definite opinion of the spirit of the work and its educational value. The impression will be in some respects all the more reliable because the primary purpose of the visit is not to inspect, but to help. Mr. Gilbert evidently thinks the principal alone should mark the teacher. I should want to get all the side lights possible upon the work of a teacher, so as to avoid the one-sided estimate which such a principal as the one above referred to would be sure to give.

Mr. Gilbert rightly places a high estimate upon the use of talented teachers in exemplifying ideals; in giving concrete examples of the correct application of approved educational principles as models for imitation. Ideas introduced unobtrusively in this way spread with remarkable rapidity. We can accomplish little by compulsion, much by suggestion. The following from the late Rev. Maltbie D. Babcock applies as truly to school problems as to other problems involving human nature:

Suggestion is generally better than Definition. There is a seeming dogmatism about Definition that is often repellent, while Suggestion, on the contrary, disarms suspicion and summons to co-operation and experiment. Definition provokes discussion; Suggestion provokes to love and good works. Defining is limiting; Suggestion is enlarging. Defining calls a halt; Suggestion calls for an advance. Defining involves the peril of contentment: "I am here, I rest." "Thus far," says Definition, and draws a map; "Westward," cries Suggestion, and builds a boat.

I must take exception to one thing more that is implied thruout the paper rather than said, namely, that there is never any restriction to be placed upon a teacher. School officials are generally anxious to give just as much freedom as can be borne by the teacher; freedom involves responsibility; the ability to exercise this responsibility comes thru a more or less prolonged experience under guidance and suggestion when a

teacher has become, thru self-reliant and self-active experience, thoroly efficient, it is readily recognized by all thinking people that the interests of the children are safest when the teacher is least restricted. Such a teacher may always be his own schedule maker, may set his own time limits, may decide for himself which subjects need most emphasis at a given time. For such a teacher there are no requirements except those which his insight, his sense of duty, and his sense of the high privilege which he exercises as a friend and helper to the children impose upon him. It must always be remembered that beginners and inexperienced teachers need guidance, and that the superintendent who withholds guidance, or even restriction upon occasion, has a limited idea of true freedom and the pathway over which it is approached. The schools should receive the benefit of the best thought of every member of the teaching force. He is the best superintendent who knows best how to utilize the forces of those about him. The thought of all is better than the thought of one. The fact that it is possible for the superintendent to learn something from the humblest teacher is altogether to his credit. To be most helpful to others he must have lived long enough to know how to be helped. Superintendent and principal are chiefly useful in holding up ideals and in securing to teachers and pupils conditions favorable for effective work in the direction of those ideals. Unity of aim is essential. Variety in execution is desirable. Responsibility and initiative are essential to a child's proper development; this is no less true of the teacher himself. When supervision is of a character to safeguard these essentials, freedom of the teacher ultimately depends upon the teacher himself.

SUPERINTENDENT JOHN RICHESON, East St. Louis, Ill.— Superintendent Gilbert looks at marks from the machine side. I have felt that marks were the tools of weak teachers. Teachers need to be educated above the need of marks. I do not agree with the comparison of the city and the rural teacher. I do not see what store of knowledge is laid up from which city teachers exclusively can draw. The teacher must have time to assimilate the good things. The city teacher, with the numberless things that attract her attention, does not assimilate so as to do better work for the children. I have the idea forced upon me that the teachers are not prepared as they should be. I think the supervising corps should be something like a faculty of education, and continue the growth which the teacher began in the high school or his one year in the normal school Superintendent Gilbert confessed that he had not sufficiently differentiated the principal, nor, I would add, considered him; and yet he says: "The principal is the supervising officer whose business it is first of all to be in personal contact with the teacher, and to do the various things for her help of which I have spoken and am about to speak." Then, I ask, is not the principal "it" in this matter of supervision? In all cities having a hundred or more teachers, to ask this question is to answer it. He is the *one* important factor in helping the teachers.

A recent writer in a prominent educational journal refers slurringly to a superintendent who runs a post-graduate normal school, and says: "At thirty years of age no person, competent by ability and character to teach, requires that kind of supervision which is commonly called 'helping the teacher.'" I suppose the author means a very low grade of supervision by his phrase "commonly called," but heaven pity the children under a teacher who at thirty, or sixty, years of age does not welcome real help, who does not strive to realize that she is still growing in knowledge of subjects and children, as well as in skill to teach! But teaching these adults, more or less fixed in habits of opinion and thought, is a complicated matter, and requires the very highest teaching skill. The supervisor who is to do this work must himself be a first-class teacher. He ought to be a man of broad and exact knowledge, and a clear thinker. He ought, if possible, to possess in himself all the native virtues which characterize the success of each teacher from the primary grade thru the high school. Hard to find? Yes. But the number of principals needed is not great, and their work can be so valuable, or so disastrous, that there ought to be no question about getting the right man or woman for the place.

In conclusion, if we are to have teachers with the greatest freedom and the highest appreciation of their responsibilities to the children, if we are to have teachers constantly growing in efficiency and power to inspire, we must have principals and superintendents who are educators first and machine directors second. Next after a "teacher's devotion to her work as the most precious possession of a school's system" must come the professional devotion of the supervisors.

A READJUSTMENT OF THE HIGH-SCHOOL CURRICULUM

E. W. COY, PRINCIPAL OF THE HUGHES HIGH SCHOOL, CINCINNATI, O.

The public high school seems to occupy the storm center in our educational system at the present time. Placed as it is between the upper millstone of the college and the nether millstone of the elementary school, it is in a position to be subjected to a great deal of trituration. Not that there is any opposition to the high school worthy of notice; not that those who are ever ready to advocate change merely for the sake of change are clamoring for something new and strange here as well as everywhere else; but many sober-minded and conservative educators are coming to the conclusion that there is need of modification and readjustment in our system. It is true that we are passing thru a period of educational unrest and upheaval when what is novel and bizarre is very likely to gain favor and win the day for the time being. And it behooves us to go slow in adopting radical changes and not be too ambitious to lead the procession, lest we be numbered among those of whom it is written: "Many that are first shall be last, and the last shall be first;" yet what reason and sound judgment approve we cannot afford to reject. A rational conservatism does not decline to accept everything that is new; it simply declines to accept anything that has nothing to recommend it except that it is new.

Numerous are the suggestions, some wise and some otherwise, coming from experts and non-experts alike, for the improvement or modification of the course of study of the high school or of the work it is doing, or for the lengthening or shortening of the curriculum. Some would cut down its course from four years to three—upon what theory I know not, unless it be the theory that the less there is of it the better. Others would prolong its course upward, taking in two years of the ordinary college course. This would be piling Ossa upon Pelion. Still others would have the high school declare its independence of the higher institutions and mark out a course of its own, without any regard to what is to come after, teaching a little of everything and not very much of anything in particular; and this they call "fitting for life." Some would have pretty definite courses with occasional options; others would spread out the whole field of knowledge and invite the child in its innocence to come and choose such viands as it may prefer before it knows the differ-

ence between biology and theology or between physics and physic. Finally here and there may be found some fine old ichthyosaurian, come down to us from palæozoic time, who would abolish the high school altogether as an expensive luxury.

All this difference of view, this fertility of suggestion, indicates a desire for a change from present conditions. Is there any reasonable ground for such a demand? I think there is.

This demand, however, does not arise because the work of the high school is not done as well as could reasonably be expected under the circumstances. There has been a change amounting almost to a revolution in secondary-school work since the report of the Committee of Ten. High schools all over the land are today furnished and equipped in a manner unheard of twenty and twenty-five years ago, and the teaching force is yearly improving. I believe that there is no better work done in any of our public or private educational institutions, high or low, than that done along many lines in our best city high schools.

It is not because the training obtained in the high school is unsatisfactory. Nothing is more needed in this country today, and all days, than men and women who can see clear and think straight, and the traditional high-school curriculum is well adapted to accomplish this result.

Again, it is not because there are so many failures and so much dropping out of pupils in the high school. No four-year period in the whole school course can be found during which there are so few failures and so little dropping out as during the four-years' high-school course, altho the opposite has been iterated and re-iterated so persistently that even some good schoolmen, who ought to know better, think that it is true, and so sometimes either directly or by implication help to give currency to the falsehood.

There are two reasons why the curriculum of the high school should be readjusted: (1) the amount of work demanded of the high school; (2) the necessity for an earlier change from the elementary to the secondary school.

The amount of work required of the high school in these later days cannot be satisfactorily done in the time allotted to it. This is true whether we regard the school as a fitting school or as a finishing school. Until comparatively recent years the traditional four years afforded ample time for the boy to fit for college, but college-entrance requirements today and even twenty-five or thirty years ago are two very different matters. And while the requirements of the colleges have increased so enormously, the demands upon the high schools for those who intend to go no farther have been increasing in like manner. This is due in general to the ever widening scope that education is assuming, as well as to the more thoro and extended pursuit of the different lines of study. Then again the specialist in each department of study, to whom we owe so much for

increased interest and improved methods, has not always exhibited a becoming modesty in his demands. He too often sees only his own favorite subject and is disposed to insist that it shall have the right of way, whatever else may suffer. The attempt to construct a course of study that shall include the recommendations of all these specialists is an attempt to perform an impossibility. The Committee of Ten discovered this when they undertook to combine the reports of its nine conferences into a coherent course of study. It found that there were not hours enough in the day nor days enough in the week to supply the various modest demands for time.

Of course, we may abandon the idea that the high school is a connecting link in a system extending from the primary school to the university, related to what may follow as well as to what has gone before, reduce the amount of work required, omitting much that every high-school graduate should have had, and thus run on an independent basis. But this, in my judgment, would be the height of unwisdom. It would satisfy neither the colleges nor the public. Under this arrangement, those who wish to continue their studies—usually the brightest and most promising of the students—would be obliged to resort to private tutors or to private schools for their preparation. This in many cases would involve an expense that they could not bear and would prevent their carrying out their purpose. The high-school course should be of such a character that the student, when he has completed it successfully, should find an easy entrance into the higher institution, to continue there his studies along the lines that he has been pursuing.

I know of but one practical remedy for this condition in the high schools, and that is to begin the high school two years earlier than we have been in the habit of doing. This would not only relieve the high school, but would also be a great advantage to the boys and girls who are going thru our schools. If it would only relieve the high school without benefiting the pupil, it would be a sorry expedient. But I feel confident that it would do both.

Now, is there anything sacred about the term of four years for the high-school course, except that kind of sacredness that attaches to everything long established? If it appears better to have a five or six years' course, is there any insuperable objection to a change? Is it reasonable to continue the pupil in the elementary course thru eight years until he has completed such subjects as arithmetic and English grammar, and then pass him into the secondary school to begin the elements of such subjects as algebra, a foreign language, or a science? It seems to me unreasonable, unscientific, and unpedagogical. It does not require an expert nor the son of an expert to understand that the boy or girl of twelve is better prepared to master the elements of algebra than he is to grapple with the abstruse and difficult problems of advanced arithmetic,

and that the same boy or girl can learn the elements of half a dozen foreign languages more easily than he can unravel the mysteries and complexities of the English sentence.

The boy enters the German *Gymnasium* and *Realschule* at the age of nine, and continues there till he is eighteen — everybody knows with what results. The French *Lycée*, under the reorganization, or readjustment, that is just now going into effect, takes the boy at about the same age and keeps him seven years, when he goes out with the baccalaureate degree, and is ready for the professional schools. Why is it that the German boy leaves the *Gymnasium* at eighteen having completed about two years of our ordinary college course, while the American boy goes out from the high school at eighteen scarcely prepared to enter college? Superior teaching doubtless will account for much; the different home training and the different habits of the foreign boy will account for much; but I believe that still more is due to the continuous, unbroken course of study in the secondary school for a long series of years. We are not urging that our people should imitate slavishly the practice and method of the German and French schools, for there are some things about them that we should do well not to imitate. Besides, the difference in temperament, in environment, in habits and customs, might render it very unwise to follow their example in all particulars. But still we may learn some valuable lessons from the study of their systems and of the results that they accomplish. Surely, if the German or the French boy may with profit enter the secondary school at nine, it can hardly be premature for the American boy to take the same step at twelve.

Let the pupil, then, enter the high school at the end of his sixth year of school and be introduced to the elements of some of these so-called high-school subjects, instead of waiting until the end of his eighth year. Let the more difficult portions of some of these so-called elementary subjects be relegated to the latter part of the high-school course, where they properly belong. By that time he will have flanked many of the difficulties of advanced arithmetic by his knowledge of algebra, and if he has taken a foreign language he will have learned much that will render smoother his path to a knowledge of the structure and analysis of his vernacular. In addition to this he will have acquired the maturity that is essential to the comprehension of these subjects.

The method of the elementary school differs from the method of the secondary school just as the method of the secondary school differs from the method of the university. This difference in method is founded upon a difference in the state of mental development of the pupil. To use the secondary-school method in the elementary stage is to offer a stone when asked for bread; to continue to use the elementary method in the secondary stage is to feed a boy with gruel when he is crying lustily for a substantial diet. We have continued to use the elementary method too

far and too long, and in the upper grades of the lower schools we have been feeding gruel until there have often resulted mental anæmia, arrested development, and general intellectual flabbiness. The interest of the child demands that this transition be made earlier and less abruptly than we are now doing. If the boys and girls at the end of the sixth year of their course can be admitted to the school in which they are to complete their public-school education, a course of six years can be arranged for the high school by which they can with less friction and greater success be carried forward farther than they are under our present system. Then the change can be made from the elementary to the secondary method gradually and naturally, without jar or jolt, instead of making it in a day, as we do under our present system.

Under this plan it is not proposed that every boy and girl shall be set at once to studying a foreign language, but it is proposed that, if any pupil desires to begin a foreign language, the opportunity shall be offered. It is not proposed that all pupils shall decide at the outset whether they are to prepare for a higher institution or to complete their schooling in the high school, but it is proposed that, if any pupil shall decide that he wishes to prepare for college, or to go no farther than the high school, the choice shall be open to him. It is not proposed that the pupils shall be put to work at once and exclusively upon the so-called high-school subjects, but it is proposed that they shall be gradually inducted into those subjects in a manner suited to their age and mental maturity.

The placing of these subjects down in the lower schools does not meet the necessities of the case. What is needed is to take the pupil out of the elementary school and the elementary-school atmosphere and the exclusively elementary-school method, and place him in the secondary-school surroundings and under teachers versed in secondary-school work. So far as my experience and observation have extended, the result of placing these advanced subjects in the lower school has never been satisfactory.

The question will at once arise: Will not this plan involve too great expense? The subject of the expense of public education is one not to be lightly treated, and yet we must remember that no community has any more important duty to perform than that of providing for the education of its youth. Besides, that which costs the least is not always the cheapest in the long run. This is emphatically true in education. The cheapest teachers, the cheapest buildings, and the cheapest equipment are not always the most desirable.

If we can make changes in our plan of organization that will result in improvement in the education of the youth, slightly increased expense should not be allowed to stand in the way. The plan proposed would involve some additional expense, it is true, but not as much as might at

first appear. The additional expense in the high school would be largely compensated for by the reduced expense of the lower school. No more teachers and no more room would be required than are required now; only a different distribution. Of course, teachers of broader culture and of more extended acquirements would command higher compensation, and the material equipment might be somewhat more expensive; but would not the advantage of these more than counterbalance the increased cost? I do not apprehend that the added expense would be large enough to make us hesitate, provided the adoption of the proposed change will bring needed improvement.

Another question that may be asked is: Will not the drawing of the dividing line between the high school and the elementary school at the close of the sixth year make a convenient stopping-place for pupils, and will not the result be that many will leave school two years earlier than they now do? I think not. In the first place, in our present plan of organization the pupil is supposed to have completed the so-called common-school studies before reaching the high school, and hence there is a natural stopping-place at that point. Under the proposed plan this reason for leaving will have less force, because these studies will not have been completed, but will be continued in the high school. Besides this, at the age of fourteen, about the average at which the lower-school course is finished, the pupil is beyond the reach of the compulsory law in many of our states, and he drops out for that reason. At twelve he would still be subject to that law, and therefore would of necessity continue his studies into the high school.

It may also be objected that the high school is so far away from the homes of many of the pupils that a large number will drop out because of the inconvenience and expense incurred in traveling to and fro. It is true that the nearer the school is to the homes, the greater the likelihood of a large attendance. But it must be borne in mind that, if pupils are admitted to the high school two years earlier than now, the number of high-school pupils will be greatly increased, so that in cities where two high schools will suffice now, three or four would be required, and where now there are three high schools, five or six would be required. These could be so located as to bring the high school within reasonable proximity to the homes of all, and the falling off in attendance, for the reason given above, would be less than under the present plan, where the high schools are few in number and situated from necessity far from the homes of many who are prevented from attending because of the distance.

All of these objections, and others that may be offered, will, I am sure, vanish when the scheme is given a practical trial. We are the only progressive people in the world, so far as I know, who begin their distinctively secondary schools so late and give to them so short a time. It is impossible to cover the ground that the secondary school should cover, or to

accomplish the results that it should accomplish, without a curriculum extending thru a longer period of years.

I know of nothing in American life and character, nor in American habits, nor in the mental peculiarities of the American, that justifies us in ignoring the long experience of other peoples in this matter. It has been well said that "the virtue of secondary teaching lies, in large measure, in its duration, in its slow influence upon the intellect. The best teachers need the help of time, if they wish, not to furnish the memory with hastily acquired and badly digested knowledge, but to act upon intellectual habits and accomplish the education of the mind, which is truly the essential aim of secondary education."

Let us then give the high school a chance to do its work, and when this shall have been accomplished, let us hope that, by omitting non-essentials and using a little saving common-sense, we may be able to shorten our whole school curriculum by one or two years.

DISCUSSION

SUPERINTENDENT EDWIN G. COOLEY, Chicago, Ill.—I believe I am in sympathy with most of what Principal Coy has said, tho I do not regard the separation of the high-school work from the elementary at the end of the sixth year as desirable.

I believe that in many ways, considering the conditions that exist in the Chicago high schools, the best is one of these schools having pupils from the kindergarten thru the twelfth grade. In that school we have manual training in the grades — manual training that can be carried farther than the grades. It seems to me that, while there is an advantage in employing something like the departmental method with the seventh and eighth grades, it is not necessary. We are giving teachers additional salary where they are able to specialize. I believe that the gap at the end of the eighth grade comes because we change too abruptly. I am not an advocate of the departmental method below the eleventh grade in the high school. I think that the lower grade in the high school needs teachers who can teach the pupils as well as the subjects.

It seems to me that the most crying need is some improvement in the curriculum and a change in the spirit of the work. We should have one or two years of manual training and commercial courses worthy of that name, and work that commends itself to the parents as dealing with real life.

It will be necessary to prescribe, of course, that a boy who takes physics must know mathematics, but we must allow choice. I do not think it is to the point to sneer at the choices by boys and girls; if they pick out "snaps," something is wrong with the teacher. I will not say it is a crime; but I will say it is a blunder, at least, to assume that schools go to pieces under the elective system. When evils from this system are shown, I will consider the objections.

Another point made by the writer of the paper is that the high school has a better atmosphere and a better corps of instructors than the elementary schools. More poor work is done in Chicago in the first and second years of the high school than in the seventh and eighth grades. More teachers are trying to bring university methods into the high school than there are making such mistakes in the grades below. I do not believe that algebra taught in the elementary schools will be more poorly taught than in the high schools.

I think I can say in conclusion simply this: While not pretending to have discussed

the subject thoroly, I agree as to the introduction of some of these studies lower down, some departmental work lower down; but not that the separation at the end of the sixth grade is fundamentally desirable.

SUPERINTENDENT F. LOUIS SOLDAN, St. Louis, Mo.—I am in accord with much of the paper and much of what has been said by the speaker preceding me. If I think of the readjustment of the high school at all, I think of it not as changed by changing the course of the district schools. Instead of holding up to the district-school teacher the ideal of the high-school teacher, I wish to hold up to the high-school teacher, as well worth imitating, the work done by the common-school teacher in the last ten of the fifteen years. The common-school teacher has gone beyond the mere knowledge of the subject he is to teach; he has gone to the thoughtful consideration of how these subjects should be taught to have the fullest educational influence over the children under his control, adjusted according to the wise and well-established principles of educational sciences. The very first step in the readjustment of the high school is to show at least one book by high-school teachers that embodies the high-school method. It is strange that the books for the common-school teachers are without equivalents in the high schools. Let them follow the example of the common-school teachers in mastering the subjects and also in mastering the pedagogics of the subjects.

The pupils enter the high school as children. Their work in the first year, and often in the second year, is done after the ways of children, but by the time they leave the high schools they are adults in many respects. That important transition from childhood to adolescence has not been considered, so far as I know, by any high-school teacher. The course of study should be adjusted according to the principles of wise pedagogics.

I do not know whether your experience is the same as mine. The common complaint of a teacher is: "If only those children came to me well prepared!" That is the general educational feeling. When the college professor finds that condition resulting from the infinite capacity of the young mind to resist new knowledge, he speaks of the high school as a failure. The high-school teacher speaks of the poor work of the district schools, and the only teacher that does not make the same complaint is the kindergarten teacher. There is enough to readjust without adding below or cutting off at the top.

PROFESSOR CHARLES DEGARMO, of Cornell University.—Since I have been engaged in the business of training teachers all my professional life, I cannot be thought by anyone to disparage such training.

Tho it may be conceded that high-school teaching is often poor, yet I deprecate the inference that often follows remarks upon this subject, to the effect that the possession of knowledge is a presupposition of inefficiency in teaching. Such an inference, I am sure, is wrong.

It was stated by the previous speaker that we have not yet produced a book on the pedagogics of high-school teaching. Tho we have no single volume covering this field, I wish to mention a few books on the teaching of secondary subjects that are worthy of our consideration: (1) *The Teaching of Elementary Mathematics*, embracing arithmetic, algebra, and plane and solid geometry, by David Eugene Smith, of Teachers College, Columbia University, an expert in knowledge of the subject and a past-master of its teaching. (2) *German Higher Schools*, by Dean James E. Russell, of the same institution. This volume gives the American teacher a wide survey of secondary work in all its departments, as it may be seen in Germany. (3) *The Teaching of Latin and Greek*, by Professors Bennett and Bristol, of Cornell University — a book which gives a complete survey of the teaching of Latin from the beginning to the end of the high-school course. (4) *The Teaching of English*, by Percival Chubb, of the Ethical Culture School, New York city. This book ranges over both elementary and secondary work in English. (5) *The Teaching of Physics and Chemistry*, by Smith and Hall — a complete survey of the teaching of these two subjects in the high school. (6) *Educational Aims and Educational*

Methods, by Paul H. Hanus, of Harvard University—a book which discusses in broad and generous spirit the whole high school problem. (7) *The Meaning of Education*, by President Butler, of Columbia University, a large proportion of which pertains to secondary education. (8) *The Making of our Middle Schools*, by Professor E. E. Brown, of the University of California. This book, tho historical in the main, gives many intimations as to how high-school teaching should be done. Besides these eight volumes, which are certainly worthy of consideration, there are many other books and a large number of reports which deal with the various aspects of secondary education. It can, therefore, not justly be charged that the high-school interest has been neglected in educational literature.

Concerning the main question before us, I wish to express my accordance with the main conclusions of Principal Coy's paper. We have been considering this subject for two years at Cornell, and have come to the firm conclusion that the roots of the high-school studies must go farther down into the grades, unless we are prepared greatly to overburden the youth from fourteen to eighteen in preparation for the work of the colleges and universities. The subject, however, is beset with administrative and other difficulties. In Europe secondary education is simplified in that it not only extends over longer periods than in this country, but because secondary education is offered in the main only to children of educated parents. These schools are segregated from those for the common people, but in this country we must preserve our educational ladder. We must make it possible for the children of all classes to pass easily and readily from elementary to secondary, and from secondary to higher, education. This means that we cannot have a caste system for our secondary schools.

In most cases I think the best and most natural solution of the problem is to offer elective courses in beginning languages and in the elements of algebra and geometry in the grammar schools. Plenty of teachers can be found who are able, not only to teach the subject, but to teach the pupil.

I did not rise, however, to settle this question, but rather to express my conviction of its importance.

INDUSTRIAL TRAINING IN RURAL SCHOOLS

ALFRED BAYLISS, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, SPRINGFIELD, ILL.

I visited a country school the other day, which I should like to describe as a basis for this discussion.

The house is comparatively new, and enjoys the unusual distinction—in Illinois—of being heated by a furnace. There is a narrow closet, extending the whole width of the building, from which leads the stairway to the basement. There is also an outer stairway to a door opening into the basement. I took the liberty to work my way into the schoolroom thru this back door and up the inside stairs, thus making an opportunity to explore that basement and take an inventory of the contents of the long closet before intruding upon the school.

The excavation for the basement is under about one-third of the floor space, and was intended to be just large enough for the furnace and coal supply. But by some happy inadvertence it had been made larger than absolutely necessary for those conveniences, and so there is room in the

corner nearest the window for a little workshop. There is a well-made (by the teacher) carpenter's bench — strong, but not elegant; with a good vise and a fair kit of tools, including a jack-plane, two chisels, a try-square, joiners' gauge, brace and two bits, a drawing-knife, saw, two jig saws, two hammers, three bench knives, a small lathe, and a glue pot. There were some pieces of unfinished work and quite a little stock of lumber. Such an outfit I had never before seen in connection with a one-room country school.

As I stood in the closet upstairs, I could hear a small boy say: "Lesson : two X's, V, one I—twenty-six. Forms of land and water. A pen-in-*su*-la, is a body of land;" etc., etc. As I entered the schoolroom, the first thing I saw was the omnipresent time-table of recitations—fifteen in the morning and seventeen in the afternoon. There was a twenty-minute period for the "A" arithmetic, and fifteen minutes each for three other subjects; all the other "hours" were five or ten minutes long. The school, therefore, is "normal" in some respects. Those four long recitation periods are accounted for by the fact that six of the pupils are in the eighth grade. The thirty-three pupils enrolled vary in age from six to eighteen years. A baker's dozen of them are over twelve years old. There were fifteen boys and four girls present the day I was there.

One notes at a glance that the ceiling is papered, that the matting in the aisles is neat, and the rug near the teacher's table rather pretty. But the casual visitor might go away uncertain about the walls; they are so covered with the handiwork of the children—colored maps, drawings, amateur photographs, and the like. These things detract so much from the effect of the three or four fine pictures that the children are planning to remove some of their own work to the halls, and give Rosa Bonheur, Millet, and Herring a better chance. Cases of that kind of growth are not uncommon in Illinois.

This school had attracted attention by the great variety and excellence of its exhibits at the Illinois State Fair. To illustrate, I quote a paragraph from a newspaper:

The Cottage Hill school in Sangamon county, Mr. E. C. Pruitt, teacher, is probably the most remarkable country school in Illinois in the matter of making agricultural collections. It takes first premium in products of school garden, flowers from school garden, collection of seeds gathered by the pupils, geological collection, school collection of woods, school collection of insects, and maps of Illinois and grand division maps; and second (no first being granted) in amateur photography of school grounds and scenes. Cottage Hill school also has a library of 150 or 200 books. Sixty-five kinds of wood are shown; the large table of potted plants taken from the school garden is very beautiful and a credit to any gardener; the products of the school garden include potatoes, tomatoes, corn of different kinds, beans of different kinds, onions, turnips, several grasses and other products. The seed collection is very elaborate, and the hundreds of kinds are neatly displayed in glass bottles and elongated globes especially adapted to the purpose. The other collections mentioned are much beyond the ordinary. A reporter talked with some parents

who send children to this school. They reported that the boys and girls are greatly interested in these collections and the garden-making, and that they talk about it a great deal at home. There is much enthusiasm in the school, and many things are learned about the features mentioned.

One of the boys told me they had earned two hundred and ninety dollars in this way. I said: "What have you done with all that money?" His reply was an expressive gesture, which said, as plainly as words: "Look around and make your own list." I told the children that their library would be richer by one or two more books, if they would tell me in writing what became of that money. There was a ready assent, and the next Monday morning after my visit I received thirteen letters bearing on the subject. Considered as a piece of literary art, the one I now read is neither the best nor the worst, but from the informational side it is among the best:

COTTAGE HILL SCHOOL
Jan. 15, 1903.

DEAR SIR:

You said you would like to know what we done with the $290 we took away from the State Fair of Illinois for premiums I will menction some of the things I can think of there is our library consisting of a 185 books, Two book cases, a 12-inch globe Dictionary stand, Music chart, case for seeds, and globes for seed, Lumber for stage curtain, an carpet, Six lampes with reflecters, Clock, Two fine pictures One of Christ, the other of Britany sheep, framed eight Diplomoes, and several of our premium maps and many other pictures to numerous to mention, Artificial palm, three tables and eight Chairs, Six drawing boards, gave $17.50 to pupils, flowers and flower seed, papered the school room, 100 seed bottles, lathe work bench and set of tools, stand cover Song books, and many articcals we neaded to make all of these things Well I guess I will close now as I can think of nothing else. Yours truly

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I do not file this statement as an exhibit of the "Illinois plan." The case is not a type. It may not be an illustration of a rational solution of the problem of "industrial education in rural schools." I shall not be surprised to hear it characterized as a case of misdirected energy, exhibiting nothing of educational value, or even as a lawless obstruction of the real business of the school. It is, nevertheless, an existing case, and, moreover, one of which there will soon be many counterparts, if the energy of country teachers and supervisors is turned, as seems not unlikely, in the direction indicated by it. For the country school, as never before, is taking its cue from the town. The country teachers have a *feeling*, if they do not know, that the town teachers have the advantage of them, and are doing some things better than the town teachers can do them. They are ready to make any sort of experiment — do anything their supervisors suggest. They are impetuously eager to "prove all things." They will hold fast to that which is good, too, if, by reason of light and guidance they chance to find it.

In this instance there is, apparently, a lack of co-ordination and logi-

cal continuity, or something else equally euphonious and equally meaningless to the country teacher. This teacher knows that as well as anybody. But there is in it at least one element of a conscious educational purpose. "When I came into this district six years ago," he told me, "the schoolhouse had nothing in it and was falling to pieces. After the new house was built, the school grew, and I just *couldn't* keep those little fellows studying books all day, and so had to do something to keep them busy. The older children just naturally 'got busy' because they wanted to." He admits that merely to "take that money away from the State Fair of Illinois" would not have been a motive of the first class, had it not been combined with the purpose to get things for the use of the school. On the whole, I am not inclined to disparage the prominence of the economic motive. Work for the good of the school is a good foundation for a larger public spirit.

This young man's method "touches life"—at almost too many points, perhaps—but it does touch life, and makes life for those children "more abundant." The articles made at that bench in the cellar, and on the home-made looms—I counted as many as twenty of the latter—develop ingenuity and train the constructive imagination, for there were variations and some signs of originality. One can see, within the first five minutes, also, a remarkably fine attitude of the children toward all their work. They "mean business." That schedule of thirty-two daily exercises is perhaps avoidable to some extent, but it *is* difficult to prepare a plan of conventional school work for thirty-three pupils, with eight grades represented, that will keep all the children who are not reciting lessons occupied all the time in preparing lessons. So at certain times in the day some of this handwork may well be done in school hours, and the inevitable mischief—or, what is infinitely worse, idleness—is reduced to its lowest terms.

But by far the most noticeable phase of this special case is its social significance. The community spirit—each for all, and all for each—is developed to a remarkable degree. They "took that $290 away from the State Fair of Illinois" *for the benefit of their school*, and I submit that the itemized account of purchases made will bear some scrutiny. They solved for themselves the vexed question of school supplies. The board of directors is a very good one. Witness that furnace in the basement and the long closet at the end of the schoolroom. But in all human probability that board would not have bought three extra tables and *eight* chairs. The schoolroom might possibly have been cleaned; it probably would not have been decorated. Several of the "many articles we needed," besides the Brittany sheep and Pharaoh's horses, would not have been provided. The school itself might not have discovered the need. It was a great step in advance to provide that furnace, but the education of those directors up to the point of regretting that the basement is not under the whole house, and the *unsolicited* offer from them to complete

the excavation next summer, is in the nature of a triumph. They are likely to be permitted to do it, making room for another bench or two and some lunch tables. "You must have warm lunches down here next winter," I said to some of the boys; "Gee, that'll be nice," was the prompt retort. I think they will have them, for this activity interests the people of the district. For example, I asked a little fellow: "Who takes care of the garden in the summer vacation?" "The man across the street watches it and keeps the town boys out of it," was part of the answer. The children talk about school at home, not more, but in a different way. The people, in consequence, think about it in a different way. The teacher, as another natural consequence, has the firmest kind of a grip on his job, and an option on three or four more nearly as good.

Results count. This man's pedagogical method may be vulnerable, but, beyond a peradventure, he has achieved the prime result in any school district—a genuine and general public interest in the school. The bane of the detached school, in the small independent district, is the withering apathy—the utter indifference to anything but petty grievances that, in the last analysis, can usually be traced to the intolerable dullness of the conventional school routine. Children are confined to a single mode of expression, and that upon matters derived from books, which, as far as they can see, have no sort of relation to anything whatever of interest to them; and they naturally go to sleep. Why shouldn't they? Whatever wakes them up is justifiable. If the waking is followed by a new attitude of mind, extending beyond the school to the community, uniting directors, people, children, and teacher, the result is a distinct gain, apparent pedagogical crudeness to the contrary notwithstanding. Saul, the son of Kish, is not the only man who ever found a greater thing than he sought.

Moreover, wherever the small district organization prevails, this sort of thing undoubtedly comes very near to the utmost limit of reasonable expectation. The difficult factor in our equation is the supply of teachers. Teachers who can do much better than this are not to be had for the country schools in anything approaching sufficient numbers. They can never be had under prevailing conditions, nor until the country school shall be reorganized up to the point of so increasing the financial ability of the taxing units that they can afford to pay living wages. All proposals to better the country schools seem to center at last in the plan of consolidation of districts and free conveyance of pupils. There is no other way in sight. Its advantages need not be recited here. The one commanding possibility in it is the leveling up of the quality of the rural teaching body and keeping it up to that of the town. The right kind of teachers would very soon make such cases as the one I have described very common, and so modify them that they would be less obtrusively "long" on the industrial and "short" on the training side.

In the meantime we must do as well as we can.

That insect collection should be continued, but its growth need not be quite so rapid. The number of varieties needed for training purposes is exceeded when it becomes so large that some of the children do not know a little about nearly every specimen. No one child need know even the names of all. Scientific classification is, of course, out of place and out of question. But it should be quite possible to learn, by inquiry from the young collectors, whether a given specimen lived in the house, the garden, or the field. The classification may well be carried a step or two beyond the dividing line made by conspicuous beauty — the question whether a species is harmful or useful to man being the natural beginning. The permanent school collection need not be much larger than the number of life-stories the children are willing to learn. Private collections may grow at the pleasure of the young collector.

As a mode of industrial training the school garden should stay. This has been questioned. It is rather plausibly urged that a garden, as part of the equipment of a country school, is a superfluity. The children, it is said, work in the garden at home, and most of them can give the city-bred teacher pointers already. All of this may be in accordance with the facts. But in most home gardens the child's share of the work is so allotted as to be mere drudgery. He does it because he has to. The garden at home has but a single interest. The school garden may have several. Among others it may be made tributary to the natural instinct of ownership. The boy will want a garden of his own, in which he will not only parallel some of the school work, but extend it in some ways and intensify it in others. His study of soil manipulation will lead to experiments of his own. If he learns nothing more than to figure the time, labor, and material cost of some product he is allowed to market on his own account, he will know the essential difference between a good farmer and half the poor ones.

But the school garden should be better planned than the Cottage Hill school garden. It was only "three rails square," and they raised "everything" in it. An Illinois county superintendent (O. J. Kern, of Winnebago county) has already worked out a better plan. About a year ago he organized a "Farmer Boys' Experiment Club," with thirty-three charter members, but which now has 118 names on the roll; as did also the superintendents of two other counties (McHenry and Christian). He took a large party (150 children and 130 adults) of boys and girls to the Agricultural College, 214 miles away, just to give them a chance to see a school garden on the large scale. These boys went home and raised sugar beets in accordance with directions given them by the teachers at the university, and returned samples of the crop for analysis. Some of them raised prize corn; others made investigations with reference to smut in oats, did something with alfalfa and some other legumes; and still others entered into a lively competition to see who could devise and draw

the best plan for "landscaping" the school grounds. They are going down to the university again next June, and to St. Louis in 1904. Just now he is interesting the school directors in a plan furnished him by Professor Blair for a school garden twelve by thirty-six feet, laid off for three rows of corn, eight rows of vegetables, and one row each of pansies, petunias, China asters, Drummond phlox, nasturtiums, sweet peas, and sunflowers. This is better than a larger variety, and much better than "everything." It will not be many years, if Mr. Kern's life is spared, before the farmers of that county will begin to visit the schools, to see what they can learn about the newest varieties of seeds and garden products. The school garden should make much of flowers, not forgetting to make room for some of the beautiful wild ones, which do not seem to me to be as much appreciated as they used to be forty or fifty years ago. The problem of the school garden, with all that it implies, when worked out, will make of every school yard a little landscape garden — an object-lesson for the whole neighborhood.

I would keep that work-bench, and may its tribe increase! If it expands I think work with leather might follow the work with wood. Mixing paint and the knack of making putty would be invaluable accomplishments to farmer boys, leading to many economies and some beauties. Man is instinctively a tool-using animal. "Nowhere do you find him without tools; without tools he is nothing, with tools he is all." The bench will justify itself as a factor in industrial training, if it does no more than increase the manual dexterity of most of the boys. On every farm there are cultivators, plows, mowers, and reapers to be mended, and buildings to be repaired. It is an advantage to any man, in any business, merely to be "handy" with tools. I know a country carpenter who takes his annual vacation in the woods, or on the water, for all the world like a gentleman of means and leisure; and a rich man who spends his summers up on the shore of Lake Superior, and finds one-half his pleasure in his shop, making whatever his fancy dictates for the cottage, the boat-house, or the barn. It is worth while to know how to saw a board straight, or drive a nail, or make a waxed end; it is no small thing to be able to make a good joint. Incidentally it may help an occasional genius to discover himself. "Stick to the farm" may not be the best advice to give a boy whose known bent is for a town occupation. But utility is as good a motive as any for the bench exercises.

For strictly schoolroom occupations, weaving and sewing should be continued and clay-modeling added. The little children neither can nor should be permitted to spend the entire school day pretending to study books. They would much better sleep part of the time. There should be a little kitchen in every country school. Some of the boys will learn to cook and sew, just as some of the girls will excel at the work-bench. That, too, will be "all right."

This is diversity enough. The country teacher who can substitute something "equally as good" for these lines of work, or any of them, is able to walk alone.

An old county superintendent who broke into the Illinois legislature last fall, and in whose county there are more than a dozen country schoolhouses with furnaces and bay windows, said to me the other day: "Oh, if my people would only allow such teaching as that, but they wouldn't!" "Industrial training for country school children is nothing but another fad; teach them to read and write!" said a scholarly man of affairs an hour later. And so it goes. There will no doubt be "beautiful fighting along the whole line" before the school garden and the school carpenter's bench become accepted commonplaces; for which reason, as Sheridan said to the colonel, we may "go in anywhere."

The book has been for too long a time the sole instrument of education. To admit its inadequacy is not to underrate its value. Time was when education in a very large sense was possible without it. It is not yet an infallible agent, even if used with the highest intelligence and skill; much less if its use be limited to the capacity of a "passive recipient" subjected to the "pouring-in" process. Children prefer action, for a good and sufficient reason. They learn to do by doing. To do is better for them than to say what 'twere good to do. Any kind of hand-training is probably better than none. It need not crowd the book-work out. The testimony is all to the effect that it does not. It arouses an interest which reacts favorably upon all other interests. Motor activity is a necessity. Rightly directed, it promotes intellectual growth. Wholly restrained, mental *life*, even, would doubtless be impossible. To keep young children at a desk six hours a day working solely with books is the ultimate educational blunder. It is not only a false pretense; it is an outrage on nature.

It may be interesting to note, in this connection, that all the normal schools of Illinois have begun to do something to prepare teachers to begin this mode of training intelligently. Of course, their output of young teachers will, for some time to come, continue to be absorbed by the towns. Perhaps it is better so. Motor training has a deeper significance for the town boy, after all. Then, too, the country teacher is coming to be town-taught, if not town-bred. Thus the normal school is but one remove from the country district.

Finally, if a rational scheme of industrial training for country schools should be devised and stated, and come to be understood, it could not be fully carried out, pending the solution of that other problem of school organization. There are two indispensable factors in a school—children and teachers. I use the plural advisedly, because, in an ideal school at least, both masculine and feminine elements will be present in the teaching force in approximately the ratio of boys to girls. A good house

comes very near being a third necessity, and some equipment is desirable; tho the last can be, and, to a large extent should be, procured by the school for itself. More schools surfeit with too much equipment than starve with none. Now these essential elements of a school do not, and in the nature of the circumstances cannot, exist in thousands of school-districts as now organized. The fundamental problem, therefore, involving the interests of four hundred thousand children in Illinois alone, and four thousand thousand or more in the United States, is to bring teachers and children together in the country districts in such numbers that efficient schools may be organized and taught, and in which the missing three or four grades misnamed "high" shall be made as "common" for those who want them as the first six or seven. The Council of Education once expressed "sympathy with and approval of" something that looked like a movement to turn public attention in this direction, but respectfully declined to lend it material aid and comfort. And yet the Council might travel far and find no field of endeavor as worthy of its continuous attention for a term of years. As I read the signs of the times, no better nor more timely use could be made of the combined resources, intellectual and financial, of the whole body of which this department is a sturdy branch, and the Council the ripened fruit, than to direct them all to the information of the public mind and the creation of such a public sentiment as would give this movement an impetus that would carry it on to the consummation which at this time is, in the American common-school system, the one thing most devoutly to be wished.

DISCUSSION

Ex-State Superintendent L. D. Harvey, Madison, Wis.—I take it that industrial education in rural schools is but one phase of what is now known as the rural-school problem, and that the purpose in its discussion here today is to see what bearing, if any, it has upon the larger question of the general improvement of the common schools in rural districts.

Superintendent Bayliss has presented an attractive picture of work carried on in a single district school by an enthusiastic teacher. He is careful not to claim too much for this experiment, and makes no generalizations based upon his observations of the work being done. He presents it as showing the possibility of modifying the work now done in most district schools so as to present at least the beginnings of industrial education. He admits that the case is not even a type, and sees but little possibility of much beyond what is now done in that school for the ordinary district school under existing conditions. He recognizes that the small, isolated district school must give place to the consolidated school, and that teachers trained in the industrial phases of educational work must be employed in these schools before much further can be expected. He commends in general terms the work which he saw in operation, and expresses a hope for its continuance and development. With all these conditions I am in hearty accord.

In the further discussion of this topic which I am to present, I wish at the outset to invite your attention to conditions which exist in the country school today, and, as my time is limited, I shall state briefly and without discussion what seem to me to be present hindrances to good work in the rural schools. They are: poor, ill-kept, ill-furnished,

inadequately equipped school buildings, with surroundings the most depressing and demoralizing; poor teachers, with poorer pay; frequent changes of teachers, but infrequently for the better; irregular attendance of those enrolled; withdrawal from school at too early an age; inadequate supervision; and schools too small to present proper conditions for successful work.

I do not mean to say that these conditions exist everywhere, nor that there are not rural schools well housed, with trained, experienced, progressive teachers, and a teaching equipment entirely adequate; nor that there are not some localities where pupils attend with a reasonable degree of regularity for a reasonable number of years; but I do mean to say that the number of such schools is not so large as it should be to leave us without a rural-school problem of the most vital importance. Nearly one-half of the children in the United States who are in the public schools are enrolled in these rural schools. I do not know what proportion of these pupils go on from the rural schools to higher schools in other states, but I do know that in Wisconsin at least 97 per cent. of them attend no other school. Are they entitled to something better? Is the state entitled to something better in the preparation of its youth for the duties of citizenship? If we would proceed wisely for the betterment of the rural school, we must first of all determine the causes for existing conditions, which are responsible for the poor results obtained in these schools. Having determined the causes, we are then prepared to consider the means which must be employed to remove those causes.

To my mind the chief cause for all the evils above enumerated is the low educational ideals of the people in the rural communities. This cause exists because of a lack of appreciation of the value of education and of its cost in time and money. This lack on the part of the rural population is largely due to their own limited education and to their environment.

Dissatisfaction with existing conditions is always the first step toward higher ideals demanding better conditions. Even when dissatisfaction exists with the results of work in rural schools at the present time (and it does exist on the part of many of the patrons), there is a lack of knowledge as to what must be done to secure better conditions, and, lacking such knowledge, there can be no improvement in ideals.

Dissatisfaction with any set of given conditions, coupled with ignorance of how to improve them, results in a possible yearning for a change, in a growing dissatisfaction with the present order of things, and in an increasing indifference to its maintenance.

It may be that some would bring forward other causes which have operated to develop the conditions interfering with the efficiency of the rural school, but I believe that all such causes may be reduced in the final analysis to the one I have stated. If I am correct here, it follows, then, that the problem of improving the rural schools resolves itself into the problem of elevating the educational ideals of the people in rural communities. It cannot be denied that there are serious difficulties in the carrying out of this program, but something is gained when we determine definitely the point of attack. The isolation of the rural school and the rural family, their remoteness from centers of educational influence, introduce elements into the problem which do not exist when we are considering the improvement of city schools. It is not enough to point out the shortcomings of the rural school, to present the difficulties which exist in the way of its improvement. We must do more than this. We must be prepared to show, and must show, to the people in the country what must be done to improve conditions. Constructive work of the highest order is needed here.

As I have already stated, before higher ideals can be developed there must come a knowledge of what is essential for better conditions, and by this knowledge I mean, not simply what you and I may understand and agree to be essential, but what the country people shall also understand and agree to be essential conditions.

We all understand that when we would convince an individual as to the correctness of a proposition which sets forth something to be done and which he is to do, it is essen-

tial to present it from a point of view which appeals to his own interests or to the interests of those with whom he is concerned.

Here is where industrial education enters the field. We do not find it easy today to even get an audience among the country people to discuss the shortcomings of their schools and to present the necessity for their improvement, so long as we do not depart in our discussion from the lines of their past development and present organization; but the moment it is understood that we are to discuss the question of a change in the rural-school system which shall introduce a course of industrial training dealing with the elements of agriculture, with manual training, and with domestic economy, we challenge their attention and awaken their interest. Such a proposition appeals to them at once as having a practical utility which will increase the productive capacity of their children, better fitting them for earning a livelihood, and opening up to them such possibilities in life upon the farm as will induce them to remain in the country, and render the attractions of the city less alluring than at present.

Show them the possibilities of instruction concerning the soil; its composition; the kind of soil needed for certain crops; the effect upon it of raising year after year the same crop upon the same soil; the effect of rotation of crops; the proper mode of tillage; the treatment of worn-out soils, and the best modes of fertilizing the soil for certain purposes. Indicate what may be done in instructing their children as to the plant life of the farm; the varieties which may best be grown in the different localities for profit or pleasure; the modes of selecting, caring for, and improving the seed; the proper time and modes of planting; the most improved processes of cultivation; treatment to prevent the ravages of insects and other pests, and the proper mode of harvesting and caring for the products of the farm. Outline the instruction which may be profitably given concerning the animal life of the farm, involving a knowledge of breeds and breeding, feeds and feeding, selection and care of stock designed for certain purposes, and the treatment of their diseases. Propose that their schools shall teach a practical system of keeping farm accounts; that they shall give such instruction in manual training as shall make the boys acquainted with the common tools used upon the farm and develop a reasonable skill in their use; as shall give them a practical knowledge of the elements of blacksmithing and of the architecture of the farm buildings; as shall afford their girls an opportunity to master the elements of domestic economy and something of the utilities and graces of home making.

When you have done this you have interested those to whom you have addressed yourself, you have opened up to them possibilities in the instruction of their children of which they had never dreamed, or have simply dreamed of without realizing their possibility. You have presented to them what is perhaps the most powerful argument which can be addressed to the ordinary human being—the dollar-and-cent argument.

In their view, grammar, geography, history, language, and even arithmetic fade into insignificance before the practical utility of this kind of training. You have presented to them something which appeals to their interests and which becomes a most powerful incentive to action on their part. Make this the corner-stone of your scheme for rebuilding the common-school system, and you have the people with you. You have presented that which is knowledge to you. It has now become knowledge to them. You have laid the foundation for the development of the higher educational ideals, and upon it you may build your educational structure without the omission of a single valuable feature now found in the rural-school system. Nothing is lost and much is gained for the schools, because you have gained the attention, the interest, the sympathy, and the support of the people who must maintain these schools.

I am not theorizing now. I am talking from experience. For four years I have personally discussed the rural-school problem from this standpoint before the farmers of Wisconsin in scores of localities. I have had something to do with securing its discussion by others in hundreds of other localities, and, when properly presented, I have yet to

find a single farmer to whom it did not appeal, who did not say that such a system of training for his boys and girls was just what was wanted.

The scope of this discussion will not allow me to go into a consideration of other means for developing the educational ideals of people in rural communities; but when once you have made this start, the rest is easy.

As was suggested by Superintendent Bayliss in his paper, the possibility of work in the direction I have indicated is limited in the present district school. It is limited for a variety of reasons, but once get this before the people as an ideal to be realized, and it will be seen that there is a necessity for another class of schools, secondary in scope, distinctly adapted to the needs of rural communities; schools that will take the pupils at the completion of the common-school course, and carry on the industrial work which may have been given in a very modest way in the district school. Such a class of schools, with a course of study at least two years in length, could carry out the complete program I have indicated, and at the same time add to it instruction in most of the high-school branches of the first two years. At the outset one such school in a county would doubtless meet the demands. With properly equipped teachers of agriculture, manual training, and domestic economy, the school would become a center of interest to the rural communities of the entire county. It would arouse an interest in popular education never before known in that county. It would educate, not only the boys and girls, but in many cases their fathers and mothers. Today the agricultural colleges are sending bulletins by the thousands to the farmers in the United States. Many of these bulletins are of the highest importance to the farmer. In a few cases they are read; in fewer still they are understood; and in still fewer are the suggestions acted upon. If these bulletins should find their way into the farmers' homes thru the medium of their boys from such a school as I have indicated, a new interest would be developed at once. Demonstration in the school would have taught the boy what it is necessary to do to carry out the suggestions of the bulletin, and he would teach the father.

In Wisconsin, two years ago, the loss in the oat crop caused by smut was equal to the total expenditures that year for the entire educational system of the state. In the *Arbor Day Annual* issued last year there was given a mode of treatment of seed oats which, at a cost of one cent per bushel, would absolutely prevent the ravages of smut. This was put into every district school in the state. Teachers were requested to instruct the pupils old enough to understand as to the character of this treatment. In many cases parents came to the teacher for specific instruction when the pupils were too young to understand it. I have reason to know that the farmers of the state appreciated this information, and that the teacher who was able to give it had by that one act secured support in the district which perhaps he could not have gained in any other way or in all other ways. That instruction had a monetary value to the farmers. When they understand that that is only one of the many things which can be taught, either in the district schools or in the secondary agricultural school, they have a new and greater interest in education than ever before. Their ideals will be developed, and when these ideals are properly developed, the attendance at school becomes more regular, partly because the parents demand it as something the value of which they realize, and largely because the pupils desire it. The children remain longer in school because the parents see the value of so remaining. The increased interest of the community in the school makes it easier to secure appropriations for proper housing and equipment of the school.

Show to the farmer that what is impossible in the small district school with the poorly paid teacher can be carried on successfully in the consolidated school of four, five, or six departments, with a piece of land connected with it for illustrative and experimental work in agriculture, and rooms for manual training and domestic science. Awaken an interest in these matters, and you have a powerful argument for the consolidation of the district schools beyond that of saving in cost. With the establishment of right ideals the question of cost is no longer the paramount one.

One thing more remains to be done. There must be better-trained teachers for the district schools, either isolated or consolidated. In no state in the Union are the normal schools supplying the demands for district-school teachers. Most of the product of the normal schools is demanded in the cities. These country schools need trained teachers, teachers trained to teach the country children the things which country children should be taught.

I shall not argue this question, but shall simply give you a statement of an attempt to solve this problem in Wisconsin. Three years ago two county training schools for the training of district-school teachers were established. We now have six such schools. The state pays one-half the cost of the maintenance, the county the other half. These schools are free to people residing in the county who are qualified to enter them. The course is one year in length. The work at present is limited to the subjects taught in the common schools, including the elements of agriculture. In some of the schools manual training is being introduced, and it is hoped that in the near future those to be trained will get instruction in both manual training and domestic economy. Two teachers are employed in each of five of the schools; in one there are three teachers. The number of students ranges from forty to seventy-five, the average number being about fifty. The principals of these schools are selected with reference to their ability to do professional work in the training of teachers for the country schools. There are not more than a dozen principals of high schools in the state who receive salaries as large as are paid these men. The assistants are paid salaries higher than the average high-school principal receives. Financial inducements are offered which take professors from the state normal schools and put them at the head of these training schools. The teachers trained in such schools find ready employment in the county where the school is located, and in most of the counties the number graduated each year is sufficient to fill the vacancies in the country schools. The teachers in these schools become an educational force in the county. They visit country schools; they address meetings of citizens with the county superintendent; they get into touch with school boards and advise them in the selection of teachers; and in one instance the principal has organized a reading club of one hundred and twenty farmers and farmers' wives, who are systematically reading the literature of agriculture and household economy. These people believe in the school and in its product. Wherever these schools are located a better educational sentiment begins to be developed in the county.

I may add that we have two county schools of agriculture of the class of secondary schools I have advocated. They were organized last September, and have not yet been in existence long enough to enable one to speak with positiveness as to what they will accomplish. In each school more than fifty pupils are enrolled and three teachers are employed. During the winter a class of the older boys, who have been out of school for a number of years and who are at work upon the farm, are in attendance, and special work adapted to their needs is provided for them. The students and teachers are enthusiastic in their work. The people in each county believe in the school. It rounds out the rural-school system.

It may be said that perhaps it will prevent country boys and girls from going to the higher institutions. I have already said that less than 3 per cent. of this class of children go on to the high schools. The condition cannot be much worse than it is today, and all who are familiar with educational matters know that every step forward in educational work results in an ambition to do still further work.

To sum up, industrial education is the keynote to the improvement of the rural schools. It cannot be carried on with any degree of success in the isolated district schools as they exist today, with the present teaching force, except in isolated cases.

The secondary agricultural school should be the first objective point to be reached; this because it is an easy thing to do and because it becomes a potent center of influence thru which the work may extend outward and downward into the rural schools.

The possibilities of industrial education less extended than that offered in the secondary school, to be given in connection with the consolidated schools, should be demonstrated, if for no other reason, for its potency as an argument in favor of consolidation.

Local training schools for rural school-teachers should be established, and they should provide reasonably well-equipped teachers in sufficient numbers to fill the existing shortage of trained teachers in these schools.

I wish to add that I am heartily in accord with Superintendent Bayliss in the view that there is work here which the National Council of Education should enter upon. Definite plans of work need to be formulated and advocated for the improvement of the rural schools. That body can undertake no other work more urgently needed than this.

LITERATURE IN THE GRADES AND HOW TO USE IT

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With telescopes and microscopes, searchlights and lanterns, we are all trying to find the wasted time—lost somewhere between the entrance to the kindergarten and the exit from the college. Traces of it have been seen, now here, now there. Those most energetic in the search have even laid hands on it, each time in a different place. And still it has not been driven from its hiding-place, because the time is wasted in *not* doing what we are going thru the motions of doing, and the counterfeit so cleverly hides the loss of the real.

For example, we have deceived ourselves into thinking that we can teach reading first and then literature, with language lessons independent of both. When *literature* is given its rightful place as the basis of all reading lessons, the basis of all language lessons, oral and written, and the interpreter and highest touch of all study of nature, geography, and history, then will the program be enriched and shortened. More than that, the program will have enriched the *child* and shortened his hours of joyless inactivity of soul.

The expressions "children's literature" and "literature for children" seem to admit of two possible interpretations. The literature under discussion is *not* that which, rewritten and "written down," masquerades under this name, but real literature, used for, with, and by children as a vital element in their education.

In any consideration of this subject, one is tempted to dwell on the general cultural value of literature—the power of living thought to quicken life in others. But to do so at this time, before this assembly, would be most inappropriate; except to express appreciation of indebtedness to many members of this body. Truly, a clearer vision of the possibilities of the influence of literature on the growing mind, and inspiration to seek diligently for means of their realization, have come to us all from the clear seeing and strong feeling of many here. Their words of power and eloquence have been, and are, the "live coal" that both kindles and illumines.

But who can estimate the results in the development of the coming generation of men and women in these United States, if this same body of educational leaders were *determined* that these ideals should be realized? We feel the tremendous pressure of the present scramble for wealth, for office, for show, for personal gratification in all its forms (the source of decay in all dead civilizations), and know that the schools are educating the men and women that must resist this pressure; we know, too, that the thoughts and desires of the child are shaping his life — may be said to *be* his life; and we say that we appreciate the quickening power of literature as an expression of life. Do we not also know that it is quite within our power actually to bring this force to bear on the young mind?

We have a vision of the value to the American people of a school life in which each child, for thirty minutes of each day, should be under the subtle and potent influence of a living truth, made beautiful to him by its beautiful expression. This vision uplifts the thought and quickens the beating of the heart. And then, too often, the energy spends itself in heart-beats, instead of in the heroic effort that would bring the thought to birth in deed.

One of our eminent literary critics has truly said that "a test of the popular education of a country is the kind of reading sought and enjoyed by its people," and he frankly and forcibly charges the American public school with neglect of duty as measured by this standard. Here and there, in all parts of the country, are individual workers that have risen to this conception of duty and have accomplished much. Many others have caught the spirit, and, without either knowledge or wisdom, are making wild dashes at anything that bears the name of study of literature — a sort of helter-skelter jumping into bramble bushes. But, to be productive of its possible large results in any community, there must be united and continuous action, under wise leadership.

We must not shrink from the fact that, if the educators represented in this, the highest, department of the national organization of educational forces were to vitalize their wills by their ideals, there would be an evolution of an American people of higher tastes and nobler conceptions of life.

It is, then, the main purpose of this paper to present, in the light of this reponsibility, a few *practical* phases of the subject, viz.: *how* literature may be so used in the grades as to realize its values; what are the great hindrances to this realization; and how they may be remedied.

First. Literature should precede all formal reading and language lessons, and the children should be allowed to live with and in it. Poems and stories given by a sympathetic teacher of literary appreciation are, in the largest sense, a development of both reading and language power, and more. Rightly chosen, they appeal to child-life, and they also lift the spirit to a larger realm than that bounded by self. Listening to these

poems and stories as they are read, recited, and told, by one who brings out their meaning and beauty, the child's mind is filled with pictures which he expresses or lives out, in word, by hand, and in play. He is getting all that reading implies, except association of thought with written or printed forms. Familiar with the words by sound, he has their meaning in his soul and their use in his oral vocabulary. The wise teacher does not hasten to the recognition of word-forms by the eye; and the wise superintendent does not set dates for measuring her progress by the length or number of her steps. Both know that premature struggle with form arrests life, and causes waste, not only of time, but of the joy of growth.

Second. Literature should be the basis of all reading lessons, the purpose of each being to kindle the thought and feeling of the reader, and to give him power to rouse the mind of another by its oral expression. Word-mastery is the only key, and *only* a key, and vocal culture is a means, and *only* a means. Reading for information should find its place in connection with the various school exercises, but should not be allowed to encroach on the period given to reading.

Theoretic agreement to all this seems assured, but it must be confessed that practice lags behind. This is the text of the preface of nearly every modern reading book, but in many cases we find the truth expressed only in the preface, and perhaps suggested by a few inserted pages of "memory gems." We believe, however, that books of sufficient number and variety, and of such character, are available for use in the intermediate and grammar grades that pupils in these grades may now read literature every day. But the feeling seems still to prevail that the first lessons in reading can be *only* the learning of written forms of words and sentences that are the repetition of statements made by the child about himself and familiar objects and actions. And *most* primers and first readers assume that the language used would be that of a very young child. That the child prepared for his first reading by living with literature is inclined to resent these lessons, is not a bit of theory, but of experience.

Miss Sullivan attributes much of Helen Keller's marvelous ability to the fact that *books* were her daily companions *from the time she had learned her letters*. She says:

> Helen learned language by being brought in contact with living language itself, brought for the purpose of furnishing themes for thought, and to fill her mind with beautiful pictures and inspiring ideals. Greater power of expression was obtained, but this was not the most important aim. I believe every child has hidden away somewhere in its being noble qualities and capacities which may be quickened and developed if we go about it in the right way. . . . . I have *always* observed that children invariably delight in lofty poetic language, which we are too ready to think beyond their comprehension.

And hundreds of those who teach normal children indorse the testimony of this rare teacher.

With the material provided by such pictures of child-life as are drawn by Eugene Field, Longfellow, and many others, notably by Stevenson, the very first lessons in both script and print, while based on a child's expressions of his own experience, may also be based on a simple word-picture of a similar experience. Read to him by one who feels its simple beauty, the picture of another colors his own, and the new phraseology enters into his own. All needed repetition and variety may then be given, but the final result is his association, by sight, of his own mental pictures with the words of the writer. Thus a bit of literature is made the beginning and the end of a series of lessons; and the child, having gone out of himself and found a larger self, has tasted *the joy of true reading*. In addition to this, he has learned to recognize certain words, quite as readily and much more effectually than as if these words had been artificially put together for the purpose of recognition.

We certainly have evolved methods of teaching in the primary grades that have needlessly complicated the problem. That, even for the eye, the vocabulary need not be so commonplace as we have assumed has been proven. And many of us frankly confess our heterodoxy regarding the necessity of thoroness, interpreted to mean the requirement that the child shall learn to recognize, at sight, *every* word in the reading lesson. Is it really so harmful to tell the child a difficult word now and then, if he is alive with the thought?

The conception of the purpose of teaching reading modifies methods as well as selection of subject-matter. It is quite possible in any grade, high-school, college, or university class so to misuse a bit of literature, by making it the basis of a lesson in mere word-calling or anatomical dissection, that it shall cause not one throb of interest in the heart of the reader, but rather cultivate a distaste for what he might have learned to love. The teacher that believes that the period of the reading lesson should be one in which the child finds the enjoyment of kindled thought cannot make use of a method that builds and polishes beautiful structures of shells of ideas, of which life is later to take possession. He knows that it is life that makes and beautifies its shell-home. He feels that the study of devitalized words as a preparation for reading literature is the surest possible way to prevent reading and to prevent the right attitude of mind toward words. The teacher that feels the purpose or meaning of the poem or story, and appreciates the means by which the writer portrays this meaning — his pictures and their relation to each other, the beauty of his imagery, and the music of his words, as well as the end they all serve — will so use it that the purpose, the pictures, the beauty, and the music will find some response in the mind of the pupil. To express them truly and correctly in oral reading necessitates study and practice in the mechanics of reading, which is now animated by purpose and meaning. The time will come when the daily reading lesson in school will univer-

sally mean the learning to read and to love literature. It will be delayed until we remove some of the hindrances. When it comes, we shall indorse the words of Charles Dudley Warner: "After many years of perversion and neglect, to take up the study of literature in a comprehensive text-book, as if it were to be learned like arithmetic, is a ludicrous proceeding. It is not teaching life, nor love of good reading. It is stuffing the mind."

Third. The inspiration and models for language lessons, oral and written, should be found in literature. Any principle underlying the teaching of an art is as true of language — the art of self-expression — as of painting, music, or sculpture. To teach an art is not merely to give instruction in the use of its forms; it is, first, to rouse and stimulate the thought and feeling to be expressed, which of itself generates the desire to express; and, second, to guide the practice in striving to express in terms of beauty. For we know that art is not merely doing; it is skillful doing in order to express something in a true and beautiful way. Response to truth and beauty must always precede and accompany successful efforts to attain truthful and beautiful expression. The teachers of music, of drawing, and of painting that do not build on this principle we call artisans, not artists. Why should the divorce of ideals and practice be considered in this one great universal art? Surely there is no skill in any art without repeated doing. It is equally certain that the product of low ideals and weak thought is valueless, be it ever so perfect mechanically. One must constantly look to his ideals and constantly put forth his own efforts. George Eliot voiced what every human being feels when she said: "For my part, people who do anything finely always inspire me to try. I don't mean that they make me believe that I can do it as well as they. But they make the things seem worthy to be done." And the time to act is when the influence is most strongly felt. From first to last, in the study of any art, it is by *vital contact* with the best expressions of thought by means of that art that they constantly breathe into the learner their subtle influence of thought and modes of expression, and thus mold his efforts into finer quality and form; and, on the other hand, by his own efforts to express, he attains not only skill, but better appreciation of the work of the artist.

And this use of literature is not as the setting of a copy. A necessary element of art is that it shall be an expression of the individual's own way of seeing, feeling, and doing; and this means neither imitation nor reproduction. A poem should never be reproduced. Certain stories and descriptions may be rewritten; and a poem, description, or story may be copied for various purposes related to vocabulary or to study of form; but literature, as the basis of language lessons, has a far greater end to serve. It should suggest and recall, illumine and interpret, the child's own personal experiences, which he is later to tell in speech or in writing as expressing himself. It is to him really a projection of his own experience, looked

at objectively. The result is a series of pictures with familiar setting, suggested and colored by the word-picture of another. One of Stevenson's *Memories* so forcibly illustrates the child's habit of weaving the web of the poem or story into his own life that we recall it here. He writes:

> Rummaging in the dusty pigeonholes of memory, I came once upon a graphic version of the famous psalm, "The Lord is my Shepherd;" and from the places employed in its illustration, which are all in the immediate neighborhood of a house then occupied by my father, I am able to date it before the seventh year of my age. . . . . The "pastures green" were represented by a certain suburban stubble field, where I had once walked with my nurse, under an autumnal sunset. . . . . Here, in the fleecy person of a sheep, I seemed to myself to follow something unseen, unrealized, and yet benignant; and close by the sheep in which I was incarnated — as if for greater security — rustled the skirts of my nurse. "Death's dark vale" was a certain archway in the Warriston cemetery. . . . . Here I beheld myself some paces ahead (seeing myself, I mean, from behind) utterly alone in that uncanny passage; on the one side of me a rude, knobby shepherd's staff, on the other a rod like a billiard cue, appeared to accompany my progress; the staff sturdily upright, the billiard cue inclined confidentially, like one whispering, towards my ear. I was aware — I will never tell you how — that the presence of these articles afforded me encouragement. . . . . In this string of pictures I believe the gist of the psalm to have consisted; I believe it had no more to say to me; and the result was consolatory. I would go to sleep dwelling with restfulness upon these images. . . . . I had already singled out one lovely verse — a scarce conscious joy in childhood, in age a companion thought:
>
> "In pastures green Thou leadest me
> The quiet waters by."

This simple and beautiful "memory," which may recall to each of us a similar experience of his own, opens a window into the inner life of childhood. It reveals a bookful of truth. The words "scarce conscious joy in childhood, in age a companion thought" leave nothing to be added regarding the value of committing to memory — truly learning by heart — that which has brightened, uplifted, and given joy to the soul. It also suggests what has been much in our thought of late — the loss to the man or woman who has not in childhood become familiar with the gems of classic literature from the Bible.

While there is clearly illustrated the greater value of the greater ends served, there is also suggested the result to the child in an enlarged vocabulary and in high ideals of form as well as of content. Expression in terms of truth and beauty requires a choice vocabulary, and sentences that clearly, forcibly, and musically express their meaning. Written expression requires, in addition, correct spelling, capitalization, and punctuation. In the written forms of literature one may find his models; and in the realm of form-study the same law governs — that attainment is the result of practice in doing, animated by correct ideals.

Let us summarize by outlining the general plan of language-teaching that embodies the principles presented:

A group of language lessons related in thought: (1) the pupil's reading, and listening to the teacher's sympathetic reading, of something that

has both vital contact with his own life and literary value; (2) thoughts and conversations suggested by the poem or story about the mental pictures seen and incidents related, and about the personal observations and experiences they suggest; (3) short conversations for the specific purpose of perfecting accuracy in use of grammatical forms and constructions; (4) exercises in copying and writing from dictation — sentences, stanzas, and paragraphs in which special attention is given to study and use of correct forms in spelling, capitalization, punctuation, and arrangement; (5) the final outcome, the flowering and fruitage of the group of lessons — the pupil's telling or writing about something he himself has seen, done, heard, thought, felt, or imagined, suggested by the poem or story — followed by encouraging and helpful class criticism of the results.

Fourth. To leave literature out of the lessons in geography, history, and study of nature is to leave out the link that binds them most closely to the child. To see the whole truth about a flower, a river, a mountain, a pebble, or a shell, it must be seen with the eye of the intellect and the eye of feeling. As the child both knows and feels, he responds to what is seen by both; and complete knowledge of the works of the Creator cannot be divorced from appreciation of their wondrous meaning and beauty. And from the poet a child may catch the meaning of many a fact in history as truly as he will ever reach it later with the philosopher.

True teaching of reading and language, then, gives power both to master and to interpret the facts of the other lessons; and thus literature may unify and vitalize and shorten the program. Half asleep, one drones for two hours over what, awake, he masters in one.

But such unifying and vitalizing demands much of the teacher. And this brings us to the greatest hindrance, and the only real hindrance, to the realization of these ideals in actual practice — our own limitations as teachers. But we may have undoubted faith in the teachers of this country. Let them squarely face their needs, and give to them the leadership that marches with the army and that carries into every day's march the inspiration of a leader filled with life and enthusiasm by the force of his own convictions; then victory is certain. The hindrances will be overcome. That they exist is not the fault of our teachers, but is another evidence of the defect in our educational system that makes it possible to spend so many years in our schools, and even in our colleges, universities, and schools of professional training, and come out without the proper equipment for this work.

What are these needs which we must face? And how may we be helped to meet them?

1. We need larger conceptions of reading and of teaching reading, of language and of teaching language. If we would enter into a larger thought, let us listen to Carlyle, Ruskin, Emerson, and Stevenson, and learn from them the meaning of literature, of language, of art, and of

true methods of teaching an art. Let us hold in thought these words of Carlyle: "Language is called the Garment of Thought; it should rather be Language is the Flesh Garment, the Body of Thought." And again: "How can an inanimate, mechanical Gerund-grinder foster the growth of anything; much more of Mind which grows not like a vegetable (by having the roots littered with etymological compost) but like a Spirit by mysterious contact of Spirit."

Cannot a wise leader profitably spend an hour now and then in the consideration of these great thoughts with his co-workers? Would not the influence be felt by the children?

2. We need a broader knowledge and cultivated appreciation of the simple literature of the English language.

Many a student that is able to quote Shakespeare, analyze *Paradise Lost*, and unravel the intricacies of Browning knows little or nothing of the great wealth of simple, beautiful poetry to which children respond as truly as does the grown man. Again Carlyle: "How shall he give kindling in whose inward man there is no live coal, but all is burnt out to a dead grammatical cinder?" To select the best literature to meet the conditions of a particular class of pupils at a particular time means a knowledge of the whole field that life is not too long to gain. Let not the "dead grammatical cinder" attempt to enter in; but let him resolutely and persistently keep himself in daily contact with the literature that has in it the spirit that kindles, and out of the gray ashes a spark will glow. To know the names of good poems and stories to use is not knowing them; to know about literature is not knowing it; to know it is to live with it. There is no other way. Hence, without knowing and loving literature, and being able to read and recite it sympathetically, truly to teach reading or language is impossible.

3. We need clearer insight into the mind and heart of child life for the wise selection and effective presentation of literature. In the book of the heart of childhood we read of love of home; love of father and mother, of sisters and brothers, and a half-parental love of the baby; love of flowers and birds and animals, and of personifying sun, moon, stars, wind, and all phenomena of nature; love of the heavenly Father, trust and faith in his goodness and wisdom; faith in a life in heaven as real as a life on earth; admiration of brave acts; love of playing at all the activities of mature life. In the book of the heart of the poet the same joys, loves, and aspirations are revealed by such poems as Wordsworth's "We Are Seven," Jean Ingelow's "Seven Times One," Tennyson's "May Queen," Longfellow's "Children's Hour," Helen Hunt Jackson's "October and November," Alice Carey's "Order for a Picture," Lowell's "The Nest," Whittier's "In School Days" and "Snow Bound," Celia Thaxter's "Little Sand Piper," Eugene Field's "Wynken, Blynken and Nod," George McDonald's "The Baby," and many, many poems of

Stevenson. Goethe said: "How fortunate the young who know what art is!" And we add: "How fortunate the young whose teachers know what art is!"

Is there not opened here a field for helpful, inspiring, and enjoyable meetings of teachers with superintendents and supervisors? Might they not do much to remove present limitations?

Another great remedy for existing conditions must be found in our higher schools and schools of professional training. Some of them are making the true study of literature a part of the education of each student; many are not. It should be demanded of all training schools for teachers that they recognize as an important part of their work the teaching to know, to appreciate, and to tell, to read, and to recite the gems of song and story that should become a part of the life of children. And this should be one of the required tests of a person's preparation for teaching in the grades.

The revival will come when professional schools, teachers, and superintendents unite in searching for the best literature to be used for, with, and by children; when, loving and appreciating its thought and its beauty, they unite in studying the inner life of the child, and the best ways of making literature serve its great purpose in the development of the manifold powers of that inner life.

That so many are thus searching and studying heralds the dawn of the new day.

DISCUSSION

MRS. JOSEPHINE HEERMANS, principal of Whittier School, Kansas City, Mo.—What question lies at the very root of the organization of our system of education for our youth? Without doubt it is the question of idealism. I mean by "idealism" the response of self-consciousness to the ideal; or the effort of self-consciousness toward self-realization; or the spiritual process of the growth of mind; or the development of the self from within; or, more simply, possibilities of reaction.

Without idealism we shall have feeble mental reaction. The ultimate aim of education is many and perfect reactions. Idealism, liberating mental reactions, abstracts the truth from each study in the curriculum, assists discrimination, and makes that study a living force. These reactions cannot be taught by talking about them, nor by memorizing; rules of any or all the studies, but may be developed and strengthened and permanently organized in various ways. We reach out to literature—"the fifth window of the soul," as Dr. Harris expresses it—dealing as it does with the spiritual, as the most potent agent we have for developing idealism.

The reactions of literature are conducive always to high thought and purpose; they organize impulses into feeling, they nurture and augment feeling; and feeling working thru will achieves character. Literature gives a certain power of adaptability and readjustment. Responsible individuality is best taught by contact with the institutions of society; yet literature pictures such contact and its results in terms of conduct, *which* patterns are supports to the child's need of experience. The child will and must build up a world of some kind in which his native reactions—fear, love, curiosity, etc.—modified or unmodified, play a large part. During the plastic period the influence of

literature — active, corrective, and constructive — harmonizes these reactions with those of the group in which he lives, making possible for all the ethical life.

Children are not getting conceptions of literature, to know them as such; or at least they are very vague. They are getting something far more valuable — conceptions of life. They do not analyze niceties of construction, but they do analyze sentiment, thought, conduct. They do picture ends more and more remote, and are influenced, on the side of feeling, to greater sympathy for others.

Our graded system of education without literature is as the body without the spirit. The three highest activities of soul — the good, the true, and the beautiful — find an embodiment in literature. Who would defer their recognition? Let the child know that these activities are in eternal correlation with himself.

While no one today is without convictions as to the necessity of literature in the grades, here and there is one who thinks the difficulties of a course quite insurmountable; others who would limit the American child, or the child taught in American schools, to American literature; others who are indefinite as to whether literature in the grades includes supplementary reading of all kinds — geographical readers, historical readers, and the like; and still others who, with minds open to the subject, are as yet unsettled as to its scope.

I am familiar with the arguments concerning the difficulties involved in a "course" in literature, the principal one being that, because a course is of necessity selected, the teaching would lack spontaneity in case a teacher was not assigned the particular poet or writer of her choice; or, worse, the teacher might not care for literature at all, and would kill rather than awaken an interest.

While there is something in that argument, there is not much. A course in literature, whether in college, high school, or elementary school, must be selected and must be taught by someone selected to teach it. Such teacher cannot hope to limit her teaching to her especial choice of writers. The truth is that we have in the grades many teachers of a catholicity of taste which enables them not only to enjoy for themselves, but to lead others to enjoy, the essential excellencies of a great number of writers, writers as dissimilar as Shakespeare and Shelley, Ruskin and Dickens, Tennyson and Browning.

Taking schools as they are, the selective power could not be left to the teachers, for the simple reason that such a course would lack organization and unity. It is left to them in a measure in this way: How does Homer stand in your regard? Which do you prefer, Ruskin, Hawthorne, or Dickens? Could you make a class of pupils understand *The Rime of the Ancient Mariner?* The answers determine what authors could be safely committed to them. Good common-sense and careful, conscientious teaching vitalize literature the same as other studies; and we must not forget that literature is one thing that does its own work largely, for the results are only measured by the power of the literature itself. Its ardor and flow negative any teacher. True literature, poetry, or prose always transports.

It is not desirable to make a set course in literature for every school in a system, as is done in arithmetic, grammar, and geography; but each school should have a course fitted to the conditions of that school, just as manual-training courses, to be effective, recognize and meet the conditions of special environment. The supply of literature is limitless, and substitutions and modifications are easily made.

Who should make this course? It must be one who knows and loves literature. It is not a question of official position, but one of ideas and ideals. It must be one who sees in literature the spirit of art, of culture, of morality, of love of nature, of patriotism, of sympathy, and knows where and when in the period of elementary education to build these into the spiritual nature of the child. It might be a joint work. However made, we should reach out our hands to the teaching body to assist with suggestions; and after the course is made, it should be elastic enough to admit of substitutions and reinforcement, as conditions suggest.

Its literary product is the best thing any nation has to show, from the days of Homer and of Moses until now. But this same product is rarely great during the infancy of a nation. Those who put all their stress on our national literature limit us unreasonably. In developing our history we revert often to the reign of Elizabeth, but what event in her reign compares with the fact that it was the age of Spenser and of Shakespeare? Shall we bar Shakespeare because not an American? Our history takes us to England, Germany, France, Spain, when dealing with religious intolerance; yet the history of centuries of religious intolerance is epitomized in Lessing's *Nathan the Wise*. Shall we bar the classic because it is not American? Surely we must have as much freedom in literature as we have in history. History is great, but literature is greater. History may be likened to Saul, literature to David. We love our national life, but we have no more right to limit our children to its literature than we have to ignore the influence of other nations on its history; no more right to limit to American literature than to American art. We gladly adorn our schools with Greek, French, German, Italian, and English art in casts of world-famed sculpture, prints of painting and architecture, doing this for the influence of the world-spirit; yet shall we bar the world-spirit in literature?

In a practical course of literature for the grades, myth, legend, poetry, the drama, and strong prose must each have its place. The Hebrew, the Greek, Shakespeare, the English, and the American poets and prose writers must each render tribute (and I should like to add a little bit of Victor Hugo and Heine and Lessing). These writers should come to the grades with texts perfect and unmutilated.

We want literature that is pure, serious, stern, joyful, truly educative; our purpose in its selection being culture, and not information. One of the many temptations in planning a course of reading is to go outside real literature and to overload the course with informational reading, scientific or historical. This is a great mistake.

While realizing the limitations of my sphere of observation, I wish to speak of my own experience with a course that has been in successful operation nine years. In organizing the course the aim has been simplicity and thoroness. The object is not to cover the largest possible field, but the reverse of that. For the time being the child is consecrated to one book until he understands it as well as he is capable of understanding it. The course is presented on the opposite page.

There is some organization of the subject-matter of the literature to harmonize with the absorbing interest of each particular stage of advancement. *Hiawatha*, *Robinson Crusoe*, *Ethics of the Dust*, and many of the legends and short poems appeal to the constructive instinct of the young child; later, in the highest grades, literature teeming with causal sequences is chosen. Some effort is made to place emphasis upon the social and economic conditions portrayed in each classic, but the main object in the grades is not to study in a minute and detailed way, but to read and enjoy and converse freely about each, making of it an influence penetrative and strong.

In the first grade are the Greek myths, based upon nature, and the Hebrew stories as found in the Old Testament. Hebrew does not stop there. It reappears in each grade in the form of passages from the Old Testament written on the blackboard; not with the indefinite word "Bible" underneath, but the particular book from whence it came, as Isaiah, Psalms, Joel, etc. These are changed frequently. Each blackboard has an extract also from some world-poet, "jewels, five words long"—poets not read in the grades; and on some little corner of the blackboard in all the upper grades is the permanent tabulation:

—— Homer.	1500 Shakespeare.
1200 Dante.	1600 Milton.
1300 Chaucer.	1800 Goethe.

The work in the first grade is memory work, the myths and stories being told to the children until they give them back. We have a simple dramatization of the myths. The children assume the characters necessary to the development of each story, using

COURSE OF STUDY

Grade I

- Prose
  - Stories of Moses, Joshua, Gideon.
  - Myths of Clytie, Selene, Eos, Hephæstus, Demeter, Hermes, Apollo, Poseidon, etc.
- Poetry
  - "The Children's Hour."
  - "The Village Blacksmith."
  - "Seven Times One."
  - "Lady Moon."
  - "The Winds."
  - "Persephone."
  - Poems from *Garden of Verse*, etc.

Grade II

- Prose
  - Stories of Jephthah, Saul, David, Absalom, Rizpah, Solomon, Sheba, etc.
- Poetry
  - "Hiawatha"—entire poem.
  - "In School Days."
  - "Thanksgiving Day."
  - "A Visit from St. Nicholas."
  - "The Corn Song."
  - "Kitty."
  - "Barefoot Boy."
  - "The First Snowfall."
  - "King Solomon and the Bees."

Grade III

- Prose
  - *Wonder Book.*
  - *Robinson Crusoe.*
  - *Greek Stories.*
  - *King of the Golden River.*
- Poetry
  - "The Daffodils" (Wordsworth).
  - "The Sand Piper."
  - "Icarus."
  - "By Cool Siloam's Shady Rill."
  - "Lyric from Pippa Passes."
  - "The Star-Spangled Banner."
  - "The Dandelion" (Lowell).
  - "The Snow Storm."
  - "March."
  - "Robert of Lincoln."
  - "The May Queen," Part I.
  - "Grandmother's Story of Bunker Hill."

Grade IV

- Prose
  - *Pilgrim's Progress.*
  - *Rab and His Friends.*
  - *Ethics of the Dust.*
- Poetry
  - "Paul Revere."
  - "Sheridan's Ride."
  - "Annabel Lee."
  - "To a Water Fowl."
  - "Calm on Listening Ear of Night."
  - "America."
  - "Home, Sweet Home."
  - "Burial of Moses" (Alexander).
  - "Landing of Pilgrim Fathers."
  - "Lexington."
  - "The Building of the Ships."

Grade V

- Prose
  - *Gentle Boy.*
  - *Stories from the Hebrew.*
- Poetry
  - "Odyssey" (Bryant's translation).
  - "Evangeline."
  - "Miles Standish."
- Drama
  - *The Tempest* or *The Merchant of Venice.*

Grade VI

- Prose
  - *Christmas Carol.*
  - *Sesame and Lilies.*
  - *Lincoln's Gettysburg Speech.*
- Poetry
  - "Iliad" (Bryant's translation).
  - "Vision of Sir Launfal."
  - "Lays of Ancient Rome."
  - "Ancient Mariner."
- Drama
  - *Julius Cæsar*, *The Tempest*, or *The Merchant of Venice.*

Grade VII

- Prose
  - *Mosses from an Old Manse.*
  - Emerson's essay on *Nature* or *Character.*
  - Declaration of Independence.
  - Constitution of the United States.
- Drama
  - *Macbeth* or *Henry V.*
- Poetry
  - "Idylls of the King."
  - "The Lady of the Lake."
  - "The Princess."
  - "Enoch Arden."
  - "Snow Bound."

mounted pictures correct as to costume and accessories, each holding the picture of the character he represents.

In the lowest grades the literature is further impressed by using as copy in the writing exercise a line from whatever story they are studying, as: "Ruth gleaned in the fields," "Apollo drives the sun chariot," etc. The object in these grades is expression. This work is done in the language period, because the reading periods in the first and half of the second grade are fully occupied with the formal side of reading. Beginning with the last term of the second grade, the reading periods are devoted to literature.

Myths are chosen because childhood loves the symbolic. Myths bring nature nearer. Myths are an attractive and convenient medium to teach the glory and power and constancy of nature, and man's relation, whether of subjection or of dominion, to it. In

different garb it is the same thing that we find in Job, chaps. 38 and 39: "Where is the way where light dwelleth and as for darkness where is the place thereof?" I think it is Emerson who says: "The universe has three children, born at one time, which reappear under different names in every system of thought, whether they be called Cause, Operation, and Effect, or more poetically Jove, Pluto, Neptune." How fitting that each generation should first apprehend poetically what later it must struggle with poetically!

The Greek thought reappears several times in the course. In the third grade the *Wonder Book* is read; in the fifth grade the *Odyssey* (Books V, VI, VII, VIII, XIII) and in the sixth grade the *Iliad* (Books I, VI, XXII, XXIV) occupy three months of school life. These are placed before the drama because of their simplicity, their steadiness, and their repose. In one sense they prepare for the strenuousness and conventionality of Shakespeare. The great lesson of Homer, that everybody needs everybody, finds a ready acceptance with the children of the fifth and sixth grades. Wherever we use the Greek thought, we link it with some expression of our own time; with the myth of the seasons in Jean Ingelow's "Persephone;" John G. Saxe's poem supplements the story of Icarus; Tennyson's "Ulysses" accompanies Odysseus.

Literature is like other arts in one respect. It includes subject and treatment. There is a wide scope in treatment which must be intelligently recognized. Literature in the grade means the pure joy of sympathy. All the method required is to stimulate sympathy and to make the impression profound and dominating. It is not the place for detailed study, for etymology or structural analysis; not the place "to chase a panting syllable thru time and space; start it at home, and hunt it in the dark, to Gaul, to Greece, and into Noah's Ark."

In the second grade Longfellow's *Hiawatha* is read entire. The whole poem is idealized nature study. But its great value for second-grade work is in its rhythm. Children delight in rhythm. It satisfies some unrecognized idea of self-activity. It was while searching for this principle that I found this splendid encouragement from Plato (*Republic*). In effect he says: "Rhythm sinks most deeply into the recesses of the soul, bringing a just disdain for the unlovely and a commendation for the beautiful. The child receives it, feeds upon it, and grows to be noble and good before he is able to be reasoned with, and when reason comes welcomes her and recognizes her by the instinct of relationship, because he has been thus nurtured."

Somewhere in the intermediate part of the course it is necessary to introduce some strong prose to give word, phrase, and sentence practice, intelligently connected with the thought back of the words. This is hard work, but not too hard for the fourth grade. Soft pedagogy should be left behind by this time. For this purpose we have used in the last half of the fourth grade Ruskin's *Ethics of the Dust*. It gives fine opportunity for verbal reaction, not to mention its value on the character side. Most refreshing are the children's interpretations of the author's message, which is, in the words of N. D. Hillis, "that goodness is more than gold, and character outweighs intellect." Of all that Ruskin has written, this is the book in which he speaks directly to the child.

The prose in the course includes a complete book or essay of Holmes, Hawthorne, Irving, Emerson, Bunyan, Defoe, Dr. John Brown, Ruskin, Dickens; certain American state papers and certain fine passages from the Old Testament. This range secures familiarity with many different styles of literary composition.

Beginning with the fifth grade and continuing thruout the course, we read a book a term, usually in this order: fall term, prose; winter term, a drama; spring term, poetry. Sometimes it is necessary to change this order.

One word about the drama. Pupils of ward-school age do respond to the strong demands made by the drama. In these plays pupils are confronted with the institutional life of man. The impressions are strong. The reactions of condemnation or approval are also strong, suggesting the strength of their own springs of action. Imagination is kept active, and enthusiasm follows naturally.

In choosing plays for the pupils in the grades there is much to consider. *The Tempest*, *The Merchant of Venice*, *Julius Cæsar*, *Macbeth*, and *Henry V.* are all suitable. There is no reason why pupils should not read at least three of these before entering the high school.

There are short poems by our American poets that are linked with our national existence and must find a place in any course. These are classics in the best sense of the word, and must be made sacred to every American child. "The Building of the Ship" contains the spirit of our nation. It alone would keep alive patriotism. Add to it "Paul Revere," "Lexington," "Grandmother's Story of Bunker Hill," "The Star-Spangled Banner," and we have a national preservative force.

Besides the course as outlined in this paper, which means reading carefully done, we have many sets of supplementary readers, some of them literature in the truest sense, and a small collection of authors not in the course, for reference.

It may be interesting to state that we have two other means of growth and of impressing this work. One of these is organized composition work — a composition each month in all grades above the second, based on the literature of that grade. The other effective agency is a course in literature for the teachers' meeting, held once a month. We began these meetings many years ago, with the study of American authors. We worked backward to Chaucer, and then worked forward again to Browning. We did not study by periods or schools, but simply by reading to the point of saturation. That this has had its influence in strengthening our work is a fact that needs no comment. We have had a training school of our own.

I look upon this course for the grades as suggestive merely. It might be amplified or it might be reduced.

Miss Florence Holbrook, principal of Forestville School, Chicago, Ill.—What is literature? Has it a place in the elementary schools? If so *what* literature shall be selected, and how shall it be presented?

Literature is the most perfect tapestry woven in the loom of Time that has escaped the moth of decay. Observing it closely, we enter into the lives of those who otherwise would be unknown. Their thoughts of nature and of God; their hopes and fears; their struggles, victories, and defeats; their loves and hates; their weakness and their strength; their ideals of life and of conduct — all are revealed for our instruction and our delight. The literature of a race is the form in which its life is preserved; when all else is destroyed this remains on stone, or brick, or scroll.

In all true literature the unnecessary and transitory has disappeared — only that is left which is vital, which the thought demands. As is true of all the arts, literature delights in the simplicity which is consistent with perfection of form, with grace and beauty. Painting and sculpture appeal to our souls thru the eye, music to our emotions thru the ear, but literature reaches the intellect and emotions thru both eye and ear. The eye reads and the thoughts delight the mind, but for full enjoyment the music of the voice must be added. The perfection of form, the beauty of word and phrase, are then doubly felt and a twofold pleasure obtained.

The beatitudes of literature have been the theme of those competent to judge and praise in all ages. The joy *we* feel from the study of any masterpiece should be the portion of every soul. Do we, teachers, really believe that this joy is the inheritance of everyone, or that only a few, specially gifted, can comprehend, enjoy, and profit by the words of the greatest teachers? Do we believe that literature can be taught to pupils in the elementary schools? Then it will soon have its rightful proportion of the school day; for teachers will be found who are ready and willing to undertake the work, and whom experience will make successful.

There is no class of children in our public schools for whom there is not some classic tale or ballad or drama suitable and inspiring. The more stolid the pupils, the greater

the need for reading which possesses the divine spark of genius. The highest, purest thought expressed in the most artistic and natural way will most quickly arouse them to appreciation and intellectual activity.

"No one can afford to be influenced by one man alone." Men and books and nature are our teachers, and when the class-room teacher can stand aside and let the genius of the master-minds of the world appeal to the pupil, the growth under that impulse will reward her sacrifice of self.

Instruction in literature should begin with the first day's work in school and should be continued during the eight years for at least a half-hour a day. The material will be found in fairy-story, in myth, in fable, in legend, and in lyric, epic, and dramatic poem. The literature given to the pupil should not be adulterated, but should be "pure and undefiled."

The teacher selects some story or poem, and continues the reading of it from day to day until the entire story or poem has been read. The literature given to the class is not to be excerpts, but wholes. This reading by the teacher of matter too difficult for them to read trains the pupils in attention, concentration, memory. They are getting lessons in beauty of style and in beautiful reading. They long to be able to read for themselves these charming stories.

Short poems are selected for the pupil to commit; and in this way his mind is filled with beautiful images, he is trained to exactness in memory, and his vocabulary is increased.

Myths and stories are read or told to him for reproduction in dramatization. This is a most valuable exercise. In dramatizing a story, in reproducing it by action, gesture, and word, the pupil makes the impression more vivid, more real; as in constructing a box which has been described, or in drawing an object placed before him. Children are constantly "playing" many parts. Their imagination and their desire for action lead them into the dramatic way of expressing themselves.

Another exercise for the pupil is to reproduce the story in his own words. The teacher reads or tells the class some beautiful myth. A child is asked to repeat the story. In doing so, altho words and even phrases are quoted, he is making original efforts at composition.

Learning to read is so difficult a task in itself that it should be made as interesting as possible. To appeal to the child's imagination and love for the beautiful; to work in harmony with his interest; to reveal a phase of life that appeals to his love for nature and animals—will be the care of the thoughtful teacher, and the result will be an ever-present joy to both. It will not do to make the beginning of reading formal, a matter of "words, words, words." He should read always for the thought, and therefore literature and reading should not be separated. Whatever the child reads should be simple in thought, artistic in form, and choice in vocabulary—a work of literary art. Such reading is training the child along the right line, and the beauty and value of books will never be questioned by pupils who have been nourished by mental food—a question often put by those whose eager and docile minds were smothered in the chaff of reading books written down to what was supposed to be the child's vocabulary and mental ability.

The work thus begun is continued in the second grade. The story or poem which the teacher read *to* them in the first grade may now be read *by* the pupils. Children never tire of the repetition of a good story, and will even resent any deviation from the original form. Kipling realized this in his *Just So Stories*. No objection need be made if many words and phrases of the story are repeated in the oral or written reproduction. Not many an adult invents words or phrases, but uses those he has heard or read. The memorizing of expressions is not required, and variety is found among the versions of the children as would be found if a number of adults repeated the same story. It is difficult to separate the work in literature from the work in oral and written composition, for the desire is not only to find enjoyment in literature, but to gain the power to express our

own thoughts. This ability is improved by the daily contact with great literary treasures.

For the child's reading the folklore of primitive peoples is adapted. The legends current among many tribes, tho differing slightly in form, childlike and simple, appeal to the child's imagination. The my h of Indian, Scandinavian, or Greek is excellent in many ways. The thought is not complex; the child lives in the midst of the phenomena of nature, whose beauty and grandeur form the subject of the myth. The simple myth is short and can be heard and repeated as a whole, and the knowledge gained is valuable as a preparation for the understanding and consequent enjoyment of the literature, music, and art of the world, based so largely upon the mythology of the primitive races.

The training of the pupil in literature, then, in the primary grades consists in (1) hearing a ballad or legend read by the teacher; (2) memorizing choice poems; (3) dramatizing fairy-story and fable; (4) reading literature, namely, fairy-story, fable, myth, legend, and poem; and (5) reproducing them in the form of oral composition, a written paper, or in dramatization.

The same general plan should continue thruout the grammar grades when the *Iliad* and *Odyssey*, the stories of Siegfried, Beowulf, Balder, and King Arthur are studied and dramatized. Some of the dramas of Shakespeare, the *Antigone* of Sophicles, are studied, committed, and given by the classes. The poems of Emerson, Lowell, Whittier, Scott, Burns, Browning, and many others are studied, enjoyed, and made part of the intellectual life. With these older children who have had the experience of reading many beautiful things, more time and attention are given to the artistic form of the production, to the style of the author, and in the written work more conscious attention is bestowed upon the beauty of word and phrase. The main thing, however, is the thought. If one really has a thought he considers valuable and wishes to communicate, a good expression will be forthcoming. Style can be improved, doubtless, but if the thought is lacking, the result will resemble a dummy clad in rich garments.

Uniformity in our work in literature should not be insisted upon; nay, it should not even be considered wise. The districts in large cities vary much, and the work in every school should be what is best for the pupils then and there. So even in the same school two classes in the same grade may well study different selections, each chosen with a view to the need of the class. Whatever literature the teacher of the class especially delights in, that will generally be best for the pupils. Her enthusiasm will inspire them. Famous results have been obtained from the *Fairie Queene*, *The Ancient Mariner*, the *Nibelungen Lied*, *Robinson Crusoe*, Emerson's *Essays*, Browning's *Saul*, because the teacher was herself under the spell of the authors' genius.

The beauty which is inherent in literature is of itself a joy, a power, an enrichment of life; but, more than all this, the moral and spiritual nature is appealed to and nourished by the lessons which no truly great literature lacks. I do not mean that the moral must be insisted upon; that might, indeed, prevent the very result we desire. But the lessons of true courage, friendship, honor, loyalty, patriotism, self-sacrifice, and devotion to principle which are found in legend, poem, and drama all have their benign influence upon character. Many other studies should have their places in our elementary schools, and they all have special claims to our approval. But if individual responsibility to the government, to humanity, and to the higher self is to be taught, the one great means—omitting direct religious training, which is the province of the church — is *literature*. As long as good books are the power for right-thinking and right-living, for joy, inspiration, and comfort we know them to be, our ever-present teachers and guides, let us value our responsibility and lead our pupils to know, to love, and to appreciate good literature.

ROUND TABLE PAPERS AND DISCUSSIONS

A. ROUND TABLE OF STATE AND COUNTY SUPERINTENDENTS

TO WHAT EXTENT AND IN WHAT FORM SHOULD THE MANUAL-TRAINING IDEA BE EMBODIED IN PUBLIC-SCHOOL WORK?

W. O. THOMPSON, PRESIDENT OF OHIO STATE UNIVERSITY, COLUMBUS, O.

It is not the purpose of this paper to enter into the discussion of the merits of manual training in a system of education; nor is it expected that the discussion will set forth a model course of study in which definite place and proportion shall be given to the several studies. It is understood that we are to consider the general place of manual training in the public schools. This at once leaves out of consideration the question of manual training or the equipment for it in specially favored localities where manual-training high schools are in operation. Our question is whether in the broad field of the public schools in cities, villages, and rural districts there is any place that now may be wisely given over to manual training. It may help toward a conclusion if we give attention to a few considerations bearing on the general aim of the public schools.

1. Here, first, I remark that we should keep in full view that the results desired in the public school are educational, and not commercial.

We are familiar with the pressure for a low grade of commercial education often felt in the public schools, backed by the theory that it helps toward a livelihood. People fail to take the broader view that education should prepare for life rather than for a particular type of life. The public schools have frequently been criticised because in their desire to meet popular demand there has been a departure from the best methods in education. In much the same way manual training has suffered at the hands of its professed friends. The so-called practical man has looked upon it as a form of education intended to help boys and girls to a livelihood. Such people would make the public school a trade school whose duty it is to stand for skill in a particular craft rather than for the all-around development of mind and body. Public education thus is transformed into a private convenience. The true theory is that the public school is organized for efficiency in citizenship; for the symmetrical development of the child's powers; for such training of these powers as will minister to their harmonious use in manhood; and for that broad sympathy with mankind that is the best fruit of education. Under this conception every subject that commands a place in our courses of study must take its place in young life in such a way as to lay the foundation for whatever demands the future may make. Moreover, these subjects are all preparatory in character. It is not presumed that elementary education may be anything else. It is to train pupils for experience rather than to give them experience.

2. A second consideration is that manual training is educational in character and fills an evident gap in our educational scheme.

It is readily understood that the older forms of education made the claim that they trained and developed the intellect, cultivated the will, and in general gave such exercise to the natural powers as to produce normal, healthy growth in pupils. It is not worth while to dispute that claim. Later the invasion of science into school courses has established its value in developing the powers of observation, in demanding accuracy, in

calling for the use of the judgment, and indeed in a number of ways exercising the same faculties called into use by the older education.

Now it needs no argument, but a mere statement, to show that manual training does much of the same work. Observation, comparison, accuracy, judgment, are the alphabet of manual training. Indeed, they are actively at work in the kindergarten. There is as much of any of these in shoving a plane as in shoving a pen. From the viewpoint of training or discipline one may be as useful as the other.

On the educational value of manual training, Superintendent Seaver has said: "Manual training is essential to the right and full development of the human mind, and therefore no less beneficial to those who are not going to become artisans than to those who are. The workshop method of instruction is of great educational value, for it brings the learner face to face with the facts of nature; his mind increases in knowledge by direct personal experience with forms of matter and manifestations of force. No mere words intervene. The manual exercises of the shop train mental power, rather than load the memory; they fill the mind with the solid merchandise of knowledge, and not with its empty packing-cases." Under this training manual dexterity becomes the evidence of a certain kind of mental alertness and power. There is here a correlation of the powers of mind and body that makes for the mastery and freedom toward which all education leads. This feature is overlooked by many. It is but common experience to see young men, freshmen at college, who can neither walk, write, sit, or perform any other function that requires a graceful use of the body. In other words, the correlation of mind and body has been neglected. The result is not merely awkwardness, but a great loss of power and efficiency. Not one high-school graduate in ten could estimate, in a reasonable time, within six inches the length of a string or a board that would measure six feet and seven inches. This is a typical illustration of a lack of training in comparison. The boy who cannot use his eyes, his hands, or his feet with any degree of accuracy must be excused from all those exercises of reason and judgment that imply this correlation of mind and body. It is evident, too, that he lives in a confused world and is incapable of that clear thinking which should mark the well-educated person. Do not regard this as illustrating an extreme case. The high-school graduate will do as well as the college graduate. I mean to say that the incompleteness of our education is most manifest and that manual training is meeting a recognized deficiency.

It is confidently affirmed, therefore, that manual training is justified from pedagogical considerations. Nothing stimulates and quickens the intellect more than the use of mechanical tools, when used under the direction of competent teachers. The boy who constructs is the boy who thinks, deliberates, reasons, and concludes. The training of the eye and the hand reacts upon the brain and calls out powers not developed by memory-processes in language or the discipline of mathematics.

3. A third consideration is that manual training in the schools does not imply that we are to develop a system of trade schools.

The appeal for trade schools fails to note that they are utterly impracticable in the public schools, owing to the large number of trades, since each one would have an equal claim; it fails to note that the unlimited expense for such a proposition defeats the whole plan, and it fails to note the narrowing effect upon children to have a few trades represent the channel in which their lives are to flow. Moreover, a trade cannot be well taught in a school. The economic questions of time in construction, quality of material used, different methods of producing, and other questions of ordinary competition in business are as necessary to the successful mastery of a trade as the mechanical side of it. All this is outside of the possibilities of the schoolroom. To attempt such results would only end in disappointment and failure, and bring against the school the charge of being theoretical and not practical.

Education is a slow and continuous process. Manual training in our public schools should put emphasis upon the educational values, leaving out of consideration the elements

of time, expense, and others properly in view by the mechanic. The questions with reference to what shall be done, material used, and all similar questions should be determined by the teacher from educational, and not from commercial, considerations.

In view of these personal considerations I now offer a few suggestions upon the extent of manual training in the public schools:

1. I believe that manual training opens the way to lengthen the school day with decided advantage to all pupils so engaged. I hear the protest against lengthening, but as a parent I strongly advocate it, provided we do not lengthen the hours of ordinary school work. Manual training, if properly presented, will furnish an opportunity to relieve the tension of desk study by furnishing a laboratory at once wholesome and pleasing to the child. The shop exercises need not interfere with the ordinary schedule to any serious amount, but, if properly adjusted, would interfere with some usual, but not very useful, exercises between the close of school and the close of day. The protest against the confinement of the school does not apply to manual training, since it provides for healthful change of occupation. It would strengthen and not overtax the nerves.

2. Provision being thus made for a reasonable portion of time, I believe manual training should be kept as a continuous subject from the kindergarten to the end of public-school work.

The danger arises from our impatience. Let us not attempt too much in a given year. Let the educational process continue from year to year. The arrangement of a schedule so that a definite portion of each day could be assigned to every student would in the several years prove its wisdom.

3. If by the term "extent" it was meant to ask when manual training should be considered completed, as we complete history or algebra, I should say there was no limit. Not skill, but growth in skill, is the measure of the course where education is desired. Manual training would never be completed. I cannot imagine a time or a condition in which the shop would not furnish an opportunity for the pupil.

4. The question of expense is an ever-present one. It must be conceded that manual training involves some expense, but it is not unreasonable in its requirements. Besides, the equipment may always be a matter of growth. In most cases to install a complete system would invite failure. This type of education, like all others, needs time, and will produce its best results if introduced conservatively. The time may never come when it will be either desirable or possible for the isolated rural school to teach more than the elementary drawing, but most of our villages would do well for both the intellect and the morals of its pupils to invest in a good shoproom. This provision for the idle hours of the day to many village pupils would be a valuable investment for any community and could be defended on economic grounds.

5. The expense of any program is, of course, determined largely by the amount the school undertakes. The answer to this question in some degree answers the question of the form in which this subject should be taught. In most schools where manual training has been introduced the year includes the workshop, drawing, mathematics, some science, and a language. If the school is divided into sections, the shopwork might go almost continuously in case of large schools, or at convenient hours in case of smaller schools. To provide for drawing and woodwork is not a very expensive matter. In many villages the building might be separate and inexpensive, so that after a shop was once furnished the pay of a competent teacher would be the chief item of expense. The material used need not be a very serious consideration. The second year does not differ largely, except in the modifications of the subjects already presented. Shopwork, science, language, drawing, and mathematics usually make up the program. It is common to change the science of the course; to have some progress in mathematics and drawing, and some change in the shopwork. The work in wood is followed by work in iron and the metals. There is no necessity, however, to bind ourselves to a definitely fixed program, with a determination to accomplish a certain quantity of manual training within a year, or indeed

within the three years. It is necessary ordinarily to teach in groups or classes, but not at all necessary to burden the school with the necessity of completing a definite amount of work. As already intimated, the great problem is the educational problem. Even if the school stops short of the desires of the pupil in that matter, it has made a great gain by inspiring in them a love for some form of work, and by leaving them with the well-settled conviction that they have not learned everything.

6. In this connection let me say that it is of greatest importance that the teaching of such subjects be done by persons trained in schools of manual training under proper pedagogical influence, with the purpose of making manual training a part of the system of education. No greater mistake is current than the common theory that a mechanic would be the best instructor in such subjects. Many a good mechanic for commercial purposes would be a complete failure in the schoolroom. The important aims and objects of the public schools must not be diverted by any false notion of the place of manual training in education. We are not attempting to train mechanics, any more than when we teach algebra we are training engineers. We are simply laying the foundation upon which any technical education may be built, or, if no further time is given to education in the schools, we are laying a foundation for intelligent and sympathetic citizenship.

In conclusion it may be stated that the amount of technical training given in the public schools will be determined largely by circumstances. Local conditions may be more efficient in settling this question than any theory that might be presented. The important issue is to get recognition for this phase of education, and it may be safely asserted that the future will easily take care of the place of the subject in the curriculum. The consensus of opinion among teachers that the subject has a place in our public schools and the willingness to begin modestly will steadily solve the problem.

DISCUSSION

PRINCIPAL E. W. WILKINSON, Cincinnati, O.—It seems to me that the paper was bristling with common-sense. I hesitate to address this audience on a subject in which I have had so little experience, but there are one or two points to which I desire to give hearty commendation.

I have manual training in the schools over which I preside. I have heard much discussion about it, but I have never before heard the statement made that manual training is a purely local issue. But it is a fact. The farmer's boy has not a great deal of need for manual training. When the plow breaks down and it is three or four miles to the nearest carpenter shop, it is not good policy to take a boy and a horse away from the work that is pressing and send the plow to the shop to be mended. The plow is mended at home. The boy gets plenty of experiences such as this, and he does not stand in need of instruction in such arts at school as does the boy from the city, who has no such outside training. What does the girl do on the farm? She helps her mother with the housework; she washes the dishes; does the cooking; puts up the fruit, and dries or cans the corn; and does all manner of similar work. Of course you can go to the store now and buy a can of corn for eight cents that is almost as good as that which the girl used to help her mother put up, and so there is no need for the city girl to learn things of this sort. In the cities and in places where the children do not get manual training at home, it is our duty to give a sufficient amount of manual training so that the brain and the hand shall work in harmony, for that is, after all, the real object of manual-training instruction. It is in the city schools and in the schools of the larger villages where manual training should be taken up. It is not the purpose to make the boys and girls artisans and seamstresses. It is simply to help them to become able to help themselves. If the mind and the muscle work together, they both realize their highest efficiency. If we can get the minds and the bodies to act promptly and in harmony with each other, we have aided the child greatly.

SUPERINTENDENT CHARLES H. COLE, Martinsburg, W. Va.—Why could not manual training in the grades well teach the elements of some of the common trades, and why should it be regarded as purely educational instead of partly technical?

PRESIDENT THOMPSON.—First, manual training is an educational feature, and not an artisan feature; second, when you turn aside to teach something you yourself do not know, you make a botch of the whole thing. All the students are not preparing for the same sphere or occupation. Here is a boy who wants to study for a particular craft. If he wants instruction in that occupation, that is his particular business, and does not concern the pupils who are not expecting to follow that occupation, and the boy should get the work he wants in the proper way; but we should not make the public schools a private affair in such a way as this would indicate. As a matter of fact, the elements of the common trades are taught in manual training, but emphasis should be put upon the educational feature and not upon the artisan feature.

SUPERVISOR GEORGE H. MARTIN, Boston, Mass.—I venture to speak of manual training in cities and in the larger towns, and, to a considerable extent, in the villages of the country. In the evolution of society, the children have been largely taken out of touch with the external world. They are out of touch with natural products and natural forces. They are out of touch with what the pioneer child got in the home, in the field, in the forest. The new things in the new education are explained and justified by this, and they have grown out of the efforts to replace to the child those things he has missed from those older days. This must be the justification for all that we have had in the way of manual training. It is to rehabilitate the child, and to bring him again to his own. The practical question is: To what extent and in what way shall this be brought about? In a small community which I know the school authorities have started with the idea that the whole school life should be correlated with the home life, and that the work of the schools should be made to harmonize thruout with the home life. One of the things they have introduced is the school garden. This introduces the child as early as the first grade to nature, and brings him into touch with the home life of the community. The ground is prepared, the seed is planted, the plants are tended and cared for, the products are harvested and sold, the financial accounts are kept by the children of the school, and all their garden work results in the furnishing of an abundance of material helpful in their other school work.

The sewing by the girls is connected with the needs of the home; the children bring in whatever piece of work the mother wishes to have done. By means of the cooking, home life is enriched. In towns near the sea, hammock- and net-making have been introduced into the school.

Some attempt has been made to have the younger children practice some of the industries of the primitive peoples—the weaving of mats and of baskets, and the making and decorating of pottery.

The pupils have constructed a house the walls of which are papered with paper of their own design, and hung with pictures which they have drawn and colored. The floors are covered with mats of their own weaving, and sets of furniture of cardboard have been made for all the rooms. In all these ways the school and home have been brought closer together. This experiment is being worked out in the State Normal School at Hyannis, Mass.

STATE SUPERINTENDENT DELOS FALL, of Michigan.—The modern course of study is fearfully and wonderfully made. It has grown from the traditional three R's, because every once in a while some person has arisen and insisted that his specialty shall be put into the course; and so we have a long list in the curriculum now. I think we can reduce the course in a practical way, not only back to the three R's, but to two R's. One of these is in character essentially the power to read or to acquire knowledge, and the other is the ability to impart that knowledge after it is acquired; and this in its essential char-

acter is the art of writing. Manual training receives commendation, not only from the power which it gives the student to use his knowledge of a subject, but also, in one way or another, to express his thoughts clearly and fluently. All men think, and their thoughts come surging up for utterance, but out of twenty men who have the thoughts only one can express them fluently by the ordinary method, by word of mouth. The majority of people utter their thoughts methodically by the hand, and not by the word of mouth. The fact that we have failed to recognize this is the reason why we have disregarded manual training so long. The carpenter in his sawing and planing, in all his work, has a thought which he is trying to utter — a thought that is far-reaching and broad. When, by the aid of lumber and tools, nails, paint, putty, and all the other materials of his craft, he has finished his work, he has erected a house. The thought of the carpenter is as rich, as far-reaching, and as blessed to the world as the word which we think of as the most blessed word in the English language, the word that we might write above the door of that carpenter's house when he has completed it, and which he has been holding in mind in all his building of the house.

I feel that manual training is a subject which will enable children to express themselves lucidly in ways which many of them will easily master, when the majority of them would not be able to express themselves in the ordinary way.

STATE SUPERINTENDENT C. J. BAXTER, Trenton, N. J.—I can hardly agree with those who regard manual training as a "local issue" and who think it would not serve a useful purpose in the rural school. All children should be so trained that the motor nerves and voluntary muscles will respond promptly and accurately to the dictates of the mind; all need the balance and precision that the correct training of hand and eye alone can give.

It has been asserted that high-school pupils are sometimes awkward and helpless. I think this can be said with equal truth of some college students. This is because they have not been symmetrically developed.

I think the manual-training school should, wherever practicable, be supplemented by the technical school, but do not think we should attempt to introduce technical training into the public school. It is not the province of manual training to make mechanics. It fulfills its purpose in this respect when it provides a good foundation for future technical training.

B. ROUND TABLE OF STATE NORMAL SCHOOLS AND CITY TRAINING SCHOOLS

THE ORGANIZATION AND FUNCTION OF THE TRAINING SCHOOL IN THE STATE NORMAL SCHOOL

WILBUR H. BENDER, SUPERVISOR OF ADVANCED TRAINING DEPARTMENT, STATE NORMAL SCHOOL, CEDAR FALLS, IA.

The purpose of the state normal school is to prepare teachers for the public schools of the state. In the qualifications of the teacher there are three distinct elements that the normal school may assume to have a direct influence in developing. These three elements are: (1) scholarship, or academic attainments; (2) a workable knowledge of the science of education, the laws of mental development, and the consequent laws of teaching; (3) definite, personal skill in the art of teaching. A fourth element that lies outside the immediate influence of any school is that mysterious something that we name "personality." While this qualification is not subject to such direct treatment as the others, there is often marked improvement in the personality of the student thru the sensible

direction that he receives in the effort made to call out his highest powers in the more definable lines. The three features directly within the power of cultivation on the part of the normal school give origin to three distinct lines of work for the normal school to perform. This leads to the organization of three departments: academic, professional or pedagogical, and training.

THE ACADEMIC DEPARTMENT[1]

The ideal for the normal school, as held in some sections, is that it should give its entire time and attention to the second, third, and fourth features of the teacher's qualifications mentioned above. This is an ideal so far not attainable in most of the institutions known, whether correctly or incorrectly, as state normal schools. Conditions must be faced as they are. Ideals must be of working dimensions. They must be such as meet the demands of the present by furnishing the best teachers it is possible to get, by whatever road discernible that will lead to the desired end. It is not a matter of definition of what a normal school is or should be. It is a question of what the normal school should do and can do for the schools of the state.

No matter how high the scholastic attainments of teachers as a body may be at any particular period, there is always room and demand for something still higher. "Excelsior!" is ever the cry of the human soul. Also there must be a constant supply of recruits added to the ranks, and these must have scholarship as well as training in the arts of the schoolroom. That normal schools feel it a part of their province to furnish opportunity for this instruction along academic lines is proven by an examination of their courses of study and their recitation programs. If it is not their desire to do this work, they at least feel compelled by circumstances to do it. Exceptionally high standards in the way of entrance requirements would leave many a worthy teacher to go elsewhere for study or to be debarred from study at all. There are great advantages to come to the teacher that gets much of his scholarship under the roof of the normal school and in the professional atmosphere thus imposed. The normal student should study the subjects usually given in the common-school course in order to learn their place and value as instruments in the development of the pupils in the schools. This semi-pedagogical study of the academic branches is conducted most profitably in close relation with that study of the subject in which the student is trying to attain accurate scholarship and his own personal culture. The professional and the scholastic values of the branch thus become more apparent and unified in his daily experiences.

The high schools are doing good work, but they cannot be expected to give the time and attention to these branches ordinarily that the person preparing to teach must give them. Some academical work should be done beyond the high school, and the logical place for those preparing to teach to do this is in the academic department of the normal school. The person who is to set about acquiring skill in the processes of instruction in the class-room should have his mind as free as possible from difficulties incident to uncertainty of knowledge. This freedom can be secured only by giving some time to reviews of common- and high-school branches and advanced study in the academic department of the normal just previous to the time that the student is to go into the class-room to acquire power in the art of teaching. Also a large part of the students that present themselves for entrance to the normal school must necessarily come to its doors by some other route than that of the high school. This is especially true of most schools of this central valley. All these conditions demand of the normal school that it shall make some provision for giving academic instruction. But there are still other advantages in having academic work done in the normal. The class instruction in this department should be given by teachers who are superior in their lines. The instructors in the normal school should ever be awake to the purposes of such schools, and make their instruction such

[1] The term "department" is used as a means of setting out in this paper different sides of the work of the normal school, and not to indicate unrelated and independent functions.

that it will be suggestive of the best that can be done in the public schools. Thus, as the student acquires his scholarship, he is also absorbing the best methods of presentation from the way that it is presented in his classes from day to day. With such conditions prevailing, things that otherwise would lie far apart in the mind of the student will come into right relations and build for him a clearer idea of his own work as a teacher.

THE DEPARTMENT FOR THE STUDY OF THE SCIENCE OF EDUCATION

The department engaged in instruction in psychology, history of education, school management, general method, and specific devices is admitted as belonging properly in the normal school. This work is partially of an academic nature, as is shown by the fact that some of it is found in college and university courses and taken by students who have no thought of becoming teachers. On the whole, it bears no closer relation to the student's final ability as a teacher than his knowledge of the subjects to be taught. If the student in the normal school masters these professional subjects, he does it by the same process that he uses in the academic branches, and likewise at the same time that he is trying to see their application in a professional way. They are means of development of the individual personally, and at the same time they have a technical value in the preparation that they give him for a more successful practice in the art of teaching. Here again the spirit and method of the class-room in the normal are to do a specific work for the coming teacher in the examples and ideals that they give. It is just as essential that the normal school should do academic work in other lines as it is that it should do the distinctively academic work in these branches.

THE TRAINING SCHOOL

Skill in the art of teaching is acquired mainly in the training school. The relation of the training school to the other departments of the normal school is a question of importance. This may be called its external organization. Should the training school be the center around which all other departments are collected? Should it be subordinate and under the direction of the other departments in its management? Should it be on equal footing and co-ordinate with the other departments in the development of teachers?

The tendency to overemphasis of methods and devices to the neglect of strong scholarship in the normal school should be avoided. This tendency is likely to become too marked when the training-school idea is allowed to overshadow all others. On the other hand, the training school must be protected from diversity of interests in method and matter in the course. Subordination to other departments endangers the unification of the work that is imperative for the interests of the children and most valuable to the practicians. One great difficulty in the training school is to keep pupils and patrons from the feeling that there is no center of interest for the child. The pupil should feel that he has some centralized power to which he may look for direction in all his efforts. This is not the case when the course of study and the directions for teaching come from as many heads as there are branches in the course. Co-ordination and co-operation seem to come nearer to the best solution of the difficulty than centralization or subordination do.

INTERNAL ORGANIZATION

As nearly as possible the training school should consist of such pupils as the representative communities of the state have in their schools. All grades from the kindergarten thru the high school should be found in the training school. This is not required with the idea that all candidates for the diploma of the normal school shall teach in all grades before graduation is allowed. The purpose is to furnish a working example of the grades of the public school and to supply the means for such class-room teaching as the interests of individual students demand. Such as have especial taste for primary work and a manner and personality that promise success in that line should do their

observing and teaching in those grades. The other grades can be used for the training and observation belonging especially to those grades. Certain fundamental principles of teaching are the same for all grades. The ability to apply such variations as are needed for the different grades should come readily to one who has good ideas of the working principles in two or three different grades. From such experience the practician, critic teacher, and supervisor in consultation should be able to reach a very reasonable conclusion as to the grade to which the student is best adapted.

The training school should be like the public school also in the spirit of the work and the atmosphere that should thus surround the practician while he teaches. It should not have the air of an experiment station where new and untried doctrines are to be tested. It should be progressive enough to keep up with the practices of the best public schools. It should be conservative enough to inspire the confidence of the public to such a degree that its example may be accepted as perfectly safe to follow. The whole idea in the school should be to give the student the very best exposition possible of what is feasible in the public schools of sensibly progressive communities and a reasonable degree of skill in putting these things into practice.

ROOM TEACHERS

In order that there may be a feeling of interest in their work on the part of the pupils, and a proper balance in study, there should be a regular teacher provided for each room in the training school. These are not critic teachers, but should give their time to looking after the assembling of pupils, opening exercises, general exercises, irregular work of pupils, keeping records required by law, visitation of patrons, and like duties. These teachers should do some teaching regularly, to keep in touch with the children. They may take a class at any time that is dropping below what it should do in the hands of a practician, and teach it for a time to bring it into proper condition again. At such times and for special lessons the practician may be present to observe and then take the class again. These room teachers should have a salary that is about what is paid for similar grades in the ordinary school. They may well be selected from the class of the preceding year, and thus get the advantages of longer training in the school while acting in the capacity of room teacher. They should be able to undertake the best of positions in the public schools at the end of the year, but they need not be obliged to leave, if they prefer to stay.

PRACTICIANS

Most of the teaching in the training school is done by the practicians. These are the senior students in the other departments in the normal school. Academically they should be well in advance of what they are to teach. In the professional classes of the normal school they should have had clear presentation of the principles that apply to instruction and class management. When quite inexperienced there should be but little demanded of the practician in the way of control of a room while teaching. He may wisely be allowed to give his entire attention to the instruction and management of the class he has for instruction. As strength is developed, more may be required in the way of taking charge of a room. In the selection of class and subject the practician may be allowed some choice, if convenient. A stated amount of work may be required, but if special ability is shown, that may be reduced, or if there is necessity for it, with certain individuals, the amount of work may be extended. So far as possible, the practician should be relieved of the notion that he is in the training school for the purpose of having his faults eradicated by criticism, or that his teaching is a test of his powers simply to exemplify what he can do. On the contrary, he should feel that the work in the training school is for the application of principles previously learned and for the development of power thru the suggestions that may be given and thru his own activity. The practician should make notes or plans of lessons to be given, and hand them in for consideration and suggestions before the lessons are presented. The class and the subject will make the

real method or order in which the matter is to be taken up somewhat imperative, but the individuality and originality of the practician should be allowed to show itself freely in the means and devices used in class instruction and management. The work in the training school should be long enough in duration to allow the practician to get into the real spirit of teaching.

CRITIC TEACHERS

The position of critic teacher in the training school is one of especial importance. It requires a person of broad scholarship, keen discernment, large hopefulness and optimism, unbounded sympathy devoid of sentimentality. The critics may wisely be selected from among the graduates of the normal who have been thru the training school themselves as practicians at some time in the past. They should have had experience in actual public-school work; also they should have taken advanced instruction in some higher institution of learning. The work of the critics may wisely be divided on the departmental plan. They should examine the notes of the practicians and make suggestions where these may be improved. They should visit classes and see the practician afterward for private suggestions. They should conduct meetings of teachers instructing in the same branch for general suggestions. These meetings should be on a higher plane than to suggest devices alone, but should also look to the purpose of the devices and the subject itself in the development of the child. These critics should do some actual teaching for the observation of practicians and prospective practicians. These lessons should be of the regular work of the class and should be discussed fully with the observers afterward. The work of pupils should receive the careful attention of the critic teacher, and they should feel that she is interested fully as much in what they are doing as she is in the teacher in charge.

SUPERVISORS

For the purpose of general supervision, the training school may be divided into two departments, primary and higher grades. There is territory enough here to engage the attention of a special supervisor for each department. This supervisor is not to be a dictator to command just what shall be done, but rather an adviser and general manager to keep the proper unity in the work of the department. With the work of the critics organized on the departmental plan and the practicians not working long periods each day, there is much to demand attention in order that the necessary balance is secured for the children. The supervisor should do special critic work also, and should do some of the teaching for observation. He should conduct general meetings with the senior students, to give such directions and help as may be useful in making the teaching in the training school more effective, and to give practical illustrations collected thru his broader view of the work in the training school. Supervisor, critic teachers, and room teachers should constantly be studying together the latest phases of public-school work, in order that the spirit of the training school may be kept up to the proper standard. There should be frequent conferences with the critic teachers and room teachers, looking toward the advancement of the work and the protection of the interests of the children and the practicians alike. Thru these conferences, and others with the president and heads of departments, proper relations with other departments of the normal school may readily be sustained. Scholarship is universal in application, and principles of method and of teaching are so nearly so that it is not seriously difficult to keep near enough to common ground to preserve the co-ordination of the training school and the other departments of the normal school.

FUNCTIONS OF THE TRAINING SCHOOL

It is not possible to discuss any organism without at least implying what the function of that organism is. Most that might be said under this title has been sufficiently shown in the previous discussion. The primary function of the training school as a department

in the normal school is the development of the student's powers in the line of the art of teaching. In part it is the purpose in the training school to supply the opportunity for the practician to work out his own schoolroom problems. What has been taught as to scholarship and as theories of teaching is to be rendered concrete thru practice. Finally, the training school furnishes the means for the culmination of the school process of acquisition of knowledge, scholastic and professional, thru the operations of expression and application in practice.

C. ROUND TABLE OF CITY SUPERINTENDENTS

THE MOST EFFECTIVE USE OF A SUPERINTENDENT'S TIME

A. B. BLODGETT, SUPERINTENDENT OF SCHOOLS, SYRACUSE, N. Y.

City charters and special legislative acts, widely divergent, give to school superintendents so great a diversity in their environment that one can scarcely present this subject in a way that will have a particular application and at the same time be of special interest to any considerable number. The importance of the topic is of value to each and all; but the variance in the amount and kind of work, the responsibility definitely located with the superintendent, the power given him to discharge that responsibility, the absolute authority placed in his hands, the attitude of the community toward the schools, and many other features differ so widely in different cities that what is wholly applicable to one superintendent's field of labor may have only a slight bearing to that of another.

I shall discuss this question, therefore, as it appeals to me, in connection with a school system employing 500 teachers and caring for 18,000 pupils, whose educational interests are presided over by a board of seven members. I could not present a theoretical view of this topic should I try, and must therefore speak from a personal experience of fourteen years in the superintendency. I shall present my views along the lines of *saving time* as one of the most effective uses a superintendent can make of his time.

Where there is a constantly changing membership in a board of education, a superintendent is badly handicapped. A considerable portion of his time must be consumed indirectly in the instruction of his board, and every experienced superintendent realizes that it takes practically about two years properly to educate the average school-board member.

A straight out-and-out course, consistently and wisely followed, will so plainly determine a superintendent's position that schemers, in or out of the board of education, who endeavor to work the system for political or personal ends will cease to approach him, and the result will be a saving of much valuable time and a condition of ease and satisfaction to the superintendent. It is a real blessing to be entirely free from manipulators of this character; to have them pass by on the other side. I am happily relieved of this class at the present time.

Under any conditions, a superintendent can save time by knowing his exact relations to every feature of his work. In certain lines his authority must be unquestioned and his acts decisive. To other questions he should hold a joint responsibility, while to still others his position should be advisory only. When these things are understood by all concerned, there is only one position for a superintendent to take. At all times and in all places, and steadied by an accurate sense of the fitness of things, he should present his views and take his stand upon all questions, with all the fearlessness of a fearless nature. He should have the right—should claim it, if it be questioned—to speak his mind fully on all matters within his legitimate field. I made a statement similar to this in the presence of a fellow-superintendent of a large city system a short time ago, and he

said to me: "What! do you dare discuss questions in open sessions of your board?" There is no *dare* about it—it is just what a superintendent should do, and it is thoroly understood with us that the superintendent is expected to speek freely. He is always invited to do so, and it saves a large amount of time in the way of explanations and individual discussions. He should present his views freely and positively in open meeting, and should never consent to be covered up—smothered—in secret sessions of either board or committee. The superintendent is no more the servant of the board of education than he is of the people, and the people expect and have a right to know his individual opinion on all school matters. The stronger the confidence of the community in the honesty and soundness of the superintendent's judgment, the more hearty and generous will be his support in school administration, and no better use of a superintendent's time can be found than in a study of how best to secure the full confidence of the community.

If a superintendent has worked from a good motive, and seeming personal troubles or conflicts with his board, or any member of it, cause him annoyance, he will clear the atmosphere quickest and best by meeting the question at the earliest opportunity in a dignified, straightforward, out-and-out manner. He should neither cringe nor fawn, nor attempt explanations when explanations are not demanded by the circumstances. Such action weakens him with his board.

If a superintendent has some new departure to propose in connection with his work, he should advocate it openly, forcefully, and wisely, and in the first instance in the presence of his full board; and he should never maneuver to find out how many will be for and how many against his proposition before he presents it. Don't play politics! Let each question stand or fall on its merits.

Neither should a superintendent waste time in casting about to see in or from which direction the wind is likely to blow next, and then hustle to the forefront and try to lead the breeze himself in connection with any measure he may guess is about to emanate from his board. No board or member of a board cares to be handled with leading strings.

One of the greatest drawbacks to the effective use of a superintendent's time, and one of the most dangerous elements to the progress of his work, is found in the brevity of school-board membership. For instance, the superintendent suggests the introduction of manual training. While the subject is under consideration the board changes. Half of its members come in knowing nothing of the proposed introduction or the consideration already given to the proposition. The remaining half are to leave the board in another year and do not care to be responsible for its introduction. Nothing is done, or at best something is only half done, and there you are.

On what may be called the material or business side of this topic there is another way to save time; and that is by being loyal to authoritative decisions. I have said that a superintendent should present his views plainly and unequivocally. But when the debate has ended and the decision has been reached, no matter to what extent that decision may be adverse to his views, he should be intensely, even religiously, loyal to the decision rendered, relying upon the unquestioned proposition that no responsibility as to results can rightly attach to him when his position has been positively taken and his duty discharged.

STRATEGY

General Grant once said, in substance: "My idea of strategy has always been to get just as close to the enemy as possible." A superintendent may very wisely adopt this saying, and, applying it with discretion, find it extremely helpful in many situations. He may find the "enemy" in that member on his board (usually the new member) who feels called upon frequently to project something new or strange into the curriculum. Or it may be a member who was elected for a specific purpose—possibly to curb the effusive progressiveness of the superintendent. In any case, and whatever his purpose, *get close to him.* 'Twill save time.

An "enemy" may be found in the person of the president of the mothers' club, who, with the best of purposes, decides that certain remedies for supposed evils in the public school can best be administered by the organization over which she so ably presides. I would not decry the usefulness of mothers' clubs, but unless a superintendent manages them, and is not managed by them, they may become the enemy against which he should employ the wisest strategy. In this case, too, I would get close to the enemy.

But why enlarge upon this thought? Other enemies as wasters of a superintendent's time will readily present themselves. Some of them are phantoms relating to possible unpleasant features of the next board meeting which never existed except in the superintendent's own imagination, and which rapidly vanish into thin air when he gets close to them. But in whatever form the enemy presents himself — if it be the carping critic, or the angry parent who knows you are all wrong because he "used to teach school himself;" if it be the enraged mother of the boy who, she thinks, has been unjustly treated, and who wants the trouble adjusted right away because "we pay taxes;" or if it be the peddler of atlases or the genial but persistent bookman — by quickly getting close to him, her, or it, as the case may be, the superintendent will find the strategy of the famous general of intestimable value.

The above suggestions pertain more closely to the material or business side of our work. Let us consider for a brief moment the instruction side.

It is unquestionably true that the teaching force of any school system should be kept moving along lines of educational progress; that reading, study, and much discussion of various topics are a *sine qua non* with all teachers and educators. But in a large city system every honest superintendent must frankly admit that he cannot possibly touch each side of the instruction work as it ought to be touched. We are none of us gifted with omniscience nor omnipresence. Then it follows that relief must be had from some source.

An important feature is how to give to the great body of teachers the right kind and amount of instruction and inspiration. There are ways to reach this difficulty and still remain superintendent of it all.

In order to save the time of the superintendent, and in a measure to save his schools, skilled supervisors and instructors must be employed to cover certain parts of the work. There must be fixed places of responsibility, and in each such place must stand a person properly qualified successfully to meet and rightly to discharge that responsibility. Then clothe that person with all needed power and authority to meet the duties of the position, and hold him accountable for results. Many of us, I fear, are loath to cut loose from traditions, from practices handed down to us by our predecessors — even from the dark ages. We think our personal touch must be *in* or *on* everything, rather than simply *over* it in a supervisory and directive sense.

I would make the position of school principal one place of fixed and definite responsibility, and I would magnify and dignify that position and office. I would have him feel the responsibilities of the place he occupies. I would do my work with his school thru him. I would have everything pertaining to his school pass thru his hands, both to and from. Questions and complaints, whether of parents, teachers, or pupils, should be answered, adjusted, and settled either by him or in his presence. I would have all parties, however, and particularly the principal, understand that an appeal from all decisions was always in order provided the principal be first served with notice of such appeal.

I would make the supervisorship of any particular branch or department another place of responsibility, and thus with each principal and with each supervisor I would have fixed and definite stations thru which I could reach every avenue of school work; *and I would still be superintendent.*

I would leave grade meetings for special instruction, except in specific subjects — which means those I wish personally to handle — to supervisors and principals selected

as instructors. It is my practice to call these principals and supervisors together, usually twice each month, for consultation and discussion. We call them "cabinet meetings," and find them very helpful.

I have found one of the greatest and best of time-savers in a general teachers' meeting held once each month, when the entire corps of five hundred teachers comes together. The occasion furnishes a spur for the superintendent, and is a good thing for him. It also keeps the teachers in close touch with the superintendent's views of general school management. If a superintendent on his rounds will make book notes of things commendable and things criticisable, particularly those of a general nature, and at these meetings comment upon them frankly, pointedly, and in a spirit of helpfulness — always eliminating the personal element — he will find material enough for an interesting monthly talk and will have a decidedly interested audience.

It is astonishing in these daily visits to the schools how many items one finds that apply to a large number of teachers when brought to their notice in this way. I would not, and could not, dispense with the regular monthly teachers' meeting without serious loss to the *esprit du corps* and the general tone of our school work.

No superintendent can use his time more effectively than by establishing frank, cordial, sympathetic relations with every teacher. They should have his confidence. He should have theirs. They should know and feel that his criticisms and suggestions are just and are given for their benefit. Full confidence in his judgment and his spirit of helpfulness should never be wanting. Teachers need the helpfulness that reaches them from honest hearts, friendly hands, and plain words; and they always welcome the visits and the suggestions of one who carries such a spirit with him.

CONCLUSIONS

1. Know your exact relations to every feature of your work.
2. Get close to the heart of every situation.
3. Take a tenable position on all debatable questions and speak plainly without being pugnacious.
4. Be loyal to the decisions of those in authority.
5. Have fixed places of responsibility and have that responsibility met.
6. Magnify and dignify the office of school principal and supervisor.
7. With your full corps of workers establish relations founded upon cordiality, frankness, plain speech, and sympathy.

DISCUSSION

SUPERINTENDENT Z. H. BROWN, Nashville, Tenn.—I rise simply to emphasize what has been said by Superintendent Blodgett. To my mind he has plainly and succinctly set forth the best and most satisfactory way in which the time of the superintendent should be occupied. He has said, what I heartily indorse, that the authority of the principal should be honored; that all directions should be given to the teachers thru their respective principals; and that all complaints of parents should first be made to the principal. Above all, we should be absolutely open, frank, honest, and fearless in dealing with our boards of education, and none the less so with our teachers. Never deceive a teacher by leaving her to believe that she is succeeding, when the contrary is true. It may be very painful to her for you to make known to her that she is failing, but she will thank you afterward for your frankness.

SUPERINTENDENT CHARLES S. FOOS, Reading, Pa.—I have a board of sixty-four members, and I find it an economy of time fully to explain and discuss matters pertaining to the schools in the open board meetings. I believe that a policy of frankly telling your board where you stand prevents much misunderstanding and misinterpretation of your official acts. This is my policy, and in the past eight months we have made at least six

organic changes in our method of conducting the schools. We have regraded the schools; changed the method of promotion; abolished monthly examinations; adopted a course of study; made more uniform the work in the several grades; and established a night high school. Not a single negative vote was cast against any of these recommendations. I attribute this to the fact that I discussed the matters in full before the board. Surely this entailed less time than going around from member to member to ascertain how each one felt. Considering the many duties of a superintendent, a wise partition of time is necessary.

J. F. KEATING, superintendent of schools, Pueblo, Colo.—The paper just read contains much that is good and helpful, but it also contains advice that is dangerous—dangerous to the young superintendent.

It is not the part of ordinary business sense always to introduce an important measure before a meeting of the entire school board without any preliminary discussion with individual members of the board. When I began my work in supervision I used to do that way, but as I grew older in practice I learned better.

There are two things that a superintendent must know: what is good for his school and how to get it. The first implies knowledge of school work, and the second knowledge of how to manage men.

Before introducing a measure for open discussion it is often wisest to consult with those members who are most in sympathy with the superintendent's aims and plans, and most keenly alive to the needs of the school. This so-called always open and frank discussion at the outset often defeats an important measure. It not infrequently happens that men taken individually are more open-minded and fairer than when taken collectively. In trying to secure the best for his schools it is the duty of a superintendent to recognize this fact and to act accordingly.

PUBLIC OPINION AND GOOD SCHOOLS

J. K. STABLETON, SUPERINTENDENT OF SCHOOLS, BLOOMINGTON, ILL.

Fourteen years I lived in central Nebraska. In 1891 Nebraska was burdened with a great crop of all kinds of grain; in 1894 it was one vast stretch of desolation, two hundred miles north and south, four hundred miles east and west. Yet it was the same land that brought forth bountifully in 1891; the same farmers were there to plant and cultivate; in 1891 the atmosphere was full of moisture; in 1894 it was a hot, dry atmosphere that sapped the life from the sprouting grain.

There is an atmosphere of public opinion that causes a school system to blossom and be fruitful; there is another atmosphere of public opinion that takes from a school system even the life that it seems to have.

The school itself is largely responsible for the atmosphere of public opinion in which it lives. If public opinion concerning the school is bad, continually bad, the administration must be at fault, largely at fault. If the school continues for any length of time worthy of the support of public opinion, it will receive such support. If public opinion does not change, the administration ought not to change. That is the best school which most nearly meets the needs of the community where it is located. That school most nearly meets the conditions when it is a great intellectual, moral, and social loadstone or magnet, by its irresistible force drawing all young life into it, and, thru its moving power over young life, readjusting, modifying, and uplifting the life of the older ones. "And if I be lifted up, I will draw all men unto me," said the great Teacher. And the school, if it be lifted up, will draw all the young life of the community to it. And when the young life is touched, the school arouses the parents, and they reinforce the work of the schools; and thus there is a knitting together, a back-and-forth interest that forms a meshwork or

web with the school at the center lifting up. And in this way the school builds up a healthful public sentiment. The school must make itself felt, and it must recognize that there are many other educational forces in the city which, when properly affiliated with the public schools, will lend additional strength to the work of the schools. Among these may be mentioned the woman's club, mothers' and patrons' clubs, bureaus of associated charities, business-men's clubs, daily newspapers, and the different courts before which juvenile offenders and delinquents appear, All these and others can be affiliated with us in our school work.

I believe strongly with William Hawley Smith that "we, the people," today includes a great many peculiar people — the white, the black, the cream-colored, and even the speckled and striped; and that when we speak of the common, free public schools for all the people, it means all the people — all the boys and girls, without regard to their color or condition of life, except that they are boys with some mental ability. I believe further that it is not merely a matter of choice, but a duty that superintendent, principals, and teachers owe to a community to know every girl and boy of school age in the city or ward, and see to it that every one of these children is in school; and that one of the greatest works we can do for a community is to bring all these into the schools: and that the very work of bringing these in puts the school in a position to touch the responsive chord of public opinion; for the heart of the public is always with the children when the public is aroused. But says one: "How can we do these things? How can we bring into our school the children who do not attend, when our boards do not favor it? How can we affiliate the various agencies mentioned?"

If our boards do not favor compulsory attendance, we must educate our boards. It was Henry Ward Beecher who stirred his people on the subject of slavery by putting up a slave girl at auction. If we select a number of families where the children do not attend school and present their claims to the board, these helpless boys and girls will appeal to our boards of education as we cannot, and our boards will gladly give us officers for the work. Then we must select our officers with greatest care. The good common-sense and kind-heartedness of these officers must be above question, or their work will do but little good.

Now that we have our officers at work hunting up and bringing in those who are not attending, we must reinforce their work on every hand. Call upon the president and leading officers of the woman's club. Put the subject before them, ask them to aid us in the work. They only wait for the privilege and to know what we would have them do and how we would have them do it. We must point out the way, and ask them to indorse the movement, to talk about it publicly and privately, and in every way possible to help to make a strong sentiment in favor of the work. They will do it. And the influence of the organization will mold the sentiment in hundreds of homes in the city.

If we have not mothers' clubs already organized in our different wards, let us organize them. When the mothers of a district are brought together at a school, we must tell them what we are trying to do for the boys and girls who are not in school; we must ask them to help us. We should tell them of some of the pitiful or helpless cases; their mother hearts will be moved, and they will pledge us all the help they can give. They will look up the children in their wards who are not in school. They will agitate the subject; and when most of the mothers in a ward talk strongly in favor of sending the children to school, it is very difficult for one or two families to hold out against the popular feeling of the neighborhood; so that the officer finds it very easy indeed to bring all the children of this district into school. Then each year there should be in each ward at least one or two evening meetings of parents, teachers, and supervisors, for conference and a social hour. If the teachers of the school and the women of the mothers' club jointly arrange for the meeting, the fathers as well as the mothers will be there. Here is a great opportunity to come into touch with many who otherwise do not know those of us to whose care they commit their children. Care-

fully, tactfully, we can talk with these people of what we are trying to do for their children, and what we hope to do for all the girls and boys, and they will understand us and join with us in our work. Sometimes, you know, when we try to see to it that all the children have at least some opportunity for an education, parents feel that we have no right to say what their children shall do; but when we meet them in these parents' meetings and talk to them about their boys and girls having the same opportunity to prepare for being men and women that their neighbor's children have, then we appear to them, not as those who would take away their rights, but as those who would help them to see to it that their children have a fair show. Parents' hearts, however crusted over they may sometimes be with ignorance and crime, have still some tender spots toward their offspring, and it is ours to find these spots. It is so much better to win than to simply compel; for, after all, the greatest compelling force is but an intelligent winning force in its ultimate analysis.

Here is a meeting, a parents' evening that was held in one of the poorer wards in a city but a short time ago. The mothers' club women and the teachers had sent a special invitation to every home in the ward. In many cases the mothers' club women had gone to the homes and thus induced the parents to be present. The large room at the school building at 7:30 P. M. was full to overflowing; fathers and mothers were there, not for a show, but to hear and learn of the school and its work. The president of the mothers' club presided. The eighth-grade orchestra opened the meeting with music; then a song by some of the eighth-grade girls—just one of their school songs, not anything specially prepared for the occasion. The superintendent was present, and with him a professor from a department of one of our great universities. This visiting gentleman was first introduced, and talked to the people of their schools and of the changes that were coming into schools, and the reasons for the same; and he talked in a plain, matter-of-fact way that appealed to them and held their attention. This was letting the light in from an outside source.

After he had spoken, there was music by the orchestra; and then the superintendent talked to them, not of compulsory attendance, but of another subject that was on his mind—the importance of their boys and girls not stopping at the close of the eighth year, but taking some work at least in the high school. Many of them knew little of the high school, for it was a district where a great many children never pass beyond the eighth grade. He explained how the high-school course had been broadened by the addition of manual training and a business course; he also explained to them how the high school was open in the widest possible way to their girls and boys; that there were students in the high school who could be there for but two, and in some cases one, recitation hour a day, the remainder of their time being taken up with work in our stores or offices; and yet these pupils in the work they were carrying were making excellent records. He said that, if any of their boys or girls could not come all the time, they would be welcome to take a part of the work and be there a part of the time; that the high school with all its advantages was theirs just as much as the first eight grades.

The parents understood what was intended and their responsive faces told him they were with him heart and soul in the work. The supervisor of primary grades then talked for a few moments of her work, after which was a pleasant social half-hour, when parents and teachers mingled freely.

The value of such meetings in creating an intelligent, healthful public opinion concerning the schools cannot be overestimated. At some of these meetings parents wish to ask questions, so that there is a back-and-forth talking and explaining that results in great good.

But let me say this, that unless we show in all the management and school discipline that the school exists for the children, and not the children for the school, it would be better not to hold these parents' meetings; for even among the most ordinary, common people sometimes there is a vast deal of common-sense that sees thru any mere

pretense on our part. In our attempts to show high per cents. of attendance, and records free from tardy marks, we sometimes defeat the very end for which the schools primarily exist. There is a school of medicine which says *similia similibus curantur*, "like cures like," but even the doctors of this school do not say that the same thing cures the same thing; or, in other words, that if a rattlesnake bites you once, you must have it bite you a second time to cure the first bite; yet we school people do sometimes practice this in our schools.

The social work of a district cannot be done, nor can a healthful public opinion be built up, by suspending boys and girls for tardiness and non-attendance. We must put forth every effort with them and with their parents to bring them to regular habits; this and this alone is right. A persistent effort in this line cannot fail to bring good results. I do not believe in tardiness and irregular attendance, but I do believe that it is better to have some girls and boys in school part of the time than not to have them at all.

There is another class of children that cannot be in school every day and serve the best social good; and when we fail to serve the best social good, we fail to build up a healthful public sentiment: a large family of little children; a frail woman trying to decently clothe and keep her family on the small wages her husband earns as an ordinary laborer; the washing, the sewing, the cooking—in fact, all the work of the home—to be done by the mother with the help of the children; she cannot do it alone, and she would shun the idea of charity; she is self-respecting, and so trains her children. What is right in this case? I will tell you what we must do to try to help her and at the same time help the children. We must permit the children to stay at home busy days to help the mother. We must try to make the school help this home to do the best possible by the children of the home, while the mother is doing her utmost to give her children the advantages the school offers and at the same time to keep herself and family out of the dependent list. It is to my mind a great social work to help families to keep their self-respect; for the school to come to their needs in such a way as to help them to feel that they are independent. This case only emphasizes the importance of the close relation that must exist between the home and the school, in order that the school may do the great social work that it is designed to do, or that modern life commits to it to be done.

We should not fail to keep in close touch with the Bureau of Associated Charities and other benevolent organizations of the city. They gladly join us in keeping children from unfortunate homes in school; or, in other words, they will clothe and care for the extremely needy, while we follow up their work by keeping these children in school. In a great many cases where the families are not what would be called destitute, where only a little help is needed, the mothers' club can and will give aid in a way that will not break down the self-respect of the family. From time to time these women will spend an afternoon with some tired, overworked mother, helping her with her sewing, sometimes taking with them clothing that can be worked over for the little ones of the less-favored home.

The schools cannot be interested in helping the children of the unfortunate without coming into a working relation with the courts before which juvenile dependents and delinquents appear. All the courts look with favor on the school whose officer appears in behalf of the neglected children. Many a child can, thru the intervention of the school officer, be saved from the jail and redeemed to a better life than he has known. Often the boy or girl will be given a trial at the request of the school officer on condition that he attends schools regularly and is obedient to school authority.

In Illinois and some of the other states the school authorities can ask the courts to appoint certain persons probation officers for these delinquent or dependent children; and the fact that the children know that the court has committed them to the care of these persons, instead of sending them from home to some institution for delinquent children, exerts a great influence over them, and causes them to feel that they must attend school

and be obedient to their school authority. Then, too, they appreciate that a kind act has been done for them, and they usually look upon those who have interested themselves in them as their friends. I could tell you of instances in more than one city of children that have been helped in this way.

In the work of the public schools we must remember that we have no more faithful allies than the daily press. If the school administration impresses itself on the community as an administration of service, and not of political intrigue and dishonesty, the daily papers will gladly give their columns that the work of the public schools may be placed before the people. This is a great opportunity to reach the people — to help them to understand what we are trying to do. I sometimes think that we school people do not fully appreciate the great work the daily press does for the cause of public-school education. Our work should always be of a character that we should gladly have it spoken of in the daily papers.

Is a large educational gathering to meet in our city? Then the business-men's organizations stand ready to aid in arranging for the proper entertainment of the visiting people. As they are interested in the visitors, they become interested in the subject that brings these people together, and, unconsciously at first to the business-men, the educational interests of the community are presented to them in a new light. Of course, most of them have children in school, and so are interested; but when they meet leading educators from other cities and hear them talk on various topics related to school interests, they immediately begin to wish to know whether or not schools in their own city take rank with the best. This leads to an intelligent investigation on their part, and they thus become active supporters of every advance move made by the administration of the schools. Everything that tends to make prominent the best in education, so far as known tends to arouse a strong public opinion in favor of a school system when it is good.

The high school has much to do with public opinion concerning the school system. It must have breadth as well as depth; courses that fit students (pupils) in the best possible manner for college, and courses that appeal to those who do not look to a college or university education. This giving breadth to the work of the high school appeals to all classes and makes the high school the people's school, and not the school of a certain class. Then, too, we must use common-sense in opening the doors to the high school to all who can possibly avail themselves of its privileges. When we do this, the common sense of the people approves it.

Here are some boys and girls who spend one or two hours each day in class work at the high school, the remainder of their time being given to work in stores and offices. Their lessons are prepared in the evenings. In almost every city is a large class of these young people who are early forced to earn their living, and yet would snatch a little time from their daily labor to receive instruction, if they knew it were possible to receive such instruction free at the public high school. If they should have but one hour a day, the school should welcome them, that they may be the better prepared to contribute their part to the common social good.

It is not only a privilege, but a duty, that a school administration owes to the people to let them know what the high school has for them. In some wards but few of the parents look upon the high school as for their children. At patrons' meetings, and in fact on all occasions, we must lead these parents to appreciate the fact that the high school is for their children; we must inspire them with a desire for their children to enter the high school.

To help to make the connection close between the high school and the eighth grade, we should have every eighth-grade class in the city spend a day at the high school, visiting. Set apart certain days for certain schools to visit. When these eighth-grade boys and girls come to the high school, let them go to the principal's office, where he will give each eighth-grade boy into the hands of some high-school boy for the day, and each girl

to some high school girl. In this way no one feels lost or uncertain what to do or where to go, but is conducted about from recitation to recitation, so that he feels as much at home as tho he were in his own ward school. This day's visit bridges the gap between the eighth grade and the high school for many a boy or girl, and is the beginning of what proves to be a full high-school course.

If the executive head of a school administration, the superintendent, impresses himself on his board and on his people as a man who knows his business, and is full to the brim with the spirit of service, willing to give himself freely for the cause he represents, his board will gladly accord him the right to select teachers and other supervisors of the schools — a right which must be largely his or all his planning may come to naught because of inefficient assistants. No school without a strong teaching force can long hold the respect and confidence of the people.

And with this privilege comes a duty; if he selects his teachers, he must bear the responsibility of dropping the inefficient ones. He must be willing to tell a teacher where she is short and lend her all possible aid to overcome her weakness; then after he and his supervisors have done all they can for her, if she is still below the standard, tell her that she is unable to do the work, that he cannot recommend her for re-employment. Even this, not always a pleasant duty, can be done in a spirit of fairness that will add to rather than detract from the good name of the school. When it is known that efficiency both in the ability to instruct and in the spirit of the work are the characteristics without which no one can hope to hold a position for any length of time in any system of schools, the confidence in the administration that this knowledge begets among the most intelligent of the community creates a strong public opinion in favor of the schools.

DISCUSSION

SUPERINTENDENT R. A. OGG, Kokomo, Ind.— I wish to emphasize just two of the many good points made by Superintendent Stableton — the value of parents' and teachers' clubs and the tendency of teachers to be impatient over absence and tardiness. For seven years I have had experience with parents' clubs in connection with the schools, and have found them very helpful. They bring parents and teachers into closer sympathy. They give parents a better idea of the spirit of the schools, and teachers a truer understanding of the attitude of parents. They give the superintendent an opportunity to explain the policy of the schools; answer questions and meet parents face to face. One very important gain is that, when difficulty arises, parents are much more ready to take suggestions and to see the reasonableness of the course pursued. They are valuable also in making the schoolhouse the intellectual and social center of the district.

Regarding the impatience of teachers as to absence and tardiness, I have found it very difficult to get teachers away from the idea that they are measured by the per cent. of punctuality and attendance they secure. Such is a false basis of estimate and leads teachers to be unduly exacting upon pupils, creating friction between the school and the home. There are times when a child ought to be tardy or absent, not only because the home may imperatively need him, but because he should learn that helpfulness at home and self-sacrifice are worth more than adherence to the form of the rules regarding attendance. Teachers should learn the home conditions and distinguish between carelessness and a conscientious doing of what appeals to the child as a duty to the home. If we only knew the occasion of the absence or tardiness we would sometimes sympathize where we now condemn.

W. S. ROWE, superintendent of schools, Connersville, Ind.— In our schools we carry out the same general plan of parents' meetings as outlined by Superintendents Stableton and Ogg. We have, however, carried it one step farther, and have federated these several district clubs. The federated body is officered in like manner by parents. Its meet-

ings are at night, take place three times a year, and are referred to as "public educational meetings." By this arrangement fathers are able to attend.

At one of these public meetings the topic for discussion was manual training. The paper was carefully prepared and presented by the high-school principal. Equally thoughtful papers on the subject were read by two of our influential public-spirited citizens. Others participated in the discussion which followed. This occurred two years ago, and the interest taken then and since in the subject of manual training has undoubtedly had the effect of encouraging our school board to take an advanced step and incorporate this important educational feature in the plans for our new high school now in process of building.

With us similar influences are tending to make the school a social and educational center. As indicative of this, our new building provides on the second floor for an assembly hall to seat six hundred, and also on the first floor for a good-sized corridor and reception hall. Provisions are made for brilliant natural and artificial light. In the latter the colonial fireplaces at either end of the corridor, the table and bookcases in the reception hall, will give a fine home-library effect. This will be open for use, not only to the mothers' clubs, out also to the literary clubs of the city.

As supplementary to the thoughts given in reference to knowing the home conditions of delinquents, in order to deal with them sympathetically, we have a plan which works admirably. Our teachers write a card to the delinquent, calling attention to some highly interesting things which have happened in the room during the day, and which he has missed. This notably decreases unnecessary delinquencies.

SUPERINTENDENT W. W. CHALMERS, Toledo, O.—In Toledo we have arranged with the business manager to take the school census by primary districts instead of the old plan of by wards. The census enumerators furnish two copies of the census list; one is for file in the board of education office, and the other copy is handed to the principals of the elementary schools at the opening of the school year in September. This list contains the names and ages, addresses, and parents' names of the children of the district. Some time during the first week of school the principal calls a meeting of his teachers and reads to them the list of children of the district coming within the compulsory-education age. Those that have been enrolled in the school are checked, and those that are not enrolled in the school form a new list to be investigated by him and by the truant officer.

SUPERINTENDENT H. V. HOTCHKISS, Akron, O.—I wish to emphasize the power of the teaching force in any city to create and foster a just appreciation on the part of the public of the work that is done in the schools of that city. Any system of schools of any value whatever has a certain genius or spirit which distinguishes it from any other system, which embodies itself in certain characteristic principles and processes; in short, which brings things to pass in an effective and desirable manner.

No body of people can have the training and opportunities which will enable them to know what the schools are doing so thoroly as the teachers themselves know. Every superintendent, therefore, should enter into the confidence of his teachers; should put forth his best effort to lead his teachers to know, in a broad way, the spirit of the system of schools in which they labor. I fear that too many superintendents satisfy themselves with the details of the work, grade by grade, and do not instruct their teachers in a broad way along the lines that I have indicated. Even very good teachers are usually familiar with the work of their grades or departments only, except in a very narrow and limited way.

Whenever the knowledge and ideals of the teaching force as to the broad work done in a school system shall approximate the knowledge and ideals of the superintendent, all the teachers who are loyal and earnest, meeting representatives of the entire city, as they do, in church work, club work, social gatherings, etc., will, with here a word and there a word, little by little build up thruout the entire community a public opinion of the work

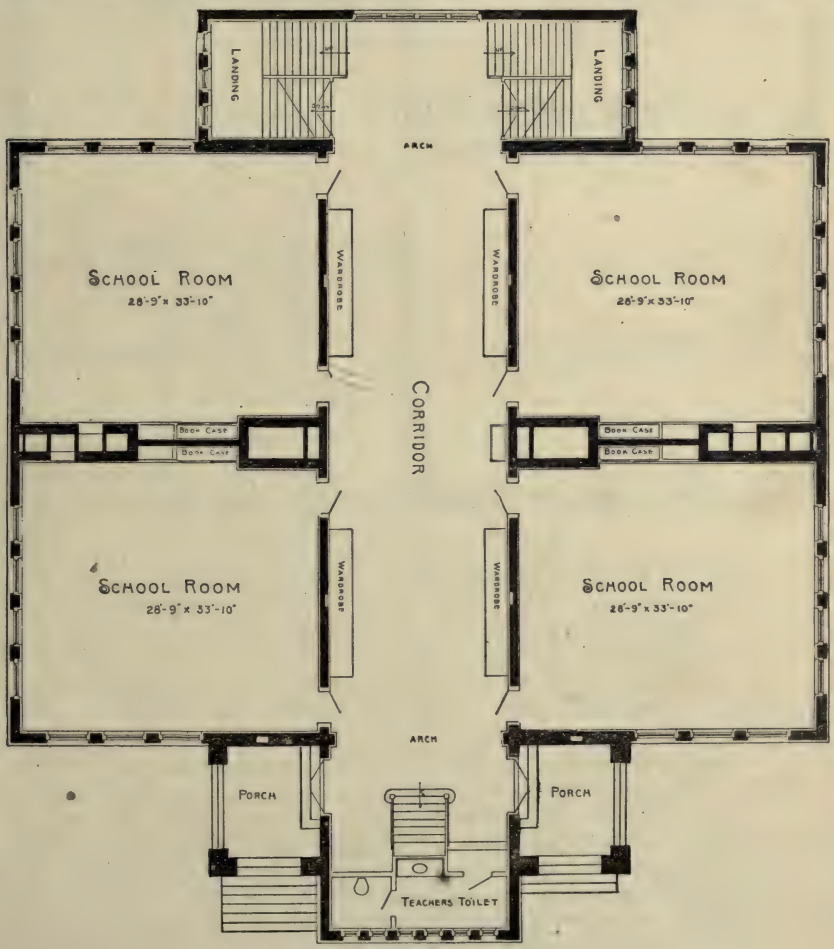
done in the schools that will be of inestimable value to the schools themselves and to the work they are attempting to accomplish. Confide, then, in your teachers; let them know the best that you have planned for your schools; and, believe me, you will find them a valuable and helpful power in your community.

WHAT SHOULD BE THE FEATURES OF A MODERN ELEMENTARY-SCHOOL BUILDING

CLARENCE F. CARROLL, SUPERINTENDENT OF SCHOOLS, WORCESTER, MASS.

The ideal elementary-school building has not yet been built, but here and there we have all found buildings parts of which appear to satisfy our most critical judgment. In this statement I shall seek to put together these fragments into an ideal whole.

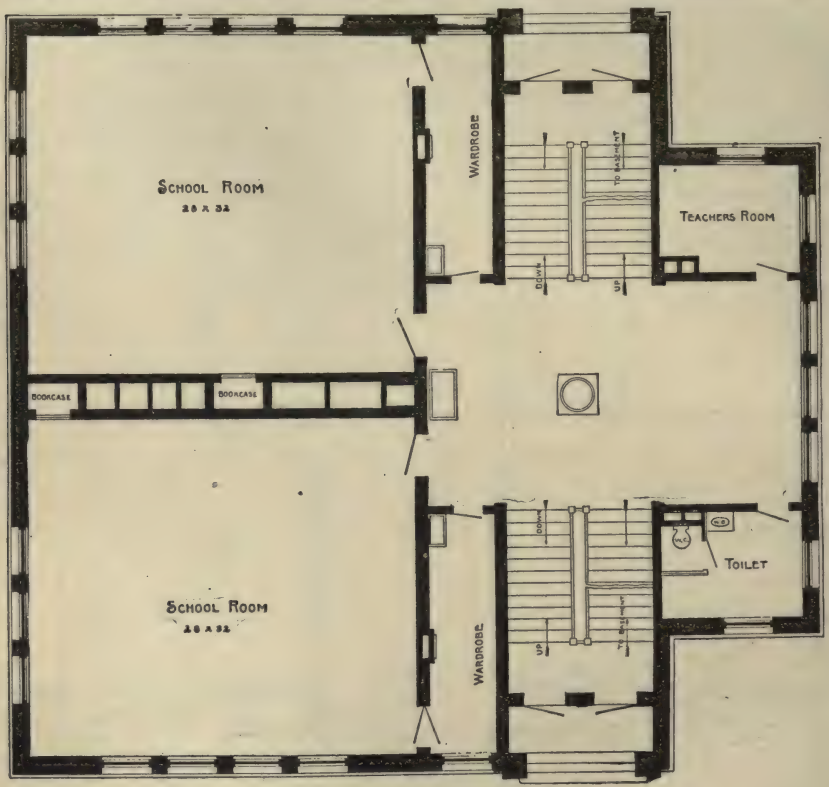
There are two types of school building that appear to be most generally acceptable. Plan No. 1 provides for four rooms to a floor. The first floor may be duplicated above



PLAN NO. 1.—Woodland Street School.

once or twice, making eight or twelve rooms in a building. The hall runs thru the center, with two rooms upon each side, and with a projection running out from the hall, to which an addition may be made. This addition is easily accomplished, since a square or oblong may be added at a minimum expense.

Plan No. 2 shows a four-room building, with two rooms to a floor, to which an addition of four or eight rooms may be made. No. 2 is intended to be the reverse of No. 1.



PLAN NO. 2.—Harlow Street School.

In the city of Worcester most buildings are built with a view to an addition, and either plan No. 1 or plan No. 2 is usually adopted. A six-room plan is frequently followed where the amount of land is limited.

Either of these shows a building architecturally complete in itself. In case of an addition, the open space between the two buildings admits light freely to the middle of what might otherwise be the center of a long dark hall.

In the model elementary-school building at least half of the third floor should be left vacant as a gathering-place for either the school or the neighborhood. In the basement there should be left ample space for play-rooms.

The water-closets for girls and boys should be on opposite sides of the building. On the assumption that there would be about two hundred boys in an eight-room building, there should be about twelve urinals. Underneath these there should be a single trough with no subterranean passage, easily accessible to the janitor. These should be divided into stalls, and in no case should boys be exposed to one another when standing at the urinals. There should be a slate incline running so far back that no urine can possibly come into contact with the brick work.

There need not be quite as many closets as urinals. Ten is a reasonable number for an eight-room building. Each of these closets should have a separate inlet and outlet. In other words, each should be as complete as if it did not belong to a system. The improved closet is in strong contrast to the old Smead system — to the long box trough still found in many old schoolhouses.

There should be an ample sink made of slate, with twelve or fourteen faucets, and a separate cup for each faucet.

There should be an exit into the yard from each side basement, that pupils may not be called to pass back up the stairway to get out of doors.

There should be an ample play-room on each side of the basement. In the ideal schoolhouse one of these basements might be used as a library and reading-room, to be open night and day.

The bath-room must not be omitted from the model elementary school building. Long ago it found its place in school buildings on the continent. Boston and Springfield have each two or three schoolhouses with bath-rooms. One such building may answer as a center for a district, children being sent for baths as for manual training. The details are easily managed at comparatively slight expense. Many children do not have the privilege of a bath at home. Some are so unclean as almost to create a nuisance in the schoolroom. Apart from the consideration of health, a thoro cleansing of the body is the first step toward rendering these children wholesome.

If a furnace is used for heating and ventilation, one large furnace should be provided for every two, or at least for every three, rooms; one stack heater should be provided for each set of closets. For an eight-room building this would make at least three large furnaces and three small ones — six furnaces in all. This makes an admirable, tho expensive, system of heating for a cold climate.

If steam is used, direct radiators should be placed in the rooms, with indirect heat from coils provided for ventilation. A fan is generally most effective for ventilating large buildings. Steam pipes running around the room are much more reliable than any other form of radiating surface.

At least one side of the schoolroom should be pretty completely taken up by windows. Every available inch not taken up by windows should be filled with blackboards. Solid slate should always be used for the blackboards.

There is no excuse at the present time for using anything but adjustable desks. These have become so familiar as to call for no particular discussion.

Iron ceilings should always be used, both because in the end they are more economical and because they are safer. There should be no platform in the room. Two closets should be built into the wall, providing ample room for the storing of books and collections. These closets take up some room, but this may be offset by a reversible standing blackboard, which is a piece of apparatus with which every teacher should be supplied.

This plan provides for a hall (twenty-two feet wide) running from one end of the building to the other. Light and air are admitted freely from both directions. This hall is so large as to furnish in itself a play-room upon occasion, or, in the absence of an assembly hall, a place for gathering together the school for public exercises. The dressing-rooms (three feet and one-half wide) may be built into these halls without interfering very much with free movement. It is, however, very desirable that these dressing-rooms should be separated from the main building and ventilated. This can most easily be accomplished by means of sliding partitions. With these sliding partitions, very little floor space is needed for the dressing-rooms.

Tar concrete should be laid in the play-rooms, and the same material should be laid in the basements, and also around the outside of the building to a width of three feet.

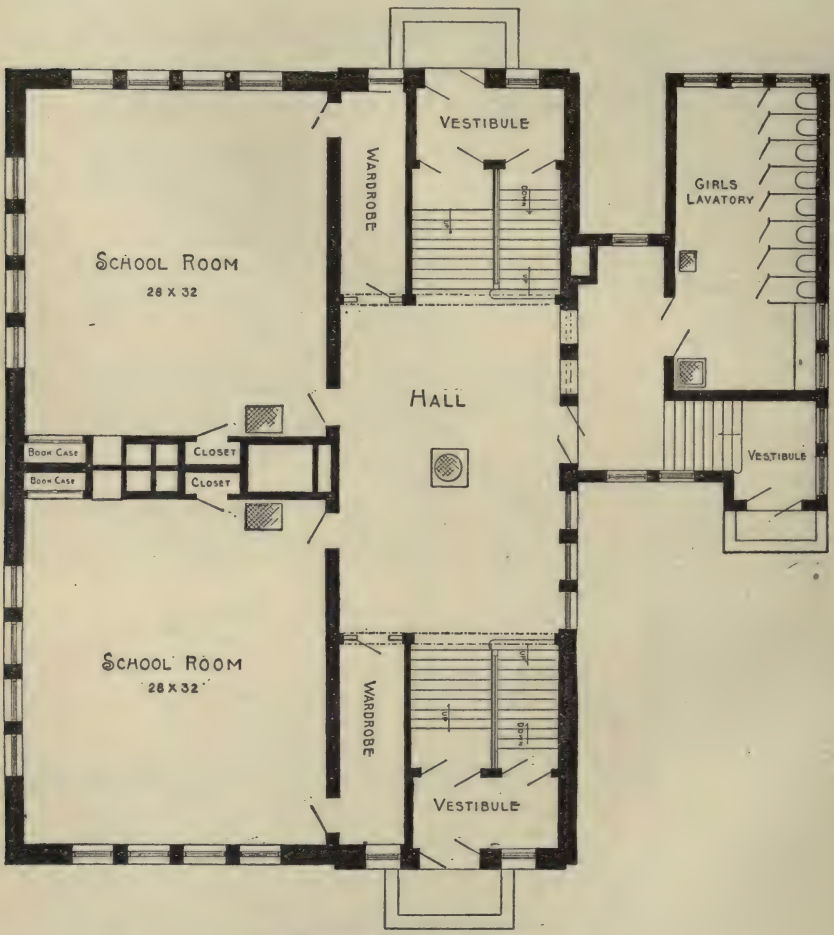
There should be a room for manual training and another for sewing in buildings occupied by intermediate and grammar grades.

In the primary building there should be a room set apart as a kindergarten room, with windows reaching practically to the floor.

The halls and rooms in the model building should be tinted from the outset.

There should be plants in the building itself, and a lawn bordering the playground, with shrubbery and gardens both for plants and vegetables cared for by the children.

These are undoubtedly at the present hour an essential part of every model elemen-



PLAN NO. 3.—Canterbury Street School.

tary school, and a building must have a principal who is intelligent enough to keep all this machinery in order. The janitor should keep the place clean and wholesome, and co-operate as far as possible in securing all that is here suggested. The principal should know his janitor as well as his teachers, should have his confidence, and constantly study with him the action of every furnace and boiler, every draft, damper, and valve. After everything else has been provided, this intelligent co-operation between principal and teachers, on the one hand, and between principal and janitor, on the other, is indispensable.

The development of the modern school building has been steady, and is apparently quite complete. From the basement up, every part has been the product of scientific

investigation and long experiment. There ought to be no question about the main features of this building. We may make the rooms small to accommodate a less number of pupils, or we may add library and entertainment rooms. We may add artistic furnishings, we may add pictures and carpets, we may make the school as elegant and as comfortable as the best home. When we do all this, we shall not have done too much.

Plan No. 3 shows the outline of another style of building. On one side of this building is the hall. On the other side are the rooms, two or more in number. In Brookline, where this model prevails, there are usually four rooms on a side, each of course with its separate entrance from the hall. Sometimes one of these opens into another. The entrance to the hall is sometimes on the side and sometimes in the front. These details are not material. An elegant new building just completed in Springfield, Mass., follows substantially this plan. The rooms, however, extend on three sides of the hall. This limits both the light and the space.

To illustrate this plan more fully, I will describe briefly the Canterbury street building in the city of Worcester. In this building there are two rooms upon the first floor (twenty-eight by thirty-two feet). The hall is twenty by thirty-two feet — in itself a fair-sized room. Stairways up and down are located at both ends of the hall, and light is admitted from both. Light is also admitted from the weather side of the hall.

Extending backward from one side of the building is a passageway connecting the main building with a two-storied annex used for sanitaries. The boys' sanitary is on a level with the basement floor, and the girls' sanitary is on a level with the first floor. This annex might easily be raised another story, providing for an annex on a level with the second floor.

From a moral standpoint, this arrangement is certainly ideal. As a matter of fact, the girls never need go to the basement for any purpose. In the history of every school there are complications and unfortunate incidents in connection with the passage of children, and especially girls, into a part of the building practically underground. Girls are naturally timid, and, if possible, ought not to be sent on so long a journey and into so unattractive an atmosphere.

Another feature of this building is that the blackboards and the windows are near the floor. There is still a strange conservatism that prevents school committees from lowering both blackboards and windows. In another six-room building in the city of Worcester the windows are only two feet from the floor. At Teachers College in New York city the windows in the kindergarten department reach quite to the floor, and the recesses are filled with plants.

If these rooms are used as kindergarten rooms, they may be opened together, as is the case in the new primary building in Springfield already referred to. One of these two rooms is used as a play-room only and the other as a working-room only. This does away with the necessity of handling the tables and chairs, which is no small task.

The first floor may be duplicated in a second and in a third floor.

In another building in Worcester the upper floor is given up to a hall which may be used as a play-room on a rainy day and as a gathering-place for the school or for the community. Large recreation rooms are also found in both basements.

DISCUSSION

Superintendent George Griffith, Utica, N. Y.—I desire to supplement at a few points the remarks of Superintendent Carroll. Also I must disagree with him upon one point.

Our experience has taught us to use exclusively the plenum fan to drive the air for ventilation. All other plans fail on some days or in some rooms. The entrance of the air is thru a large enough flue to furnish the required amount of air with the rate of flow not over 300 to 400 feet per minute. The air comes into the room at about two-thirds of

the height of the room, and the impure air goes out near the floor on the same side of the room. Facilities should be made for circulating the air of the building outside of school hours in all rooms not provided with direct radiation. This is to save fuel. We get the best results at least expense from a combination of direct and indirect steam heat.

Again we insist upon *entire* separation of the ventilation of the toilet-rooms from the ventilation of the schoolrooms and corridors.

We save expense by partitioning off the sides of the corridors for cloak-rooms by the use of wire or expanded metal with one-inch or one and one-quarter-inch mesh and proper supports.

In every school we now use, and greatly like, stationary drinking-cups, with water constantly flowing over the edge during hours of use. They solve completely and at small cost the problem of danger of contagion from ordinary drinking-cups used in common.

Some three years since I wrote to six or eight of the best authorities I knew upon the question of the best color for school walls. These authorities included artists, eye specialists, and schoolmen who had made a study of the matter. The answers received showed a preference for very light Nile green for side walls and a clear white for ceilings. For rooms with northern exposure a light terra cotta was favored by several. We have followed this scheme for three years, and are entirely satisfied both with the artistic effect and with the comfortable feeling these colors give to the eyes of those in the rooms.

The point where investigation and our experience lead us to differ from Superintendent Carroll is in the matter of lighting. We are strongly in favor of unilateral lighting. It is better for both pupils and teachers if sufficient light can be secured from one side. We find that this can be done by massing the windows upon one side of the room, by using iron mullions instead of brick piers, and by carrying the windows up to the ceiling. By this treatment in an ordinary room of twenty-four by thirty-two feet, about 20 per cent. of floor space may be secured in glass surface. This is regarded as sufficient, except where there are serious obstructions to the light caused by adjacent buildings or dense trees. In such cases "factory-ribbed" glass should be used to improve the transmission and dissemination of the light. By this arrangement, moreover, no desk need be farther from the window than one and one half times the height of the top of the window from the floor — a desirable condition.

Question by a superintendent: "What do you use to shut out the direct rays of the sun?"

Answer by Superintendent Griffith: We never use blinds or dark shades. The narrow streaks of light admitted thru blinds are very injurious to the eyes, and dark shades shut out altogether too much light. We prefer very light straw-colored or very light green shades of Roxonia sun-fast Holland. We hang them double-wound on spring rollers at the center of the window, with a cord over a friction pulley at the top of the window, and so arranged that any part of the window may be shaded without shading the rest of the window.

We have two school buildings equipped with shower-bath facilities for both boys and girls. These have proved so beneficial that we are to put them into a third building this summer. The cost of equipment of two bath-rooms in one building was about $400. The cost of running these for one year was less than 3 cents per bath for over 3,700 baths *voluntarily* taken by the 450 children of this school. We furnish soap, hot and cold water, and a clean bath-towel and wash-cloth for each bath. The janitor and his woman assistant supervise the baths under the direction of the principal. I have no hesitation in declaring baths a very beneficial, and not expensive, addition to all school buildings in sections of a city where the great majority of residences are not equipped with bath-rooms.

THE FULL UTILIZATION OF A PUBLIC SCHOOL PLANT

CHARLES W. ELIOT, PRESIDENT OF HARVARD UNIVERSITY, CAMBRIDGE, MASS.

[AN ABSTRACT]

In approaching this subject we should first consider to what extent the public school plant is now ordinarily used. The following estimate is a tolerably close approximation to ordinary practice at present: Schoolhouses may be said to be used about six hours a day during one-half of the days in the year, Sundays, vacations, legal holidays, and Saturdays or two half-holidays in each week, having been deducted from the total number of days in the year. It is obvious at a glance that so partial a use of an industrial plant would never be thought possible. No productive industry could be successfully carried on with so incomplete a use of an expensive plant. Yet public education ought to be the most productive of all industries; and its plant should be more fully used than any other. It is as true of the country as it is of the city that schoolhouses are used but a small portion of the working time of an industrious population.

What sort of a school plant can best be completely utilized? In the first place, it cannot be expected that ordinary school buildings should contain machinery or other elaborate tools. No exceptional equipment is expected. The problem is to utilize more fully the ordinary schoolhouses provided for the first eight grades, as well as the high-school buildings. The first requisite is the means of brilliant lighting. When, but a short time ago, it was proposed to utilize in the evening several of the Boston schoolhouses, it appeared that most of these buildings had no adequate means of lighting. Here is an initial expenditure. In the next place a schoolhouse which is to be used twelve hours out of the twenty-four will need some rooms which are not completely occupied with fixed desks and chairs. It will need some rooms which can be used for such exercises as drawing, modeling, dressmaking, embroidery, cooking, and basketry. Again, it will need an assembly-room provided with seats which adults can comfortably occupy; and this room should be provided with an electric lantern and the accompanying fixtures. Lastly, no schoolhouse can be made as useful to the public as is possible unless it has a yard, playground, or roof garden. The yard or playground need not necessarily be immediately attached to the building; it may be a little removed, if the access to it be convenient. Thus relatively cheap back land, instead of front land, can be utilized for the yard or garden.

The time is ripe for a fuller utilization of public school plants. It is a historical fact that improvements in education have generally been originated and developed in our country in private and endowed institutions, and have spread from them to the public schools. At this moment

a great deal of the work which I am about to describe as suitable for public school systems is already being done in many parts of the United States by private and endowed institutions of education and religion. Thus, evening work on a large scale is carried on by such institutions as the Cooper Union, and the Pratt, Drexel, and Armour Institutes. So it is by the Young Men's and Young Woman's Christian Associations. Vacation work, which was started at Harvard University more than thirty years ago — originally by the two great naturalists, Asa Gray and Louis Agassiz — has now been adopted by many universities, and has proved to be an important enlargement of university influence and serviceableness. At the University of Chicago the summer term is the most important term of the year. I recall distinctly Asa Gray's plea for a summer school in Botany: Here are the herbarium and botanic garden maintained at large cost in labor and money, and we fail to utilize it during the three months of summer, the very months in which they could be most serviceable. It was an argument for the better utilization of an expensive equipment. The recent report of the Commissioner of Labor at Washington on "Trade and Technical Education" contains a great body of evidence concerning the serviceableness of evening schools all over the civilized world; and one interesting feature of this exhibit is the large proportion of private and endowed enterprises in this field. Trade schools were first established in the United States by private benevolence, and the newer schools of this sort, like the Lick and Wilmerding Schools at San Francisco, have the same origin. Another evidence that the local institutions of public education fail to meet a widespread and large demand for instruction may be found in the extraordinary development of schools of correspondence which has taken place in our country during the last ten years. It is hard to imagine a more disadvantageous way of getting instruction than the occasional receipt of typewritten directions and comments from a remote instructor who has never seen his pupils; but nevertheless over three hundred thousand persons are at this moment maintaining correspondence with one such school in this country, and these persevering and ambitious pupils are scattered all over the United States in both city and country. Unable to get what they want at their homes, they pay considerable sums for this extraordinarily uninviting and uninspiring sort of instruction. What a picture of local educational desolation do the facts about schools of correspondence set before any mind which has a little imagination! The experience of the Chautauqua Reading Circles sets in a clear light the same sort of local school unfruitfulness.

I turn now to a description of the work which a fully utilized school plant might do; and the first branch of this part of my subject is evening schools. Evening schools, like vacation schools, are in our country of private origin, and in many cases religious or philanthropic associations started them. Fifty years ago I was a teacher in an evening school in

Boston which was carried on by an association of churches in that city. All the teachers were volunteers. The equipment was very meager, and the physical surroundings deplorable; but it was good pioneer work, and showed the way toward the somewhat ample organization of evening schools which now makes part of the Boston public school system. The fundamental idea of the evening schools is to continue and supplement for individuals the school training which was too early broken off. They are continuation schools. They are schools for boys and girls who have already worked many hours during the day. Experience seems to have proved that for such pupils, so occupied during the day, manual and laboratory subjects and methods are to be preferred to book methods. Such pupils can be taught from things better than from words and phrases. They can more easily attend strenuously to exercises which involve the use of the hands as well as of the eyes. In such schools the elective or optional method is indispensable; for the pupil gets more profit from a single subject than from many, and that single subject should be one which naturally enlists his interest and zeal. It is interesting to observe that the present program of the Boston Evening High School is a longer and richer program than is provided for the day high schools, and that the system is thoroly elective, not only for short-term pupils, but for the long-term pupils who seek the diploma of their school. Thus the total amount of instruction offered by the school in all its subjects represents eighty-three points on the program; but to attain the diploma of the school only twenty-four points are required. The evening schools offer a continuation of instruction to boys and girls who have been obliged to leave school at the conclusion of the eighth grade, or even earlier. They offer additional instruction to boys who have been obliged at too early an age to become apprentices in shops and factories. The evening school ought to be a refuge and refreshment for an apprentice. The objection to apprenticeship is that the interest of the shop or factory is constantly in collision with the interest of the apprentice. It is the interest of the shop that the apprentice should learn to do a few things well and stop there; it is the interest of the apprentice to learn to do many things and to understand many more—to comprehend a whole machine, and not that part only to the production of which he day after day contributes. The evening school should enable him to widen his knowledge; to understand principles as well as practice; and to escape from the contracting influence of automatic repetition.

The moment we come to consider what the subjects are which may be most profitably taught during the evening in our, at present, unoccupied schoolhouses we shall see that some modification of the arrangement of the rooms and of the furniture in the rooms will ordinarily be needed. There will be needed, for example, rooms in which conveniently to teach drawing, both free-hand and mechanical. The

value of drawing as training does not seem to me fully appreciated by the ordinary American school superintendent and school-teacher. In the first place, drawing is a mode of expression which is universally useful in all callings or occupations. There is no mechanical art or trade and no learned profession in which a capacity to draw is not a source of power as well as of enjoyment. Drawing develops the perception of beauty and of the sources of beauty, and cultivates in a quick and effective way mental accuracy and habitual regard for truth. As a means of conveying ideas and of recording impressions it can be compared only to language, and is often far more convenient than language. Those of us who cannot draw — and I fear that we are a great majority in this meeting of superintendents — are seldom impressed with a more disagreeable sense of personal inferiority than when we watch a man or a woman who uses a pencil effectively in sketching or designing, or a blackboard and crayon in lecturing. Who of us has not watched with great delight, but with a sense of hopeless personal inferiority, an artist depicting with rapid strokes a landscape or a person, or the mobile surface of the sea? It is by practice in drawing, and particularly in free-hand drawing, that the intelligent young artisan may most easily be brought to unite artistic and technical capacity. After drawing come clay-modeling, pattern-making for the parts of machinery, and the experimental study of electricity and electrical apparatus, as useful subjects for boys in the evening schools, and for girls sewing, cooking, household economics, dressmaking, millinery, and embroidery. All these arts have much educational as well as industrial value; they train the mind as well as the hand, and they may all impart habits of accurate observation, just reasoning, and moral rectitude.

The next enlargement of the use now made of school buildings should be their use for vacation schools, not for a short term of four or five weeks, but for seven or eight weeks during July and August. Vacation schools, like evening schools, were first established by private enterprise, and with a view to keeping children off the streets and giving them congenial and improving occupations. They have been adopted by some American cities, and have uniformly succeeded wherever adopted; but they ought to become a regular part of every urban school system, and they should be as numerous and as well-sustained as the public schools which are open the rest of the year, altho the resort to them will not be so large as it is to the ordinary schools maintained from September to July. In these schools the instruction should chiefly concern things, and not language, just as in the evening schools. The pupils need something to do with their eyes and their hands; hence the same subjects which are used in evening schools should form the staple of instruction in vacation schools. In many cases the evening-school teachers from September to June can be employed for the vacation schools, for this staff can very well take its vacation in June.

We should not imagine that either the evening school or the vacation school is to be regarded as play; on the contrary, both are real work. Both provide a serious mental training, and both ought to have an excellent effect on the moral quality of their pupils. The pupils' minds should gain in accuracy of observation and clearness of conception. The cultivation of good judgment in productive labor may be more successfully carried on in manual operations than in mathematical operations or in the study of languages. Whatever illustrates and inculcates good judgment in work during youth will add to the industrial efficiency of the nation when the youth become adult. There is no well-directed manual labor or laboratory work which does not give valuable training in the power of application, in the capacity to give keen attention and to grasp quickly and firmly the gist of the matter under consideration. This power of application may be as well developed in the classes appropriate to an evening school or a vacation school as it can be in the classes appropriate to an ordinary day school; indeed, for some minds this invaluable power of application can be developed only thru manual training and laboratory processes.

I have said that there is strong moral training in the work appropriate to evening schools and vacation schools. Let me illustrate this proposition: To make a true joint between two pieces of wood or a true socket for a square stanchion is a process in which may be displayed all degrees of accuracy in planning and of conscientiousness in work. As a test of honesty in labor I know nothing better than the preparing of a plane piece of metal, proved to be plane by the application in all directions across it of a veritable straight-edge. The foreman of a school shop in which such work is done has, in my opinion, better means of ascertaining the moral quality of the pupils under his charge, with all its various shadings and gradings, than the teacher has in an ordinary schoolroom where language, geography, and history are taught. In all good workmanship there is a large element of morality, and this fact comes out very strikingly in every evening school and vacation school where the proper manual and laboratory subjects are utilized. This is a strong argument in favor of vacation schools; for the contrast between the kind of mental and moral training which they supply and the effect on idle children of the sights and sounds of thronged city streets is a very striking one.

The next additional use of schoolhouses is evening use for adults as well as children. This use is described by the phrase "the schoolhouse an educational center." It regards the school building as the center of various instructive entertainments offered gratuitously to the people of the neighborhood, but particularly to the families and friends of the school children. These entertainments comprehend singing classes, performances by local choruses, bands, and small orchestras, readings of poetry, fiction, travel, and the drama by good readers, men, women, or

children; the acting of simple plays by children or adults, and lectures, illustrated by the lantern, on architecture, sculpture, city government, landscape, history, biography, the useful arts, and social questions. The illustrated lecture has in recent years been brought to great perfection, and has become a very interesting and profitable mode of teaching. It used to be laughed at as an easy method, fit only for children and other inattentive persons; but it has firmly established itself as superior in all subjects to any written lecture without illustration, not only for popular audiences, but for university audiences. Nowadays even Latin and Greek cannot be taught well without the lantern as a means of illustration. All the sciences need it, and the teaching of history can be effectively vivified by it. For these instructive entertainments in great variety the assembly room of all modern schoolhouses can be advantageously used four or five nights out of every week from the 1st of November to the 1st of May. In a densely populated city the schoolhouse can thus be made the center of an active, intellectual interest for persons of all ages, from the child of fourteen to the grandmother and the grandfather. The schoolhouse should be the most active social center of the neighborhood, kept so by the interest in the music, recitations, plays, readings, and illustrated lectures which there can be enjoyed. This work needs a sympathetic director who knows how to enlist in it all the available talent of the neighborhood and much outside talent besides. If it be objected to this suggestion that it is a new function for the public school to provide pleasures for the populace, I reply that the adding of pleasures, joys, and satisfactions to human life ought always to have been recognized as the principal function of every school and of all education.

Finally, the school yard or playground ought to be utilized by the neighborhood whenever the school is not in session. For this purpose the playground ought to be decorated at its borders with vines and shrubs, and provided with seats. It should, of course, have a large asphalt or gravel surface, in order to secure quick movements of the children during recesses, and this surface should be accessible for free games to all the children of the neighborhood, when the school is not in session. There ought also to be provided in every school yard sand-boxes in which babies can play at all times of the day when the weather is mild. The mothers of the neighborhood should be encouraged to come and sit in the school yard with their babies or little children, whenever the weather permits. In short, the school playground should be an open-air parlor for the neighborhood, and should be kept accordingly with perfect tidiness and with the utmost possible provision of pleasant objects for the eye on and about the neighboring walls and buildings. It is astonishing how much can be done to adorn commonplace or even dilapidated and forlorn buildings by means of vines, hanging baskets, and window-boxes, and it is often easy to interest the occupants of such buildings in this sort of decoration,

particularly if they belong to any Latin race, or have come from the southern half of Europe. Every such playground would require careful watching by a man who had the double duty, first of keeping it tidy, and secondly of seeing that nothing rude was done there. It is an axiom that every piece of public ground, large or small, must be effectively policed.

You perceive that all this larger use of school playgrounds involves an expenditure of money; but such expenditure is the only true economy. It is an abominable waste to use a very costly piece of open city ground only during the recesses of a day school. Such breathing-places should not be used for any highly competitive sports in which the few play and the many look on; they should be chiefly used for free, spontaneous, active games which require very little apparatus and no elaborate training. These remarks apply most directly to city school playgrounds. Your own minds will suggest the modifications which would be needed in the country. The surroundings of a country school ought to be beautiful. They should be thoughtfully contrived to exhibit successive beauties as the season of the year advances; and they ought to make ample provision for quick-moving spontaneons games. A fortunate movement to this end is already well advanced in various parts of the country, and we hope that before long Whittier's description of the country school as "a ragged beggar" will no longer be applicable.

You are all well aware that I have made in this discourse not a single original or novel suggestion. Every idea or plan I have mentioned has already been put into execution in some part or other of the United States. What I have desired here to urge on school superintendents and school committees is that the full utilization of a public school plant is the only true economy; that the present inadequate use of schoolhouses is wasteful precisely in proportion to the costliness of the grounds and buildings, and that reform in this respect means a larger and better yield, physically, mentally, and morally, from the public schools, and therefore a significant addition to the health and wealth of the nation and to the public happiness.

SEVEN-YEAR COURSE OF STUDY FOR WARD-SCHOOL PUPILS

JAMES M. GREENWOOD, SUPERINTENDENT OF SCHOOLS, KANSAS CITY, MO.

In this discussion I am obliged to deal with conditions of things rather than with laws of thought, and I flatter myself that I have been cautiously conservative rather than rashly radical in advancing and defending the views I maintain. My object is to have you look at a course of study from another's experience, and to weigh the facts presented in the

light of reason guided by unbiased judgment. The argument is based on the assumption that children are not admitted to school before they are six years old, as is the law under which the schools in Missouri are operated. With this limitation as to age, the inquiry is narrowed to a single proposition: *Can children of average intellectual ability complete a substantial ward-school course of study in seven years?*

My answer is in the affirmative, without any reservation whatsoever, and I shall discuss this question on its educational merits fairly, candidly, and fearlessly by taking my viewpoint at the center of the situation. I shall submit what I have seen, investigated, and feel sure of, after years of patient observation. Whether I assign true or false causes for results accomplished, you must judge of the facts set forth. If these be irrelevant, then cast them aside; but if they appear reasonable, estimate them at their real worth.

In order to simplify this discussion, and to pick out the factors involved and to determine the weight of each, so that its truthfulness or falsity may be the more easily shown, the following propositions are submitted for consideration:

I. The custom in vogue in this country of estimating the ages in a grade by a mean average age is fallacious and untrustworthy.

II. The mean average age of a class completing a ward school course is a false standard by which to judge of the time required for each pupil to do the work.

III. That pupils of ordinary intellectual ability have completed, and do complete, in a satisfactory manner as heavy a course of study in seven years as is pursued in all first-class city schools of this country.

IV. The educational effect a seven-year course has on high-school attendance.

From the very nature of the question proposed, it necessarily follows that I must draw largely from my own observation and experience.

A seven-year course for ward schools is not a recent discovery in Kansas City. The schools were organized on this basis in 1867, and have been operated on it ever since. Therefore I speak with confidence, strengthened by convictions as deeply and clearly fixed as anyone can possibly have after watching and directing this work for twenty-nine years. Had I found after going to Kansas City that the children required eight years to do the work satisfactorily, I should have asked the board of education to change from seven to eight years; but I have never found it necessary, or even desirable, to suggest a change. Beginning under the seven-year course, and not feeling sure at first as to results, I watched carefully and cautiously the entire work over which the pupils passed, and I made it a point to test our seven-year pupils with all kinds of questions used by the eight-year pupils in the best schools of this country; and our seven-year pupils stood as high as the highest, whether the questions were from Brooklyn, the "Regents' Examination Questions" of New York, Civil Service or West Point preliminary questions, or those prepared by

city or state superintendents. The tests were chiefly on English grammar and composition, arithmetic, geography, and United States history. We have always emphasized reading, spelling, writing, and the four branches previously mentioned, and not neglected vocal music, drawing, and calisthenics.

In presenting my argument, I regret that other school systems did not have, or at least supply, the information I wanted; or, if it was published, it was in such vague form that I could not organize it for any useful or reliable purpose. These explanatory remarks prepare the way for entering upon the discussion of the four propositions previously announced.

I. THE CUSTOM IN VOGUE IN THIS COUNTRY OF ESTIMATING THE AGES OF CHILDREN IN A GRADE BY A MEAN AVERAGE AGE IS FALLACIOUS AND UNTRUSTWORTHY

When a pupil enters school at the beginning or during the school year, his age in years and months is recorded; but in making up the table of ages—for publication in annual reports—he is usually counted 6 till he is 7, the months being omitted, and so on for each succeeding year. It is also assumed that, if the age of admission be 6 years, practically all the pupils in the first grade are somewhere between 6 and 7 years old, and the same assumption is made for each of the following grades. That is, the pupils thus massed by years, instead of by scholarship and educational proficiency, give many surprises when a critical examination of classes is made involving both age and proficiency. If the age theory be the correct one, all 14-year-old pupils should be in the highest class almost ready for high school. On the contrary, I have found that the ages of children in each grade vary from 8 to 10 years. This variation in age in the same grades has existed in Kansas City schools for more than a quarter of a century, and I have no reason to believe that it is an anomaly and is not found in other cities.

The following will illustrate this point:

In Missouri children are admitted to school when 6 years old, if their parents wish to send them then. Now, the Kansas City school report for 1902 shows that 6,996 children belonged to the first grade. According to theory, all of these children should have been between 6 and 7 years old, or very nearly all of them; whereas 3,044 were between 6 and 7, counting their ages in years and months; 2,100 between 7 and 8; 1,002 between 8 and 9; 426 between 9 and 10; 215 between 10 and 11; 89 between 11 and 12; 53 between 12 and 13; 21 between 13 and 14; 3 between 14 and 15; and 1, 16. The mean average age of all these children was 7 years, 5 months, and 20 days. But only 44 per cent. of these children were between 6 and 7 years old at the time of enrollment, while 56 per cent. were more than 7 years old. The extreme limit between the youngest and the oldest was 10 years, and this variation is only slightly changed thruout all the other grades.

The second grade.—In this grade the breadth was from 6 to 16 out of a total enrollment of 3,760—1,856 boys and 1,904 girls, grouped by years as follows: 72 between 6 and 7; 724 between 7 and 8; 1,214 between 8 and 9; 878 between 9 and 10; 467 between

10 and 11; 226 between 11 and 12; 111 between 12 and 13; 42 between 13 and 14; 20 between 14 and 15; 5 between 15 and 16; and 2, 16. That is, 34 per cent. from 6 to 8 years of age, while 66 per cent. were above 8 years old. Statistically, these children should have been between 7 and 8 years of age, yet only 20 per cent. fell within this limit, and 80 per cent. above it.

The third grade.—This grade presents a still wider variation, ranging from 6 to 17 years, two pupils being 6 years old and one 17. The enrollment in this grade was 3,974, or 2,001 boys and 1,973 girls. From 6 to 9 years of age there were only 609 children, completely upsetting all theoretical predictions; but between 9 and 10, 1,090; between 10 and 11, 1,042; between 11 and 12, 596; and 637 above 12 years of age. Not quite 15 per cent. of these children were from 6 to 9 years of age.

The fourth grade.—The variation remains unchanged, beginning with 7 and extending to 18. The enrollment in this grade was 3,780—1,872 boys and 1,908 girls. Theoretically, the large bulk of these children should have been between 9 and 10 years old. As a matter of fact, 1,513 children were registered as being from 7 to 10 years old, and 2,267 from 11 to 18 years. In this grade just 40 per cent. were where theory places them, and 60 per cent. above it. By condensation, however, 91 per cent. of the pupils were from 9 to 13, 7 per cent. above 13 years old, and nearly 2 per cent. were under 9. It is in this grade, however, where the masses begin to consolidate, and the enrollment conforms somewhat more closely to theory. The massing pupils within a narrower limit is also observable.

The fifth grade.—In this grade there were enrolled 2,912 pupils—1,297 boys and 1,615 girls. The ages varied here from 8 to 20, but 1,907 were from 8 to 12 years old, and 1,005 from 13 to 20. Of every 1,000 pupils in this grade 630 were from 9 to 13, while 367 were over 13. Considering the ages of the pupils as a sort of "milky way," the cluster was thickest from 10 to 13. It should be remarked, in passing, that the boys in the fourth and fifth grades have commenced to drop out of school, and the girls are in the ascendancy.

The sixth grade.—In this grade the consolidation thickens from 11 to 14, there being 86 per cent. within these limits, 12½ per cent. above 15 years of age, and 1½ per cent. between 8 and 9. The total enrollment in this grade was 2,242, there being 999 boys and 1,243 girls.

The seventh grade.—The total enrollment in this grade was 1,828—763 boys and 1,065 girls. The ages of these pupils are from 11 to 19, there being 31, 11 years old, and 2, 19. Of the total enrollment, 1,609 were from 10 to 15 years old, and 219 were from 16 to 18.

In another way, 86 children out of every 100 pupils in this grade were comprised within the limits between 11 and 15 years of age, while the mean average age of the grade was 14 years and 14 days.

The most carefully prepared mean average reports by years are those of the Cleveland schools, made by Superintendent Jones, but, unfortunately for the purpose that I had in view, these tables, so laboriously wrought out, do not tell what I wanted to know concerning the ages of the children individually. Nevertheless, his tables are instructive in showing the phase of school statistics by mean averages. From Table IV, Cleveland report for 1901, one could infer that every child upon entering the first primary room that year was between 6 and 7, and so on year by year up thru the eighth grade. The regularity in ages—like a long flight of stairs—is very monotonous, a year at a step.

This fact strengthens the belief that an examination based upon age and educational standing would reveal a different set of conditions, even where compulsory laws exist and are enforced, if enforced.

II. THE MEAN AVERAGE AGE OF A CLASS COMPLETING A WARD-SCHOOL COURSE IS A FALSE STANDARD BY WHICH TO JUDGE OF THE TIME FOR EACH PUPIL TO DO THE WORK

Ages of pupils entering high schools.—In the investigation of this particular phase of the subject, I shall endeavor to show the unreliableness of mean average ages from different points of view. The first is from the Minneapolis report of Superintendent Jordan for 1901, which is very complete in the presentation of this subject. On p. 62, showing the age of the pupils in the high school that year, is the following: Number 12 years of age, 5; 13 years, 39; 14 years, 223; 15 years, 502; 16 years, 681; 17 years, 564; 18 years, 346; 19 years, 152; 20 years, 48; 21 years, 21; over 21 years, 3; total, 2,584. By grades or years in high school, these pupils are grouped as follows: first year, 984; second, 770; third, 518; fourth, 312.

I quote next from Superintendent Soldan's report of the St. Louis schools, 1900, an extract submitted by Principal William J. S. Bryan. There were 855 pupils admitted to the high school that year. Thirteen were 12 years old; 63, 13; 228, 14; 270, 15; 201, 16; and 80, 17. By taking the entire enrollment in St. Louis, which was 1,993, the percentages by ages are practically the same as those from Minneapolis; that is, there were 14 pupils 12 years old; 76, 13; 320, 14; 457, 15; 502, 16; 359, 17; 177, 18; 629, 19; and 26, 20 years old.

In these two cities, whose systems of schools are among the best on the continent, the ages of the pupils in the high schools range from 12 to over 20 years, each having the largest percentages in the fourteenth, fifteenth, sixteenth, and seventeenth years; but the extreme limits here are in line with those that I had previously found to exist in the ward schools of Kansas City.

Attention is next called to Superintendent Maxwell's third annual report of the city of New York for the year ending July 31, 1901, under the head of the "Average Age of the Elementary-School Graduates," which is as follows:

> The following table shows the average age of the children graduated from the elementary schools during the year in each of the boroughs; two classes graduated, one in February, 1901, and the other in June, 1901. I will give the ages of the February class first: Manhattan and the Bronx—boys 14 years and 6 months, girls 14 years and 7 months; Brooklyn—boys 14 years and 9 months, girls 15 years; Queens—boys 14 years, girls 14 years and 6 months; Richmond—boys 14 years, girls 14 years. June: Manhattan and Bronx—boys 14 years and 6 months, girls 14 years and 7 months; Brooklyn—boys 14 years and 8 months, girls 14 years and 10 months; Queens—boys 14 years and 3 months, girls 14 years.

Alongside the New York report I will set the average ages of those entering the Cleveland high schools according to the report of 1901: Central High School, 14.3 years; East High, 14.9 years; Lincoln High,

14.9 years; South High, 14.6 years; and West High, 15 years. These two reports are practically the same.

Appended to the New York table is the following by Superintendent Maxwell:

> The fact that the boys and girls who graduate from the seven-year course in the elementary schools of Manhattan and the Bronx are on the average quite as old as the boys and girls who graduate from the eight-year courses in the elementary schools of Brooklyn and Queens, and are older than the graduates of the Richmond schools, destroys the last argument that remained to those who advocate the maintenance of a course of study of seven years in the elementary schools. A seven-year course is made for the bright pupils, and places the average and dull pupils at a most decided disadvantage. An eight-year course is best adapted for the average and the poor pupils, who must, in the nature of things, constitute the great majority, while provision may easily be made for the bright pupils to graduate in seven years, if they are able to accomplish the work of the grades in that time.

It is just such an inference as this that I wish to examine from the bottom as well as from the top of a city school system. The only real argument, so far as can be discovered, in the New York report is a series of averages, and mean averages at that. To meet this inference I now invite attention to the—

Ages of pupils in the Kansas City high schools in 1902.—To see whether the pupils in the Kansas City high schools are younger or older than those in other high schools of corresponding grade, I submit the following facts as bearing directly on this subject: For the year closing June, 1902, the total enrollment of pupils in the four high schools was 3,653—1,419 boys and 2,243 girls. There were 18 boys 12 years old; 117, 13; 249, 14; 324, 15; 289, 16; 239, 17; 110, 18; 54, 19; 19, 20. Of the girls, 29 were 12 years old; 245, 13; 565, 14; 800, 15; 661, 16; 661, 17; 347, 18; 135, 19; 52, 20.

Bringing the pupils in the high schools of St. Louis, Minneapolis, and Kansas City together, the total enrollment was 8,230, and taking the ratio of percentages of each year to the total enrollment in the high schools, St. Louis and Kansas City are practically the same for the twelfth, fourteenth, seventeenth, eighteenth, nineteenth, and twentieth years, but in the thirteenth Kansas City has 3 per cent. more than St. Louis, 1 per cent. less in the fifteenth, and 3 per cent. less in the sixteenth. In St. Louis and Kansas City 43.4 per cent. and 44.7 per cent. of the high school pupils are from 12 to 15 years of age, respectively, while in Minneapolis 29.4 are from 12 to 14; but in Minneapolis 61.6 per cent. of the pupils are from 16 to 18 years of age, and 52.1 per cent. and 50.6 per cent. in St. Louis and Kansas City, respectively. This comparison relates only to the ages of pupils, and not to the years in high-school classes. This distinction is important.

Ages of pupils prepared for admission to Kansas City high schools in September, 1902.—There were 1,200 who gave in reports—1,130 white

children and 70 negroes. There were 487 white boys and 643 white girls; 20 negro boys and 50 negro girls. These reports were made out at the close of the school year, and the pupils counted their ages to September 15. The items are all in years and months for each pupil; but in order to condense this information I shall handle the statistics in periods of six months each for convenience. Two white boys between 11 and 12 would enter high school, one being 11 years and 5 months old, and the other 11 years and 9 months old; 12 boys and 4 girls between 12 and 12½ years old; 15 boys and 12 girls between 12½ and 13 years; 40 boys and 60 girls between 13 and 13½ years; 61 boys and 54 girls between 13½ and 14 years; 83 boys and 129 girls between 14 and 14½ years; 68 boys and 89 girls between 14½ and 15 years; 90 boys and 128 girls between 15 and 15½ years; 40 boys and 62 girls between 15½ and 16 years; 45 boys and 59 girls between 16 and 16½ years; 9 boys and 25 girls between 16½ and 17 years; 21 boys and 31 girls 17 years old. From an analysis of this table, which is published in detail in the Kansas City annual report, the following items are obtained: Of 1,130 white pupils prepared and certificated for admission to the high school last September, 3.8 per cent. were 12 years old at the date of admission; 19 per cent., 13; 32 per cent., 14; 28.3 per cent., 15; 12.3 per cent., 16; 2.6 per cent., 17; 1.1 per cent. 18.

Only one other table of this character have I found, and it is by Principal Bryan, of St. Louis, who has kept these items since 1893. His statistics on this point for 1900 are as follows: 1.5 per cent. were 12 years old; 7.4 per cent., 13; 26.7 per cent., 14; 31.6 per cent., 15; 23.5 per cent., 16; 9.3 per cent., 17.

Putting these figures from St. Louis and Kansas City together, in St. Louis 35.6 per cent. of the pupils admitted to the high school were registered as being from 12 to 14 years of age, and in Kansas City 56.4 per cent. of the corresponding age; and if those classified as being 15 be included, then in St. Louis 67.5 per cent. and in Kansas City 84.7 per cent.

Time required to complete ward-school course.—A special report was made to me in September, 1902, by 441 boys and 554 girls who entered, or intended to enter, high school, stating the length of time each pupil had taken in ward school or rural school to prepare for high school, counting nine months to the year. Nearly all these children had been prepared in the Kansas City public schools. The boys reported as follows: 6 had completed the ward-school course in 4½ years; 11 in 5 years; 45 in 6 years: 29 in 6½ years; 209 in 7 years; 29 in 7½ years; 9 in 9 years; 3 in 10 years; 2 in 11 years. Of the 554 girls, 3 had completed the work in 3 years; 6 in 5 years; 5 in 5½ years; 80 in six years; 290 in 7 years; 26 in 7½ years; 104 in 8 years; 1 in 8½ years; 9 in 9 years; 2 in 11 years. Putting this in another form, 71 per cent. of the

boys had completed the course of study in 7 years or less; 27 per cent. required from 7 to 8 years to complete it, and 2 per cent. required more than 8 years; and of the 554 girls to enter high school, 74 per cent. had completed the course of study in 7 years or less, 23½ per cent. required between 7 and 8 years, and 2½ per cent. more than 8 years.

This statement does not differ in any material respect from several other reports I have published upon previous occasions and at different intervals, and I think it and other similar reports materially invalidate Superintendent Maxwell's inference that a seven-year course is made for bright pupils only. His conclusion must have been based on a series of arithmetical averages.

Substantiating this report made from the pupils of 1901 who entered high school, I herewith submit summaries from the pupils of the four high schools of Kansas City who are members of the graduating classes in June, 1903. This information was procured from the pupils directly, who filled out a printed blank which I had prepared and was returned to me December 23, 1902. In this report a school year is also counted as nine months.

The total number of boys who reported is 143; 3 had completed the ward-school work in 2 years; 2 in 2½ years; 2 in 3 years; 3 in 4 years; 6 in 5 years; 42 in 6½ years; 61 in 7 years; 20 in 8 years; 4 in 9 years; putting this in briefer form, 119 had completed the ward-school studies in 7 years and less, while it took 24 more than 7 years.

Of 288 girls only 42 attended ward school more than 7 years; more specifically, 4 had completed the ward-school work in 2 years, 7 in 3 years, 10 in 4 years, 28 in 5 years, 59 in 6 years, 138 in 7 years, 27 in 8 pears, 10 in 9 years, 5 in 10 years.

Condensing: 85 per cent. had completed the ward-school course of study in 7 years and less. This again confirms the argument hitherto adduced in regard to a seven-year course, and that it is not made for bright children only. It is pertinent to remark in this connection that I have upon three former occasions examined into all cases of failure to do ward-school work on time, and I found the chief causes to be irregular attendance, loss of time by changing from one school to another, sickness, and a few cases of inability to do the work.

III. THAT PUPILS OF ORDINARY INTELLECTUAL ABILITY DO COMPLETE, IN A SATISFACTORY MANNER, AS HEAVY A COURSE OF STUDY IN SEVEN YEARS AS IS PURSUED IN ALL FIRST-CLASS CITY SCHOOLS IN THIS COUNTRY

The subject-matter in a seven-year course.—The quality and quantity of subject-matter in an eight-year course have appeared to superintendents, principals, and teachers engaged in graded school work as incapable of reduction or compression into a seven-year course, without some losses of the essentials in the common branches. I admit that the announce-

ment of such a proposition to conservative school people is very repellent to their habits of thought. This feeling is apparent in Superintendent Soldan's excellent paper read at Chicago, November 8, 1902, before the Annual Conference of High Schools and Academies, in which he discussed "Shortening the Course in Elementary Schools." As I read between the lines in his published paper, he is haunted by a strong misgiving in regard to subject-matter. He thinks that possibly the substitution of one text-book in geography for the customary two books, with the reduction of text-books in arithmetic, would be necessary; he would put stress on the practical acquisition of good English (deferring some of the formal grammar to the time when a foreign language is studied in high school), and thought that a change in the method of conducting recitations would become necessary perhaps. With modifications such as are indicated, he thought a seven-year course might become feasible. With all due respect to the opinion of a man so able as Superintendent Soldan, and one whose judgment is always calm and judicial, I must dissent most earnestly from his views of a "bob-tail" course of study, and I therefore deal with the entire question on the basic fact that all the necessary work done in an eight-year course, in order to prepare children for life or a high-school course, can be done, and is done, just as well in seven years. Why should a child be kept eight years on an area of school work that can be done in seven years under the limitation stated at the beginning of this paper?

The branches in detail.— First, as to two geographies being replaced by one, as suggested by Superintendent Soldan, I dissent on the ground that it is not necessary. We have always used two good books in geography, besides doing a very great deal of work not found in any text-book. Butler's two books were used since their publication till September, 1901, when Morton's two books were adopted instead. Elementary geography is introduced as a regular study, that is, by reading from the book during the last three months of the third grade; and it is continued for twelve months, or to the end of the fourth year. At the beginning of the fifth year, the advanced or complete geography is begun, and it is continued to the end of the sixth year. Our pupils have done the work in geography as well as, if not better than, it is done in a large majority of the city schools with which I am acquainted. In fact, I do not know a system of schools in which there is so much latitude given to the teachers in teaching this subject. We have man-geography, dirt-geography, commercial-geography, industrial-geography, correlated-geography, wet- and dry-geography, field- and visiting-geography, and some straight-geography.

With reference to arithmetic, I am equally positive that the course should not be abridged, and, furthermore, that no necessity exists for curtailing it. Besides oral-arithmetic, wooden-arithmetic, pint-ing-

inch-ing-measuring-arithmetic, doing-arithmetic-concretely, we have also elementary arithmetic, introduced at the beginning of the second term, third grade, or at the beginning of the twenty-second month of the child's work. He continues this text, Milne's *Arithmetic*, for twenty-four months. But this work is largely supplemented by outside miscellaneous problems and exercises. At the beginning of the sixth year Moore's *Grammar School Arithmetic* is taken up and studied till the close of the seventh year. This is not all. We have never been maudlin enough to throw out of our course of study mental or intellectual arithmetic. While all thru the course much quick work is done mentally in fractions and integers, yet at the beginning of the fifth year the pupils take a mental arithmetic, Book II, *Oral Arithmetic*, Kirk and Sabin's; and this text is studied till the end of the seventh year. If there are any eight-year schools that have a solider course in arithmetic, I am not aware of the fact. Our course in arithmetic is practically the same as the one in use in the schools of France at this time — a strong, three-book course — besides all the new fads practiced in Chicago and elsewhere.

In English grammar and composition the same solid work is carried on, with still greater force, if possible, than in arithmetic. It is obvious to anyone that children in the third grade, who observe and study natural objects with a considerable degree of interest and curiosity, will, if their minds are properly directed to words and sentences in their oral language work and composition, study these with a like degree of intelligence and understanding. This is the result of our experience, corroborated by practice in grammar, composition, reading, and spelling. If the children in the public schools of France have, beginning at seven and by the end of the ninth year, or at the farthest by the end of the tenth year, acquired not only a good working knowledge of their mother-tongue, but also a fair understanding of technical grammar, including the nicer shades of meaning in the "subjunctive mode," I should like to know why our children cannot grasp in the fourth grade some of the essential principles underlying the use, function, and syntactical structure of sentences and paragraphs of the English language — one of the simplest of all languages in its structure. While the usual practice with teachers in the reading and language exercises of various kinds in the first, second, third, and fourth grades is to watch carefully over the child's pronunciation of words, his putting words into sentences so as to express his thoughts definitely and forcefully — and all these things are strongly emphasized — yet it is just as true that the child's attention is seldom or never directed to the forms of sentences, to the principal elements and the modifying elements of which sentences are composed; while, if, on the other hand, the object be a tree, a clear distinction is drawn in regard to root and trunk, branches and branchlets, leaves and leaflets, even down to the venation of the leaves. Why should we not carry the child along

a similar process of investigation and reasoning in sentence structure, where material is so abundant and ready-made? Instead, he is kept using words and sentences as things not to be studied, and his language work, except a little preliminary drill of a routine character, is chiefly confined to copying sentences and paragraphs—simple, careful work that cultivates attention and penmanship, but exceedingly dull work. Writing from dictation is a grade higher in value, especially if the pupil is put to correcting his mistakes by the use of the book from which the dictation has been made. Whatever the exercises may be, the pupil should be made to see in what his mistakes consist, whether in spelling, the use of capitals, punctuation, syntax, unity, or concord. Gradually, beginning with the second grade, a few of the simpler prefixes and suffixes in the spelling exercises should be introduced, and their meaning and use taught; and by so doing some advance will be made over the present slow methods in vogue. In the fourth grade, especially, it is time to commence systematically to teach the four different kinds of sentences as to their use in the expression of thought and feeling, and immediately after these divisions have been mastered by the pupil he should begin to study sentence structure in a formal manner, then passing to the elements that enter into sentence structure. Anyone who has ever tried it will find that pupils are just as keenly interested in taking sentences to pieces in thought as they are in any other kind of analytic work. Either before or after, the child can be taught to tell the parts of speech in all plain sentences, and the properties of the same. But I need not point out in detail how these different things can be done. I simply say they are done, and that any intelligent teacher who is able to organize the material in English grammar and composition on a rational basis can do all I have indicated, and much more; and this work should be commenced in the third or fourth grade. Enough for me to say that Reed and Kellogg's *English Grammars*, the *Graded* and the *Higher Lessons in English*, are the texts that we have used for twenty years, interspersed with composition work; and I am of the opinion that this series is as severe as any other published in this country. By the time the pupil has passed thru the fourth grade, he takes up *Graded Lessons* in the fifth year, much having been anticipated in the third and fourth grades by oral work; but the work in the text is not taken up as the authors arranged it, but related topics are brought together and studied, and not cut into little pieces, as the authors conceived it to be their duty to do in arranging the text. The best method of teaching the essentials of any subject is not to nibble at this thing a little while, and then at something else, and so on; but to bring related matter together, organizing and handling it in good-sized pieces as wholes. Too many teachers—and some superintendents, I fear—do not discriminate between essentials and non-essentials when teaching.

As to whether this is feasible or not, I shall not waste words in trying to convince anyone. Should any doubt, try it, is my advice. This is the best and quickest way to settle such questions. The *Graded Lessons* is used by the pupils one year, and in the sixth and seventh grades the *Higher Lessons* is studied, after the same general plan as that pursued in the lower grades. We cut nothing out of the text, but rearrange some of the material by putting it together in a better way to handle it, so that it may be the more easily comprehended by the learners.

In United States history, McMaster's is the regular text. It, with much collateral reading, gives the children a fair knowledge of the history of the United States, and some glimpses of outside matters, past and present. The way for this is prepared in the lower grades also.

Lest some may conclude that music, drawing, and calisthenics are not taught, I will simply state that the Kansas City schools were the first in this country to employ a supervisor of calisthenics, and to teach the subject in all the grades in the ward schools; and that it, in due time, spread to other cities. I will also remark that we never employed a special teacher of penmanship, because we had no use for one when our pupils did prettier writing, whether slant or vertical, than do the pupils of any other city, except the children of the Cincinnati schools; and from them our children learned to do it.

I think that I have shown that by sticking to the common branches, as we have, and having kept steadily in mind solid attainments in these branches, not omitting any essentials, but by emphasizing them, neglecting nothing important, all that is really valuable to the child in a ward-school course can be learned in seven years. Furthermore, I do not hesitate to affirm that, in view of all the facts, an eight-year course is one year more than pupils of average ability need to do the work.

IV. THE EFFECT A SEVEN-YEAR COURSE HAS ON HIGH-SCHOOL ATTENDANCE

A few years ago, and even at the present time, various remedies were and have been suggested, and some of them strenuously and ably advanced as successful measures for increasing the attendance in high schools. In some cities and towns it was maintained, with some degree of plausibility, that if Latin and algebra were left optional in high schools, the boys who had completed the ward-school course would gladly enter the high school. This elimination, which was the substitution of a downy bed for solid work, has had little appreciable effect one way or the other. There has not yet been found a quick commercial or an electric method of learning any subject outside of faithful, persistent, intelligent work. The mind yet moves in its own way, and possibly will continue to do so as long as the earth spins in space. Legislation does not change human nature, and neither do milk-and-water courses of study make sound scholarship, no difference how deep or thick the sugar-coating is.

A more hopeful panacea was the manual-training high school, which, it was believed, would be sure to catch and hold boys and girls better than the old-fashioned high schools had done; but with the largest city manual-training high school in this country, after several years of experience, we have found thus far that it neither holds pupils in school so well as do the other high schools, nor do they pursue their studies so persistently; that is, they do not stick to what they start in with so continuously, especially in mathematics, Latin, German, French, English, and natural science. But in manual training and domestic science the classes continue at a relatively high level.

Another view was that of large options in high-school studies. This, I believe, is a potent factor in influencing some minds not yet fully qualified to choose intelligently, but capriciously, such studies as strike the fancy of the pupils for the time being, or in sliding thru school on a down grade. There must be a broad and deep educational background in the mind of man or woman upon which a solid structure can be built. That, in my opinion, is the only safe and sure foundation to fit boys and girls for the manifold duties of life. In high schools, as in other schools, the chief factor is whether the pupil is *sent* to *school* or he *goes* to *school.* The *sent* pupil looks out for soft snaps; the other goes to work.

Turning aside from these reflections, I cannot account for the heavy enrollment and attendance of pupils in the high schools of Kansas City except upon the hypothesis of a seven-year course as compared with an eight-year course in other cities.

A few references will be sufficient to indicate what I mean. In New York the total enrollment in all the high schools is 3.4 per cent. of the entire enrollment; in St. Louis, 2.6 per cent.; in Cleveland, 6.4 per cent.; in Los Angeles, 6.2 per cent.; in St. Paul, 5.2 per cent.; in Springfield, Mass., 5.2 per cent.; in Denver, District No. 1, 10 per cent., (the richest school district in the United States in proportion to population); in Omaha, 8.2 per cent.; in Buffalo, 5.1 per cent.; in Chicago, 4.49 per cent.; in Lowell, 6 per cent.; in St. Joseph, 7.2 per cent.; in Indianapolis, 7.2 per cent.; in Boston, 6.2 per cent.; in Kansas City, 12.5 per cent.

I have used the most recent information from these cities, and in several instances the reports for the second school year ending June, 1902. If this subject be viewed from the standpoint of graduates from the high schools in different sections of the country, the contrast is still more striking. The number of graduates for the last three years from the Kansas City high schools thus summarized is: in 1900, 387 graduates, 135 of whom were boys; in 1901, 430 graduates, 158 of whom were boys; in 1902, 486 graduates, 152 of whom were boys.

It may be that the public-school spirit in Kansas City is more enthusiastic than in other cities, but I hardly think so. I can see no reason why there should be a more pronounced feeling among us on this subject

than among other patriotic citizens living in other sections of our country. Neither am I persuaded that our citizens as a class are better able financially to keep their children in high school than in other localities, or that our principals and teachers persuade the children to go to high school more successfully than in other cities. Competition to get ahead in this world's goods is as keen and exacting with us as it is with you. Perhaps it is more pronounced than in many other localities. So far as I can determine by an analysis of the facts, I firmly believe that the chief factor is the seven-year course of study pursued in the ward schools. A good course of study in the ward schools and a heavy course in the high schools—just such courses as fit young men and young women for college or for life—are the inducements we offer to our boys and girls. Our plan has always been honest, persistent, intelligent, systematic, and conscientious work in ward and high schools.

Before closing, I will venture an opinion on the six-year plan for ward schools and six years for high-school work. In my opinion some pupils can be well prepared in six years for the high school. Such a course would further particularly such as are foreordained to take a classical course, and to begin it early in life, as is done in the German schools. A six-year course for high schools, viewed from a financial standpoint, would render such a scheme impracticable, unless the salaries of high-school teachers were reduced to a common denominator with those teaching in the ward schools. I need not argue this question further.

Summarizing the results, I conclude as follows:

1. That the custom of presenting tables of mean averages as a coefficient of the ages of children in a particular grade, or class, is practically of no real educational significance.
2. That the mean average age of a grade, or a class, completing a year's work is a false measuring unit by which to estimate the time required by each pupil to do the work.
3. It has been shown, and it cannot be successfully contradicted, that children admitted to school at six years of age, or older, do complete, in a satisfactory manner, as heavy a ward-school course in seven years as is pursued in first-class city schools of this country.
4. That Kansas City has a greater percentage of pupils in her high schools than any other city of the same or larger size, whether percentages be estimated on entire population, the total enrollment in the public schools, or the number of high-school graduates in proportion to the total population.

DISCUSSION

SUPERINTENDENT RICHARD G. BOONE, Cincinnati, O.—In the first place, the important point is not that the children shall have learned so much of the subjects, but that they should become eager to attack new problems. There are not so many

essentials in those branches as we may think. The child should learn how to make application to history of his studies in literature, and then he will be able to take history work in the high school.

So in the nature work in the elementary grades, the child must learn how to get hold of its meaning, and then, when he comes to the high school, he can take whatever science is offered. We must remember that there is no convincing reason for the present curriculum; the amount of each subject put into it is arbitrary. The traditional limitation of subject-matter is being removed. As a matter of fact, it seems to me that the experience of the best schools is that during seven or eight years, without using more time for reading than before, we can read eight times as much as we used to think we could read. What is true of reading is true of geography. It is not necessary to reduce the number of books nor to reduce the assignment. The child needs to get at these things in a more resourceful way. The schoolmaster dawdles, works on the unimportant details of subjects, on things that bring no insight. Much in history is of no use to life; much in the field of nature study has no earthly use, and could not be of heavenly use, in the very nature of things. The trouble with too much of our work is that it is given up to details.

If we only knew what to teach of these matters, far more could be done in six years than we now do in eight. It is not a question of years so much as of the age and development of the children.

We are all doing something in the direction of pushing down from the high school into the grades — introducing into the elementary schools studies heretofore considered as high-school studies. We are beginning algebra in the grades, constructive geometry in the grades; history, belonging in the high school as formerly believed, is being done in the grades.

We have a peculiar situation in Cincinnati. Forty-five thousand children are in the schools, and seventeen thousand take the German language in the elementary schools, spending during the first four years one-half of their time in that subject. So far as I am able to see, the seventeen thousand do the work of the English course of study about as well as the others do. This means six years for our English course, and a large percentage of our children get for the English course *only* six years.

I should be afraid to give you here the figures on attendance. I am not so well fortified on that point as is the writer of the paper. We in Cincinnati get very few children the whole ten months of the year. Thousands come not more than eight months, and thousands not more than seven months. When they finish in fifty-six school months, you see how much farther the reduction would go. The course is made out for eight years because the children are so irregular in attendance. If our children were in school nine months per year, or even eight months, seven school years would be all that is necessary.

There is a great waste of time. We do not begin to do what we might do if the circumstances were more favorable. As I have already said, the greatest trouble is that the majority of teachers do not see what is vital. They should select what is vital in your arithmetic, drawing, geography, history, grammar, spelling, etc. Some years ago, in an attempt to revise an elementary course of study, I went to some members of the faculty to ask assistance. In physics the teacher said, "All the points can be counted on the fingers of one hand." In history the teacher of that subject gave practically the same response. There are not many things to be taught in language, geography, etc. The problem is the problem of selection.

I recognize the fact that the time is needed for growing. An eight-year course must be better than a seven-year course on this account. I do not mean by this that we are to shorten the time in school. Mr. Greenwood is wrong about the seven-year course making a large high school. I think their manual training and the enrichment of the courses have popularized their high school. Altogether, it seems to me that we might make some shortening of the elementary course. I am not sure but his last suggestion for shorten-

ing to six years the elementary course, with a little more time in the high school, may be worthy of adoption.

FRANK M. MCMURRY, Teachers College, Columbia University, New York.—I want to support one of the thoughts suggested by Mr. Boone, namely, that there is nothing sacred about the present common-school curriculum. In the last fifteen years we have introduced subjects until we have probably twice as much as we had in the course before that time. We all know, however, that what we now have is the result of enthusiasm, enterprise, and extension. If we know that much we have introduced is not very valuable, why can we not agree that there must be much omission? We should unload from one-third to one-half of what we have. I was disappointed in the indication that the author of the paper wanted to hold in the course all that is now there. Why shall we not discuss the question of what can be left out of the course?

The omissions we have referred to will, on the whole, involve the omission of details. There are many details that lead nowhere to vitals, but there are details that will aid the comprehension of the subject and will greatly enrich the course. We must substitute details of the more valuable kind.

SUPERINTENDENT C. F. CARROLL, Worcester, Mass.—Yesterday, and on Tuesday perhaps, the question was presented here of dropping the high-school course two years lower. This morning the question is the shortening of the preparatory course. Twenty-five years ago President Eliot proposed the enrichment of the common-school course. The grammar-school principals almost made a riot, but now we are taking his view. Last night President Eliot proposed an industrial course reaching down thru the grades, and I think he voiced the feeling of almost all who are here.

Now, it seems to me that both this morning's discussion and the previous discussions are parts of the same question: How can we readjust the entire curriculum from the kindergarten to the university?

For my part, I am not particularly interested in shortening the elementary course. In New England nine years is still given to this course in many cities. I thought Superintendent Greenwood skipped something. In Worcester we send children to the high school below the age of fifteen years. It is reported that in Kansas City 35 per cent. go to the high school below fifteen; in our schools all go below fifteen after finishing a nine-year course. A larger percentage go to the high school in Worcester than in Kansas City.

It does not seem to me that this is the important question. As Mr. McMurry has said, it is the question of enrichment. We need something of history, something of literature, as was set forth on this platform yesterday. All these things really shorten and enrich and enlarge the elementary course. The languages should be put into the elementary schools, as Dr. Boone has already suggested. This is being carried out in a number of schools. Mr. Coy contended that it is not practical to teach languages and algebra in the elementary schools. I will tell you what I think we are accomplishing in the schools of Worcester. A year ago I asked the board of education to authorize putting German and French into the seventh grade, Latin and algebra into the eighth, algebra and geometry into the ninth. One very intelligent man, a college man, was anxious that his children be spared the mountain of higher arithmetic and similar omitted subjects. This year we have five city centers, containing nearly four hundred pupils, taking this work. There are administrative difficulties to be overcome. We simply select good teachers, employ one special teacher in French and one in German, and the schools go along in the usual way.

It is impracticable to lengthen the high-school course by dropping it down into the grades. The high-school teachers can never, in point of skill or sympathy or effectiveness, take the place of the teachers in the grades. I have been a high-school teacher. The teachers coming from college, as I did, anxious to take a chair, learn at the expense of your children and mine how to do good teaching.

We have in the grammar grades a company of teachers wonderfully interested in the children and improved in skill beyond what is common in the high school. May the good Lord forbid that we shall ever put the children of the upper grammar-school grades into the hands of the untrained teachers in the high school, thus taking them out of the hands of teachers who love them!

All honor to the university men at Columbia, Chicago, Cornell, who are trying to train high-school teachers so they can teach along pedagogical lines! It is the hardest proposition I have ever met, this making of college graduates into teachers. I have tried fifty such teachers, and I have not in Worcester today a single college graduate teaching little children. The question of readjustment from top to bottom is the vital question.

SUPERINTENDENT J. W. CARR, Anderson, Ind.—I have read somewhere that, in writing a novel, the excellence of the book consists largely in what is left out. I want to take but one moment of your time to utter my most emphatic disapproval of overcrowding the elementary-school course.

I have not been with people announcing great educational doctrines; I have been along the firing line, where we are trying to do the work that they say needs to be done, and we are suffering from intellectual dyspepsia. It is not the question of how much can be crowded into the course, but of how much can be done, how much can be digested. I want to say that French and German and algebra and geometry are not to be crowded into the elementary schools. We are not to crowd out the old-time studies. Spelling still has a place in the public-school curriculum of this country, and my plea is for relief from some of the things we have. I am willing to try in my school to leave some of the things out.

PRINCIPAL E. W. COY, Cincinnati, O.—I do not want to give an account of my whole life, but I wish to say that there is no grade of school in which I have not taught. I have been in primary schools, and I have worked in the grades. If the Lord will forgive me, I will confess that I have been a city superintendent. I want to enter a protest against what has been said about high-school teachers. In Cincinnati we do not have that kind of high-school teachers. In Cincinnati high schools we have the most thoro devotion to the pupils. When young people come to the high school, the whole plan of instruction must be changed; no class comes into the high school without the teacher's considering the adjustment that must be made for the individual pupil. That those teachers do not teach the children, but teach the subject, is not true. I not only know the high schools of Cincinnati, but I have visited Columbus and Chicago and other cities, and I can show that there also it is not true.

I did teach in a normal school once; I believe in normal schools; but there are good teachers that have never been to the normal schools. I want to protest against the abuse of high-school teachers not founded on fact, and much of what has been said here in that direction is not founded on fact.

OXFORD UNIVERSITY AND THE RHODES SCHOLARSHIPS

W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION,
WASHINGTON, D. C.

One of the memorable events of last year was the offer of Cecil Rhodes, made known to us thru the provisions of his will, providing for a hundred perpetual scholarships in the University of Oxford, two for each state and each territory in the United States, a scholarship amounting to the

handsome annual sum of three hundred pounds — say $1,500 — to support a student for three years at the most famous university in Great Britain.

This provision was made with the noble purpose of bringing about a more intimate and sympthetic acquaintance between the most influential class of citizens in the English nation and the people who have gone out from it in past times and founded an independent nation on the basis of constitutional liberty and local self-government. In the words of his will, "the union of the English-speaking peoples throughout the world" impelled him to make this endowment. He desired "to encourage in the students from the United States of North America, who will benefit from the American scholarships, to be established, for the reason given, at the University of Oxford under this my will, an attachment to the country from which they have sprung, but without withdrawing them or their sympathies from the land of their adoption or birth."

As a guide to his trustees in the selection of incumbents of these scholarships, Mr. Rhodes mentions four qualifications: first, literary and scholastic attainments; second, fondness for outdoor sports; third, unselfishness and fellowship; and lastly, moral force of character and zeal in the performance of public duties.

All good people will respond with a hearty spirit of co-operation to so noble a project, and we may well consider what it signifies and what are the conditions of its successful management.

The past three years have been noteworthy, in the history of industry and finance, for the development of productive industry. *Pari passu* with this has gone on the taking possession of the resources of nature, and the increase of the assets of civilization — wealth in mineral, vegetable, and animal productions; natural forces have been harnessed for the use of men, lessening distances and removing obstacles to communication by land and water. Never before has the potency of capital been so awe-inspiring. To name in one word the function of the great process going on, one would say that it is the removal of the middle man, who effects exchanges, to the function of the end man, who is direct producer or direct consumer. By saving in the middle term of cost of manufacturing, transporting, and distributing there comes to be an enormous accumulation of capital. After apportioning to the producers and consumers their quota of the benefit derived from reducing the expense of the middle term, the owners of capital have for many years made large gifts to education.

The names of Tulane, Johns Hopkins, Cornell, Leland Stanford, Drexel, Vanderbilt, Sophie Newcomb, Vassar, Wellesley, Smith, Yale, and Harvard come to our minds as the leading universities recipient of endowments.

For the year 1899–1900, gifts for higher education amounting in the

aggregate to $11,995,463 were reported to the Bureau of Education by the several colleges and universities. For the year 1900–1901 the gifts amounted to $18,040,413. For the year 1901–1902 thus far the gifts reported amount to $16,989,967. Not all of the university reports for 1902 are in.

The Carnegie gifts for libraries and other institutions have been estimated at the following: for 1895, $1,000,000; for 1898, $310,000; for 1899, $3,370,000; for 1900, $5,065,000; for 1901, $30,243,500. Counting in his gift for the Carnegie Institution in Washington, his grand total of gifts in the United States is estimated at $52,270,173. Besides this his total for Canada, Cuba, England, Ireland, and Scotland amounts to $15,000,000 more.

This enormous increase in gifts to education incident to the amassing of capital is of special interest to this consideration of the Rhodes gift, by reason of the fact that the application of capital to the increase of wealth is a process somewhat mysterious to the common mind. Karl Marx's formula *C-M-C*, commodity—money—commodity, or the producer exchanges the commodity which he has created for money, and with money procures the other commodities which he wishes for use—states the first and obvious economic process (in a formula *C-M-C*); but the middle term, money, when expanded, comes to mean the market, and the market has a different function from *C-M-C*, or commodity—money—commodity, namely, it starts with *M*, or money, and buys commodities, to sell again for money, hoping to increase its money by the process—earning an income by the process of exchange—and this formula is *M-C-M*, according to Marx, and in that he sees the origin of all the evils in an industrial and commercial civilization, for this is the formula of the capitalist. The capitalist as the middle term represents a stock of goods and its transportation and distribution. Without this middle term the producer can produce only what is useful to himself, and not for his neighbor or for the market of the world, because there is and can be no market without this second formula *M-C-M*, money—commodity—money.

It is obvious that the profit of the market, the middle term, is greater when its own expenses of collection and distribution are diminished—and when this is done on a large scale, say by gigantic railways on land or ships on the sea, great economy is secured, and there are large savings to be distributed, partly to the producer of raw material, partly to the manufacturer, and partly to the consumer, and a large dividend left for capital which supports the world-market.

Things without use cannot be counted as property, and there is no object in creating a surplus of goods that cannot be used. To transport things from a place where they have no use to a place where they are needed is to produce value; and, as an actual fact, by far the largest por-

tion of the final cost (to the consumer) of the commodities that in the aggregate constitute wealth derive their value from the two functions of the market, namely, the collection and the distribution of commodities — the function of the market (*M-C-M*) so strangely misunderstood and suspected by Karl Marx.

But the market collects its toll from the consumer. It shares with the producer the total amount received from the consumer. The market causes competition, and competition reduces the producer's profit, and also the profits of the market. The less the charge of the market (that is to say, of the middle man), the efficiency of collection and distribution remaining the same, the greater the profit to the end men, that is, to the producer and the consumer.[1] It is obvious that the increase of the efficiency of the market and the diminution of its charges indicate economic progress. It is in the line of the reduction of the necessary labor to conquer nature. The production of the raw material, its collection, its manufacture, distribution, and consumption, require less expenditure of human labor, or of its representative, which is money.

From this point we can see the significance of this great movement of capital in our times which diminishes the number of middle men and transfers them to the function of end men, that is, producers and consumers. It is the aim of every combination that capital makes to reduce the expense of exchange, give the producer a higher reward, and share with the consumer by lowering the price of the finished product to him. For the performance of this function capital collects its tithes. It gets perhaps a tenth of what it saves, distributing on an average the other nine-tenths to the producers and the consumers.

In our day the enormous aggregates of capital are hastening forward this beneficent process with ever-increasing speed. It is, of course, out of place to consider here the fact that so important and radical a transformation as results from this great process necessarily involves much evil and much suffering to the human beings that are forced from the place of middle men to the place of end men. All readjustment of vocations involves inconvenience, and sometimes suffering, and sometimes injustice.

But we may remark that if a new investment of capital pays well for a while, it is constantly attacked by newer inventions and newer combinations which, being more economical than the old — that is to say, needing fewer middle men — cause the old investment to pay less and less interest to the capital. Old investments, therefore, in capital are obliged constantly to divide with new combinations, and the producer and the consumer — the end men — finally get all the profit. The inventions of fifty years ago are nearly all now the property of the community at large.

[1] A ready example of this is found in the reduction of the cost of transportation from St. Paul to New York city, which has given the consumer his year's flour in New York as cheap as it can be had at St. Paul with the addition to that price of only a single day's wages.

Returning to our theme, endowments for education, we see what significance there is for the future of civilization in this accumulation of capital. For its accumulation stimulates the work of prospecting for natural resources, not only the home resources of the great nations, but the resources abroad in the world at large — the possible resources of all lands. Witness the acquisition of the oil lands, the deposits of gold, silver, and diamonds, the ore deposits of useful minerals — coal, iron, copper, and tin, wherever they are. Apparently the era has arrived when the possibilities of food-producing which belong to the tropics — to the Amazon valley, for instance — shall be first capitalized, and after that made tributary to the populations of Europe by a vast commercial stream of merchandise consisting of cheap elements of food and textile fabrics and lumber. On reflection one sees that vast possibilities of raw material are more likely to be soon utilized if they come into the possession of great stock companies than if they belong to private owners. Great companies see to it that there are provided all the necessaries of production and of transportation to the best markets.

The era of the creation of capital is also the era of endowment of higher education. Higher education is becoming more and more a process of research and original investigation. And it is the experts furnished by the instruction of the laboratory and the seminarium that are most needed in the work of prospecting for the natural resources and in the work of transporting and manufacturing.

There has never before been so much wealth created in the form of inheritable goods and chattels — wealth of a permanent kind that goes down from generation to generation, relieving the people of the future from the work of creating a plant of some kind or other — railroads, bridges, tunnels, water-works, schools, and libraries. These and the like items of inheritance add a permanent contingent to the wealth of the future by their annual earnings, and swell the income of after generations.

In the midst of this economic change our population is called to new objects of interest and new duties. In 1880 the national census indicated the arrival of a population of fifty millions. At that time we began to ascend above the horizon to the great powers of Europe. Twenty years later our active participation in the control of the world which is exercised by the great powers has become so apparent that all see the necessity of forming a special class of experts who are to become familiar with the national purposes and ideals of such nations as Japan, Russia, Germany, Austria, France, Great Britain, Italy, Spain, and Holland. Foreign diplomacy will furnish a great field for the employment of a larger and larger class of American citizens, and the most successful among these will be recruited from the ranks of those who have made studies at the universities in those foreign countries and become familiar with that class of their population that furnishes the directive power. It is natural that

each nation throws its influence in favor of the perpetuation of its own institutions in the world-council of the great powers. It is, of course, necessary that the United States shall have an influence in the great council of the world, favorable to the preservation of our own national idea of local self-government and productive industry.

The Rhodes bequest comes opportune at the beginning of this epoch of training our citizens for diplomatic influence abroad, for of all places for training diplomats the first one in direct usefulness is the University of Oxford. The offer of constant residence in that great English university to one hundred students from the United States will afford the best preliminary training for the experts required in our consulates, embassies, home cabinets, and international commissions.

Oxford is the English school for gentlemen. A typical English gentleman is a peculiar product, somewhat different from the ideal gentleman of France or Germany, or any other country in Europe. An American would suppose, on first hearing of the English gentleman, that he must be a person very sensitive as to his caste—as to his wealth, or nobility by birth, or by official position—and continually making demands for recognition; and that in his ordinary actions he is likely to imply a consciousness of his superiority in wealth or birth or official station. No greater mistake could be made. Of all people in Europe the Englishman is the most apt to see that any such manifestation is vulgar, and any consciousness or self-assertion of caste is marked at once as a gross violation of the code of the gentleman.

Both universities, Oxford and Cambridge, have been long famous for their function in training youth in the principles of good breeding. This is especially true of Oxford. A rich man's son who comes to Oxford with conceits founded on the wealth of his family is made to feel very soon the difference between the ideal of the English gentleman and his own ideal. In most cases a three-years' residence will modify his character in this respect, so that he will come to avoid ostentation either in his clothing or other belongings, or in his manner toward people not wealthy. So, too, the scions of nobility. In all well-established houses the private tutors and governesses have already trained the young nobility, before they come to Eton or Winchester, in the code of English politeness, and they have not so much to learn in this matter at Oxford. But any youth from a noble family who has not already received this training is likely to learn the lesson so well in his residence at Oxford that it will become a second nature to him to stand on his humanity and never to indicate a consciousness on his part of the possession of a noble ancestry, or of inherited possessions, or of the station of his family in the army or navy, or as a member of the government. This is true also of those who have risen to military or political station from the ranks of the people. The average child of a noble house learns this difficult art of behavior more

readily than the other two species of aristocracy, namely, the aristocracy of wealth or the aristocracy of government position. This is so because of the fact that the nobility have been longer in training, whereas the wealthy family may have gained its property within the present generation; and the high position in the government may also have been achieved by extraordinary services on the part of a citizen possessed of great strength of will-power or special capacities of intellect, all of which is sometimes accompanied by great deficiency in a knowledge of the code of the ideal gentleman.

This function of Oxford and Cambridge is of national and international importance. An aristocracy of wealth or birth or station whose children are trained in the ideal code of the gentleman have a certain great advantage over all other people brought up without the proper sense of self-control. They possess an imperturbable self-respect which intrenches itself on a humane basis that not only easily captivates all classes of British citizens, but makes an easy conquest of a citizen of any other nationality in the world. It has an inimitable charm. It is impossible to storm its intrenchments, because it assumes nothing for itself. It has habituated itself to this repression of the vulgar desire to attract attention to its havings and made it a second nature, so that it does not reveal any effort. If any effort on its part were visible, it would take the form of condescension and would betray its consciousness of caste; but the ideal English gentleman never permits himself to think of his rank or station; he has acquired a sense of honor that excludes even the thought of it as something odious. Indeed, the English gentleman can easily be distinguished from the other Englishmen by the ease with which he bears this impersonality, this sincere humanity, and this utter effacement of his own claims for special consideration. In the long run this accomplishment of being a true gentleman wins its way in the world and constantly reveals its power. In the diplomacy of Europe it has always held a high place.

The English nation is famous for its love of fair play. This love of fair play is sometimes, however, very brutal, as interpreted by the brutal classes, altho even then it is far superior to the manifestations of treachery and fraud which the lower classes of people in some other nations furnish. But the Oxford gentleman realizes the English sense of fair play in a transfigured form by the complete suppression of all manifestations of the pride of aristocracy. He is the simplest of all men, but it is a simplicity with the wisdom of the serpent coiled up within it and thoroly under control. One would almost infer that the ideal of the English gentleman had changed somewhat since the publication of Thomas Carlyle's *Sartor Resartus*, and that the Briton had taken to heart the lesson of the philosophy of clothes and determined within himself to refute that philosophy by making the matter of clothes no indication whatever of character. The English gentleman puts his fine clothing upon his lackeys and goes

about himself in easy and comfortable undress, choosing his clothing for its warmth and comfortableness—sparing no expense in this matter, but utterly refusing to make his clothing manifest wealth or position.

A good story illustrating this was once told by a visitor in my office. He mentioned a commercial traveler from the colonies who was riding from Edinburgh to the north. A very plain English gentleman entered the railway coach, took out his briar pipe, and began to smoke, and opened a conversation on current topics with simple, unaffected manners, and the humane spirit of an English gentleman, without the exhibition of any fad, or the consciousness of carrying with himself a desire to impress anyone else with any purpose of his, or any indication that he was charged with a particular mission or the advocacy of any cause. After a delightful two-hours' ride another gentleman entered the railway carriage at Perth, quite as simply dressed and quite as urbane in his manners as the first. He entered readily into conversation with our commercial agent and his companion traveler. In the course of the morning they arrived at the station where passengers leave the train for Blair Atholl. Here the second gentleman left the coach, and our commercial traveler took note that a splendid carriage and a train of lackies were in waiting for him, and he asked, with some haste, his companion: "Who is that man that just left our coach?" "Oh," he said, "that is his grace the Duke of Atholl." "Indeed," said our commercial traveler; "he was very condescending to talk in such a friendly and genial manner to two cads like us." The remark was cordially assented to by his companion. In the course of the journey to the north they arrived at a station where the first gentleman left the coach and an equally imposing train of lackeys with a fine carriage awaited his arrival. If our commercial traveler had been astonished on the first occasion, he was astounded at a second incident of the same kind. He approached the guard or conductor of the train and asked him: "Who is that man that just now left my coach?" "Oh, that is his grace the Duke of Sutherland." Our friend, wishing now to probe the case to the bottom, fearing that he should make again a similar mistake in judging greatness by aristocratic manners and fine clothing, said to the guard: "And will you pray tell me who are *you*?" This manifestation of common humanity and the desire to be of service to one's fellow-men is the real tower of strength of the true English gentleman.

But Oxford trains not only the aristocracy of wealth, birth, and official position in these matters of ostentation, but it also trains the great scholar, the person who has achieved distinction in letters, or science, or art, making him conscious that it is vulgar to show in any way a consciousness of superiority or to advertise in any way what one has done to distinguish himself.

One reads in the apprenticeship of Goethe's *Wilhelm Meister* the

studies which Goethe made on the difference between the born nobleman and the distinguished but not highborn citizen. In the one case the person is content to be, and never lets his possession either of culture or wealth or of great deeds appear—for that, he feels, would degrade him. To be a nobleman is sufficient for him, whereas the ordinary citizen stands on his achievements and finds it difficult to forget these (or to forget his *havings* in his sense of *being*). He must rely upon his possessions, and he is likely to make them obtrusive.

Our country, the United States, belongs to the vast regions of the world which may be called border-lands. In the border-lands there are found the most active processes of transformation. A synthesis is in progress between different nationalities. The raw materials of commodities, mineral, vegetable, and animal, are being gathered and worked over for transportation to the central emporiums—Paris, London, New York. On border-lands the human spirit is fullest of hope and courage, because it sees from day to day and week to week the wilderness conquered for human purposes and for civilization.. But the frontier is the most unstable and variable region of civilization. Its institutions are less firmly established.

In the times of King Alfred, and earlier, Oxford was on the border-land of Wessex, between it and Mercia on the north. Mercia, as its name indicates ("Mark" or "boundary") was the border-land between the Anglo-Saxon kingdoms and the British tribes which, driven into the fastnesses of Wales, sullenly resisted the encroachments of the Teutonic wave of migration. It was a fording-place, shallow enough to allow herds of oxen and other cattle to be driven across without too much danger of loss by the flood. The Cherwell and the Isis united here, forming the Thames, and spread out in shallow reaches separated by islands. We may conclude that the place was on the line of trade which Walter Besant speaks of in his book on *West London*. This commercial route led on its way to Dover thru Westminster, the lowest ford on the Thames—much used before London Bridge was built in the fourth century. Here in Oxford, of course, was a mart or market, and after Christianity came to the Saxon some religious houses were built as early as 728 A. D., and with religious houses there came scholastic learning.

Wherever the Christian church went in Europe there was created an interest in the history of the religion of the Bible and in the history of Roman nationality. We do not forget that the history of Rome was for six hundred years practically the history of the world, the six hundred years including one century before and five centuries after *Anno Domini*. Hence in the monasteries of Britain, France, and Ireland there was more or less interest in regard to the history of the world and the dealings of God's providence with mankind. St. Augustine, the bishop of Hippo, said in his great work *The City of God* that "the world and its history is

a sort of antiphonic hymn, in which God reads his counsels, and the earth and man read the responses." Those inclined to learning among the Christian monks all over Europe studied Orosius, the disciple who had been induced by St. Augustine, his master, to sketch a general history of mankind in the spirit of his view that made it an antiphonic hymn. This is noteworthy in our inquiry as to Oxford, because King Alfred the Great, king of Wessex—Oxford was in Wessex—translated the history of Orosius into Anglo-Saxon, so that it could be read by the laity as well as by the priesthood. But not only did Christianity take this first rational view of the world-history, but it also collected and prized certain elements of World-knowledge. It had the *trivium* and *quadrivium* or the seven liberal arts. The scholar and philosopher Boetius nurtured in the latest years of the Roman empire and the early years of the reign of Theodoric, the Goth, who held all Italy in order by his firm hand—Boetius has in his *Consolation of Philosophy* described the contents of the *trivium* and *quadrivium*, giving a brief résumé of the insights which formed the learning as to nature and man—another work that Alfred translated into Anglo-Saxon.

First, there was grammar, considering not only the structure of language, which reveals human nature in general as will, intellect, and feeling, but also literature; then, in the next place, logic, which reveals the structure of the pure intellect; and, thirdly, rhetoric, which reveals the process by which ideas are made into feelings and convictions and result in deeds. These three constitute the *trivium*. Then there was arithmetic, including the science of numbers and what was known of analytical mathematics in the form of algebra. They had not yet discovered the works of Euclid, and what was called geometry in the *quadrivium* was an abridgment of the work of Pliny on geography. Music and astronomy complete the four branches of the *quadrivium;* music relating not only to what we call music, but also and chiefly to poetry, art, and such matters as are found in the part of grammar called prosody; astronomy relating to the facts and theories regarding the movements of the visible bodies of the heavens, the changes of the moon, the seasons, the climate, meteorology, and the like. These elements of knowledge were more or less studied by the intelligent and influential monks. Of course, religion was the main interest, but these other matters were not entirely neglected, and there were some places in those early Christian countries where considerable attention was given to them.

As a matter of course, the Teutonic countries had to learn, besides their native tongue, the Latin language. It was a study of the language that had been rendered capable of expressing subtle thoughts of all kinds. Latin had become a sufficient organ for the description of the facts then known of Europe, Africa, and Asia, and its study opened up the world to the provincial youth that had left the narrow circle of his home to join

the monastery which formed a ganglion in the great spiritual nervous system that contained the intellectual brotherhood of the world. Slender as was the store of human learning, it held in germ all that has been unfolded since. It was taught at Paris, Cologne, Metz, Bologna, Winchester, Oxford, Cambridge, Ely, St. Ninian's in Galloway, St. Columba on the island of Iona (north of Argyleshire) in Scotland; St. Cuthbert's Holy Island, Lindisfarne on the northeastern coast of England; St. Peter's south of the Tweed (here lived the venerable Bede) in Scotland—to mention only the places which come to one's mind, without attempting a careful list.

It is certain that monastic education had gone on for centuries at Oxford before the foundation of the first college in 1249. It seems that the nunnery of St. Frideswyde was founded there in 727. Edward the Elder, in 912, soon after Alfred died, took possession of Oxford and made it a fortified city to defend it against the Danes.

History records that Vacarius, professor at Bologna, lectured at Oxford on the Roman civil law in 1149, less than fifteen years after the discovery of the Pandects of Justinian, and only eighty years after the Norman conquest; and it is well argued that this implies a European reputation already achieved by Oxford University. Evidences multiply from that time on of the existence of important schools at Oxford.

The first college, which is called University College, was founded in 1249, and there were two more before 1300, namely, Balliol and Merton; four more in the following century, 1300 to 1400, the century of the beginning of English literature with Chaucer, Gower, and the author of *Piers Plowman;* these four colleges were Exeter, Oriel, Queen's College, and New College; in the next century, 1400 to 1500, three more colleges —Lincoln, All Souls, and Magdalen; and in the century of the Reformation (1500 to 1600) there were six more colleges founded: Brasenose, Corpus Christi, Christchurch, under Henry VIII.; Trinity and St. John's, under Queen Mary; Jesus College, under Queen Elizabeth. Two colleges, 1613, 1624, were founded under King James, namely, Wadham and Pembroke Colleges. Worcester College, founded in 1714, is the only one of the eighteenth century. In recent times Hertford College, St. Edmund's College, and Keble College in the nineteenth century make up the twenty-two colleges in the corporate body of the University of Oxford.

The college is the characteristic of Oxford and Cambridge, for the college collects within its walls anywhere from a dozen students up to something over three hundred. Of the twenty-two colleges in the University of Oxford, four have over two hundred students; and twelve between one and two hundred; and the remaining six have less than one hundred each. Merton is sometimes called the oldest college, but it was founded in another town and removed to Oxford about 1270. Mer-

ton College is the first one which erected dormitories and study halls, a refectory and a chapel, surrounding the whole by a college wall with only one gate for entrance. A new step was taken with the foundation of New College, in 1370, by William Wykeham. This step consisted in the separation of preparatory students from the regular university students. The school at Winchester furnished the preparation, and New College contained only those students who were fitted to take up and go on immediately with the university work. Other new departures are mentioned; one in particular was the founding of Corpus Christi in the early part of the reign of Henry VIII.—a new beginning, because it made so much more provision for the modern studies that had come into vogue with the revival of learning, particularly the study of Greek and of mathematics.

In America there prevails class feeling, but in Oxford the college feeling predominates. The small group of students living within the walls of a given college form a sort of family or monastic community, bringing together the older students and younger ones, so that the unit is the college, and not the class. It is better adapted than the American plan for the production of the type of gentleman which we have been discussing. The older students have much more influence on the younger students.

All books on Oxford tell us about the two courses of study—the easy one, called the "pass," adapted to the students who desire the social culture of Oxford with its athletics and good fellowship, and no more of its erudition than is necessary to pass examination for its degree of bachelor of arts (master of arts is given in course to all bachelors who have been enrolled twenty-seven terms, and who have paid the fees). This course of study shows in all its parts the influence of the *trivium* and *quadrivium* —especially the branch called "music" or "prosody," in the insistence upon the study of the quantity of Latin words—the writing of Latin poetry.

Besides the "pass" examination for the minimum scholarship, there are courses of study for honors. The honor schools are eight in number: (1) English language and literature; (2) *literae humaniores*—modern philosophy and logic and grammar called "greats" (opposed to "greats," the "pass"-examination studies are called "smalls"); (3) mathematics; (4) jurisprudence; (5) modern history; (6) theology; (7) oriental studies; (8) natural science.

The design of the honor examinations is to afford the fullest scope for scholarship—specialization and thoro research being required. The honor school in *literae humaniores* is most sought and highest prized. The chief branches of study in that school are Latin and Greek, ancient history, logic, ethics, and philosophy.

The entrance examination, which is called "responsions," is passed some time in the first year of residence, and is not required before matricu-

lation, as in American universities. The second examination is called "moderations," and comes in the second year of residence, about the middle of the undergraduate course. The third and final examination takes place in the last year. Of the subjects offered for the "pass" three are compulsory. The pass examination includes:

(1) Classic languages; (2) mathematics; (3) modern history; (4) the Bible. Each with its affiliated subjects forms four groups, within which there may be selection for examination of one or more of the four subjects of the classic group, one or more of the five subjects in the modern group, one or more of the seven subjects of the mathematical and scientific group, and one of the religious group. It is compulsory to choose one foreign language, ancient or modern, and to have some portion of the Old or New Testament (with Greek) and the elements of religious knowledge, and another subject from mathematics and science, or from moderns, or from classics.

One of the facts that excite surprise in an American student at first is the short period of residence required in Oxford each year. There are three terms, each of eight weeks: Michaelmas, beginning the first Monday after October 10; Hilary, on the first Monday after January 14; Easter and Trinity, beginning on the second or third Monday after Easter Sunday: twenty-four weeks of residence (which may be reduced to eighteen weeks) and twenty-eight weeks of vacation, the long vacation, ending about October 10, being sixteen weeks, and the other two vacations six weeks each. A greater surprise is created by learning that the hard work in scholarship is not expected so much at Oxford in term time as in the vacation. The demands of athletics and social functions at Oxford during term time are too severe to permit the hard study necessary for great success in scholarship.

Athletics is perhaps the most prominent feature in Oxford life. Boating leads; next come football, cricket, and golf; next running, walking, cycling, etc. There is much literature regarding this phase of English university life.

The hours for exercise are between lunch and tea — 1 P. M., 5 P. M.; that means that games begin usually at 2:15 or 2:30, and stop at 4 P. M., except in case of cricket, which goes on till sundown, or till dinner time when the days get longer. "Lunch is usually a very spare meal, often being simply dessert with bread and something simple to drink. Similarly tea is simply one cup, especially if a man is wanting to keep in good form both for exercise and for dinner at 7 P. M."

Oxford has solved the problem of making athletics develop nervous force instead of nervous dyspepsia by its care to give its two hours in the best part of the day to systematic exercise and guard it against encroachment on the time needed for digestion of the chief meal of the day.

It would seem that our candidates for the Rhodes scholarships should all have obtained a preparation in scholarship amounting to that required for the A.B. degree. But it is obvious that it was the intention of Mr. Rhodes himself to have the benefits of his bequest reach

graduates of the secondary schools; but the provisions of the will give authority to the trustees to modify the bequest, if in their opinion a modification will make the grand purpose of the will more effective. I have found myself obliged to come to the conclusion that any and every attempt to fill the proposed scholarships from graduates of our secondary schools, or indeed even from college students of attainments below the degree of bachelor of arts, will fail to realize the expressed wishes of the testator. In the first place, there is not a sufficient maturity of mind on the part of graduates of our secondary schools to profit by the exceptional opportunities of Oxford, nor is there any considerable degree of maturity until entrance upon the third year of the American college or university.

Now, the chief difficulty with the immature student from the United States will lie in the fact of his sensitiveness to criticism, and of his readiness to fall back upon what he believes to be his rights. While the criticism of his fellow-students at home actually prevails with him because there is no appeal, yet in a foreign university he will, if possible, reinforce his cause by an appeal to the importance of his state or to the importance of his nation. The candidate, if appointed by a state authority — say, a governor — or by a national authority — say, the president, or a board chosen by him — will feel himself in some sense a representative of his state or nation. This form of conceit will be more likely to take root in the mind of the immature student than in that of the holder of a bachelor's degree. It is needless to say that such a conceit in any form would be so offensive to his fellow-students in a foreign university, and to the authorities of such an institution, as to make his residence abroad impossible.

The Rhodes trustees have been fortunate in appointing as their agent Dr. George R. Parkin, whose wide experience in English-speaking communities within and without England has admirably fitted him to the work of adjusting the details of arrangements for filling our quota of these Rhodes scholarships. If the matter of primary selection and nomination of a list of candidates be left to the college presidents in each state, this will be best. But certainly the final selection from the list nominated should be determined by an examination conducted by an Oxford "don" visiting this country for the purpose, and holding examinations at convenient points in the several states. The examination should be in place of "responsions," for the students chosen must be sure of their qualification before the serious undertaking of the long journey and large outlay of money necessary to reach Oxford.

It is admitted by all who are acquainted with the present and past of Oxford that it has fulfilled the function of educating the English gentleman. It has had the effect of creating a democratic code of manners and of securing its adoption by the sons of the powerful families in the government, and by the heirs of nobility. I have already discussed suffi-

ciently this code. It has made it one of the distinguishing characteristics of the English gentleman that he never mentions his titles, or the influence of his family, or his wealth, or his literary productions, or any services of his to his nation or to his fellow-man. He holds his tongue under a severe restraint, and has learned to do this without the appearance of restraint. Not only Oxford, but other English institutions, are powerful in creating in the mind of the youth an ideal of good form in this respect; but Oxford is by far the most potent factor in this influence.

But there is another phase of this matter to be considered: Good form includes also the code of etiquette, established from time immemorial, which gives precedence in a certain fixed order to the members of the nobility, to the dignitaries of the national church, and to the elected or appointed representatives of the English commonalty, settling in advance the rank due to each order in all ceremonials. This recognition of fixed rank and position must be observed as an indispensable form of gentlemanly courtesy in such matters as the addressing of letters, or in personal allusions in a speech, or in a written communication, etc. It is a characteristic of English good form that it makes a code of limitations on each class of people: the nobleman or other gentleman, the tradesman, the servant, and the common laborer. Each one not only observes carefully the proper manners toward his superior, but he is careful to expect and to exact the proper etiquette from those beneath his station. The most refined gentleman will not himself make a personal matter of the neglect of courtesy, but the class to which he belongs or moves in will take care of this matter on his behalf, and this, too, effectively.

On the whole, the code of the English gentleman has in it what is considered the most admirable the world over as belonging to polished manners. I have tried to show that these traits give the person a certain superiority in diplomatic councils, in statesmanship, and in social relations. While this is the case with the individual, it is not so with the class influence which supports and makes valid on occasions the aristocratic prestige or pretense which underlies the condescensions and the reservations of the Englishman's manners. For the very reason that the English gentleman takes none of these upon himself individually in his own behalf, but only as a member of his caste or class, in behalf of some other members of his class, the foreigner not prepared in advance for this phase of English life is apt to feel himself baffled even to exasperation. He finds himself unable to right himself. He meets only personal courtesy and democratic simplicity in individuals, but he finds himself proscribed by a caste. To attack this caste barrier is to meet an ignominious defeat without any ability to set oneself right.

It must be admitted that what is very noteworthy and impressive in English society, as a whole, is more or less to be met with in some degree in all social circles of Europe, and indeed of America, and it must also be

admitted that the English form is more highly refined because within it the individual preserves his democratic cordiality of manner, calmness of demeanor, and careful observance of all the requirements of courtesy due to an individual from his equals.

In the new epoch that is upon us now we are compelled to come into foreign relations. We cannot choose but take part in the councils of the great powers which determine in the aggregate the course of present history; we must have our say — have an influence in international decisions, and an influence that will be proportionate to our strength in population. But for all this there is need to provide sufficient skill.

Here is the important point: We must educate hundreds of our scholars and politicians in jurisprudence and international law; we must have a corps of trained specialists who know the minute details of each great nation's past history and present achievements — Great Britain, Germany, France, Russia, Austria, Italy, Spain, Holland, and the Scandinavian countries.

The Rhodes bequest is the most timely of gifts for higher education, because it gives opportunity to begin this education of that class of our population which will furnish our diplomatic corps with attachés to our consulates and to our home offices and to our embassies. Out of the most successful of these will come by and by our foreign ministers and our home experts in diplomacy.

England is the best place in which to begin this work. The excellence of the University of Oxford is without doubt the training of the ready gentleman who cannot be pushed off his feet by an attack directed upon the weaknesses of his personality. His training at Oxford gives him that secure self-possession and self-respect which commands the respect of his fellows.

Our American students need have no fear that they will lose their nationality at Oxford; for they will find the English ideal of a gentleman exactly fitted for Anglo-Saxons everywhere.

The more perfectly they accept its training in this regard, the more ready they will be for the great work of extending our American influence in the councils of the world.

SOME PRACTICAL PROBLEMS IN MANUAL TRAINING

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I do not propose to deal with the theoretical aspects of manual training in this paper, but with certain practical considerations and some very practical quantities in regard to this work in the elementary school, which I suspect are of more interest to the Department of Superintendence.

The main elements of weakness in the manual-training situation at the present time—and in this outlook I include work in domestic art and domestic science—it seems to me, can very well be summed up under two heads: first, isolation or lack of organic connection with the practice and spirit of the other work in the school; and, second, the factor of expense.

The first fact undoubtedly is partly due to the change and readjustment thru which all school work is now passing, in which each subject is seeking to find its place and relation to the whole. From this point of view manual training is simply in the same condition as the other subjects of instruction, a condition that cannot be much improved until greater unity has been reached in the entire course of study.

The isolation of handwork, however, is also due in part to the conditions under which this work was introduced into the school system. The fact that manual training in our country began in the high school, and next appeared in the upper grades of the grammar school, and always thru the medium of the special teacher working in a special laboratory, has in itself contributed much to keep the work apart in spirit and practice from the other school activities. Under such conditions it is little wonder that the special teacher has worked largely by himself and been content to measure results by his own standards.

When to this situation is added the further fact that the conception of manual training held by the special teacher is often that of some cut-and-dried scheme of exercises and models, the tendencies making against real unity are clearly evident. I do not, of course, wish to lose sight of the fact that such work is often the most vital and stimulating influence in a school, but to point out that, even when this is true, the lack of connection has commonly been no less evident.

The full correction of this evil and the solution of the practical problems presented will not quickly be reached, but the corrective tendencies are already evident; indeed, they are well under way, and their progress can undoubtedly be greatly furthered by the influence and assistance of the school superintendent.

In the first place, greater organic unity will obviously be possible only when the special teachers of handwork have attained a professional outlook beyond that represented by the technique of their subject—when they recognize larger ends than mere skill in manipulation, and when they see their subject in broader relations both to industrial life, on the one side, and to child life, on the other. Without such a broad grasp of the problem on the part of the specialist, it is idle to expect manual training to enter into thoroly natural relations with the rest of the school work.

When a superintendent refuses to employ a professionally trained teacher because he can obtain a mechanic for $200 less salary, it is evident that not much headway is liable to be made in this direction.

Advance will be made very much in the degree that men and women who have been trained to look at the whole and not at a part, who know something about child nature and the tendencies and forces of education, are given preference over those whose idea of handwork is confined to some narrow technical formula. With broadly equipped and resourceful teachers it should certainly not take long for handwork to reach its proper place in the scheme of the whole.

Under such direction will come the introduction of richer content and more thought material into the work. With teachers accustomed to consider principles rather than a formula, growth will inevitably be made toward greater scope and suggestiveness in subject-matter. Progress in this direction need not mean work of greater complexity, but, on the contrary, should make toward things of greater simplicity and more familiar use. Less attention will perhaps be given to mere skill and more to breadth of information and insight. Instead of elaborate and erudite systems built up by the endless drawing out of meager subject-matter will come the effort to set forth the elements of industrial life in simple everyday terms. We shall be liable to have less of instruction, but much more of construction, in our work. When the problem is approached in this way, relations to locality and the character of the particular pupils in hand will be studied. No one scheme will be regarded as unduly important, but out of the whole field of art and industry will be selected those types of most significance for each special set of conditions.

Under such an influence we should expect to find a different line of work in the schools of Grand Rapids from that undertaken in the schools of Pittsburg. In a town where three-fourths of the working population are connected with textile mills we should look for the development of weaving and applied design, and the study of simple machines. Where clay-working is a prominent industry we might find the making of simple pottery built up by hand and enriched with simple decorations as a central feature in the school handwork. In each case the real life of the community would furnish the key to subject-matter, and the problem of the teacher would become that of reducing its suggestions to methods and projects practicable for the school.

One other tendency that is doing much to overcome the isolation of manual training as a school subject is represented in the steadily increasing introduction of the work into the lower grades under the regular teacher. In this movement lies perhaps the largest hope of bringing handwork into natural and vital relations with the educative process as a whole. When handwork is taught by the regular teacher, it will at least receive the same treatment as the other elements of the course of study, and can hardly escape establishing relations with them in the course of time. But, after all, as Dr. Dewey has said in an address before this body: "What gets to the child is dependent upon what is in the mind of

the teacher, and upon the way it is in his mind;" and because of this fact handwork will enter into natural and effective relations with the course of study as a whole only to the degree in which the teacher appreciates and feels the need of such relations. Evidently no external prescription from supervisor or superintendent will take the place of this attitude of mind. Nevertheless, as in all school work, much may be effected thru administrative influence. If that influence is toward natural and sensible correlations with the other elements in the course of study, such as history, geography, and nature study, with allowance for individual latitude where practicable, rather than toward narrow "courses," it is plain that the progress of handwork toward its proper place in the school cannot fail to be greatly promoted.

In such work no one material or process has any paramount value. Natural relations will be secured only when the teacher feels free to make use of clay, paper, wood, yarn, thread, cloth, or other available material that will best serve the purpose in hand. Such a proposition undoubtedly raises serious problems in regard to the supply of materials. These problems can be worked out only by experience, but it seems safe to say that under proper administrative direction they will not prove insurmountable.

One of the important correlations that make toward greater vitality and fruitfulness is that between constructive work and art instruction. We have been prone to consider these subjects quite apart as so much construction, on the one hand, and so much art teaching, on the other; and yet it is not only true that the art of a democratic people must express itself largely in the things of common use, rather than in painting and in sculpture, but it is also true that thru these channels of simple use and understanding lies the readiest approach to the æsthetic appreciation of the child. The simple decoration of a box destined for some definite use appeals to him most strongly, when the abstract composition with brush and paper leaves him cold. It is, indeed, only thru the application of design to definite use that it becomes of meaning and consequently of educational value. We have generally started with our design and then looked about for some place to apply it. Work of this kind may develop into some sort of facility and show of results, but it lacks bottom and meaning in the child's mind and is apt to be readily forgotten.

When the start is made from the other end, and the making or beautifying of some actual thing calls for the design, the idea becomes full of meaning and interest. The process becomes alive with real qualities. It is no longer a matter of merely formal relations, but a question of what can be done to improve the form and enrich the surface of this particular construction in wood, or clay, or weaving, or basketry, or needlework. Each material has its own peculiar possibilities and limitations, and the whole process is a constant study in adapting means to ends. Each

instance develops some concrete way of realizing beauty in simple things, and brings the meaning of art down from an abstraction to a reality.

Working co-operation in this field is by no means impracticable. If the art supervisor and the manual-training teacher can be brought to work upon the same problems, the influence of both will soon be blended in results vastly superior in artistic quality to most of our present work. Much may be done here to vitalize the drawing and color study of our schools, and at the same time to build up a true appreciation of right principles in design. A practical demonstration of the rich possibilities of such co-operation is afforded in the interesting and artistic handicraft produced at the present time in the public schools of New York city, where both the art and constructive work are in charge of one director.

In this problem of the lower grades one of the practical difficulties most often cited is that of size of classes. It is claimed that fifty or sixty pupils in a class present an insuperable obstacle to the introduction and proper teaching of handwork. It is without question that such classes present serious problems in relation to any work that requires simultaneous activity on the part of each and every pupil, and that under such conditions any work of this kind cannot reach its fullest possibilities. In most school work these problems are largely avoided, inasmuch as real activity is commonly demanded of but one pupil at a time.

It is far from true, however, that effective and valuable instruction in handwork is impracticable with classes of even the size just mentioned. The best and most adequate proof of this proposition is the fact that such work is at the present time being carried forward successfully in a considerable number of cities and towns. In a large primary school not far from New York, a varied program of handwork is provided thruout the different grades from the kindergarten upward. In this school the number of pupils in each class ranges from fifty to fifty-seven. Handwork lessons intimately related to the instruction in number, spelling, nature study, geography, and history, in which a considerable degree of expression is demanded of the pupils, are given each day, and it has not been the fortune of the speaker ever to have visited a school marked by greater order, neatness, and smoothness of routine than is the case in this institution.

The remaining serious problem in the manual-training situation has been stated as that of expense. This element necessarily conditions the rate of progress of all school work. Manual training undoubtedly means expense. There is no escape from that fact, but the amount of this expense is unquestionably often very much greater in practice than there is any need, and because of this the estimates as to the cost of introducing handwork are often much exaggerated.

The factors of expense are twofold in character; first, as to the special teacher; and, second, in the cost of equipment and supplies. The

special teacher is a necessity if the work is to be introduced in the upper grades, and, as has already been pointed out, the character of the results will depend upon the character of the man or woman employed. This is not the place to suggest economizing. Not only will the character and spirit of the work depend upon the training and outlook of the special teacher, but capacity and knowledge at this point is the best assurance of economy in all other directions.

The place for the special teacher, however, as far as class instruction is concerned, may well be limited to the upper two, or at most three, grades of the elementary school, where, by means of laboratory centers of instruction, his time may be distributed among the pupils of several schools. Below this point the regular teacher may be brought gradually under proper supervision to handle all the work that is essential. The problem of developing or training the regular teacher to take charge of such work is, under the usual school conditions, not a simple one. Teachers' meetings, prepared suggestions in printed form, personal conferences, and illustrative lessons by the supervisor all represent helpful means of approach, according to the special conditions presented.

The greatest danger in the situation is that of forcing some arbitrary and externally formulated scheme upon the teacher before she understands its significance. Haste should undoubtedly be made slowly at this point. The great end, I take it, is to bring whatever is attempted into natural relations with the teacher's experience and point of view, so that she may come gradually to make use of constructive work in the same spirit that she employs writing and speaking. In order to make a start in this matter, it may be necessary to present the plan of work at first in very specific and detailed form, but there seems little danger in saying that, if more effort were then made to consult the individual sympathies and bent of the regular teacher, richer and more natural results would soon be reached.

In the matter of equipment the manual-training situation presents all manner of possibilities. It is the greatest mistake to conceive that valuable results depend upon an elaborate and expensive equipment. Here, as in all other lines, completeness and thoroness of material conveniences make toward richness of results, and avoidance of waste in time and energy, but the educational result depends upon the brains and spirit in the instruction, and not upon the extent of benches and tools. A teacher of capacity and energy will develop a rich harvest out of the most meager resources, while a weak man remains a slave to his conditions.

This problem is most significant in regard to the laboratory equipments for the upper grades. Given the room, a comprehensive equipment for twenty-five pupils in benchwork on the usual basis may run up to $800 or $1,000, but it is entirely possible to devise a thoroly practical

equipment for such work that can be obtained in the open market for $300 or $400. Further than this, when the problem is reduced to its strictly essential elements, and the benches and fixtures built by the pupils, as was done in the case of the Sterling High School, and the DeKalb Normal School, even these figures may be cut squarely in halves.

On the side of materials it must be allowed that manual training is at present suffering in certain directions from the employment of unduly expensive materials. The zest and enthusiasm that have attended the introduction of certain lines of artistic handicraft, such as basketry and weaving, have led to the use of materials in many ways excellent for their purpose, but objectionable both on the score of expense and from the fact that they represent materials of a foreign and unfamiliar character. The searching out and adaptation of common domestic materials are a crying need in all this kind of work. Much has been done already, particularly in the South, toward developing local resources in this direction. Grasses, rushes and flag, pine needles, yucca, palm leaves, corn husks, and willow twigs have all been brought into use, but much still remains to be done.

This matter has an educational as well as an economic aspect. Anything that brings manual training into more direct contact with the common facts and activities of every-day life, and requires it to find its resources therein, makes toward a training in economics that is of inestimable value. For this reason, if for no other, the effort should be constantly toward simplicity and cheapness of material.

With a teacher of proper influence and spirit much simple material for handwork may be obtained from the home resources of the pupils. In one southern town that has come to my knowledge sacks in which flour is purchased and which would otherwise be thrown away are turned over to the children, washed by them, and brought to school, where they are used as a basis for work in sewing and embroidery. In another place the common burlap bags used for farm products are secured for the same purpose.

Even in the matter of wood a considerable saving of expenditure may often be effected by studying the possibilities of the cheaper woods and conditions of the local supply. Instead of depending solely upon the fast-disappearing white pine, such woods as cypress, whitewood, and basswood may often be used with just as much appropriateness and at one-third or one-half the cost. When it becomes a question of doing something or nothing, there are still further resources. The material of the grocers' packing-boxes, which may be obtained at very small cost, offers a supply of planed lumber of which a goodly percentage is capable of being immediately utilized in the school shop and transformed into articles of use and beauty.

The limitations of this paper hardly allow of a reference to the problems presented by manual training in the high school, and yet there is

one fact evident in the tendencies in this field at the present time that the speaker cannot forbear to mention. Manual-training workers in the past have to a large extent rested their philosophy upon the disciplinary and formative value of handwork, and have given comparatively slight attention to the subject-matter, value, and opportunities of their work. Practice has for the most part conformed to this attitude, and the result, as has been suggested before, has been systems or schemes of work arranged with great attention to the development of skill in rather narrow lines, but with little concern as to breadth of knowledge or insight into practical conditions.

A change, however, is becoming apparent in the situation. As the insufficiency and incompleteness of the theory of formal training has come to be recognized, and as the sociological reference has been added to the psychological, it is coming to be seen that breadth of experience and widening of outlook must be added to the mere training in manipulation. With this view, a clearer outlook as to the field of manual work is being obtained. It is seen that manual training means, not only a method of teaching, but something to be taught, and that something is the study of art and industry.

With the growth of this idea a rich field of subject-matter is at once opened up, and the question of what is to be presented in our instruction assumes a new phase. This change of attitude is resulting in the attempt to get closer to the real facts of industrial practice, and to represent these facts in a more suggestive and practical fashion. This tendency does not represent in the slightest degree any more of a desire to teach a trade than formerly. It is simply the coming of manual training to its proper estate, as the representative in the school curriculum of the great field of modern industry.

It has been said many times recently that the dominant tendencies of the present age are industrial. If that is so, why should we be afraid to acknowledge the fact in our school practice? The question was asked in this hall yesterday afternoon: "What is the objection to teaching the rudiments of an industry in connection with industrial training?" What, indeed? Manual training itself has been slow to take this point of view. It has been largely content with forms and symbols, but it is putting these by and looking forward into a larger horizon and a work of greater meaning. In this, I take it, it is but following the tendencies of all education, which is more and more finding the materials of culture and discipline in the facts and tendencies of real life.

DISCUSSION

GUSTAF LARSSON, principal of Sloyd Training School, Boston, Mass.— In discussing the practical problems in manual training, I take for granted that we are considering this problem from an educational point of view, rather than from an industrial point of view.

I think that most of us agree that it is not practicable in our public schools to prepare the pupils for a trade for making a living, or for a professional career, however valuable these may be. Nor is it best, in my opinion, to utilize manual training merely as a means to further other school subjects.

I believe, with the previous speaker, that manual training should have an organic connection with other school work, but it is still more important that it have a vital connection with *child life* and *child interest*. It may be practicable to have manual training taught by the class teacher in the regular schoolroom below the sixth grammar grade, but in this lies the danger that, in dealing with large classes in this organic work, we sometimes fail to reach the need of each individual; and drill and mass instruction is not wholly educational. I believe that well-directed plays and games which have vigorous motion and interesting motive would be better than many of the occupations that have been practiced.

I think we could not do better than to carry out Froebel's beautiful idea in many of the grades above the kindergarten. In his *Education of Man*, with which we are all familiar, he says: "Every child, boy, and youth, whatever his condition and position in life, should devote daily at least one or two hours to some serious activity in the production of some definite external piece of work. Lessons through and by work, through and from life, are by far the most impressive and intelligible, and most continuously and intensely progressive, both in themselves and in their effect on the learner." The first practical point, then, would be that the teacher should make a study of the *child* before he takes up the *means* whereby he should be educated.

There is a danger that the teacher may be so engaged in the study of the material processes that the child is forgotten; in other words, the children are likely to be fitted to the school, rather than the school to the children.

It is true that correlation of studies has been much discussed of late years, and I believe that it is a good thing; but I also believe that manual training of the right kind has by itself an educational possibility not always recognized by our educational leaders. I believe that manual training will lose much of its educational effectiveness if we try to make it a means directly to intensify the instruction in some of the other school subjects; for whatever interests and strengthens the whole child will enable him to grasp more strongly any subject.

If we are able to prove that manual training can help to produce a healthier, happier, more capable, and more social individual, we must have it; if this is not true, we should not have it.

It has been proved over and over again, in places where manual training has been adequately tried, that it touches the whole human being, physically, mentally, and morally. In other words, it gives a simultaneous development to hand, head, and heart. Over thirty years' experience of educational handiwork in the public schools of Sweden will testify to the correctness of this statement.

In order to obtain these higher educational results — to reach effectively this threefold nature of the child thru manual training — it is evident that the teacher of the subject must be a person of high qualifications, a master of his subject, and also one who fully understands child nature.

While I do not yet see the educational advantage of correlating manual training with some other studies — at least as far as wood-working goes — I do most earnestly believe that it would be very profitable for the teachers of the different subjects to meet in conference as often as possible, particularly those of manual training, gymnastics, drawing, and art. They would have much to gain from this interchange of thought that would strengthen each and all of them in accomplishing that for which they are all striving — the development of the whole child.

If time allowed and the opportunity were possible for illustrations, I should try to show by what means handwork of the right sort would teach our children to *think* to

more profit, and to *act* more individually, and yet in perfect harmony with the constant upward growth and development of the human life around them.

In regard to the so-called "Russian system of manual training," which has been predominating in this country and has been described as being "a series of exercises based upon tools, materials, and the elements of construction," I would say that "sloyd" recognizes and uses all these in its means, but it goes a step farther and also recognizes the importance of the fact that effort and action must be stimulated by human interest. This idea is now also fully recognized in Russia, for during the past year I have corresponded with some of the leading educators in Russia on this subject, one of them being Director Zirul of the Royal Normal Teachers' Seminary in St. Petersburg, and I have obtained from that school two large volumes of working-drawings for manual training in both wood and metal, showing that every exercise now used in the schools of Russia is applied on finished articles of use and beauty. This idea of the importance of a stimulating, worthy motive in all our school subjects is nothing new, and I think needs no discussion before an audience like this. In order to gain a correct idea of the evolution of manual-training methods in this respect, seven years ago I collected photographs of objects used in some of the leading manual-training schools in this country, and three years later I obtained another collection from the same schools. By comparing these collections I found that during the period intervening fully 75 per cent. of the exercises had been put into completed objects. This will show more truly than any reports that the progress toward a stimulating motive has been steadily increasing.

A word as to the meaning of "sloyd" and its adaptation to American schools: We prefer to use the anglicized Swedish word "sloyd," because this single word means more than the double term "manual training"—it means educational handwork, or the simultaneous training of all the faculties of the child. Like the word "kindergarten," it has the disadvantage of being foreign, but I hope it will soon become perfectly familiar. The *Century Dictionary* gives a good definition of the word "sloyd," but the following may give a clearer idea of its meaning: "'Sloyd' is tool work so arranged and employed as to stimulate and promote vigorous, intelligent self-activity for a purpose which the worker recognizes as good."

The Sloyd Training School of Boston, which I have the honor of representing, was started in 1888. It is a free school for teachers, supported by Mrs. Quincy A. Shaw. Only men and women having special qualifications as teachers are considered as applicants, and of these a limited number are admitted each year. The course covers one short school year of eight months, from October 1 to June 1. Over two hundred teachers have been graduated from the school, and most of these are now engaged in teaching sloyd in different parts of this country. In the Boston public schools alone thirty of our graduates are employed.

The particular aim of sloyd is to seek to provide the harmonious development of the pupil during the formative age, *i. e.*, from eight to fifteen years of age. Sloyd has often been misrepresented by well-meaning people, who do not know the principles which govern our work. Let me briefly state the general principles upon which sloyd is based:

1. The teachers must be professional teachers, and not artisans merely.

2. The teaching must be systematic, progressive, and, with the exception of class demonstrations, as far as possible individual.

3. Such manual-training work should be selected as will give the best physical development thru free, vigorous movements.

4. The visible or material results should in every respect represent the individual worker's own effort. This should mean no division of labor, and practically the exclusion of machinery as labor-saving contrivances.

5. The exercises should be applied on objects the use of which can be thoroly appreciated by the worker: each object should be simple, of good form and proportion—hence artistic.

6. The course should include, not only objects which can be made accurately thru the use of ordinary testing tools but frequent work which develops appreciation of curves and exercises the sense of form thru both sight and touch.

7. Special importance must be attached to neatness, accuracy, and finish, and to the development of independence.

COEDUCATION AT THE UNIVERSITY OF CHICAGO

ALBION W. SMALL, PROFESSOR OF SOCIOLOGY, UNIVERSITY OF CHICAGO

I understand that my invitation to discuss this subject was virtually a request to explain the recent action of the University of Chicago in modifying certain administrative details. In accepting the invitation, however, I speak solely from my own individual standpoint. I am not authorized to represent either the university or any official policy of the university. I happen to have voted with the majority in our recent action, and the members of that majority, of course, in a certain general way, think alike about the matter. At the same time, as in all such cases, the action adopted represents compromise and concession even between the members of the majority. The view of no single person appears precisely. I speak of the case, therefore, as it looks to me individually, without attempting to calculate how nearly I may voice the views of anyone else.

It would be immodest to thrust forward a local incident as deserving the attention of a body like this, if it really were nothing more than a local incident. It has value, not because in itself it decides anything of general validity, but because it is a single experiment under conditions which may or may not exist elsewhere, and it is worth what it is worth as a contribution to the theory and practice of education, merely so far as similar circumstances exist. Accordingly, I must say very distinctly that my paper relates to one situation only, and to the practical conclusions which have been reached by the people dealing with that situation. With a single fundamental exception, to be spoken of in a moment, the conclusions are not regarded as necessarily applicable in detail anywhere else. We have had no revelation of a new educational gospel. We have made no claim that our newly adopted working policy has any bearing upon high schools. Whether it has or not I shall omit to inquire, as that part of the subject belongs properly to the gentleman who follows me. I am presenting merely a single case and the conclusions which it has forced upon the persons most responsible.

In the first place, it is safe to assume that impressions which members of this body may have gathered from the press about our experiment are thoroly out of true. Nothing that has been published, with the exception of extracts from the president's latest quarterly statement, gives an approximately correct idea of the action itself or of the considerations

that led to it. The reason for this is easily stated. No question ever roused intenser interest in the university faculty than the one that I am discussing. This interest early spread beyond university circles. The daily papers got inklings of it, and of course tried to get more. Versions of what was going on were furnished by unauthorized reporters, and the papers published them with liberal garnishings of their own. The majority of our faculty did not believe the case belonged in the newspapers while it was in process of decision. Not by formal agreement, but by natural reaction against a public agitation which we felt to be unfortunate, we found ourselves uniformly refusing to argue our case in print. The opposition had a monopoly of the newspaper field. Before the discussion had gone far, fanciful accounts of what the proposition *must* involve, and what its friends *must really* be aiming at, had been set adrift in the newspaper current. They have been floating in the stream of reportorial gossip and editorial comment ever since. Statements have been published denying the correctness of the rumors, but the positive arguments of the majority have been presented to the public only in versions prepared from the opposite point of view. They have consequently been in a large degree fictitious. Like all other mythologies, this folklore is much more entertaining than the truth. It will doubtless be a long time before the commonplace reality supplants the fictions that preoccupied the public mind. My task, however, is principally a dull recital of the literal facts. It is hoped that the truth may not fail utterly to command the attention which wild rumor provoked.

The first proposition which requires emphasis is that *the new administrative measure at the University of Chicago was devised and supported and carried by men who believe in coeducation.* They do not merely accept it as a necessary evil. Most of them have always believed in coeducation. All of them expect that they always will believe in it. It is a curious fact that, while the minority was composed chiefly of persons who regarded themselves as the only real friends and defenders of coeducation, the men who are outspoken opponents of coeducation voted with that minority. They said: "The proposal will not abolish coeducation, so we do not believe in it." There would have been no majority for the measure if it had abolished, or tended to abolish, coeducation, or if it contained any concealed opposition to coeducation. The men who actively promoted the change did so on the ground that it is a constructive measure, destined in our particular case to make coeducation stronger than ever before. We believe that our attitude on the matter will contribute, at least indirectly, to improvements in the administration of coeducation everywhere.

My second main proposition is that *coeducation is not like the form of a geometrical figure, yesterday, today, and forever the same.* Our opponents at once pounce upon this formula and make it the key to their plan of

campaign. They reply: "This is a quibble, a subterfuge, a word-juggle. It shows that you do not mean what you say when you profess friendship for coeducation. There is only one proper meaning for coeducation, viz., instruction first, last, and all the time to men and women sitting side by side in the same room." To people occupying the traditional position the detail thus magnified is the citadel of women's intellectual rights. Weaken this stronghold, they argue, and you surrender all the educational opportunity for women that the struggles of the last century have secured.

To this I reply that we absolutely refuse to recognize anybody's right to identify the principle of coeducation with the purely accidental detail of promiscuity in classification. If coeducation amounted to nothing more than this, belief in it would be formalism of the most mechanical and superstitious sort.

The fallacy of this merely dialectic method of deciding the merits of the case may be shown by an analogy. Making coeducation consist essentially in the form or quantity of association between male and female students is parallel with the notion that marriage is one unchanging and unchangeable form of association between a man and a woman. Not to notice ruder forms of marriage, and considering monogamy alone, we have, as a matter of fact, all the variations in the form of the monogamous union, from marriage under early Roman law, in which divorce was at the absolute discretion of the husband, to marriage under the canon law, which recognized no divorce whatever. We have marriage according to the Code Napoleon, which denies to the wife who has earned money and deposited it in a savings bank the right to draw it without her do-nothing husband's permission; and marriage according to the Kaiser, in which *Kinder*, *Küche*, and *Kirche* measure the tether of woman's liberty. At the other extreme we have marriage according to our western American republics, which consists of a union between an acquiescent man, as silent partner, and, as party of the second part, a woman whose voice is never silent in the streets, so long as there is a public reform to be agitated or a political election to be contested. Accordingly, a very large part of what Mrs. Browning calls "the social spasm and crisis of the ages" is the problem, not of stereotyping the conjugal union in an inflexible form, but of realizing that spirit of association between husband and wife which will make each most valuable to the other, and both most useful to society.

A similar problem is at the heart of the case before us. Coeducation is something profounder than mere adherence to a local tradition of mechanical arrangement among pupils getting their schooling. Coeducation is a stage and a phase in the apprenticeship of men and women for their appropriate life-functions. What are the conditions most conducive to the passing of this stage into the most highly adapted and

adaptable manhood and womanhood? Are we to assume that this tremendous question is the one solitary detail which is settled beyond revision for all time among the innumerable open problems of educational theory and practice? The University of Chicago, at any rate, declines to accept any such snap-judgment. We have no quarrel with separate colleges, either for men or for women. They undoubtedly have a mission, and perhaps a limited number of them will always be desirable. We believe, nevertheless, that as a rule association, not isolation, is the normal condition during the years of preparation for manhood and womanhood. The terms of association, however, should not be rigidly prescribed *a priori*, but should be flexible according to the dictates of experience. It should be possible to regulate the association as circumstances of time and place and individual needs require. This demand reduces the item of co-instruction to the rank of one among the many details which the development of coeducation must utilize for what they are worth. It is as foolish to make a specific, or a shibboleth, or a fetich, out of one accident of the educational program as out of another.

For myself—and now I do not know whether this formula would be acceptable to my colleagues or not—I define coeducation as *instruction, under a single management, of males and females, upon equal terms, under conditions which promise to prove in the long run most advantageous to all concerned.* That is, coeducation is, like education in general, a progressive revelation, and selection of means according to the revelation. The only essential specifications added to the generic term "education" to form the special concept "coeducation" are, first, affirmation of the equal claims of men and women to all opportunities of education, and, second, endeavor by the same educator, whether state, or church, or private corporation, or individual, to furnish equal educational privileges to the males and females of a given constituency. It is most fortunate that the charter of the University of Chicago was deliberately framed so as to provide for this flexible conception.

Third: So far as I am aware, no published statement, with the exception of Dr. Harper's report, just alluded to, has been within respectable guessing distance of the actual grounds for our action. It has been charged that the aim was to diminish the number of women in the university. This neither is, nor has it ever been, nor is it likely to be, the desire of any individual who has actively interested himself in our movement. On the contrary, we not only expect, but hope, that the number of women in our student body will rapidly increase, and it is the policy of the university to promote that increase as diligently as it attempts to increase the number of the men. Without partiality for men or for women, the University of Chicago will not, by its own fault, be second to any institution in providing educational opportunities for both.

Again, an ingenious guesser has contributed to one of our most influ-

ential American weeklies the interpretation that our move has been in response to a demand of the male students for the exclusion of women, and he treats this supposed fact as a cardinal symptom of the times. In reality, to the best of my knowledge and belief, no sign of opposition to the old system ever reached the faculty from the students. So far as their feelings were concerned, the inherited system was rather conspicuously satisfactory. This is, of course, in marked contrast with familiar cases in New England colleges founded for men but afterward opened to women.

Once more, it has often been said that some serious moral problems must have been met, some grave misconduct must have been detected, to account for disturbing the *status quo*. Again, I may reply that for myself I have never had personal knowledge of a single case of immorality, either at Chicago or elsewhere, which was fairly chargeable to coeducation. If any member of the Chicago faculty has had a different experience, he has never put it in evidence in any argument of which I have knowledge. Immorality, in the usual sense, has never been a factor in the case. It is immoral to scrawl letters with a pen, when one can afford a typewriter. It is immoral to waste time running errands, when one can afford a telephone. In that sense alone has our problem been concerned with morals; *i. e.*, we think we have discovered a more excellent way, and it would be immoral not to adopt it. Our action has not been prompted by anything that would usually be classed as sins of commission on the part of students. It is rather a provision against sins of omission on the side of the university.

Now, to state the facts positively: The movement in question was occasioned immediately, not by any speculative theory about coeducation, but by reaching a point in the growth of the university at which it became an inexorable necessity to recognize an axiom of physics, namely, two bodies cannot occupy the same space at the same time. Our lecture halls, laboratories, and departmental libraries were overcrowded. They were wanted by both graduates and undergraduates. Enlarged accommodations were imperative. Unless we were to proceed without system, and regardless of the future, the question was forced upon us: Looking ahead as far as we can, what principle of assigning ground space for the needed buildings will best provide for all the interests of the university? Time would not permit rehearsal of the many considerations which had to be weighed, and it is not necessary for the present purpose. It soon became clear to everyone, however, that the four blocks to which the university had been confined would be needed for the higher work alone, and should be reserved accordingly. This meant, in other words, that removal of all freshman and sophomore work — that is, in our terms, the Junior College — from our present base of operations, and provision for it elsewhere, was judged to be the wisest method of relieving our overcrowded condition.

When so much was clear, everyone taking it for granted that the higher work was anchored by the laboratories, etc., the questions were forced upon us: How can we best provide for the Junior College? Shall we plan to develop in the future an indefinite number of quadrangles, in imitation of the central university quadrangle, with dormitories for women on one side, for men on another, and with intermediate buildings for common instruction; or shall we adopt some other principle? The moment this was recognized as a practical and urgent administrative question, some of us saw that we could not do our full duty in answering it unless we reconsidered on its merits, and in all its bearings, the whole traditional machinery of coeducation, which we had inherited. In other words, it was not sufficient to inquire: How can we most conveniently continue to do the thing we are already doing? The more important question was: Is this the best thing possible? Would any changes in our system improve it in the interest of both men and women?

The newspaper advertising of our discussion, as something that grew out of hostility to women, or jealousy of women, or illiberal disposition toward women, was a long shot in the opposite direction from the mark. Whatever may be our deficiencies in other respects, I feel perfectly safe in declaring that the world does not contain an educational institution in which recognition of the equal right of women to all that it offers is more complete than in the University of Chicago. I make this boast without qualification or apology, because when a thing is absolute it can't be any more so. This is not only the fact, but the fact corresponds with the whole animus of the university. Women are no more there on tolerance than the men are. Use of all that the university affords, from the kindergarten in the School of Education to private laboratories for special research, is not a privilege dependent on concession, but the unquestioned right of women on precisely equal terms with men. The trustees and faculty of the university are probably more anxious to guard this equality in the interest of the women than of the men, for they assume that the men would be more aggressive in defending their rights if by oversight or accident they were ever impaired. There has never for a moment been any halting or wavering, or equivocation, in our purpose to develop and improve and realize coeducation. The few individuals in our number who do not believe in the idea have always accepted the fact that the university is irrevocably committed to it, and that they could not change it if they would. The great majority not only accept the fact, but are in cordial sympathy with it, so that they would not change it if they could.

As the newspapers have taken pains to let everybody know, the first step which we have taken, in pursuit of the purpose to perfect our system, has been the establishment of separate Junior Colleges for men and women. They are to be located, the one on the east, the other on the west, of the main quadrangle reserved for higher work, and their nearest

boundaries will be three or four blocks distant from each other. The ugly term "segregation" was invented by misinformed outside agitators against what they excited themselves into believing to be our purpose. It is a sneer, with which it is useless to argue. If it is applied to the division between the Junior College and the higher work, it is no more in point than it would be to use it for the separation between the elementary medical work in lecture-room and laboratory, and the more technical work in clinics. If the epithet applies to the division between Junior College men and Junior College women, the separation is equally of each from the other, and it is only by a freak of the imagination that it can be made invidious. Each Junior College is in the same sense, and in the same degree, a part of the university that the other is. There are no divisions of the faculty, but merely temporary shifting in assignment of duties. That is, the professor who gives a course in geometry, or French, or history in one college at one hour of the day, or in one quarter of the year, will offer the same course at another hour of the same day, or in another quarter of the same year, in the other college.

For myself, I do not believe that this will work out as "identical instruction" in the two colleges, and I do not believe that it should. It is a moral impossibility for a teacher who is thoroly alive to give precisely the same instruction to a class of men which he would give to a class of women. He will and should adapt himself to the different mental attitudes of men and women. The more skillful he is, the more will his power to vary his instruction accrue to the advantage of both men and women.

The division just described between men and women ceases at the end of the sophomore year, or, in our terms, at the completion of the work of the Junior College. Meanwhile, the foundations of a somewhat coherent, sheltered community life will have been laid for both men and women. No Chinese walls, nor barbed-wire fences, nor even hedges will inclose the students in either college. They will have more and better opportunities for meeting each other in perfectly natural ways than the average man and woman of the same age who are not in college. No one who is acquainted with the social tendencies of Chicago is likely to harbor very desperate fears lest our boys and girls may henceforth see so little of each other that their social development will be permanently arrested.

The modification that I have described has been hysterically denounced from one point of view, and almost as hysterically ridiculed from another. On the one hand, it has been claimed that this is merely the beginning of the end of coeducation in the University of Chicago, and so it is regarded as the first move in a campaign for the educational disfranchisement of women. On the other hand, it has been ridiculed as a change too insignificant to affect coeducation one way or the other. Unlimited scorn has been aimed at the futility of a scheme which merely sandwiches

in two years of separate class work between earlier and later years of association. As to the former charge, I have already shown that our answer might be in baseball language: "Never touched me." To the latter criticism we may properly reply: "Then why these tears? If the effort is so feeble, why waste agitation on it? Why not leave it to expire of inanition?"

Now, the truth is, this measure can never have anything like the radical importance, either for weal or for woe, which its friends have been supposed to claim for it, or which its opponents predict as its consequence. Reactionary it never was, in any shape or degree. On the other hand, we have never thought of it as a cure-all. It is a measure designed to guard the equilibrium of students at a stage when it is peculiarly liable to be disturbed. It is an adjustment, an adaptation, a relief of nervous and mental tension, at a point where there is excessive stimulation.

In a word, what I mean is this: We are in the geographical center of a large city, the focus of a group of states in which there is an enormous increase of families whose children are not compelled by poverty to hurry into bread-winning. The time is apparently approaching when the number of girls who choose college education in the country at large will equal the number of boys. However this may be, in a city like Chicago, and to a lesser degree in the tributary country, the time is fast approaching when girls will enter college in equal numbers with boys, and from closely similar motives. The days when going to college was an ordeal that tried women's souls, and when only the rare few would undertake it, are ancient history. Today in our city colleges we can match the immemorial species "generous youth" with equal numbers of the lately differentiated "generous maiden." To speak sooth of either type, it means well enough, and will mostly find itself by and by, but just now it frankly does not know what else to do with itself, and college is its line of least resistance. No one who has been a freshman or a sophomore will think hard of me for not stopping long to verify the other scattering specimens in the collection. The aforesaid "generous youths and maidens" come to college very human boys and girls. They have been with other boys and girls before, but they didn't mind particularly. Now they are thrown in with a crowd of new boys and girls, and they begin to take notice. The boy of seventeen or eighteen has grown up by the side of his younger, or even older, sisters, and other boys' sisters, and has probably never wasted a minute on the purely academic question of their possible equality with himself. In the college environment the perspective changes. He is doggedly aware that the girls in his class are sophisticated beyond his years. He has always supposed himself at least as old as anyone of his age. Now, when he hears the girls of his class talk about "high-school kids" he has a guilty feeling that it means him. While he is being guyed and hazed and, if lucky, "rushed," the chasm yawns wider between him and

his girl classmate, who does not even shrink from the presence of the captain of the football team, and has already made a distinct impression upon some of the social stars of the fraternities. Our freshman doesn't feel happy. These girls embarrass him. The only relief they can offer is by electing courses as far ahead of the natural sequence as the rules allow, so as to get into the company of older and more interesting men.

But what of these freshman girls themselves; these eager, impulsive, inexperienced, adventurous maidens that our prosperous American life produces; these heirs-expectant of the world and the fullness thereof; these latest arrivals at the gates of life, equipped with anticipations as omnivorous as they are indefinite; with nerves a-quiver for the next sensation; with serene assurance that their future must be a long crescendo of happiness? What of these on-the-whole most admirable specimens of unfulfilled womanhood that any civilization has ever produced? A man old enough to be a grandfather may be safe in confessing that he would suspect the mental and moral wholesomeness of the college boy who could live within the horizon of these peerless girls, and not in his secret heart be gloriously in love with them one and all!

But how fares it with these girls in the atmosphere of the big city coeducational college? More than anything else they need poise, repose, standpoint, perspective, purpose. They need long, clear looks at life from its upper side, unconfused by the jostlings of the crowd. What are the chances in this direction, when every nerve is at concert pitch, when ambition for prestige is goaded by the keenest spurs, when the whole air tingles with the excitement of a continuous social function?

I grant you all this is not argument. I am dealing with facts, to be sure, but let us say that my use of them is merely parable. What I mean by it is that things like those which the parable suggests are bound to produce a large amount of distraction of attention, which would wander enough without such provocation. Much of this disturbance is avoidable. Removal of needless causes of it would do just so much toward securing maximum conditions of comfortable, healthy, normal growth, and incidentally of effective college work. Is this a trifle? If any of us think so, we might learn rudimentary psychology from the gymnasium, not to say from the paddock.

But you reply: "After all, you have not proved either that unwholesome conditions exist, or that, if they did, your measure would be a remedy." You are right, and I do not deceive myself in the least about the logical status of the discussion. In the twenty-seven years of intermittent debate in which I have participated on this subject, and particularly in the portion of it which has been carried on among my colleagues during the past two years, I have known of only one absolute demonstration. The one thing established is that, if a person has once had an opinion, either *pro* or *con*, upon the subject of coeducation, all the arguments in

the world will never prove anything to the contrary one way or the other. On every subject, with this one exception, reasoning may have some effect. In this case never. The only possible change of view has to come thru collision with new experiences and the sensation of facts arguing for themselves. I have no ambition to fly in the face of Providence by attempting the impossible. I have been content to state our position, and to indicate the spirit in which we are acting. We may be mistaken about our facts. We may be fatuous in our way of treating them. Our purpose is beyond attack.

Speaking again for myself only, it seems to me that in education we have parodied the practice of Judge Lynch; that is, first hang your prisoner, then try him. We first extemporized a coeducation, and then, with uncanonical speed, we canonized it. I believe that the contrast between the naïve coeducation which we stumbled into and that which we shall develop in the future is parallel with the difference between the little purgatory which the memories of my childhood recall under the name of primary school, and the kindergarten which the wisest teachers are perfecting today.

COEDUCATION IN HIGH SCHOOLS

AARON GOVE, SUPERINTENDENT OF SCHOOLS, DISTRICT NO. 1, DENVER, COLO.

I believe that the interests of the thousands in the high school are quite as important as are those of the hundreds in the colleges. I am aware that what I am about to say will arouse antagonism, especially on the part of my women friends. They will seem to see an attack on what is commonly called the equality of the sexes. I address myself especially to opposing the present identical education of the high-school boy and girl, without reference to the "co." It matters little where they receive instruction; I am protesting against the identical education that schools have been led to give to the sexes. Altho the high schools have largely modified their curricula because of the elective courses and of the privilege of equivalents which is one of the blessings of the present time, we have not yet got thru with the notion that the diploma of a secondary school must be the same certificate, whether issued to a boy or to a girl. The equivalent for the boy and the girl ought to include and exclude much of either.

From the homes — and I speak for the high schools — the girls have been compelled to enter school with the brothers, to select the course of study with their brothers, to enter school at the same time in the morning, to attend recitations at the same time, and to receive diplomas at the same time — identical education.

The progress in our nation along all industrial lines, the advance in commercial lines, the improvement in all the opportunities of human life have been so rapid in the last fifty years that our fathers hardly know where we are; but the public high school has remained the same until recently. It is changing now, but in some respects the girls are working at an increased disadvantage. I remember two boys who, in their city home, had nothing to do but go to school; no kindling to prepare at the home, no coal to carry in, no chores to do, no horse to take care of; no work whatever was to be done by the boy. When they left school at two in the afternoon, they dawdled, unless fortunate enough to have inherited a bias for football or other athletic sport.

The sister is never free from a task. In common life, domestic cares employ her; if the middle station in life be hers, duties about the house engage her attention; if above the middle class, duties of society engage her. The American girl must have society — not dull society, not balls late and long, but girl society, society social and contributing to the culture of the individual. With such differing conditions, it is wicked to assign the same task to both girls and boys.

I ask the teacher of physics: "Tell me, if you had the girls at one time and the boys at another, would your instruction be modified?" He replies: "I would modify the instruction; I cannot tell you just how, but I should not always take the same route." The girl who has floundered thru arithmetic in the grammar school may be one of the brightest in the high school under proper conditions. We wrong the high-school girl by saying that the science must be taken as the university graduate wants it, with complicated apparatus, original investigation, and the notions of the college. This is at the present time harming the girls' and the boys' high schools. The first, second, and third years in the high school are suffering for lack of good teachers, because the college men coming to us must wait to learn from practice there.

I have little respect, and so have you, for him who undertakes to demolish without suggestions for building up. I have a suggestion for the better. The mothers and the sisters and the aunts remonstrate against the statement that the girl cannot be equal with the boy. She is equal and frequently superior. The girl does more for self-culture between fourteen and eighteen years of age than does her brother, but she must take longer to get thru the high school.

Let her go with her brother in the morning and go home at noon, and not appear again until the beginning of school next day. She will be engaged in the extra duties I have spoken of; I trust she will be out of doors some part of the time. From this it follows that the girl's afternoon vacation will necessitate six years, in which she is to do the work in school which her brother does in four. The objection I meet is the prejudice of the people and the home in concluding that this means

the depreciation of the young women of the country. Every high school could so adjust its work that the girls could all go home at noon. Just think; the boys have gone to college and gone to business; the girls are saved in health, have the accomplishments, have learned domestic life, have been able to read more than their brothers, and they are made free in their lives, and are ready for life's duties quite early enough, with six years of high school to offer against four years of the brothers'.

DISCUSSION

SUPERINTENDENT EDWIN P. SEAVER, Boston, Mass.—I want to declare my great pleasure in hearing the preceding speaker say that identical education for girls and boys is the error in which we have been allowing ourselves to proceed for a good many years past. With Superintendent Gove, I believe that the high-school girl should not have identical education with the high-school boy, because they are not equal—as he says, the girl is superior. Something was said about Boston not having come into line, and I must be allowed to tell you what we have been doing. Some twenty-five years ago Boston enlarged her borders by taking in the neighboring towns. Each of these annexed towns had high schools of the usual coeducation type. In the old city we had the English high school for boys, dating from 1821; the Latin high school for boys, dating from almost the founding of Boston, 1635; the high school for girls, established in 1854; and the Latin school for girls, established about twenty-five years ago. So when I am asked what Boston stands for, I say we stand for about everything that can be thought of. But there is a curious piece of history which I wish to state, and then to point out consequences. Soon after this annexation, it entered into the heads of the committee that all these high schools, except the Latin, must be organized and run on a uniform course of study. The women who had lately obtained places on the board insisted that the girls' high school must do just the same work that the boys' high school did. The equality of the sexes must be recognized in education. The two high schools, the one for boys, and the one for girls, had grown each from its own roots, and had become different in character, and the schools in the suburbs had grown each in its own way; but all these schools were driven to use the same course of study. After my official connection of twenty years with this work of enforcing an identical education for boys and girls and for all high schools, I do not hesitate to declare that it has been a gigantic failure, and if my experience is worth anything, the rest of you are welcome to it. After our trial of a uniform course of study, we had to smash the whole thing, and now all the studies are elective. The girls take what it is best for them to take, and the boys take what it is best for them to take, and they display quite a difference in taste or in judgment. There is also an option as to the quantity of work to be done. We allow the girl, if five studies are too many, to take three, or as few as two for the time being. In the case of a certain girl I have in mind, it was better for her to take some studies than to stay out of school entirely. This was not in Boston, but in the neighborhood. The father asked permission for her to continue with three studies, and was told that she would not finish, would have a one-sided education, would become a special student, and would not graduate with her class. The persistent argument by the father gained the permission, but the girl was never allowed to take the diploma. She went thru the usual studies in five years, but could not have the diploma. The prospect of losing the diploma operates injuriously upon the girls of the high school. The "special student" receives less consideration, not only from the teachers (that might be endured), but also from the body of her classmates.

I believe, if the studies of the high school are arranged on a liberal elective plan, a

good many of these difficulties will disappear, and we shall better adapt high-school education to the boys and girls who enter. That was one of the "adjustments" which I hoped our friend from the Hughes High School would bring into his paper. A most important adjustment is the adjustment of the kind and quantity of study to the boys and to the girls respectively. The time has gone by when we are to consider that the boys and the girls are all alike, and are best treated by a uniform course of study.

SUPERINTENDENT E. A. GASTMAN, Decatur, Ill.— Forty-one years ago I helped organize, in a town of about five thousand inhabitants, a high school. I am still trying to make that high school as good as I can. My sons and daughters have passed thru it; two of them are graduates of the University of Michigan, and one of them a graduate of the Lewis Institute. I never knew a time when a parent was not told that a physician's certificate would excuse his child from any work that he might desire. Two things are required in our course—mathematics and English; the others are elective.

I have great respect for my friend Gove, and attach importance to what he says, but I want to state this experience: I never have seen, in the forty-one years, that either the boys or the girls were injured by the regular work of the high school, even when they took exactly the same studies.

SUPERINTENDENT J. F. KEATING, Pueblo, Colo.— I think only a portion of the paper was on the subject of coeducation. We find the distinguished gentleman from Chicago saying that we shall have identical education in the segregated schools. Then Mr. Gove says we must not have identical training for the boys and girls. Thus the doctors continue to disagree.

In the presence of these gray hairs I hesitate to speak, but I do want to know what sort of system, under the modern elective plan, will compel both sexes to take identical work in the high school. I wonder if the boy does not pass thru the period of adolescence as well as the girl, and whether he does not have times of rapid growth also. I have found the boys needing to drop off at times in their studies, as well as the girls. I think this is simply a reversion that we have had introduced to us. I think, with the elective system in the modern high school, we can leave the boy and the girl to take care of themselves.

One thing more I want to know is, why Dr. Small would turn the boys and girls together socially, but would not allow them together in the recitation room. In other words, they may dance together, play cards together, but they must not recite together.

In regard to Superintendent Seaver's statements, I think it a mistake to generalize so broadly from a few isolated cases presented by him, just as I think it would be a mistake for a man to purchase a house from the average real-estate agent when he had only shown him two or three bricks from the house.

SUPERINTENDENT L. E. WOLFE, San Antonio, Tex.— I believe the time will come when we shall admit that fundamentally, psychologically, and in every other way the education of the girl should not be the same as that of the boy. If the social environment is to determine education — and we all admit that industrially, in the home, and in many other ways, the environment of the girl is different from that of the boy — then it must follow that the educative material must not be identical. Mr. Gove only partially solves the question, because he does not allow the girl any credit for the growth she gets in the home. The girl studies music and does brain work in the home; will the time ever come when she can have credit for that work?

DR. JOHN T. PRINCE, West Newton, Mass.— My friend Mr. Gove suggested that the girl close up work at 12 o'clock and go home. I suggest that the boy go home then, too; but I suggest that both may come back in the afternoon for manual and physical training, domestic science, and other things that might be extra, but entirely voluntary. Three or three and one-half hours a day of close intellectual work is quite enough for boys as well as girls. The afternoon's exercises should be optional, but may be made so attractive that no one will wish to miss them.

NATIONAL COUNCIL OF EDUCATION

CONSTITUTION

PREAMBLE

The National Council of Education shall have for its object the consideration and discussion of educational questions of general interest and public importance, and the presentation, thru printed reports, of the substance of the discussions and the conclusions formulated. It shall be its object to reach and disseminate correct thinking on educational questions; and, for this purpose, it shall be the aim of the Council, in conducting its discussions, to define and state with accuracy the different views and theories on the subject under consideration, and, secondly, to discover and represent fairly the grounds and reasons for each theory or view, so far as to show, as completely as possible, the genesis of opinion on the subject. It shall be the duty of the Council, in pursuance of this object, to encourage from all its members the most careful statement of differences in opinion, together with the completest statement of grounds for the same. It shall further require the careful preservation and presentation of the individual differences of opinion, whenever grounds have been furnished for the same by members of the Council. It shall invite the freest discussion and embody the new suggestions developed by such discussions. Any member making such suggestion or objection may put in writing his view, and the grounds therefor, and furnish the same to the secretary for the records of the Council. It shall prepare, thru its president, an annual report to the National Educational Association, setting forth the questions considered by the Council during the previous year, and placing before the Association, in succinct form, the work accomplished. It shall embody in this report a survey of those educational topics which seem to call for any action on the part of the Association. The Council shall appoint, out of its own number, committees representing the several departments of education, and thereby facilitate the exchange of opinion among its members on such special topics as demand the attention of the profession or of the public.

ARTICLE I—MEMBERSHIP

1. The National Council of Education shall consist of sixty members, selected from the membership of the National Educational Association. Any member of the Association identified with educational work is eligible to membership in the Council, and, after the first election, such membership shall continue for six years, except as hereinafter provided.

2. In the year 1885 the Board of Directors shall elect eight members—four members for six years, two for four years, and two for two years, and the Council shall elect eight members—five members for six years, two for four years, and one for two years; and annually thereafter the Board of Directors shall elect five members and the Council five members, each member, with the exception hereinafter provided for (sec. 5), to serve six years, or until his successor is elected.

3. The annual election of members of the Council shall be held in connection with the annual meetings of the Association. If the Board of Directors shall fail, for any reason, to fill its quota of members annually, the vacancy or vacancies shall be filled by the Council.

4. The term of service of the several members of the Council chosen at the first election shall be arranged by the Executive Committee of the Council.

5. The absence of a member from two consecutive annual meetings of the Council shall be considered equivalent to resignation of membership, and the Council shall fill vacancies caused by absence from the Council as herein defined, as well as vacancies caused by death or resignation, for the unexpired term. All persons who have belonged to the Council shall, on the expiration of their membership, become honorary members, with the privilege of attending its regular sessions and participating in its discussions. No state shall be represented in the Council by more than eight members.

ARTICLE II—QUALIFICATION FOR MEMBERSHIP

All members of the Council shall be either life or active members of the National Educational Association.

ARTICLE III—MEETINGS

There shall be a regular annual meeting of the Council held at the same place as the meeting of the National Educational Association, and at least two days previous to this meeting. There may be special meetings of the Council, subject to the call of the Executive Committee, but the attendance at these meetings shall be entirely voluntary. A majority of the Council shall constitute a quorum for the transaction of business at any meeting, whether regular or called; but any less number, exceeding eight members, may constitute a quorum for the transaction of business at the regular annual meeting, as defined in this article.

ARTICLE IV—THE WORK OF THE COUNCIL

The Council shall, from time to time, undertake to initiate, conduct, and guide the thoro investigation of important educational questions originating in the Council; also to conduct like investigations originating in the National Educational Association, or any of its departments, and requiring the expenditure of funds.

ARTICLE V—THE APPOINTMENT OF SPECIAL COMMITTEES AND EXPERTS

In the appointment of special committees, and in the selection of writers and speakers, it shall be the privilege of the Council to appoint such experts, whether members of the Council or not, as are deemed best qualified to conduct investigations.

ARTICLE VI—THE PROGRAM

It shall be the duty of the president of the Council to prepare, with the assistance and approval of the Executive Committee, such a program for the annual meeting as shall realize as fully as practicable the purposes for which the Council was organized and exists.

ARTICLE VII—STANDING COMMITTEES

1. There shall be four standing committees: an Executive Committee, a Committee on Membership, a Committee on Educational Progress, and a Committee on Investigations and Appropriations.

2. The Executive Committee shall be composed of the president of the Council and of three other members, whose terms of office shall be so arranged that one new member may be chosen each year, beginning with the year 1899.

3. It shall be the duty of the Executive Committee to provide an annual program by selecting, whenever feasible, subjects for investigation, and appointing committees to

conduct such investigations. It shall be the duty of the Executive Committee to carry out the provisions contained in this constitution referring to volunteer and invited papers. It shall be the duty of the Executive Committee to provide a place on the program for the report on any investigation which may be ordered by the National Educational Association or its departments.

4. The Committee on Membership shall be composed of the president of the Council and six other members, whose terms of office shall be so arranged that two vacancies may be filled every year, beginning with 1899.

5. There shall be appointed annually a committee of one to submit, at the next meeting, a report on "Educational Progress During the Past Year," in which a survey of the important movements and events in education during the preceding year is given. This committee need not be selected from the members of the Council.

6. The Committee on Investigations and Appropriations shall be composed of nine members, whose terms of office shall be so arranged that three vacancies may be filled each year, beginning with 1903. No proposal to appoint a committee to undertake an educational investigation of any kind, and no proposal to ask the Board of Directors of the Association for an appropriation for any purpose, shall be acted upon until such proposal has been referred to this Committee on Investigations and Appropriations for report.

ARTICLE VIII—THE DUTIES OF THE COUNCIL

1. It shall be the duty of the Council to further the objects of the National Educational Association, and to use its best efforts to promote the cause of education in general.

2. The meetings of the Council shall be, for the most part, of a "round table" character.

ARTICLE IX—AMENDMENTS

This constitution may be altered or amended at a regular meeting of the Council, by a two-thirds vote of the members present, and any provision may be waived at any regular meeting by unanimous consent.

By-laws not in violation of this constitution may be adopted by a two-thirds vote of the Council.

OFFICERS, STANDING COMMITTEES, MEMBERS

OFFICERS FOR 1902–1903

WILLIAM R. HARPER	Chicago, Ill.	*President*
W. H. BARTHOLOMEW	Louisville, Ky	*Vice-President*
J. F. MILLSPAUGH	Winona, Minn	*Secretary*

EXECUTIVE COMMITTEE

THE PRESIDENT, *ex officio*

JOSEPH SWAIN	Bloomington, Ind	Term expires in 1903
RICHARD G. BOONE	Cincinnati, O.	Term expires in 1904
NICHOLAS MURRAY BUTLER	New York, N. Y	Term expires in 1905

OFFICERS FOR 1903–1904

FRANK A. FITZPATRICK	Boston, Mass.	*President*
JOSEPH SWAIN	Swarthmore, Pa.	*Vice-President*
JAMES H. VAN SICKLE	Baltimore, Md.	*Secretary*

EXECUTIVE COMMITTEE

THE PRESIDENT, *ex officio*		
RICHARD G. BOONE	Cincinnati, O.	Term expires in 1904
NICHOLAS MURRAY BUTLER	New York, N. Y.	Term expires in 1905
ANNA TOLMAN SMITH	Washington, D. C.	Term expires in 1906

COMMITTEE ON MEMBERSHIP

AUGUSTUS S. DOWNING	New York, N. Y.	Term expires in 1904
LORENZO D. HARVEY	Menomonie, Wis.	Term expires in 1904
JAMES M. GREENWOOD	Kansas City, Mo	Term expires in 1905
JAMES H. VAN SICKLE	Baltimore, Md.	Term expires in 1905
W. T. HARRIS	Washington, D. C.	Term expires in 1906
ALBERT G. LANE	Chicago, Ill.	Term expires in 1906

COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

EDWIN A. ALDERMAN	New Orleans, La.	Term expires in 1904
AUGUSTUS S. DOWNING	New York, N. Y.	Term expires in 1904
LORENZO D. HARVEY	Menomonie, Wis.	Term expires in 1904
NICHOLAS MURRAY BUTLER	New York, N. Y.	Term expires in 1905
NEWTON C. DOUGHERTY	Peoria, Ill.	Term expires in 1905
WILLIAM R. HARPER	Chicago, Ill.	Term expires in 1905
JAMES M. GREENWOOD, *Chairman*	Kansas City, Mo.	Term expires in 1906
FRANK A. FITZPATRICK	Boston, Mass.	Term expires in 1906
ELMER E. BROWN	Berkeley, Cal.	Term expires in 1906

MEMBERS

NOTE: The letter "A" following a name denotes that the member is of the class elected by the Association; the letter "C," by the Council.

	Term expires
*Richard G. Boone, Yonkers, N. Y.	A 1904
*F. Louis Soldan, St. Louis, Mo.	A 1904
*Lorenzo D. Harvey, Menomonie, Wis.	A 1904
*R. H. Halsey, Oshkosh, Wis.	A 1904
*Carroll G. Pearse, Omaha, Neb.	A 1904
*Anna Tolman Smith, Washington, D. C.	C 1904
*Josephine Heermans, Kansas City, Mo.	C 1904
*James H. Van Sickle, Baltimore, Md.	C 1904
John Dewey, Chicago, Ill	C 1904
*Newton C. Dougherty, Peoria, Ill.	C 1904
*W. H. Bartholomew, Louisville, Ky	A 1905
*Frank A. Fitzpatrick, Boston, Mass.	A 1905
*I. C. McNeill, West Superior, Wis.	A 1905
*E. Oram Lyte, Millersville, Pa	A 1905
*J. M. Greenwood, Kansas City, Mo.	A 1905
*Frank B. Cooper, Seattle, Wash	C 1905
*Joseph Swain, Swarthmore, Pa.	C 1905
*Nathan C. Schaeffer, Harrisburg, Pa.	C 1905
*Louis C. Greenlee, Denver, Colo.	C 1905
*Z. X. Snyder, Greeley, Colo.	C 1905
James A. Foshay, Los Angeles, Cal.	A 1906
*J. H. Phillips, Birmingham, Ala.	A 1906
*Livingston C. Lord, Charleston, Ill.	A 1906
*James H. Baker, Boulder, Colo.	A 1906
*Robert E. Denfeld, Duluth, Minn.	A 1906
*Lucia Stickney, Cleveland, O.	C 1906
*Irwin Shepard, Winona, Minn.	C 1906
*Aaron Gove, Denver, Colo	C 1906
*J. W. Carr, Anderson, Ind.	C 1906
Frank A. Hill, Boston, Mass	C 1906
*James M. Green, Trenton, N. J.	A 1907
*Augustus S. Downing, New York, N. Y.	A 1907
*A. R. Taylor, Decatur, Ill.	A 1907
*Charles D. McIver, Greensboro, N. C.	A 1907
*E. H. Mark, Louisville, Ky.	A 1907
J. L. Spaulding, Peoria, Ill.	C 1907
*Bettie A. Dutton, Cleveland, O.	C 1907
*Charles H. Keyes, Hartford, Conn.	C 1907
*Andrew S. Draper, Champaign, Ill.	C 1907
William F. King, Mt. Vernon, Ia.	C 1907
Charles F. Thwing, Cleveland, O.	A 1908
*Albert G. Lane, Chicago, Ill.	A 1908
*Edwin A. Alderman, New Orleans, La.	A 1908
*Charles M. Jordan, Minneapolis, Minn.	A 1908
*J. F. Millspaugh, Winona, Minn.	A 1908
*W. M. Davidson, Topeka, Kan.	C 1908
*E. W. Coy, Cincinnati, O.	C 1908
O. T. Corson, Columbus, O.	C 1908
*James E. Russell, New York, N. Y.	C 1908
*Oliver S. Westcott, Chicago, Ill.	C 1908
*W. T. Harris, Washington, D. C.	A 1909
*William R. Harper, Chicago, Ill.	A 1909
*Charles R. Skinner, Albany, N. Y.	A 1909
*Ella F. Young, Chicago, Ill.	A 1909
*Howard J. Rogers, Albany, N. Y.	A 1909
Alexander Graham Bell, Wash., D. C.	C 1909
L. H. Jones, Ypsilanti, Mich.	C 1909
*Elmer E. Brown, Berkeley, Cal.	C 1909
*W. H. Black, Marshall, Mo	C 1909
*Nicholas Murray Butler, New York, N. Y.	C 1909

*Present at the Council sessions at Boston, 1903.

HONORARY MEMBERS

Earl Barnes, Philadelphia, Pa.
William N. Barringer, Newark, N. J.
Newton Bateman, Galesburg, Ill.
D. Bemis, Spokane, Wash.
Thomas W. Bicknell, Providence, R. I.
Albert G. Boyden, Bridgewater, Mass.
Anna C. Brackett, New York, N. Y.
John E. Bradley, Randolph, Mass.
Edward Brooks, Philadelphia, Pa.
George P. Brown, Bloomington, Ill.
William L. Bryan, Bloomington, Ind.
John T. Buchanan, New York, N. Y.
Matthew H. Buckham, Burlington, Vt.
David N. Camp, New Britain, Conn.
James H. Canfield, New York, N. Y.
Clara Conway, Memphis, Tenn.
John W. Cook, De Kalb, Ill.
Oscar H. Cooper, Abilene, Tex.
William J. Corthell, Gorham, Me.
Charles DeGarmo, Ithaca, N. Y.
V. C. Dibble, Charleston, S. C.
John W. Dickinson, Newtonville, Mass.
John Eaton, Washington, D. C.
Charles W. Eliot, Cambridge, Mass.
William W. Folwell, Minneapolis, Minn.
R. B. Fulton, University, Miss.
W. R. Garrett, Nashville, Tenn.
Charles B. Gilbert, New York, N. Y.
Daniel C. Gilman, Washington, D. C.
James C. Greenough, Westfield, Mass.
W. N. Hailmann, Boston, Mass.
G. Stanley Hall, Worcester, Mass.
Paul H. Hanus, Cambridge, Mass.
Walter L. Hervey, New York, N. Y.
Edwin C. Hewett, Normal, Ill.
J. George Hodgins, Toronto, Can.
Ira G. Hoitt, Sacramento, Cal.
James H. Hoose, Pasadena, Cal.
George W. Howison, San Francisco, Cal.
James L. Hughes, Toronto, Can.
Thomas Hunter, New York, N. Y.
Ellen Hyde, Farmington, Mass.
Edmund J. James, Evanston, Ill.
E. S. Joynes, Columbia, S. C.
David L. Kiehle, Minneapolis, Minn.
Thomas Kirkland, Toronto, Can.
Henry M. Leipziger, New York, N. Y.
James MacAlister, Philadelphia, Pa.
Albert P. Marble, New York, N. Y.
Francis A. March, Easton, Pa.
Lillie J. Martin, San Francisco, Cal.
William H. Maxwell, New York, N. Y.
Charles A. McMurry, De Kalb, Ill.
Lemuel Moss, Minneapolis, Minn.
William A. Mowry, Hyde Park, Mass.
Mary E. Nicholson, Indianapolis, Ind.
John M. Ordway, New Orleans, La.
Warren D. Parker, River Falls, Wis.
W. H. Payne, Ann Arbor, Mich.
Selim H. Peabody, Chicago, Ill.
John B. Peaslee, Cincinnati, O.
William F. Phelps, Duluth, Minn.
Josiah L. Pickard, Brunswick, Me.
Edward T. Pierce, Los Angeles, Cal.
William B. Powell, New York, N. Y.
J. R. Preston, Jackson, Miss.
John T. Prince, Boston, Mass.
George J. Ramsey, Bristol, Tenn.
Frank Rigler, Portland, Ore.
William H. Ruffner, Lexington, Va.
Ellen C. Sabin, Milwaukee, Wis.
Henry Sabin, Des Moines, Ia.
J. G. Schurman, Ithaca, N. Y.
H. H. Seerley, Cedar Falls, Ia.
H. E. Shepard, Baltimore, Md.
Edgar A. Singer, Philadelphia, Pa.
Euler B. Smith, Athens, Ga.
Homer B. Sprague, East Orange, N. J.
J. W. Stearns, Madison, Wis.
Thomas B. Stockwell, Providence, R. I.
Grace Bibb Sudborough, Omaha, Neb.
John Swett, Martinez, Cal.
H. S. Tarbell, Providence, R. I.
W. R. Thigpen, Savannah, Ga.
H. S. Thompson, New York, N. Y.
L. S. Thompson, Jersey City, N. J.
Arnold Tompkins, Chicago, Ill.
Julia S. Tutwiler, Livingstone, Ala.
Delia L. Williams, Delaware, O.
J. Ormond Wilson, Washington, D. C.
Lightner Witmer, Philadelphia, Pa.
H. K. Wolfe, Lincoln, Neb.
C. M. Woodward, St. Louis, Mo.

DECEASED MEMBERS

Robert Allyn 1894
Israel W. Andrews 1888
Joseph Baldwin 1899
Henry Barnard 1900
Reuben S. Bingham 1902
Norman A. Calkins 1895
Aaron L. Chapin 1892
J. L. M. Curry 1902
N. R. H. Dawson 1895
Larkin Dunton 1899
Samuel S. Greene 1883
John M. Gregory 1898
George T. Fairchild 1901
Daniel B. Hagar 1896
John Hancock 1891
William D. Henkle 1882
Elnathan E. Higbee 1889
Burke A. Hinsdale 1900
George Howland 1892
John S. Irwin 1901
Henry N. James 1901
H. S. Jones 1900
Merrick Lyon 1888
James McCosh 1894
Thomas J. Morgan 1902
M. A. Newell 1893
Birdsey G. Northrop 1898
Edward Olney 1886
Gustavus J. Orr 1888
Francis W. Parker 1902
S. S. Parr 1900
John D. Philbrick 1885
Matilda S. Cooper Poucher .. 1900
Zalmon Richards 1899
Andrew J. Rickoff 1899
Charles C. Rounds 1901
Edward R. Shaw 1903
James A. Smart 1900
R. W. Stevenson 1893
Eli T. Tappan 1888
Charles O. Thompson 1885
James P. Wickersham 1891
S. G. Williams 1900
Emerson E. White 1902

SECRETARY'S MINUTES

FIRST SESSION.—Monday, July 6, 9:30 A. M., 1903

The Council met in the Second Church of Boston, and was called to order by the president, William R. Harper.

The usual formal exercises of opening were omitted. The first paper of the session was presented by Charles DeGarmo, Ithaca, N. Y., on "The Voluntary Element in Education." I. C. McNeill briefly discussed the paper.

Thomas M. Balliet, Springfield, Mass., presented the subject "Saving of Time in Elementary and Secondary Education;" and was followed by Mrs. Ella Flagg Young, Chicago, Ill., upon the same subject.

In discussion of these papers C. M. Woodward, St. Louis, Mo., James M. Green, Oliver S. Westcott, and Aaron Gove each spoke briefly. Mrs. Young and Mr. Balliet closed the discussion.

Pursuant to a motion directing the president to appoint the Committee on Nominations, the following were named as such committee:

W. T. Harris. Nicholas Murray Butler.
James M. Greenwood.

James H. Baker asked that a committee of the Council be appointed to investigate educational questions of national interest, and report its conclusions to the Council.

It was moved that Mr. Baker's suggestion be referred to the Committee on Investigations and Appropriations. After discussion, in which several members of the Council participated, the motion was laid on the table.

SECOND SESSION.—2:30 P. M.

The Council was called to order at the appointed hour by the president.

After the reading by the secretary of sec. 5 of Art. VII of the constitution, which provides for an annual report on "Educational Progress During the Past Year," the president introduced William DeWitt Hyde, president of Bowdoin College, who presented the report.

Following the reading of the report, the president called upon John W. Cook, DeKalb, Ill., J. W. Carr, Joseph Swain, and C. M. Woodward, St. Louis, Mo., each of whom responded with brief remarks pertinent to the subject under review.

THIRD SESSION.—Tuesday, July 7, 9:30 A. M.

The Council was called to order by the president.

On motion, the report of the Committee on Investigations and Appropriations was made by Nicholas Murray Butler, on behalf of the chairman, J. M. Greenwood, as follows:

REPORT OF THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

To the Council:

The Committee on Investigations and Appropriations begs leave to report as follows relative to the several matters which have been before it either by reference from the Council or from the Board of Directors, or upon the initiative of the committee itself:

1. Action on the proposal of President Baker, of Colorado, to appoint a committee, and to ask for an appropriation to inquire into the contemporary judgment as to the culture element in education and the time that should be devoted to the combined school and college course, should await a clear definition of the topic to be studied and a precise indication of the methods of inquiry to be pursued. We recommend that the president of the Council be authorized to appoint a committee of five active members of the Association to under-

take to define the question as presented by President Baker, the report of this committee to be printed and distributed in advance of the next annual meeting of the Council, and its discussion made a special order for that meeting.

2. In reference to the request of a number of active members of the Association, made to the Board of Directors and referred by that board to this committee, that an investigation be undertaken to determine the economic condition of public-school teachers thruout the United States, your committee feels that the time is ripe for the prosecution of such an inquiry. There is a great and growing interest thruout the country in matters relating to the condition of public-school teachers and their compensation, and there is every reason to believe that, if the facts could be correctly ascertained and lucidly set forth, the effect upon public opinion, and consequently upon the status of the teachers themselves, would be excellent. We, therefore, recommend that the president of the Council be authorized to appoint a committee of seven, to consist of active members of the Association, and of not more than two experts in statistical and economic science, who may or may not be members of the Association, to inquire and report to the Council upon the salaries, tenure of office, and pension provisions for public-school teachers in the United States. We recommend that an appropriation of $1,500, or so much thereof as may be necessary, be asked from the Board of Directors to defray the necessary expenses of conducting the work of this committee.

3. The committee is unable to recommend any appropriation to defray the cost of the work being carried on by the so-called Committee on Formulation of Contemporary Educational Doctrine. The attention of the Council is called to the fact that, by resolution of the Board of Directors, and by terms of the constitution of the Council, Art. IV, all investigations made in the name of the National Educational Association shall originate in the Council, or, if not, shall be made under its direction or authority. To the best of our knowledge and belief, no request has ever been made that the Council should authorize or approve the work of a Committee on the Formulation of Contemporary Educational Doctrine.

4. With reference to the request of the Board of Directors that this committee report upon the expediency of undertaking an investigation in the field of industrial education in schools in rural communities, we report that such an investigation seems to be urgently needed in view of the requests for information and advice that are reaching the school authorities in several states of the middle West. We recommend that the president of the Council be authorized to appoint a committee of five, consisting of active members of this Association, and of not more than one expert in agricultural education, who may or may not be a member of this Association, to undertake such an investigation and to report to the Council. We recommend that the Board of Directors be requested to appropriate $500, or so much thereof as may be necessary, to defray the cost of the investigation to be conducted by such committee.

5. Several times during the past few years the National Educational Association has explicitly declared in favor of strengthening the Bureau of Education, and of increasing its dignity and importance in the scheme of governmental administration at Washington. At a meeting of the Department of Superintendence held at Chicago February 28, 1900, upon motion of the Commissioner of Education, a committee of six members was appointed for the purpose of aiding the Bureau of Education to accomplish its work. This committee has from time to time had under consideration the needs and opportunities of the bureau. It has recently held a series of prolonged sessions for the purpose of giving careful consideration to the whole matter, and, in conjunction with the Commissioner of Education himself, has arrived at the conclusion that the time has now come when a determined effort should be made to secure from the administration and from Congress such action as will put into practical effect the oft-repeated recommendations of this Association relative to the Bureau of Education. It is the judgment of the committee referred to that the Bureau of Education should be speedily restored to the status which it had at the time of its formation, namely, that of an independent department—a status which the Departments of Agriculture and of Labor had before they were raised to cabinet rank. Inasmuch as education in the United States is not a matter committed to the general government, the Bureau of Education can never become a strictly administrative office save in certain limited respects. The bureau should, however, have the dignity of a separate organization, and there is reason to believe that it would fare better if it enjoyed such status rather than continued in its present rank as a bureau of the Department of the Interior. The salary of the Commissioner of Education should be raised to at least $5,000, preferably to $6,000. He should be given two assistants, at salaries of $3,000 or $3,500 each, and the annual appropriation now made to the bureau should be increased by not less than $50,000, primarily to enable the commissioner to bring together and to make public a still greater and more practical amount of information than he now collects and brings to the attention of school officers and school-teachers in every state and territory. One assistant commissioner might well have charge of the division of statistics and reports—the work which has been so effectively carried on under Dr. Harris' personal direction for fourteen years. The second assistant commissioner should have charge of the administrative division of the Department of Education, whose duty it should be to deal more directly and more strongly than now with education in those parts of our domain that are not organized into states and territories, and where in consequence the matter of public education is either neglected or is under a local control which is not in touch with the experience and the resources of the educational system of the nation as a whole.

It is our belief that the National Council should take vigorous action in the matter of the status of the Bureau of Education, and that it should either assume as its own the committee appointed by the Department of Superintendence in 1900, as mentioned above, or should name a committee in succession to that one, whose duty it shall be to undertake an active propaganda before Congress and the country in favor of the upbuilding of the Bureau of Education into a department, as outlined above. We, therefore, recommend that the presi-

dent of the Council be authorized to appoint such a committee, to consist of seven active members of the Association, and that the sum of $1,000, or so much thereof as may be necessary, be asked from the Board of Directors to pay the necessary expenses of the work.

Appropriate resolutions to carry these recommendations into effect are attached to this report.

Respectfully submitted for the committee,

(Signed) J. M. GREENWOOD, *Chairman.*

BOSTON, MASS., July 8, 1903.

Each of the recommendations proposed by the committee in its report was adopted by unanimous vote.

The committee also offered the following resolutions designed to carry into effect the recommendations of the report:

Resolved, (1) That the report of the Committee on Investigations and Appropriations, made under date of July 8, 1903, be accepted and its recommendations adopted.

(2) That the Board of Directors of the National Educational Association be requested to make the following appropriations:

One thousand five hundred dollars, or so much thereof as may be necessary, for a committee of seven to inquire and report to the Council upon the salaries, tenure of office, and pension provisions of public-school teachers of the United States.

Five hundred dollars, or so much thereof as may be necessary, for a committee of five to investigate and report to the Council upon the subject of industrial education in schools in rural communities.

One thousand dollars, or so much thereof as may be necessary, for a committee of seven to urge upon Congress and the country the erection of the Bureau of Education into a separate administrative department, and its adequate equipment and financial support.

The above resolutions were also unanimously adopted by the Council.

The topic for the morning's discussion, "Religious Education," was introduced by George Albert Coe, Evanston, Ill., who presented a paper on "Contributions of Modern Education to Religion."

The discussion was continued by Rev. Edward A. Pace, Washington, D. C., who read a paper on "The Influence of Religious Education on the Motives of Conduct."

W. T. Harris read the third paper in the series, "The Separation of the Church from the School Supported by Public Taxes."

Discussion followed the reading of Mr. Harris' paper, participated in by the following persons, in the order named: N. C. Schaeffer, W. T. Harris, William Sheafe Chase, of New York, J. W. Carr, W. E. Crosby, of New York, Lucia Stickney, J. M. Greenwood, J. L. Brooks, of New York, Carroll G. Pearse, of Nebraska, and Edward A. Pace, of Washington, D. C. The discussion was closed by W. T. Harris.

FOURTH SESSION.—THURSDAY, JULY 9, 9:30 A. M.

In the absence of the president, Vice-President W. H. Bartholomew called the Council to order and requested the secretary to announce the committees appointed by the president in compliance with the recommendations of the Committee on Investigations and Appropriations.

COMMITTEES OF THE COUNCIL APPOINTED BY PRESIDENT HARPER JULY 8, 1903

I. COMMITTEE TO DEFINE AND REPORT UPON QUESTIONS PROPOSED BY PRESIDENT BAKER, OF COLORADO

President Charles W. Eliot of Harvard University, *chairman.*
President Edwin A. Alderman of Tulane University.
President James H. Baker of University of Colorado.
Principal Edward J. Goodwin of the Morris High School, New York, N. Y.
Superintendent James M. Greenwood, Kansas City, Mo.

II. COMMITTEE TO INQUIRE AND REPORT UPON THE SALARIES, TENURE OF OFFICE, AND PENSION PROVISIONS OF TEACHERS IN THE PUBLIC SCHOOLS OF THE UNITED STATES

Carroll D. Wright, United States Commissioner of Labor, Washington, D. C., *chairman.*
Superintendent Edwin G. Cooley, Chicago, Ill.
Professor Franklin H. Giddings, of Columbia University.

Miss Catherine Goggin, Chicago, Ill.
President R. H. Halsey of the State Normal School, Oshkosh, Wis.
Principal William McAndrew of the Girls' Technical High School, New York, N. Y.
Miss Anna Tolman Smith, of the Bureau of Education, Washington, D. C.

III. COMMITTEE TO INQUIRE AND REPORT CONCERNING INDUSTRIAL EDUCATION IN RURAL SCHOOLS

Superintendent L. D. Harvey, Menomonie, Wis., *chairman.*
Professor L. H. Bailey, of Cornell University.
State Superintendent Alfred Bayliss, of Illinois.
State Superintendent W. T. Carrington, of Missouri.
Professor Willis M. Hay , of the University of Minnesota.

IV. COMMITTEE ON THE BUREAU OF EDUCATION

President Nicholas Murray Butler of Columbia University, New York, N. Y., *chairman.*
Superintendent Newton C. Dougherty, Peoria, Ill.
President Andrew S. Draper of the University of Illinois.
Superintendent Aaron Gove, Denver, Colo.
Hon. G. R. Glenn, Atlanta, Ga.
Principal E. Oram Lyte of the State Normal School, Millersville, Pa.
Together with the United States Commissioner of Education.

On motion of C. H. Keyes, a supplementary report of the Committee on Investigations and Appropriations was made by the chairman of the committee, J. M. Greenwood:

SUPPLEMENTARY REPORT OF THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

To the Council:

The Committee on Investigations and Appropriations begs leave to report as follows relative to the application made to it upon reference from the Board of Directors by a committee of nine appointed by the Department of Superintendence on February 27, 1902. This committee was appointed "to formulate, on a sound educational basis, contemporary educational doctrines, submit statements covering contemporary educational experience, and indicate the tendencies of contemporary educational methods."

The committee has asked for an appropriation of $2,500 with which to meet the expenses of its work.

After a full hearing of representatives of the Committee of Nine, your committee begs leave to report that in its judgment the Council should request the Committee of Nine to designate a subcommittee of three of their own number, which subcommittee shall report to the Council at its next annual meeting:

1. A detailed and specific statement of the field of the proposed investigation.
2. A precise indication of the method or methods to be pursued.
3. A careful estimate of the cost of the proposed investigation and the amount of time it will probably consume.

It is further recommended that an appropriation of $750 be placed at the disposal of the chairman of the Committee of Nine for the purpose of defraying the expenses of the subcommittee of three as well as of meeting the cost of the work hitherto prosecuted by the full committee.

An appropriate resolution is attached to this report.

Respectfully submitted,

(Signed) J. M. GREENWOOD,
Chairman of the Committee.

BOSTON, MASS., July 8, 1903.

Resolved, That the Board of Directors be requested to appropriate the sum of $750, or so much thereof as may be necessary, in order to defray the expenses of the work of the subcommittee of three on a proposed investigation of the facts of contemporary educational experience, and the expenses already incurred by the Committee of Nine appointed by the Department of Superintendence on February 27, 1902.

Both the report and the resolution providing for carrying its provisions into effect were adopted without dissent.

The report of the Committee on Membership was presented by its chairman, W. T. Harris, and is as follows:

At a regular meeting of the Standing Committee on Membership appointed by the Council to nominate persons to fill vacancies in the membership thereof occurring from any cause, the following persons were duly nominated to succeed themselves, their terms expiring this year:

Alexander G. Bell, Washington, D. C.; term to expire in 1909.
L. H. Jones, Ypsilanti, Mich.; term to expire in 1909.

Elmer E. Brown, Berkeley, Cal.; term to expire in 1909.
W. H. Black, Marshall, Mo.; term to expire in 1909.
Nicholas Murray Butler, New York, N. Y.; term to expire in 1909.

The following persons were nominated to fill the two vacancies due to other cause than expiration of term:

Frank B. Cooper, Seattle, Wash., to succeed Reuben S. Bingham, of Tacoma (deceased); term to expire in 1905.

Andrew S. Draper, Champaign, Ill., to succeed Edward R. Shaw, New York, N. Y. (deceased); term to expire in 1907.

W. T. HARRIS, *Chairman*,
JAS. M. GREENWOOD,
L. D. HARVEY,
JAS. H. VAN SICKLE,
AUGUSTUS S. DOWNING,
} *Committee.*

On motion, the report was received and the nominations confirmed.

The memorial session of the Council was opened by Edwin A. Alderman with an address in memory of Dr. J. L. M. Curry.

In the absence, on account of illness in his family, of W. F. King, appointed to present an address in commemoration of President William M. Beardshear, a paper prepared by H. H. Seerley on the same subject was received and ordered printed in the volume of *Proceedings*.

E. W. Coy addressed the Council upon the "Life and Educational Services of Dr. Emerson E. White."

James F. Reigart, New York, N. Y., made an appropriate address in memory of Dr. Edward R. Shaw.

Following the above formal addresses, brief remarks were made by several members of the Council, in order as follows: Thomas W. Bicknell, Providence, R. I., W. T. Harris, Joseph Swain, J. M. Greenwood, W. H. Bartholomew, and J. F. Millspaugh.

By consent of the Council, Alexander Hogg, Fort Worth, Tex., and Sylvester F. Scovel, Wooster, O., added their tributes to the memory of Dr. Curry and of Dr. White.

FIFTH SESSION.—FRIDAY, JULY 10, 9:30 A. M.

The following elections to membership in the Council by the Board of Directors of the General Association were announced:

W. T. Harris, to succeed himself; term to expire in 1909.
William R. Harper, to succeed himself; term to expire in 1909.
Charles R. Skinner, to succeed himself; term to expire in 1909.
Ella Flagg Young, to succeed C. B. Gilbert; term to expire in 1909.
Howard J. Rogers, to succeed George J. Ramsey; term to expire in 1909.
Livingston C. Lord, to succeed Emerson E. White; term to expire in 1906.
E. H. Mark, to succeed R. B. Fulton; term to expire in 1907.

The report of the committee appointed to nominate officers of the Council for the year 1903–4 was received, as follows:

REPORT OF NOMINATING COMMITTEE

To the Council:

The committee appointed to nominate officers of the Council for the year 1903–4 begs leave to report as follows:

For *President*—Frank A. Fitzpatrick, of Massachusetts.
For *Vice-President*—Joseph Swain, of Pennsylvania.
For *Secretary*—James H. Van Sickle, of Maryland.

For *Member of the Executive Committee*, to succeed Joseph Swain (term expired)—Miss Anna Tolman Smith, of the District of Columbia.

For *Members of the Committee on Membership*, to serve for three years: to succeed W. T. Harris (term expired)—W. T. Harris, of the District of Columbia; to succeed Emerson E. White (deceased)—Albert G. Lane, of Illinois.

For *Members of the Committee on Investigations and Appropriations*, to serve for three years: to succeed James M. Greenwood (term expired)—James M. Greenwood, of Missouri; to succeed Frank A. Fitzpatrick (term expired)—Frank A. Fitzpatrick, of Massachusetts; to fill vacancy by reason of non-election—Elmer E. Brown, of California; to fill vacancy by reason of non-election, to serve until 1905—William R. Harper, of Illinois.

Respectfully submitted,

(Signed) NICHOLAS MURRAY BUTLER,
for the Committee.

A. S. Downing, of the Committee on Investigations and Appropriations, on behalf of the committee offered the following resolutions:

Resolved, That all applications for appropriations requiring the attention and consideration of the Committee on Investigations and Appropriations shall be placed in the hands of the president of the Council at least sixty days prior to the regular meeting of the Council, with a full and detailed statement of the reasons for requesting the appropriation, and the president shall forward a copy of such application to the secretary of the Council, and to each member of the Committee on Investigations and Appropriations; and be it further

Resolved, That the names of the Committee on Investigations and Appropriations, and notice of an hour set for the meeting thereof for hearing arguments, be printed as a part of the official program, and that the rule be printed in connection with such notice.

After discussion by various members of the Council, the resolutions were adopted.

A roll-call of members showed an attendance at the various sessions of the Council of forty-five.

The Council adjourned *sine die*.

J. F. MILLSPAUGH, *Secretary*.

PAPERS AND DISCUSSIONS

THE VOLUNTARY ELEMENT IN EDUCATION

CHARLES DEGARMO, PROFESSOR OF THE SCIENCE AND ART OF EDUCATION, CORNELL UNIVERSITY

It is proposed in this paper to examine in some detail the voluntary element, as it manifests itself in the elementary stage, the secondary or cultural stage, and the higher or professional stage of education.

Tho the education of the race has in the past been conducted with small regard to the mental attitude of the learner, it is, notwithstanding, a fact that the true teacher has always loved the willing mind. He has always striven to awaken in the learner a zeal for knowledge. Vittorino da Feltre could go at early dawn with candle and book in hand to the bedroom of his choice scholar, rouse him from his slumbers, and urge him to high endeavor. Yet, on the whole, such practice has been rare. Men have relied on the compelling force of circumstances to hold pupils to their prescribed tasks. The same energy that makes it possible for the youth under economic pressure to slave uncomplainingly at the roughest labor makes it likewise possible for him under the social pressure of family, caste, or compulsory law to apply himself to mental tasks, even tho he has for them neither aptitude nor liking. When, therefore, all children are compelled to attend school until they are fourteen years of

age, the teacher may think himself not bound to consider whether his pupil performs his tasks with a willing or an unwilling mind; for perform them somehow he must, whether they appeal to him as medicine or as food.

Since all things cannot be demonstrated in a twenty-minute paper, I prefer to assume that it is desirable to enlist the heart and will of a child in the work involved in his early training, and then to devote what time I can to showing how this may be done.

Schoolmasters are usually content when they have made an idea clear, but the active co-operation of the child is not fully secured until the idea becomes also vivid. This is a fundamental distinction. A vivid idea is one that is psychologically complete, which has passed thru the stages of cognition, emotion, and volition. Such an idea, whether its genesis be in the senses or in the intellect, appeals to the pupil as subjectively valuable. It seems to him as worth while; it arouses perhaps his enthusiasm, which may ripen into zeal; it is suffused with a glow of interest, and it naturally leads on to some sort of culmination in action. This action may be spontaneous expression in words, or it may lead to some other form of motor expression, as with a pen, a pencil, a brush, or the effort to mold it into physical form with tools; or it may lead to the effort to express it in a game or thru dramatic action. A vivid idea is, in short, one that appeals to the pupil as connected more or less immediately with productivity in the world of things or in that of events. The modern school is everywhere striving to vivify its ideas. Witness our manual training, cooking, drawing, painting, and molding, nature work with materials, and our laboratory work in the sciences. But we have hardly reached the stage where we strive to vivify all ideas.

A clear idea is one that is arrested at the stage of cognition; it may enlighten the understanding, but it does not warm the feelings or stir the volitions. We are inclined to think our work is done when the pupil apperceives; but this is only the stage of clearness; vividness must be added. The disciple of education by compulsion would force the child to comprehend the intellectual boundaries of a proposition, to store his mind with facts; that is, with merely clear or undeveloped ideas. But the teacher who would arouse voluntary effort strives to carry these ideas thru their natural development into hospitable feeling and voluntary activity.

In elementary education voluntary effort cannot take the form of election of studies, for in large measure what the pupil should learn is predetermined. We cannot permit a child to choose whether or not he will learn to read, to spell, to write, to compute, to know the essential facts of geography, grammar, and history. We must, therefore, find the scope for voluntary effort in something besides the election of studies. It lies in the development of vivid ideas. Such ideas have a threefold origin, namely, (1) in the richness of the subject-matter, (2) in the proper balancing

of sensory and motor activity, and (3) in the charm with which the personality and the methods of the teacher can suffuse the subject. The subject-matter may be condensed to the bare requisites of routine drill, or it may freely partake of the richness of human experience itself. It is at this point that we shall have to reconstruct, if not revolutionize, the curriculum of the normal school. This institution is now halting between two tendencies, namely, either to give no instruction in the ordinary branches of knowledge at all, or to apologize for paying even a little attention to the academic work of other types of schools. Both these tendencies should, I think, be abandoned, and a curriculum formed which shall be a complete reorganization of knowledge in accordance with the vital needs of elementary education. A medical school organizes knowledge in accordance with its own peculiar needs; so does an engineering school; so does every other branch of professional training except the normal school. This is not the place to suggest what the new curriculum should be, but it is perhaps safe to assert that it should not consist of foreign languages and advanced pure mathematics.

The second essential in securing the best voluntary effort of the pupil is the proper balance between intellectual and motor activity; but this is only another aspect of the distinction between clear and vivid ideas. The modern school is beginning to learn that the children have other muscles than those involved in talking and in moving the forefinger, and is devising ways and means for the whole boy to go to school. This was not so necessary when children lived in the country and attained some muscular dexterity thru work. But now, when most children live in cities, the school must supply the muscular training formerly given by farm labor.

As to the charm with which the teacher can invest the work of the school, it may be said that, aside from purely personal qualities, this will depend most upon the richness and compass of her knowledge, as governed by the needs of elementary education, and in her fertility and skill in securing the proper balance between intellectual and motor activities. Ideas will become vivid when they are truly important, properly presented, and duly joined to motor activities.

The secondary—or, better, the cultural—stage of knowledge is by common consent one in which the mind enters a new realm of activities, attacking its problems with new comprehension and a new outlook upon life. It is now that the youth recapitulates in brief the knowledge and experience of the race. This stage extends, not only thru the four years of the high school, but thru that part of the college work which precedes professional study; for during this long period there is no essential change in aim.

It is possible to make cultural education merely an extension of the fixed curriculum of the elementary school, and to rely only upon

the means used in the latter to secure the voluntary efforts of the student. Such has been the custom of the past; such is the procedure of many European schools of today. Not a few men in this country whose opinions are to be respected claim that such is still our true policy.

Whether the voluntary element in education can be wisely stimulated thru the elective principle is a complex question that cannot be finally settled by reference to a single line of arguments, for it involves social as well as psychological and educational considerations.

In giving a summary of the principles to be kept in mind in the discussion of this question, I wish to call attention to the recognized purposes of cultural education, and then to distinguish between the teacher's and the student's conception of the means for reaching these ends.

The aim of cultural education reduces itself finally to the acquisition by the student of such knowledge and skill as will best prepare him for what Herbert Spencer calls "complete living." The problem of the voluntary element, as exemplified in electives, cannot be seriously discussed without considering what knowledge and skill will best help to realize this purpose. Since there is not time to examine the problem of educational values, let it be assumed that cultural education should include such knowledge and training as are fairly representative, not only of the means that conduce to physical survival, but also to those human sciences and capacities which conduce to the social survival of men in institutional life. Two methods of reaching these ends are practiced among civilized nations. The European method is, in general, to bring all cultural education into a single institution, as the German *Gymnasium*, making it extend over a period of nine or ten years, and then to construct a fixed curriculum to be imposed upon all who undertake this phase of education. The studies, their place in the course, the time to be devoted to each, the relative emphasis to be placed upon them, are all decided by the experience of men who have had a similar training. In such a scheme the personal aptitude or attitude of the learner is not considered. He can do the work as prescribed, or let it alone. Abstractly considered, such a plan may provide a representative study for each important department of education and for each species of mental and muscular training. Its weakness is that it cannot provide for variation in emphasis, since its relative values are predetermined and fixed. Such courses consider all claims except those of the persons to be educated. It is at this point that the elective system provides a corrective, by allowing the personality of the student to assist in determining the kind and quality of his own education.

This second system of securing a cultural education that shall con-

duce to complete living limits the selective function of experienced adults to a specification of the *departments* of knowledge and skill that are necessary to a fairly complete equipment for life. It permits the student to place the emphasis where he will; to select studies within departments in accordance with his own desires as determined by taste, ability, and probable calling in life.

These personal preferences are not mere caprices, even tho they may be short-sighted and often not for the best; for we must distinguish between the teacher's and the student's ideal of complete living. The first has some experience and much tradition behind it; the second is compounded of hereditary and environmental influences. But these are precisely the forces that must be reckoned with if the teacher is to have the whole-souled co-operation of the student. In the first place, election of studies conduces powerfully to the development of vivid ideas, for the student elects his studies in accordance with the interests already formed, or for the accomplishment of ends having a high degree of personal valuation. A boy bent on mechanical engineering has a far different attitude toward higher algebra than one is likely to have who is trying to meet the teacher's ideal of mental training. In the one case the ideas become vivid, whereas in the other they are at best but clear.

Again, all fixed curriculums tend to overemphasize the subjects that are easiest to teach, and hence are usually best taught. These subjects are by common consent languages and mathematics. The student who studies four foreign languages learns four sets of symbols for one set of ideas; he has repeated three times the grammatical training he obtained from his first language. It is surely superstition to imagine that his four languages have given him a fourfold mental training. For many students, perhaps for most young men, this iteration of old ideas under new symbols is destructive to vividness, and tends to make education an ordeal to be endured, rather than a pursuit of infinite zest, as it should be. With a little skill on the part of parents and teachers, there is no danger that the student will miss altogether any of the necessary types of training, for they are really few: mathematics, language, history, literature, economics, a physical and an evolutionary science, and some form of motor training. In the six or eight years usually devoted to cultural education there is ample time to secure at least enough attention to each of these subjects to make the student intelligent in it and to be sure that he does not miss the forms of education for which he has the most ability and desire. The right studies, for him, are those that awaken most effectively all his native powers. If education can become a passion with him in a few studies, it is easy to arouse in him an associated or induced interest in all needful accessory studies.

A social reason why we cannot profitably hold to the European plan

of a fixed curriculum is that cultural education in our country is democratic in the broadest sense of the term. It is democratic in that all secondary education is, with a few exceptions, given in one type of schools, and, further, in that the possibility of such training is open to all who finish the elementary education in the common schools. In other words, we have the educational ladder, which, in general, European schools have not. Again, the fixed curriculum in Europe makes it necessary to multiply types of schools in order to secure the variety in education demanded by modern conditions. Each class of occupations has schools peculiar to it, thus fixing and extending the caste or undemocratic tendencies of these countries. Europeans, therefore, if they would elect anything, must elect schools; whereas with us, since in general there is but one type of high school, variety must be secured by the election of studies. Even were fixed curriculums always of superior educational quality, which is by no means conceded, our democratic conditions make imperative the elective system. We must offer cultural education of all varieties to all classes of our population; and, to do this, we must have one high school with many types of elective studies.

For the reasons given above, it is seen that the elective system helps to preserve the spirit of our institutions, and conduces more than does a rigid system to the best development of each individual.

But a word can be said of the third, or professional, realm of education. The voluntary element here enters upon a different phase; for it is no longer studies, but courses of study, that can be elective. The man who elects engineering necessarily elects the studies that naturally belong in that course. The same is true of agriculture, forestry, law, or medicine. The nearness of all such professional study to actual life brings about spontaneously that vividness which is often so difficult of attainment in elementary and secondary education. While the student in the cultural stage clamors for variety and light work, the student in professional courses submits cheerfully to large amounts of difficult study.

In the way of summary, it may be said that in general the need of stimulating the voluntary element in education rests upon the need of relating learning to life thru the development of vivid ideas, and upon the needs of a democratic society, which seeks to use every influence to induce each individual to carry his development to the highest possible point. Furthermore, there are three phases to the application of the voluntary element in education. In the elementary school it is to be awakened thru richness of subject-matter, union of intellectual and motor training, and charm of teaching; in cultural education it takes the form of elective studies in addition to the means already enumerated; while in the professional schools it appears again as the choice of courses.

THE SAVING OF TIME IN ELEMENTARY AND SECONDARY EDUCATION

I

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Within the last thirty years our colleges have been steadily raising their standard of admission, and throwing more and more work upon the secondary schools; and the secondary schools have been obliged in turn to make greater demands upon the elementary schools. The colleges, moreover, are attempting, during the last two years of their course, to do more or less of the work usually done in foreign countries by the universities. Some of our best professional schools have also raised their standards, and now require graduation from a college or a technical school as a condition of admission. These various factors combined, besides raising a number of other questions of fundamental importance, which it is not the province of this paper to discuss, have made it necessary for the student who desires the best professional training to prolong his course to an unusual, if not an unreasonable, length. His course is longer by nearly two years than that of the student in many foreign countries, and is no more thoro. This lengthening of the course below the professional school is due in part to the organization of our elementary and secondary schools, and in part to the somewhat chaotic condition of our higher education; and the question of shortening it is therefore not only one of readjustment of the elementary and secondary schools, but also one of reorganizing higher education. The various efforts in recent years, under the lead of Harvard and Chicago universities, to shorten the college course, show how widely this larger aspect of the problem is becoming recognized today. Not many years ago its solution was supposed to lie wholly in the abridgment of the course in our grammar schools; there alone the waste was thought to exist. Now it is coming to be recognized very generally that there is waste in the college as well, and the problem has assumed a less simple form. The question to which this discussion must confine itself is, therefore, only a part of a larger and a much more complex one: How can the course of study in the elementary and secondary schools be shortened? Before attempting a solution we must make sure that we clearly apprehend all the elements of the problem.

In this country all pupils who attend the public schools, whether they desire to fit for college or to enter practical life at the end of the grammar-school course, attend the same elementary schools and pursue the same course of study. This involves the necessity of keeping both the gifted and the dull in the same schools and largely in the same classes; as also the keeping in the same classes and schools of those who have so widely

different aims as that of entering practical life, perhaps as early as the age of fourteen, and that of going thru a university.

Various attempts have been made, with greater or less success, to shorten the time required to complete the course in the elementary and secondary schools under these conditions. The system of semi-annual instead of annual promotion, by which the more gifted children can skip a half-year or a year at a time, has in many cases shortened the course for such children. The abolition of formal examinations as tests of promotion and the promotion of children individually have also contributed to the same result. These are devices which greatly facilitate the better classification of pupils and promote their advancement, and should therefore be adopted in all schools.

It has been proposed to reduce the number of years or grades in the elementary schools to seven, in the hope that this would shorten the time for many pupils and enable them to enter the high school at an earlier age. But a careful investigation, conducted some years ago by the Association of School Superintendents of New England, brought out the interesting fact that where the standard of admission to the high school is about the same the average age of entering it is virtually the same also, whether the course in the elementary schools is eight years or nine. There is a certain amount of work to be done in preparation for the high school; and it is to a large extent immaterial whether it is divided into seven, eight, or nine sections; the time required to do it is practically the same. Where the course is nine years, bright pupils are more readily able to skip a year, or a half-year, and dull pupils find it somewhat easier to make their promotion from year to year; where the course is seven or eight years, bright children are less likely to skip grades, and the dull more frequently fail of promotion. The theory that by reducing the number of grades in the elementary schools without reducing the amount of work required we may materially shorten the time necessary to complete the course is therefore not borne out by experience, and the solution of our problem does not lie in this direction.

An attempt has been made in recent years to shorten the course somewhat by the introduction of secondary-school studies into the grammar schools. This experiment has been carried farther in New England, and more particularly in Massachusetts, than in other sections of the country, and in a number of places there has been sufficient time to test results. While in many cases it has proved an "enrichment" of the course, it has failed to shorten appreciably the time spent in the elementary and secondary schools. It has had the effect rather of making the work of the secondary school somewhat easier for pupils, provided the teaching of these secondary-school studies in the grammar schools was well done, which in many cases has not been the fact.

It has been proposed to incorporate the two upper grades of the grammar

schools into the high schools, and to reduce the work of the elementary schools by this amount. This plan has been found of much advantage, especially in small cities and towns. It makes it possible for pupils to begin the study of modern languages and other secondary-school studies two years earlier, but it does not materially reduce the time required to fit for college. It offers, therefore, only a partial solution of our problem; its limitation consists in the fact that children of all grades of intellectual ability and of the most diverse aims as to their future education are still kept together in the elementary schools for six or seven years, pursuing the same course of study.

A plan was devised some years ago at Cambridge, Mass., by which a pupil is able, according to his ability, to finish the nine-year course of the elementary schools in seven or eight. This is accomplished by providing above the third year, besides the regular six-year course, two abridged courses, one of four years and the other of five years. In this way gifted children are able to enter the high schools a year or two earlier than would otherwise be possible, and statistics show that such children maintain a high standing in the high schools.

Of all the practical attempts at the solution of this problem this so-called "Cambridge Plan" has proved the most satisfactory in its workings and in its results. The limitation of this scheme lies in the fact that it is adapted only to grammar schools of considerable size, where there are enough pupils of various degrees of ability to form classes in the different courses sufficiently large to make the plan financially economical. In small grammar schools such a plan would reduce the size of classes to a point where instruction would be unusually expensive.

European nations have found a solution of the problem in the peculiar organization of their secondary schools. The American secondary school is a direct continuation of the elementary school, and is therefore closely articulated with it. All pupils finish the course in the elementary school before they enter the secondary school. Our own secondary school has a course of only three or four years, and is followed by an institution called the college, which has no existence, except in name, on the continent of Europe.

The foreign secondary school has a course of eight or nine years, and includes the upper four or five years of our elementary schools, the four years of our high school, and the first two years of our best colleges. It fits not for a college, but for the university, and for the technical school, which is there an institution of university rank. Pupils who wish to prepare for the university and the technical school leave the elementary schools at the age of nine, ten, or eleven, and enter the secondary schools, where they are given a course of study in many respects very different from that of the elementary schools. A foreign language, either ancient or modern, is at once begun, and in the second or third year, corresponding

approximately to the sixth or seventh of our elementary schools, algebra and general history are commenced. Less time is given to the so-called "common branches" than in the elementary schools, and the teaching is as a rule more virile, forceful, and effective. The European secondary school, unlike our own, is not a direct continuation of the elementary school, and pupils who first complete the course in the elementary school are unable to enter a secondary school and fit for the university, except at such loss of time as they can seldom afford. No foreign language is taught in any elementary public school in Europe, and no mathematics beyond arithmetic, except the mere rudiments of plane geometry. A pupil who should complete the course in the elementary schools and then apply for admission to a secondary school will find himself behind other pupils of the same age by at least four years of study of some foreign language, two years of study in history, and about two years in mathematics. This is the undemocratic feature of the European secondary school which could easily be eliminated—if it were desired by its patrons, as it is not—by introducing courses which would connect directly with the elementary school after the fashion of the American high school.

The European secondary school differs from the American high school in that it keeps its pupils eight or nine years, receives them at the the age of nine, ten, or eleven, and fits them directly for the university and the professional school. The saving of time in fitting for the university is effected: first, by the early separation of pupils who are to fit for the higher institutions of learning from those who are to enter practical life at the close of the elementary-school course; secondly, by the separation of the gifted from the dull, as a larger percentage of talented children is found among those who are fitting for the higher schools than among the rest; thirdly, by giving the former a course in the secondary school which differs very considerably from the course of the corresponding grades in the elementary schools; fourthly, by giving pupils of the lower grades in the secondary schools much better trained and much more effective teachers than pupils of the corresponding grades of either the European or American elementary schools.

As the American school system is organized, all pupils, whether gifted or dull, are left together in the same classes; those who fit for college, and those who do not, pursue the same course below the high school, and have the same teachers.

These conditions are radically different from those existing in foreign countries. The fundamental question at issue is whether all pupils, regardless of their future aims as to education, should pursue the same course; or, in short, whether the best preparation for college is also the best preparation for life, and the reverse. In America we have thus far answered this question in the affirmative in the organization of our public-school system; all European nations have answered it in the negative.

It seems to me that here we may well learn a lesson from the older countries. Surely until college-entrance requirements are changed very radically it will be wholly unsafe to allow these requirements to dictate the course of study in the elementary schools. Moreover, there are many phases of the so-called "common branches" which are essential to the pupil who is to enter practical life at the end of the elementary-school course, but which may be omitted without disadvantage by the pupil who is to enter college. The course in arithmetic, in geography, and in United States history can be profitably shortened for pupils who are to pursue a course in college which will include advanced mathematics, historical geography, and general history. Moreover, such pupils ought to begin the study of one or two modern languages not later than the age of ten or eleven, and of algebra at the age of twelve. They should be separated from the children who are to end their education in the grammar schools, and be given more work than can usually be got from a miscellaneous grammar-school class.

This may be accomplished in part by extending the high-school course downward by two years, and admitting pupils who desire to fit for college from the sixth or seventh grade, as the case may be. It can be accomplished in large part by the "Cambridge Plan." I believe, however, that the most satisfactory solution will be found, in the end, in the establishment of special grammar schools in which pupils who are to fit for college and higher technical schools may be given an abridged grammar-school course of four years instead of five or six, and be allowed to begin a modern language and the elements of algebra. Such pupils could enter the high school at the age of twelve, or at most thirteen, better prepared to do the work of the high school than the average grammar-school pupil is at fourteen or fifteen.

To such schools should be admitted only pupils who are both gifted and physically strong, and who are able to do more work than the average pupil without injury to health.

Every city should have at least as many such grammar schools as it has high schools, and they should not take the place of any ward schools.

Such grammar schools would not be in any sense undemocratic, as the gifted and healthy children of the poor would be admitted as well as the gifted and healthy children of the rich. It is true that many children are unable to decide early in their grammar-school course whether they will be able to go to college or not, but a large number can. The former would suffer no disadvantage above what such children now suffer; they would complete the full grammar-school course and enter the high school as at present.

Finally, the establishment of such special grammar schools would be economical, and therefore from an administrative point of view entirely

practicable. They might be established gradually as the grammar schools of various sections of the city become overcrowded. The establishment of one such special school would relieve a number of ward schools of their overcrowded condition, and therefore save, for the time being, the expense of erecting several new ward schools.

Our American school system is too severely simple; instead of unity, which implies variety, it has uniformity; and it fails to this extent to minister to the needs of all classes of pupils. There is no good reason why all grammar schools of the same city should pursue exactly the same course of study. In some grammar schools special emphasis should be laid on industrial education; in others, composed largely of the children of foreigners, on the learning of the English language; and in still others, as I have indicated, on the studies which directly and in the shortest time fit for the high school those pupils who are to pursue a prolonged course of study. Uniformity is not one of the merits of democracy, and it is not one of the essential characteristics of a democratic system of education. It makes for that kind of blind mechanical justice which is but another name for injustice. Any educational system that would be truly democratic must provide that variety of educational opportunity which is needed to minister to the wants of all classes, and at the same time preserve that unity which keeps open a direct pathway to the highest institutions of learning for all, both rich and poor.

II

ELLA FLAGG YOUNG, PROFESSOR OF EDUCATION, THE UNIVERSITY OF CHICAGO

This subject refers directly to the time element in education. It does not, however, present a problem in mathematics. Any solution, therefore, which is obtained by transposition will be a partial one only. There are two sets of conditions involved, each of which demands careful consideration with little or no emphasis upon the terms in which the desired answer will be stated.

The first set refers to the organization and relation of the school sections under consideration. It may be of interest and value in this discussion to review the manner in which the colleges and professional schools in this country have handled the questions of organization and relation which have confronted them. The specific aim of the college and of the professional school had been emphasized until it seemed as if college education and preparation for a profession or for specialization in science were antagonistic. A man or woman looking forward to becoming a self-supporting member of society found the beginning of apprenticeship in practical affairs deferred too long, if an effort was made to get something

from both the college and professional course. Progress in the solution of the time problem was made by the recognition of the fact that its conditions lay in both the common means and special aims of the college and the professional school.

To the general public and the conservative educationalists the reorganization of higher education has seemed to be directed largely in the interest of the short-term degree. This is a misconception of a movement which corrects a waste in time and effort, and thereby increases the efficiency of the schools concerned. With a fairly clear idea as to the general culture which should be the possession of a man or woman intending to specialize, and also of the knowledge essential in preparation for specialization, it was not difficult for the college and the professional school to determine their common means and so organize them that the responsibility in the common territory was properly placed, thus preventing repetition and correcting some tendencies toward indifferent work. On the other hand, with a clear idea as to the special aims of each, their relation to each other was sharply defined so that neither now attempts to do the intensive work that is the special function of the other. This concentration upon the organization and relation of the college and the professional school has rendered it possible for a student to secure the foundations of general culture, and out of them to develop specialized knowledge in less time and with better preparation than formerly, when subject-matter was indiscriminately appropriated by each section.

Turning to the elementary and secondary schools, we find a situation analogous to that which obtained formerly in the college and the professional school. With the development of the high school, the differentiation between it and the grammar school has been made sharper and sharper, until the time spent upon covering the work offered by the two combined has become excessive. The high school views its work in comparison with that of the grammar school very much as the professional school views its work in comparison with that of the college. The treatment of subjects in the elementary school seems to fit the pupils in a very slight degree for the work planned in the secondary school.

It is not unusual for high-school teachers to recommend, with great fervor and seriousness, limiting the elementary school to its special subjects, namely, reading, writing, spelling, arithmetic, and grammar. The efforts to introduce more general culture into the lower grades thru the reading of literary classics are often frowned upon by the teachers of literature in the high school. Some teachers of mathematics have an attitude of disapproval toward algebra in the eighth grade. Within the last year there has come under my notice a marked illustration of this general tendency. A class of eighth-grade children that had been studying Latin two years, upon entering a high school was advised and urged to renounce all pretensions to any acquaintance with Latin, and to begin the subject as if

it had never learned a Latin word. The teacher is a college graduate and a fine drill mistress. She based her advice upon experience with classes from the same elementary schools in which the members of this class had been taught; and also upon her preconceived ideas as to the impossibility of elementary-school teachers successfully and intelligently teaching subjects which were especially in charge of the high-school faculty. A readjustment in the arrangement of the school necessitated sending this class to another building, and to a teacher who had no well-developed ideas about the limitations and weaknesses of elementary-school teachers when instructing in a high-school subject. The second teacher had an undoubted standing as an excellent instructor. The previous work of the class was accepted without comment, and the study of Cæsar was begun. The class proved unusually strong. This instance might be construed as indicating the complications often introduced into the school situation by personal peculiarities. To some extent that construction would be correct, but it would not include all of the conditions.

In many cities the marked distinction between the two schools has come to be felt so keenly that within the last few years conferences have been held, in which the high-school teachers have told the eighth-grade teachers wherein their work was poor, and the eighth-grade teachers have reciprocated the courtesy by telling the high schools wherein they have failed. As an outcome of these interchanges of opinion, some high-school principals have expressed a willingness to take the seventh and eighth grades under their care; and, on the other hand, some elementary-school principals have expressed an equal willingness to keep their pupils a year or two longer, and instruct them in the subjects assigned to the ninth and tenth grades. These conferences are straws which indicate the general trend of thought.

It is usually said that the elementary pupils spend too many years in acquiring a slight acquaintance with the school arts; and yet, no one in touch with the best elementary schools believes their work is restricted to reading, writing, and ciphering. The facts in the case are that many subjects are taken up, but the heavy stress thruout the eight-year course is laid on rudimentary work which is not so developed as to lead into advance work later on. It is the limitation to short reaches of experience in mental development and subject-matter that induces the strong teachers in the upper grades to emphasize the traditional in education with such stifling thoroness. Those teachers sometimes doubt the efficiency of a school that enables its pupils to fit for the high school in less than eight years. They would be certain that a school which accomplished what I saw done within the last fifteen years was radically wrong. A boy eight years old, unable to read, but with a method of his own in calculating, entered a school which covered the field of elementary and secondary education, and in seven years and ten months was admitted to Yale with-

out a condition. Tho he was not brilliant, he was a lad of good parts. As he was not delayed at any point in Yale, it is evident that his period of preparation was not too brief.

There are two points in the management of the school just referred to which are worthy of consideration: (1) the principal's daily experience ranged from the kindergarten to the college; (2) each teacher above the third-year classes taught the same subjects thru the course for several years, thus giving continuity to those subjects and to the children's efforts with them. It is safe to assume that the arts of reading and writing were acquired in order that the children might use them in learning things; not that they might perform on a trapeze, devised for reading and writing gymnastics. The principal with valuable subject-matter developing in his higher classes had no interest in playing at the school arts in the lower ones. The teachers also knew what development of a subject meant.

It is doubtless true that many elementary schools enable the more highly endowed boys and girls to prepare for the high school in seven, and sometimes six, years. The secondary schools, however, have not made it possible for even the most brilliant children to graduate in less than the four prescribed years, their general attitude being in favor of giving the children entering at twelve or thirteen years of age "time to grow."

A young girl who was unusually proficient in arithmetic entered a high-school class in algebra that had finished the fundamental operations, factoring, the greatest common devisor, and the least common multiple. She made up that work in three days, without assistance; and yet, neither the teacher nor the principal of the school thought it wrong to keep her sauntering in algebra thru the remainder of the year. Each dwelt upon her proficiency in algebra and her having "time to grow." The attitude of both was in no way in advance of that of the strong teachers who devote the eighth grade to reviewing and polishing. The high-school teacher was beating around on a year's horizontal plane in algebra. Without doubt he and the principal supposed they were working on the departmental plan. The great majority of elementary-school teachers and principals are opposed to departmental instruction. They labor under the same delusion that limited the teacher of algebra. They think that teaching five classes a day, in the same subject, and at the same stage of advancement, is departmental instruction. It is horizontal repetition. This self-imitation and the general lawlessness met in the many classes are not attractive, are not stimulating to mental activity in a high degree.

The elementary and secondary schools should be organized on the vertical departmental plan. Soon after entering school a child should be taught mathematics three or four years by the same teacher. If he has marked ability, the teacher will know what to do, for she will have classes in vari-

ous stages of advancement in that subject. If he is not specially gifted, his teacher will keep him moving forward. He will not become a repeater. That teacher of algebra would not have thought of keeping the girl sauntering, if his daily experience had stretched along thru three years of work in mathematics.

The greatest objection to the vertical plan is that it precludes the possibility of teaching children in droves or herds of forty, fifty, or sixty. As teachers discover the possibilities in individuals, they develop what might be termed an educational conscience, and are constrained to give mind a better opportunity.

Ineffectual approaches to subject-matter, methods of treatment of subjects that are evolved out of nothing and lead nowhere, are useless in every stage of education. Elementary and secondary education cannot be differentiated until the second of the two sets of conditions involved in the problem is considered. That set of conditions is named the "course of study." The chaotic situation as regards the course of study has resulted largely from the reaction against the rigid college-preparatory requirements that long dominated the ideal of education in the school. The struggle and victory of the scientists in the war against classical learning to the exclusion of scientific investigation have effected elementary education more than secondary. The secondary school snuggled under the wing of the college so long that the college in coming out from the contest with the scientists has greater flexibility than the secondary school. It is the elementary school, with its nature study, household arts, manual training, and parents' associations, that has stood for the scientific reformation below the college and has for a long time perplexed the secondary school. The latter has, however, taken on some of the arts of the common people and has begun to comprehend their significance in education.

The colleges have broken away from their single list of requirements for admission. Today in the more progressive universities there are groups of required preparatory studies leading to nearly every department of learning known to the modern mind.

The college and technological preparatory courses are so arranged that the manual training, household economics, the beginnings of science, and the training in art and literature should find thru them an entrance into desired advance work. The time has come when elementary and secondary education must be unified and then differentiated. The great course of study must be reduced to reasonable proportions, and then intelligently apportioned between the grammar and the high school, with a clear understanding of the relations and responsibilities involved. The preparatory courses for college, and those in manual training, household economics, nature study, and school arts, offer abundant material for continuous lines of work. Every elementary subject should be so planned

as to lead naturally and necessarily into advanced study in that same subject in the secondary school; that secondary study should necessarily lead into the treatment peculiar to the college.

The high-school courses are now arranged in elective groups; the grammar-school courses should be so arranged in their last three years. Something of the kind obtains in cities in which modern languages and Latin are taught in the seventh and eighth grades; excepting that the child taking an extra language is usually forced to take it in addition to the rest of the course. If we could break away from the fear of having classes in which all of the members of the grade do not recite in every subject, it would not be difficult to arrange these groups. They would settle the question of the course of study for the children intending to go into practical life at the end of the eighth grade, and for those in the same class intending to go to the high school.

The National Council could do nothing greater than to set a body of competent men and women to working out the course of study for elementary and secondary education. It would accomplish little if the elementary-school teachers were left voiceless. Experience in the great educational movements of the last quarter of a century, sound scholarship, and organizing power should be brought to bear on this problem of saving time, improving the quality of the work, and not overcrowding the children in the elementary and secondary schools. Whether an effective solution will be soon secured or long delayed is an open question. The attitude of this Council will have great influence in the decision.

DISCUSSION

PROFESSOR CALVIN M. WOODWARD, St. Louis, Mo.—I have enjoyed the papers exceedingly. They are full of suggestions, and would easily provoke a long discussion. I have, however, only three points to make.

I heartily approve of Mrs. Young's notion of a vertical arrangement of study whereby there is secured a definite relation between the parts of the subject, whether it be Latin or Mathematics or any other sequential study. I fancy, however, that this plan is much interfered with by superintendents or school authorities who specify just where a teacher shall begin and where she shall end in a specified time.

While agreeing with Superintendent Balliet in nearly all he said, I think he classifies high-school children in two different ways which are inconsistent. He first classifies them as "gifted" and as "dull," and he gives the gifted a shorter course and the dull ones a longer course. Again he classifies them as "those proposing to go on to college" and "those intending to stop at the end of the elementary or secondary course." Now, it happens that the gifted people are not always rich, nor are all the poor people dull, and therefore the two classifications are conflicting. In short, I object to classifying pupils with reference to any future course. The moment a boy or a girl enters a course of study especially designed for those who are not going to college, literary or technical, then the way to a higher education is closed to him. I do not believe in that. I believe that every way of advancement should be open at the top, and that a boy is at any time and at every time on the way to higher education if it shall turn out to be possible to him. I object to any system which virtually closes the door against him.

JAMES M. GREEN.—I have listened with interest to the papers of Dr. Balliet and Mrs. Young, and have found them very suggestive. I think, however, that it would add greatly to the discussion if they would put their suggestions in terms of subjects of study. To say that the secondary course of study for one who is to enter college must differ from that for one who is not to enter college is not sufficiently definite. We should like to hear a specific statement of the particulars in which they should differ.

We have recently had in college circles a very general discussion on the length of the B.A. course of study—whether or not it should be shortened, and what effect its treatment one way or the other would have on the secondary course. Here again we should be helped if those leading the discussion would speak in terms of subject-matter. For instance, how much Latin prepares for the college course, and how much additional Latin prepares for the university course? Paralleling this inquiry in English, mathematics, history, etc., we are better able to understand what would be expected in the different schools and the different courses of study.

The term "liberal education," like the term "culture," is very indefinite, and is not a sufficient warrant to those who are called upon to ask states for the expenditure of large sums of money in carrying out their courses. What we need is to show that a certain study and a certain amount of that study are necessary to the accomplishment of certain definite ends.

MRS. YOUNG.—Some speakers have read their ideas on departmental teaching into my paper. Nowhere did I suggest limiting a teacher to instructing in one subject. It is desirable in the grammar grades that a teacher instruct in more than one subject, but not in so many subjects that in the evening she must prepare lessons in geography, history, arithmetic, drawing, music, nature study, English, and readings in literature. It is also desirable that a child's work spread over more than the few subjects that any one person can teach extremely well. Attention to these two desirable conditions will give a class of children the same teachers in some subjects three or four years. This arrangement will insure continuity in the work. Power gained by the children will be used in attacking new questions with the same teachers year after year, and so be capitalized continuously. There is all the difference in the world between this continuity and the finishing off of a half-year's or a year's work with one teacher. One speaker says that twenty-five years ago he tried departmental teaching and found it a failure. He seems to remember it merely as a right-about-change-of-teachers-every-half-hour. I know a school principal who likes to narrate his one experience with departmental teaching. Two weak teachers were assigned to his school. He knew they were incompetent, and so gave them charge of the music and penmanship. Those teachers proved his opinion about the foolishness of dividing the work by departments to be correct. They were failures, and he has not permitted departmental teaching in his school since they were dropped for incompetency, thirty years ago.

The objection has been raised here that departmental work does not care for the child's moral well-being. Does morality depend upon associating with one person only? I supposed that a sturdy morality was developed by means of intelligence; that intelligence makes our wishes sane, moral. If the judgment is better developed when children are studying all day with one teacher who teaches some things well, others indifferently, and others badly, than it is when they are working thruout the day with different teachers who teach their special subjects well, then there is little connection between intelligence and morality.

In speaking of the reconstruction of the course of study I had the continuity of subject-matter in mind. I thought of a committee on geography, for instance, consisting of two or three teachers of geography from the primary grades, two or three from the grammar grades, some from the high school, and a recognized authority from a college or university. Such a group could never present a course leading at various stages into blind alleys.

The same kind of a committee in making up a course in mathematics would not set children of tender years to studying the intricacies of banking, because they are not going to college. The failure to make conditions such that the child's power gained will be the active factor in conquering the new, and the failure to make conditions such that the subject-matter studied will always lead into something beyond, are the causes of the necessity for discussing this question of saving time.

I have met the usual difficulty in making suggestions by means of old terms — old meanings have been read into them. Some day *continuity* will be recognized as the chief element in the solution of the question of the morning.

THOMAS M. BALLIET, Springfield, Mass. — I agree heartily with Professor Woodward in saying that all courses in the elementary and secondary schools should be kept open at the top. No course ought to lead into byways. Every child should have the opportunity, when he has finished a lower grade of school, to enter some course in the next higher, and I meant to suggest nothing in my paper which would not be entirely in harmony with this fundamental principle. As to the separation of pupils in such a way that the bright and the dull may not be kept together, I would say that such separation must always be imperfect; but, as a practical matter, any separation, however crude, is better than none. Every high-school teacher knows that there is a much larger percentage of gifted pupils in the classes which fit for college and technical schools than in the classes which do not fit for a higher institution. To separate those who fit for college from those who do not effects, therefore, altho in a crude way, a separation of the bright from the dull. I say "in a crude way," because we all know that some of the brightest pupils are, for financial reasons, unable to go to college, and some pupils of inferior ability enter the college-fitting courses.

So far as the elementary schools are concerned, there is more of dawdling at present than of rushing or of overwork. The brightest pupils in the elementary schools could, without injury to health and with much profit to their intellectual growth, do fully twice as much work as they are now doing; and the same is true of a limited number of pupils in every high school. It is intellectually demoralizing for any pupil to have less to do than he can easily do. It demoralizes his intellectual habits and begets intellectual indolence.

I am aware that there is considerable complaint on the part of parents of overwork in the schools; but what such parents really mean is that their children are given too much "home work" and have to devote to the preparation of lessons out of school hours which should be given to exercise and play. In this parents are in most cases entirely right, but this is not the same thing as too much work. If children were made to work harder in school, they would not be obliged to work as long hours as they do now.

There ought to be fewer pupils per teacher in our schools, and we ought to be able to secure more forceful, energetic, and stimulating teaching. Five hours per day of earnest, intellectual work, including the necessary intermissions, is enough for any boy or girl below the high school. Our American school system is so organized as to do more for the average and for the dull child than is done in any other country; but it also does less for the exceptionally bright child than is done in any other highly civilized country. We sacrifice too much the interests of the brightest to the interests of the average and the dull, and we mistake this for true democracy. No nation can afford either to neglect or to sacrifice its best talent, and we must organize our system of education in such a way as to give brilliant boys and girls an opportunity to advance at the rate at which they are capable of advancing, without being held back by the less gifted who must progress at a slower pace.

I do not believe that we shall effect the saving of time at which we are aiming, except thru a separation early in the course of those who are to fit for higher institutions from those who are to end their education in the elementary schools. The question essentially resolves itself into the question as to whether all pupils, no matter what their aims may be

as to their future training, should, in the elementary schools, pursue the same course. It is a question as to whether the best preparation for college is also the best preparation for life. The teachers in our colleges in an offhand way assume that there is only an affirmative answer possible to this question. I feel strongly convinced that a negative answer is the true one. This is the answer which all foreign nations have given to this question. There is no nation in Europe which gives the two classes of pupils the same course of training, It does not follow at all that those things which are taught in the elementary schools and are necessary to the pupil who is to go to college afterward are necessary to the pupil who is to end his education in the elementary school. Indeed, it is my conviction that for pupils who are not to go beyond the grammar schools a very much better course can be prepared than a course which would be calculated to fit a pupil in the quickest way for admission to college.

THE EDUCATIONAL PROGRESS OF THE YEAR 1902–1903

WILLIAM DEWITT HYDE, PRESIDENT OF BOWDOIN COLLEGE, BRUNSWICK, ME.

As the officers of an ocean steamer each day take observations and report the run of the last twenty-four hours, it is my privilege to report observations, kindly made for me by school and college officers in all parts of the country, on the educational progress of the year.

First of all I must record the promotion of Mrs. Alice Freeman Palmer from the ranks of our working force to

> "the choir invisible
> Of those immortal dead who live again
> In minds made better by their presence."

Principal of a high school at twenty-two; professor in a college at twenty-four; college president at twenty-six; member of a state board of education; organizer of the women's department of a great university; counselor and helper of the women's college connected with our oldest university; trustee of a seminary for women; advocate and friend of every form of educational progress: she united a delicate, feminine capacity to give herself responsively, devotedly to persons and institutions who sought her help, with the energy and determination of a field marshal to push to a successful issue every interest intrusted to her hands. She had the tact to carry conservative boards unanimously for progressive measures; the confidence which transforms seeming impossibilities into accomplished facts; the courage to say to incompetence, stupidity, or inefficiency, when it was blocking the wheels of progress, the hard words: "Thou art the man!" yes, the harder words to say and to get understood: "Thou art the woman!" Thus she has left us the ideal of the educated woman: scholarship without a particle of pedantry; optimism with no blinking of unpleasant facts; efficiency unsevered from winsomeness; power unspoiled by pride; all rooted, as woman's best influence must

ever be, in the affections of a loving heart, and radiating from its normal center in a happy home.

Thruout the South, under the wise guidance of the Southern Education Board, with the judicious aid of the General Education Board, and mainly thru the heroic efforts of the southern men and women themselves, a movement is going on which has all the enthusiasm, the diversified agencies, the massing of forces, the raising and expenditure of money, the distribution of literature, the organization of conferences, the utilization of the press, which mark a great political campaign. Out of this united effort are coming increased appropriations by the states, a great extension of local taxation, improved schoolhouses, consolidated schools, great free summer schools for teachers, improved courses, lengthened terms, higher salaries, better teaching, expert supervision. This is the most hopeful feature of the educational progress of the year; and at this meeting of the National Educational Association in New England, here in this city of the Puritans, it is an especial privilege to award the well-earned palm of greatest educational progress during the year to the splendid labors of our brothers and sisters of the South.

Where new ideas have been unsupported by adequate teaching or equipment, there have been wholesome reactions. Where science in the secondary schools has failed to impart thoro discipline, Latin has been restored to more than its former prominence. Where sentimentalism had offered amusement, or utilitarianism had demanded information, there is a return to substantial drill.

Didactic teaching is more freely used to supplement the laboratory method in science. The best reaction, however, is from the pedantic refinements of methodology imposed on the country by the normal schools of ten or a dozen years ago, to an increasing appreciation of the rights of the individual teacher to get results in her own individual way, and the demand for accurate, organized, advanced knowledge on the part of the teacher as the first and foremost essential of good teaching.

The kindergarten has had a steady growth, both in the increase in its own numbers and in its influence on the general practice of elementary education, by uniting the home and the school in mutual helpfulness, and making self-activity the basis of all education. The two-session kindergarten, where the same teachers meet the same children twice a day, has proved an excessive drain on the nerves of both teachers and children; and its continuance anywhere is an educational blunder amounting almost to a crime. The best compromise yet devised is that in practice in New York, where two sets of children are taught daily in the same room, the morning kindergartner assisting for an hour in the afternoon kindergarten, and the afternoon kindergartner assisting for an hour in the morning kindergarten.

The kindergartners, like all active bodies, are dividing into two

camps. One camp would make of the kindergarten a self-sufficient cult, regardless of its connection with the school system as a whole, and cling so closely to the letter of Froebel that they are in danger of missing his spirit altogether. The others are ready and eager to make the transition to the primary grades easy and natural, and have enough of the master's spirit to discard on occasion, and with more advanced children, pretty much all the letter of his law.

Manual training is gaining steadily in public estimation, thanks in part to the phenomenal success of industrial education at Hampton and Tuskegee, and the industrial development of the country. The new manual-training building of the Brookline (Mass.) High School; the new Technical Institute given to Indianapolis; the new science building for practical scientific work at Colorado College; the new foundry at the Worcester Polytechnic Institute; the new research course in engineering at the Massachusetts Institute of Technology; the new departure at the Sheffield Scientific School, by which a part of the work for the degree of mining engineer is done in the field rather than at the university — are all illustrations of the great wealth that is being expended, and the progressive spirit that animates all grades of manual and technical education. The new Simmons College is an attempt to complete the courses in sewing, cookery, and stenography offered in the schools by what shall be an institute of technology for highly educated women.

School architecture is receiving more liberal and intelligent consideration than ever; yet the distinctive progress of the year has been in the provision of adequate playgrounds, with their increased use in vacations, either in connection with vacation schools or independently. Joliet, Ill., takes the lead in this movement with its eighty acres in school yards — one of twenty acres, one of seventeen acres, and several of five acres each. The model school to be established in Knox county, Tenn., is to have its six-room building surrounded by twelve acres of land.

School gardens, by bringing a bit of the country into the heart of the city, afford an admirable and inexpensive form of manual training, provide botanical material, foster a respect for weaker forms of life, and develop perseverance, fidelity, obedience to natural law, mutual helpfulness, and an appreciation of property rights in natural products.

Vacation schools utilize the school plant during the summer, take the children off the street, and give them valuable social experience, as well as manual and physical training. Last summer in New York there were 56,000 children in school playgrounds, and 12,500 children in vacation schools, at a cost per capita for the entire season of 97 cents for playgrounds, and $3.44 for vacation schools. The total cost of these and kindred extensions of the use of school property was $130,000, and this sum made of real value for some 400 hours nearly $35,000,000 of municipal property which otherwise would have been unused. This summer the

board will operate 53 vacation schools, 66 playgrounds, 7 pier kindergartens, 12 open-air playgrounds, 13 roof playgrounds and kindergartens, 14 swimming schools, and 11 roof concerts.

The use of the school buildings for evening schools, free public lectures, choral clubs, and Shakespeare clubs is an indication of a widening of the scope of our idea of education to include the intellectual and social elevation of the whole life of the community. The Speyer School in New York, in connection with Teachers College, is one of the first attempts to combine the work of an ordinary school with that of a social settlement. This school occupies two floors of a five-story building, the other floors being given to libraries, gymnasium, clubs, lectures, and living-rooms for the principal's family and seven residents who will devote themselves to this school-extension work.

Increasing attention is being given to the health of school children, thru enlargement of the work of the school physician, the employment of district nurses in crowded sections, better teaching of hygiene in the schools, better hygienic and sanitary conditions in school buildings, and permission to take less than the full amount of school work freely granted to those pupils who are unable to take full work without injury to their health. Some schools, like the Horace Mann School in New York and the High School in Amesbury, Mass., issue a blank, to be filled out by parents, covering such points as weaknesses or tendencies to ill-health, average number of hours of sleep, appetite, number of hours out of doors, average time devoted to school work at home, time spent in other work at home, number of evenings spent in recreation away from home, opportunity for outside help in school work, fondness for reading, class of books read, time devoted to music, and the like. In these and other ways there is evidence of a growing recognition that the home and the school are parts of a single life; that the school is made for the health, happiness, and usefulness of the children; and that the breakdown in health of a schoolboy or schoolgirl from preventable causes is murder in the first degree, for which high averages cannot atone, and for which parents and school officers are jointly responsible.

The greatest advances of the year in school work are in improved organization. The tendency is toward small centralized boards, elected on a general ticket or appointed by the mayor, with legislative work only, so that the best men can afford to serve for long periods. The board of nine in Baltimore, appointed by the mayor under the new charter, which became effective in 1900, besides lifting the schools out of scandalous conditions of favoritism and inefficiency, at the end of its first year returned to the city's sinking fund $40,000 of the sum that had been appropriated for its use, and in the second year estimated its requirements as $71,000 less than the previous year's appropriation.

New York city, however, shows the most marked and rapid gain.

Since February 1, 1902, its schools have been under a new system. The four borough school boards, with their local jealousies and political interference, and the rule that inhibited by law the city superintendent from "interference with the actual conduct of any school," have been superseded by one board of education, and one board of superintendents of which the city superintendent is chairman, and both *de jure* and *de facto* professional head of the city schools. The civil-service system of appointment has been applied to all teachers, those of the evening schools, the summer schools, and the playgrounds included. Promotion to higher-salaried grade positions is on the same basis. This, together with the yearly increase of salary between fixed limits for meritorious teachers, has completely divorced the teacher's position from politics. With this improvement has gone an increased pride in the public schools, shown by the appropriation for 1903 of $20,000,000 for their support, of which over $15,000,000 is for salaries of teachers. Adding liberal appropriations for new schoolhouses, the city has given $50,000,000 for schools since February, 1902. High schools have been introduced; the elementary schools have been reorganized on an eight-year plan; and promotion and graduation from the grammar schools has been made to depend, not on pages studied or examinations passed, but on the ability of the pupil to do things which a grammar-school graduate ought to do: write a letter or composition, use a dictionary, figure accurately, and have a sufficient knowledge of history and geography. The endless grind at arithmetic gives place in the seventh year to algebra and geometry; United States history is supplemented by English history; in the eighth year German, French, Latin, or phonography may be taken as electives. The high schools offer a wide range of subjects from which to select the requisite number of counts; also a two-year technical course for girls. There are special schools for abnormal children, rigid medical inspection, and the service of nurses when required. These splendid achievements in our largest city are types and prophecies of what is rapidly coming in other cities of the country. Departmental teaching in the higher grammar grades, increasing demand for college graduates in all grades of the public schools, and the recognition that it is ruinous to appoint all or nearly all the teachers of the primary and grammar schools of a great city from the graduates of a single local institution, but that these positions must be open to the best teachers from every section and from every source, are other principles of administration which have gained ground within the year.

Consolidation is the distinctive step of progress in the rural schools. It is authorized in twenty states; is in operation in twenty-eight counties in Iowa and forty-eight counties in Indiana. In Ohio twenty-three townships have all their schools centralized, and a hundred or more have partial centralization. Duval county, Fla., reports a net saving of $237

per month from the partial consolidation of its forty-five schools. As a rule, it reduces expense, wagons and wagoners being cheaper than school-houses and teachers. It gives better teachers, better classification of pupils, easier supervision, larger enrollment, more regular and punctual attendance, more competition and stimulus, improved buildings, ventilation, and equipment; affords better protection to children on lonely roads; furnishes a center for the social and intellectual life of a widened neighborhood; and in general, by enriching rural life, keeps the well-to-do farmer on the farm, instead of driving him to the city to educate his children.

The relations between colleges and preparatory schools are becoming closer. The requirements for admission are becoming more varied, music being the latest addition to the list at Harvard. These requirements are being organized on the system of points, one point usually representing five recitations a week for one year. It is at length possible for the small high school to fit for college without maintaining at disproportionate expense a separate preparatory course. The University of California has strengthened its system of accrediting schools by the addition of an officer who is to give his entire time to this work for a half-year. College-entrance certificate boards in New England, and in connection with the North Central Association of Colleges and Preparatory Schools, have been organized to rescue the certificate system in these sections from the looseness into which it had fallen. The New England plan does not contemplate actual inspection of schools, but does provide for careful inquiry into methods, subjects, and equipment in the schools, and a record of the early college work of all certificated students.

There is a dawning consciousness, perhaps more clear at the University of Mississippi than elsewhere, but worthy of cultivation in other sections, that the first duty of a college or university is to support, by high standards of admission faithfully enforced, thoro work for the full course in the schools immediately below. A university or college which by low standards of admission or cheap courses entices young men and women to leave the secondary schools before their work there has been thoroly and completely done is guilty of the folly of killing the goose that lays the golden egg, the crime of taking the money of such students under false pretenses, the parasitic vice of sucking the life-blood out of the educational system of which it professes to be the crowning ornament.

Yale and Dartmouth within the year have added their influence to the movement to make the degree of A.B. stand for a liberal education, regardless of whether or not it has included a course or two in a particular ancient language. The action of Williams in making the last three years elective, and of Yale in introducing electives into the freshman year, marks the beginning of the end of that long struggle for the elective system in American colleges which the President of this Association has so magnificently led.

Yet liberty, tho the first word in all reforms, is never the last. Already the elective principle is passing into its second stage. The group system—not the old rigid group system imposed by authority from above, but a group system in which each student shall choose a major, and perhaps one or two minors, for himself, so as to insure consecutive, cumulative study of one subject leading to an advanced course in the last year—previously established in Yale University, Leland Stanford Junior University, and the University of California, has been adopted this year by two New England colleges, Dartmouth and Williams. This is the logical development of the elective principle, and aims to combine the freedom of choice with a requirement that something solid, consecutive, and valuable shall be chosen. It puts into the elective system the backbone which was the strength of the old requirement of Latin, Greek, and mathematics; but it leaves the individual free to determine what the backbone of his own course shall be. For a college to do this requires a pretty large staff. It is, however, the most positive step forward taken within the year in college education; and we may expect to see colleges making haste to adopt it as fast as their resources will permit.

If to this requirement of a major we could add a suggestion, made by President Wilson of Princeton, that examination, in the major subject at least, should be, not on particular courses, but on the subject as a whole, we might to that degree avoid some of the evils growing out of large courses, wholesale methods of instruction, and so-called "seminar" devices for passing examinations.

No educational proposition ever received such sweeping and emphatic condemnation from school and college, press and platform, private conference and public assembly, as the proposition to grant the degree of A.B. at the end of two years of college work. It is a project to vivisect our most distinctive educational institution; to cut the college course in two, and throw the better half away.

Still, the time must be saved somewhere. Providence, R. I., has reduced the grades from nine to eight; the superintendent of the Boston schools recommends the same change; and in the West they have in some cases reduced the grades to seven, and even propose to reduce to six, transferring the two upper years to the high school, making that a six-year course. Semi-annual promotion, with frequent irregular promotion for bright and healthy pupils, will save for them another year. Baltimore has in the seventh and eighth grades a preparatory class in which bright pupils can anticipate some of the 150 credits required in the high school. Admission to college by points enables a bright and vigorous pupil to offer more than are required, and thus anticipate some portion of the college work required for the degree. The Boston Latin School proposes to prepare its students for three years of college residence. The statement of college requirements for graduation in units of work, rather

than lapses of time, is another opportunity to gain time by extra work. Many universities count the same work for both the last year in college and the first year in the professional school. Western Reserve University and the Case School of Applied Science give both the literary and the scientific degrees for three years in the university and two in the Case School. The University of Minnesota gives the bachelor's degree and the degree in medicine for a six-year course, of which the studies of the last four years are chiefly medical. The new college in connection with Clark University opens with a three-year course. In these various ways, thru greater elasticity at points of transition all thru the system as a whole, and a little more industry and enterprise on the part of the individual, we are working out a plan by which one who goes thru all the stages from the kindergarten to the professional school may shorten the period by from one to three years; and at the same time graduation from each stage shall mean as much as it ever did.

In the education of women there is a revival of the old-country seminaries like Wheaton and Bradford. The University of Chicago, in the face of bitter local prejudice and in defiance of the whole tradition of the West, has had the courage to ask such questions as these:

> Is the intellectual stimulus which the women receive thru coeducation wholly of a salutary sort?
>
> Are there not too many cases of young women who have lost some of the fine attractiveness which closer reserve would have attained?
>
> Is it not a pedagogical and social mistake to assume that men and women should be trained as nearly alike as possible?
>
> Is there not a serious loss to both men and women if the university places too much emphasis upon what they have in common, and gives too little weight to the fact that in many respects these essential common interests may be best promoted separately?

Now, if it is brave to ask these questions, it is braver still to answer them, as the University of Chicago has done, in a way that on the face of it is partial, prudential, tentative, illogical, and inconsistent. "Consistency," as Emerson tells us, "is the hobgoblin of little minds." This action of the University of Chicago is a declaration that coeducation is not a matter of merely administrative detail, but involves the profoundest sociological and social considerations; that it is not, to use General Hancock's remark about the tariff, "a local issue," which can be answered permanently in one way by the East, and in another way by the West; that in every section of the country there will always be those who from circumstances or conviction will prefer coeducation, and others who from social or pedagogical considerations will prefer more or less segregation; and that the determination of the policy of each institution should be based, not on a doctrinaire devotion to an abstract theory, but on an inductive study of its own specific situation, resources, and the preferences of its constituency.

Other important steps of progress must be passed over with a mere

reference: the organization of the Religious Education Association, which promises to prosecute this important department of educational work with candor, vigor, and progressiveness; the tendency to divide professional schools into two groups — those which do, and those which do not, require the bachelor's degree for admission; the establishment of chairs devoted exclusively or mainly to research; the splendid gifts of Mr. Rockefeller, Mr. Morgan, and others to establish the Institute for the Study of Pathology, and place the Harvard Medical School on a basis of permanent efficiency; the raising of the money for the Emerson Hall at Harvard, where, in a building named for our greatest seer, and devoted to philosophy, Professors Palmer, James, Royce, Münsterberg, Peabody, and Santayana will have the best provision for the study of philosophy since the Athenian lyceum and academy.

One thing, however, deserves especial note — the wise policy of the Carnegie Institution. By its refusal to compete with other agencies; by its impartial constitution of advisory committees; by its encouragement to research; by its utilization of the immense historical and scientific resources accumulated at Washington — the Carnegie Institution has already won the gratitude of the scholars of the country. Incidentally it has effectually sidetracked the sentimental agitation for a Washington Memorial University. What might have proved a rival to other institutions has become a stimulus and ally to all. It was a fortunate thing that this munificent gift of our great and generous captain of industry, Andrew Carnegie, came under the administration of that prince of scholars and past-master of educational organization, Dr. Daniel Coit Gilman. Thus administered, the Carnegie Institution is a worthy crown of our national educational system.

As the golf enthusiast amuses himself at times by figuring up what his score would be if he could count the best he ever did at each hole, we may in conclusion draw a picture of what our educational system would be if it were everywhere as good as the best that anywhere has been attained.

We should have small boards of education, composed of the best citizens, devoted exclusively to legislation, employing trained experts to carry out their measures. We should have trained teachers, whose attainments are years in advance of the stage at which they are teaching; granted, after careful selection and adequate probation, permanent tenure at salaries proportioned to their efficiency and length of service.

We should have in the elementary schools, kindergarten ideas, manual training, literature, and nature study; yet in all due subordination to the old-fashioned idea that the individual must master with the greatest economy of time the symbols of human knowledge and human intercourse.

We should have attractive buildings, in spacious and beautiful grounds,

used summer and winter, daytime and evening, by both children and adults, in the service, whenever needed, of social as well as intellectual ends.

We should have the length of each stage of education determined in part by individual performance, instead of by a rigid time-table imposed on all alike; so that, without lowering the standard of any single stage, a bright scholar might pass thru them all in a substantially shorter time.

We should teach women as expensively and thoroly as men; yet not necessarily the same subjects, at the same time and place. The degree of A.B. would stand for the knowledge of several important subjects, and the thoro knowledge of at least one subject.

We should give the exceptional man of proved ability such aid as he requires to make his largest contribution to science and human welfare.

The elements of such an educational system are all present at isolated points. It is for us to return to our homes and cultivate our own garden plots up to the standard of the best that has been attained elsewhere.

DISCUSSION

JOHN W. COOK.—These are cheering notes to which we have listened. They fill us with hope. One feels rising in his soul the spirit of the hunter when the bugle notes proclaim that the quarry is in sight. I may be permitted to speak of two or three things that especially interest those of us who live in the West. First of all, we may have a growing confidence in the fact that the school is learning to maintain its independence against the political forces that, in their struggle for mastery, endeavor to use it to its extreme hurt. The schoolmaster must stand for his cause with all the courage and enthusiasm with which the old Greek defended his hearthstone. I believe that the people are with us, and, if they can be informed of the perils that lie in wait if the nursery of states is to be administered with an eye to the particular advantage of a political party, the autonomy of the school may be maintained.

The decline of the rural school in numbers and in consequent efficiency has not failed to attract the attention of the schoolmen of the West. Pray, what degree of success can a little group of half a dozen children attain in the development of their genuine social life when they gather from the isolated home on the farm in the little schoolhouse at the corners? The number of pupils in the average rural school of Illinois does not exceed eighteen, while there are many with less than half that number; but the consolidated school is on the way. It is true that we are following in the wake of some of the older and some of the newer states, but we are willing to be led in matters of such extreme importance. The first consolidated school in Illinois is now an accomplished fact, and the man of all men to whom credit is especially due for the inauguration of this important reform is Superintendent O. J. Kern, of Winnebago county. That this school will have many imitators I have no doubt, and the time is coming in Illinois when the children of the rural districts are to have all of the facilities of the village so far as education is concerned. What a transformation of the social life of such communities will inevitably result!

A single word more must suffice. The professional school is likewise getting its recognition. In many localities boards of education have had the courage to declare that only those who have received the discipline of the teachers' academies need apply. The normal schools are waiting for those to come who need their ministry. It rests with the school board, which needs only to insist upon the attainments, and they will be forthcoming.

And when the shadows of nepotism and the sordid spirit of mistaken economy shall have become things of the past, the schools will enter into their own, and become those centers of social influence for which they are designed.

J. W. CARR.—If this discussion is to be in the nature of a *report from the field*, I should say that the most cheering news from Indiana relates to the increase of the salaries of her teachers. There has been a steady increase in the salaries of the rank and file of the grade teachers in the towns and cities of Indiana for a number of years. In some of the most progressive cities all first-class grade teachers now receive $600 per year. This is a decided advance.

But most progress has been made in reference to the salaries of the country teachers. In 1901 the general assembly of Indiana passed a minimum wage law, which greatly increased the daily wages of a large majority of the teachers in the rural schools. Previous to that time a law had been enacted requiring the school term to be at least six months. It was found, however, that in many rural communities the revenues were not sufficient to continue the schools for that length of time. The last general assembly amended the minimum wage law, making provision for successful experienced teachers to receive a much better salary than ever before. At the same time the law in reference to local taxation was amended so that now almost every rural community in the entire state can have a six-month term of school, while all successful teachers receive at least $50 per month. It is difficult to estimate the beneficent effect of this law. The teachers are elated, and the people hopeful. The children will be greatly benefited.

JOSEPH SWAIN.—It is very difficult to determine just what is accomplished in any one year in education in the United States. Doubtless those things which count most are matters of growth from year to year. Certainly this excellent report of President Hyde is very encouraging. As a western man, who has been in the East for a single year, I have been impressed with the growing tendency to favor admission to college by the certificate system rather than by examination. It is probable that our educational system will never be sufficiently perfect to do away entirely with the examination for entrance to college; but, as we more and more perfect our system, the step from secondary school to college should be as simple and as natural as the step from one of the lower grades to the next higher. The teachers in one grade should determine the fitness of the pupil for the next higher. This system has been in use in part of the West for many years, and I am pleased to note its extension in the East. The University of Michigan, after several years' experience, finds the character of the work of those entering under the certificate plan slightly superior to those entering under the examination system.

Another encouraging result of the year is the increased endowments and appropriations for higher education, both in public and private colleges and universities. The University of Illinois received over $1,300,000 from the last legislature of the state. This is the largest appropriation, so far as I know, that has ever been made to a single educational institution by any state for expenditure in the period of two years.

C. M. WOODWARD.—Of course we expect you all to come to the great Louisiana Purchase Exposition next year, when we shall have an opportunity to show you how admirably the management of that exposition and Washington University have co-operated in organizing the greatest educational exhibit of the age. But the story of the exposition is too long for me to tell. I will, therefore, say a few words about this report, which was not only inspiring in its thoroness, but was delightful in the way it was presented.

I wish to speak especially of the action of the state of Missouri in increasing the income of our public schools. The rate of taxation for public-school purposes is fixed by the constitution of the state. It has been four mills on the dollar for thirty years. Last November, by a popular vote of the people of the whole state, the rate of taxation was raised to six mills—an increase of 50 per cent. You can easily imagine the effect of such a splendid increase in the money at our disposal. I predict that within two years the high-

school attendance in St. Louis will be double what it is now. This result has already been reached in Kansas City, without waiting for the amended constitution. While the population of the city has increased 50 per cent. in six years, the high-school attendance has increased 100 per cent.

President Hyde omitted entirely all reference to the tremendously important subject of athletics. I wish to report that at the recent meeting of the Central Association of Colleges and Preparatory Schools at Chicago it was unanimously and enthusiastically agreed that in the future we should aim to eliminate from our system of school and college athletics the professional coach, with his demoralizing influence, and abolish all gate receipts, which are a source of corruption and infinite evil. I trust that at a subsequent meeting of this Association we may be able to report that this ideal has been actually reached.

CONTRIBUTIONS OF MODERN EDUCATION TO RELIGION

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The present widespread demand for improvement in religious education renders necessary a re-examination of the relation between religion and the principles that underlie general education; for writers, both Catholic and Protestant, who complain of defects in existing methods of religious training are seeking relief — at least in part — thru the adoption of methods already in use in the so-called "secular" schools. It is apparently assumed that the pedagogical principles upon which these schools are working are inherently adapted to promoting the ends of religious nurture also.

Religious education must certainly be religious in point of process as well as in point of purpose. No real advance can be made by attempting to graft into religion methods that are, at their foundation, either irreligious or non-religious. What kind of alliance, then, is this which is proposed between religion and modern pedagogy? Has the educational reform any contribution whatever to make to religion? Of course, religion lives in its own right; it does not depend upon contributions from without. Nevertheless, it is often helped or hindered by the movements of the time; and in this sense modern pedagogy may conceivably have something to contribute.

In a broad sense, religion may be said to include the whole movement for the reform of education. Modern "secular" schools are an offshoot from church schools, and the fundamental ideas of the school reform can be traced back to the mediæval period. The demand for popular education and for natural methods started within religion. Many of its chief prophets, too — notably Pestalozzi and Froebel — looked upon it as a distinctly religious movement.

Nevertheless, the reform movement, in both its practical and its theoretical aspects, became independent. It based itself upon psychology

and child study; not upon Bible or church or creed. It has built up a set of principles of its own, without asking what bearing they have upon religion. We have to deal, then, with two apparently independent sets of principles—the religious and the pedagogical.

What is modern education? The movement started out and ran a considerable part of its course under the inspiration of a single idea—that of the natural development of the child. This idea became a great tree with many spreading branches. The soil in which it stands is a sense of the worth of man. Hence the demand for universal education. Its trunk is the vital principle of growth as contrasted with every mechanical or merely logical process. Its chief branches are the following principles, which every teacher who is both conscientious and intelligent writes upon his heart: that the mind grows by assimilating mental food, that is, by apperception; that nothing is fully acquired until it has been expressed; that the proper attitude and habit of the pupil is therefore that of self-activity; that self-activity is free activity, that is, activity that springs from natural or spontaneous interests; that therefore, in the work of training, the concrete precedes the abstract, the reality the symbol; finally, that education is the symmetrical development of the entire personality, not merely of the intellect.

A second great idea has also come to prevail in the educational movement. It is that education is not set for the building of isolated personality, but for the building of society as an ethical organism. We have actually reached a point in the educational reform where culture without socialized conduct is looked upon as defective culture.

Of these two basal ideas, the first, that of the child himself, determines the nature of the educational process; the second, that of the social destination of the human being, prescribes an end for the process and yields a principle for the selection of material. Our problem is whether these principles have any essential affinity with religion, and whether, therefore, they are capable of serving as a basis for improved religious education. The solution of the problem can be found only by analysis of the ideas involved. Such analysis will show certain positive results.

1. Modern education, in its principle of apperception, recognizes the inner life as the essential life of a man. It proclaims that things are not life, and that nothing can enlarge us that does not become a part of our inner being. The school is not to hang something upon the child, but to develop something within him. Here, surely, is support for spiritual religion. "Out of the heart," said a wise man of ancient times, "are the issues of life." The Great Teacher reaffirmed this thought again and again. Not what comes to a man from the outside, but what comes up out of the inner being, is the decisive fact of life. At this point, then, Christ and modern pedagogy are at one.

2. Modern education not only puts emphasis upon the inner life, but it also conceives that life broadly. Life is more than knowledge; it is also appreciation of what is lovely and of good report; it is sympathy with other life; it is righteousness of purpose. To teach is more than to train the intellect and fill it with information. It is to make men. The transformation in our schools from the idea of mere instruction to that of symmetrical development is not yet fully accomplished, but in principle the victory has been won. This victory is a move in the direction of religion. For, tho religion concerns the intellect, it is most of all a matter of the heart and the will. Jesus declared that he is come that we may have life, and that we may have it abundantly. There is a sense in which every true teacher could say this of himself, for he is to help his pupils, not only to know, but also to live. Whatever culture of the feelings and the will the school is able to impart is so much preparation of the soil for the reception of religious impressions.

3. Tho modern education emphasizes the inner life, it demands that this life come to outward expression. "No impression without expression" is its motto. It declares that a mental act is not complete until it has expressed itself by means of the motor apparatus, and hence that we do not really grasp an idea until we set it at work. Does not this remind us of the very words of Jesus when he said that one who hears his words without doing them is like a man who built his house on shifting sands, while he who both hears and does is like a man who built upon a rock? Entrance into the kingdom is accorded, not to those who say "Lord, Lord!" but to those who do God's will. In religion and in education alike the inner and the outer are indissoluble; they are the concave and the convex sides of the same curve. Hence education, working in its own way, enforces the lesson of religion. This lesson is especially significant in this day of practical affairs; for the only kind of faith that is convincing to a modern man is the faith that shows itself in its good works, the faith that spiritualizes conduct, business, and all our human relations.

4. Another side of the same principle requires that the sensible shall come before the rational, the concrete before the abstract, the reality before the symbol. The word, the rule, the theory, is not to be introduced until the pupil has something to express by means of it. Hence, education begins, tho it does not end, with things of sense. The training of the senses and of the muscles, which has become so prominent in our schools, proceeds from no unspiritual view of life, but from the actual structure of our minds. In the manual-training class the child learns vastly more than mere material things. He learns arithmetic, the laws of nature, self-control; he cultivates attention, imagination, character. A laboratory, or a landscape, or a mass of clay for modeling, if only such meanings be found therein, is fully as spiritual as a book. Modern education busies

itself with objects that are visible and tangible because of what they reveal, and because of their effect upon the inner life of the child or youth. Is not this principle a principle of religion also? What is the meaning of the central idea of Christianity, incarnation, unless it be that men come into relation with the invisible God thru a visible person? "That which we have heard, that which we have seen with our eyes, that which we beheld, and our hands handled, concerning the Word of Life"—this preface of St. John's first letter would serve with equal appropriateness to introduce a fundamental conception of modern education. When this principle has its perfect work in our schools, it will counteract two tendencies that are unfavorable to religion—the tendency to think of religion as abstract and speculative, and the opposite tendency to ignore the spiritual aspects of the visible world.

5. The educational principle of free self-expression is equally harmonious with religion. At first sight freedom may seem to clash with all authority, but the apparent conflict disappears when we understand what pedagogy means by freedom. Freedom certainly does not mean that the pupil is to do just as he likes; for what one likes may actually repress and enslave. Unwholesome food may give pleasure to the palate, tho it depresses our vital powers. Freedom is the active self-expression, not of incidental desires, but of the deeper demands of the nature. These deeper demands continually oppose our more superficial impulses, so that the attainment of freedom implies the learning of self-restraint and of obedience. Capricious indulgence of desire ends in slavery. We cannot be ourselves unless we train our vagrant impulses to bow before the deeper and higher things of the spirit. Freedom does not exclude authority, then, but requires it. What pedagogy insists upon under the name of freedom is simply that the teacher shall utilize the deeper currents of life so as to help the child from within rather than in any merely external fashion. The deeper currents, as well as the superficial ones, will manifest themselves in spontaneous interests which it is the duty of the teacher to seize upon. Artificial leverage is to be shunned. Whatsoever is done for the child must include a spontaneous expression of the child. When, for example, restraint must be used, it should be so applied as promptly to transform itself into self-restraint.

Here, once more, modern education prepares the way for religion; for religion is itself a proclamation of liberty. Its promise is to release us from bondage to sins and fears and the pettiness of our merely individual desires. It releases us from the sense of being oppressed by the bigness of the world, and makes us realize that all things are ours, whether things present or things to come, or life or death. But it grants us this liberty only thru self-surrender, only thru that losing of *our* life whereby we gain *life*. In other words, religion assumes that her commands

are also the commands of our own deepest self. It is thus that the obedience that we render to her is our highest freedom. Thus education and religion are at one in teaching us freedom thru obedience.

6. Modern education is likewise working with religion for the adjustment of the individual to society. The demand that every child shall have opportunity for education recognizes the ultimate worth of the person. It is in direct line with Christianity, which looks down thru wealth, position, nationality, social circumstance, to the individual heart. On the other hand, both education and religion recognize right relations to one's fellows as a necessary part of true life. Christianity sets before us the ideal of a divine society in which each citizen loves all the others as he loves himself. Something like this is coming to be recognized as the end of education. No longer is it possible to look upon knowledge, power, intellectual and æsthetic culture, or anything else that is merely individual, as the aim of the school. The school is to make men, and strong men; but men strong in regard for one another, strong in their loyalty to law, strong in their spirit of co-operation.

These are the essential characteristics of modern educational philosophy. Every one of them is not only reconcilable with religion, but actually included within the Christian view of life. We may therefore say that *the modern educational movement as a whole has consisted in the working out of certain pedagogical aspects of Christian belief.* It has by no means appreciated all the wealth of educational principle that is contained in Christianity, nor has it always kept itself free from un-Christian tendencies of the times. Educational reformers have often been unconscious of their indebtedness to religion; now and then one of them has been hostile to the church. Doubtless, too, the administration of education has improved less rapidly than educational theory. Yet, for all that, the educational movement of modern times has never been really independent of religion. It has builded better than it knew, for its inspiration has come from the highest source. The separation of church and state, which every citizen is concerned to maintain inviolate, does not signify that education is an unspiritual fact. As far as it goes, the school is essentially a creation of the religious spirit, and its work is essentially religious and Christian.

It follows that the entire body of modern educational principle is adapted to the specific work of religious education. It contains the spirit that modern education received from religion, but enriched by new knowledge and wrought into a system. The contribution of modern education to religion, then, is a suitable form and method for religious education, a form which the church and the home must be relied upon to fill with the complete Christian content.

THE INFLUENCE OF RELIGIOUS EDUCATION ON THE MOTIVES OF CONDUCT

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The subject on which I have the honor to address this National Council seems to gather in one concise phrase some of the largest problems which can be offered either to our private thinking or to our public deliberation. Education, religion, conduct epitomize life. Each suggests the dualism of theory and practice. Each may be regarded alternately as end and as means. And each is apt to be taken, according to our individual fashion of thought, as the supreme standard by which all other values are determined.

It is significant, therefore, that our program asks us to discuss, not the respective worth of education, religion, and conduct, but rather their mutual relation. Our question is not whether religion shall enter into our scheme of education; but, assuming that a particular sort of training which we call religious education is to be given, we ask what is or may be its influence upon the motives of conduct.

You have also noted, I am sure, that the question proposed in these terms goes to the heart of the moral life; for the implication is, obviously, that the worth of conduct lies chiefly in the motives which prompt it, and not merely in the outward form of action. In other words, we are getting away from that plane of ethical theory on which a man's character is judged exclusively by his behavior. We are looking at facts in the light of purpose. And we are trying to determine how far the purposes which are supplied by religion and woven into the will by religious education avail toward the securing of right conduct.

That they are of some avail we are doubtless agreed. From our point of view as teachers, religious education is simply religion at work. It is the tangible shape that religion takes alongside of ourselves in the discharge of our professional duties. And since, as intelligent men, we must admit that "the religious element of human culture is essential," likewise, as intelligent teachers, we claim that "it must be presented to every child whose education aims at completeness or proportion."

It seems, then, that at least two important points are beyond dispute: first, that conduct should be guided by high motives and even by the highest motives; second, that religious education does in some measure influence the motives of conduct. If so much is clear, we are ready for the further question: In what way precisely does religious education exert its salutary influence? Wherein lies its power, if power it really have, for uplifting and strengthening and making purer the determination of our human will?

The answer which the Catholic church gives to this question is found

most clearly in her insistence upon the need of the religious element in all forms and grades of education. As to her purpose in holding so tenaciously to this position, it is often said that she seeks thereby to spread and perpetuate her beliefs. In her judgment, the school is a nursery of faith and a training-ground for the practical exercises of religion. Its chief lesson would therefore be her *Credo*, and the cardinal virtue of its pupils would be loyalty to those who wield her authority. That there is much truth in this appreciation, no Catholic need deny. The church, in fact, does maintain that religion must be based on definite beliefs; tho she also teaches that faith without works is dead. She does insist on sacrament and rite, tho she plainly says that the outward sign is worthless without the inward grace. And if she requires from her members obedience to her laws, it is only what she commands them to yield to all legitimate rule. In a word, the church holds that a large share of our duties is toward our Maker, that the discharge of these duties is or should be an essential portion of our conduct, and consequently that the motives which shape our conduct in conformity with these duties can, in the very nature of things, be supplied by religious education alone.

Now, just as we know from the highest source that all the precepts are reducible to the one great commandment, so we might say that all our duties are included, either explicitly or implicitly, in the duty we owe to God. Religious education in the best sense would therefore be not only an education in religion, but an application to all the affairs of life of those principles and motives which religious belief supplies. To "do all things for the glory of God" would certainly make us men after the manner of St. Paul himself. And for men of this type "religious education" would be a prime necessity.

But again, facing actual conditions, we have to admit as a fact the distinction between religious obligations and other obligations, between religious motives and other motives. And it behooves us to inquire in what way the motives which religion furnishes may be brought to bear effectually upon our every-day and every-hour conduct — upon our working and planning, our business dealings and our social relations, our external behavior and our secret thought.

It seems to me that we need to keep steadily in view certain psychological principles respecting the nature of motives; and tho we have not at this time to make a thorogoing analysis such as the psychologist might demand, we can assure ourselves at any rate on this point: the efficacy of any motive is due chiefly to the habitual attitude of the mind to which that motive is presented. Merely as an idea in which the connection between a proposed action and our welfare is perceived, a motive may, and according to a well-known theory always does, produce some effect. It is, as we say, an "ideo-motor" process. But even on this theory, it remains true that the motor effect depends, not only on the afferent

stimulus, but also on the momentary condition of the centers thru which it must pass. And the same is doubtless the case for the whole range of organic processes down to the reflex discharge.

We cannot, of course, enumerate — much less foresee — the impressions received thru the senses during, let us say, a single day. Similarly, it is impossible to predict the motives that will spring up in consciousness as the result of deliberate thought, association, impulse, passion, or emotional state. But we can say for a certainty that the selection of any one motive in preference to all the rest will be determined by the habits developed in will and intellect thru the whole course of experience. No system of religion or of education or of religious education can guarantee us against the appearance in consciousness of unworthy motives. The saints have all been tempted. The calmest of the philosophers has his internal storms. And the majority of us, who are neither sages nor saints, know that the best actions, objectively considered, may issue from the meanest motive.

Any sort of education, therefore, that pretends to impart moral strength must concern itself not so much with laying down precept on precept as with developing in the mind a habit of appreciating, judging, and willing in conformity with the rules of upright conduct. "Automatic righteousness" is not an acceptable expression; and yet, without the least concession to our determinist friends, I think we would prefer what it means to the disposition of those who "always err in their hearts."

Now, it is plain that this moral center, as I will call it, may be organized in many different ways. Its cells may all have the idea of duty for their nuclei; its fibers may have the sense of honor for their axes; its ganglia expand with the love of humanity; its whole structure be under the tension of a categorical imperative, strong with the sanction of all the moralists from Aristotle to Kant. Be it so. Let us by every possible means inculcate these principles, and all other principles that make for better conduct. There can be no question as to the necessity of making men dutiful, honorable, philanthropic. The function of religion is not to dispense with such motives, but to consecrate them; not to inhibit, but to reinforce, the feelings and promptings that open up paths of goodness. The impulses that flow down from the cortex are not destructive, but regulative with respect to subordinate centers. The brain itself must atrophy and perish if it fail to quicken and control the organs of nutrition; and religion likewise would tear away its firmest support, were it to deaden the fine growths of volitional power which raise us above the level of self.

What we call lower impulses or instincts or tendencies are selfishness gone to excess. All attempts, consequently, to educate us out of these less worthy motives are attempts to educate us away from self, or to educate that very self to a better sense of its own interests. Unselfishness, as we

understand it, is rational precisely because it is founded upon a clear perception and a vivid realization of the exact value of self. So long as I take a view of myself which makes me the center of the world, neither I nor my universe can be of much use except at moments of total eclipse. But when the center begins to displace itself somewhat, then is the beginning of hope for me; and when my conceptual system, by further displacement and reduction, is brought to coincide with reality, hope gives way to the substance of well-ordered action.

Religious education, properly understood, aims at a just estimate of the self in view of all that is. It locates man in the universe. It gives him his setting in the order of things. If it reminds him that in one respect he is but dust, it also tells him that in another respect he is but a little below the angels. By teaching him to look upon himself and all things else in the presence of a Supreme Being, it opens up to him a perspective in which all values are definitely fixed. It shows him that the starry heavens and the moral law derive their grandeur from the same cause. It lays upon him the imperative: So act that thy action may fit harmoniously into the universal order of which God is the center and source.

The several precepts of morality are simply the more or less detailed working out of this supreme ordinance. The complex system of hierarchy, government, dogma, and ritual in the Catholic church represents so many different attempts to arouse and preserve in men's minds the consciousness of membership in this universal order. The "calmer piety" which enables us to take this comprehensive view is not inborn. To a few gifted minds it may come as the fruit of earnest philosophical thought. But mankind in the average needs a methodical training to lift them above the appearances of sense, to differentiate inclination and duty, to purify the imagination, and to strengthen the will.

It is not to be expected that religious education will enable a man at any and every moment to place himself ideally in the universal order and regard each of his actions *sub specie aeternitatis*. It is not even necessary that a man should ever unravel the metaphysics bound up with such concepts. But the habitual attitude of his mind and his habitual way of selecting motives should be such that it could be analyzed and, if necessary, restated in terms of the order imperative.

Briefly, therefore, the view which has been taken may be recapitulated as follows:

1. Where various motives of conduct are suggested, that motive is adopted which best accords with the mental and moral habits of the individual.

2. The aim of all education, on the ethical side, is the formation of such habits as will insure the selection of good motives and the rejection of evil motives.

3. The aim of religious education is to secure for this selective habit the greatest possible breadth on the highest possible plane by bringing the mind to choose its ends conformably to the divine order.

4. All other criteria and imperatives that have real worth should be regarded as more or less specialized forms which may become clearer and stronger under the influence of religious training, and which may in turn facilitate the application of the religious standard to particular motives of conduct.

I need not remind you that we have been dealing all along with *a priori* judgments; in other words, that we have been studying out the influence which religious education *ought* to exert and would exert in ideal conditions. Nor again would it be the part of wisdom to propose religious education as the one infallible remedy for all our ills. But, considering the amount of work that is done in the interests of religion by persons of all denominations, we seem justified in asking ourselves one question more: How can religious education be made to yield the results, or at any rate a larger proportion of the results, which might reasonably be expected?

So far as I can see, the simplest answer is: By giving the religious element its due share in education. The child comes very quickly to look on the school as the place in which everything is taught that is worth knowing. The absence of religious instruction has for one of its effects ignorance of certain important truths. But its more serious effect is the detachment, in the child's appreciation, of religion from practical life. Once we give the impression that religious ideas and duties are extras for which the ministers alone are responsible, we make the work of the church in the pulpit and in the Sunday school exceedingly difficult. And the difficulty increases as we go on adding every other sort of practical teaching to our curricula. Physical training is not turned over to the professional athlete nor manual training to the expert mechanic. We have brought these and other things into the school, and by so doing we have recognized their value. Whether we intend it or not, we are surely making it quite clear to the people, both young and old, that the school provides or means to provide all the essentials of knowledge. The obvious inference as to the value of religion is not likely to overcrowd the churches.

It must, of course, be admitted that religious education, from the pedagogical view-point, leaves much to be desired. In content, method, and organization, but above all in the proper training of teachers, there is ample room for improvement. Now that these needs are realized, it is to be hoped that the experience gained in building up our school system will prove valuable in solving the problems of religious education. In the movements recently initiated there is a promise of success which must be gratifying to all friends of education. The fulfillment must bring about that unity of intellectual, moral, and religious development which is the basis of right conduct. A mind in which all good motives and all habitually determinant principles of action are thoroly co-ordinated, so that duty to self, duty to the fellow-man, to society, and to God

are merged in one clear imperative, is an ideal worth striving for. It is the ideal of citizenship in each particular order of our human relations, and in that universal order which is none other than the City of God.

THE SEPARATION OF THE CHURCH FROM THE SCHOOL SUPPORTED BY PUBLIC TAXES

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The question of religious education in the schools supported by public taxes is not the question of the importance of religion, but the question of the most fitting occasion for efficient instruction in religion, on the one hand, and, on the other hand, the question of guarding the rights of private conscience and the separation of church and state. There is a general feeling on the part of American citizens that the rights of private conscience must be respected, the cause of religion sacredly guarded, and the church and state kept separate. Are all these things compatible one with another?

It seems to be an historic tendency, in our time, to separate church and state. We speak of it as a principle of our government; it is found in our national constitution. Other nations seem to be moving toward this as a goal, and most of them have arrived at the stage of universal toleration of dissenting faiths, altho retaining an established church. But it may be held that this toleration, which amounts to indifference almost, is only an incidental stage in the growth of civilization, and that it is not a permanent settlement of the matter. It may be possible that it is necessary only while the church is divided by schism, and that it will disappear when the higher degrees of enlightenment arrive and men come to see alike on religious questions. At all events it is well to glance at the grounds on which is based a claim that the church and the state are each more efficient when completely separate in their functions; that religion without an established church is more spiritual, more devoted to the highest interests of the soul; that the state which does not permit itself to interfere in religious matters administers justice in a more efficient manner; and that the school supported by the state teaches the secular branches of instruction with greater success.

The state is the highest of secular institutions, and its function is to secure justice in such a manner that the citizen reaps the fruits of his deeds. Any attack that he makes upon the welfare of his fellow-men should be returned upon him by the state; and, on the other hand, he should reap the fruits of his righteous deeds. The deed that injures society is a crime, and the state sees to it that crimes are punished. As nearly as possible the state returns upon the criminal the symbolical

equivalent of his deed. If he takes life, he shall forfeit his own life; if he takes property by violence or stealth, he shall be deprived of his liberty. Whatever attacks the bond that unites men into society shall be requited by deprivation of life or liberty, or loss of property by fines.

On the other hand, religion does not consider the external act so much as the inward state of the soul, the heart. While the state calls the overt act which attacks the bond of society a crime, the church looks behind the overt act to the disposition of the soul and defines what is opposed to an ideal state of holiness as sin. Sin and crime must not be confounded. The crime, being an overt act, may be measured and a just penalty awarded; an equivalent of the evil deed may be returned upon the doer; but sin, which may exist all the same without an overt act, cannot be measured. Only sincere repentance on the part of the sinner, and utter renunciation of the sin and its consequences, will be forgiven. Repentance does not and ought not to save one from punishment of crime; and, on the other hand, a finite punishment — a penance, in other words — does not and ought not to suffice to wash away a sin and make the soul clean again. We see that the categories of sin and crime indicate a very important difference in the attitude of the soul toward them. It is true that most crimes are to be regarded also as sins, but the state cannot take a deed into consideration for punishment except in so far as it is a crime. In the case of sin in the heart without overt act the department of justice cannot inflict punishment. It would be improper for a court to punish a disposition which had not yet become a volition.

We may see this more clearly if we consider what would happen if the church administered the affairs of the state. If it held firmly its standard of religion and looked to the disposition of the heart, it would forgive overt acts in all cases where repentance is supposed to be sincere; and, on the other hand, it would punish malignant intention even when there was no attempt on the part of the will to make it an overt act. This would destroy justice and undermine the state; no citizen would know what to expect; there would be no sure protection of person and property.

If, on the other hand, the church adopted the standard of justice, borrowing it from the state, it would destroy religion. For if the church were to look only to the overt act, it would neglect the disposition of the heart, and give to its penances a meaning entirely unorthodox. It would make its penance condone for sin, just as the penalty of the law condones for crime. Corruption would come into the church, and its members would be led to believe that they could make up for sin by good acts; they would lose the sense of the infinitude of sin, thinking that it is only a temporary affair which may be made up by future good conduct. If the state undertook to regulate religious matters, the same confusion would occur, and the interests of justice as well as those of religion would suffer.

Applying this distinction, on which the separation of the church and state is based, to education in the school, we shall see that a somewhat similar confusion will arise in respect to secular knowledge as contrasted with sacred doctrine. The principle of religious instruction is authority; that of secular instruction is demonstration and verification. It is obvious that these two principles should not be brought into the same school, but separated as widely as possible. Religious truth is revealed in allegoric and symbolic form, and is to be apprehended, not merely by the intellect, but also by the imagination and the heart. The analytic understanding is necessarily hostile and skeptical in its attitude toward religious truth. The pupil is taught in mathematics to love demonstration and logical proof, and he is taught in history to verify its sources and to submit all tradition to probabilities of common experience. The facts of common experience dealing with the ordinary operations of causality are not sufficient to serve as symbols of what is spiritual. They are opaque facts and do not serve for symbols—symbols are facts which serve as lenses with which to see divine things. On themes so elevated as religious faith deals with, the habit of thinking cultivated in secular instruction is out of place. Even the attitude of mind cultivated in secular instruction is unfitted for the approach to religious truth. Religious instruction should be surrounded with solemnity. It should be approached with ceremonial preparation, so as to lift up the mind to the dignity of the lesson received. Christianity is, indeed, the religion of the revealed God, but there is no revelation possible to the mind immersed in trivialities and self-conceit. In religious lessons wherein the divine is taught, as revealed to humanity, it is right that the raw, immature intellect of youth shall not be called upon to exercise a critical judgment; for the youth at his best cannot grasp the rationality of the dogmas which contain the deepest insights of the religious consciousness of the race.

But the advocate of the parochial school often urges, by way of rejoinder, his view that the secular branches ought to be taught in the same manner as the catechism which teaches the dogmas of the church by authority; and it is a fact that in parochial schools the influence of the dogmatic tone sometimes creeps into the secular recitations, and too much authority in secular studies prevents the pupil from getting at the vital points. He cultivates memory at the expense of thought and insight; for the best teaching of the secular branches requires the utmost exercise of alertness and critical acuteness of the intellect. The spirit of authority loves dogmatic assertion and the memorizing of the exact words of the text-book. It represses the investigating spirit and stifles independent thinking. Arithmetic, algebra, and geometry cannot be learned by authority. Geography and history can be learned properly only by the mind that carefully observes facts and verifies the statements of others. Grammar requires severe application of definitions and logical distinctions.

The church has thru long ages learned the proper method of religious instruction. It elevates sense-perception thru solemn music addressed to the ear, and works of art which represent to the eye the divine self-sacrifice for the salvation of man. It clothes its doctrine in the language of the Bible—a book sacredly kept apart from other literature and held in such exceptional reverence that it is taken entirely out of the natural order of experience. The symbolic language of the psalms, the prophets, and the gospels has come to possess a maximum power of suggestiveness, a mighty influence to induce what is called the religious frame of mind. The highest wisdom of the race is expounded before the people of the congregation in such language and such significant acts of worship as to touch the hearts of young and old with like effect.

In view of these differences between religious instruction and secular instruction, and in view of the contrast between the spirit of the school and the spirit of the church, it is clear that the school cannot successfully undertake religious instruction. In fact, experience goes to show that the school fails to achieve success when intrusted with religious instruction; and it is certain that the church becomes less efficient when it abates in any way the impressiveness of its ceremonial in its art and music, and in its use of the language of the Bible in its ritual.

The boarding school, whether of elementary character or of college grade, assumes in addition to the school the relation of the family to the pupil. The principle of the family is authority like the principle of the church; and the boarding school can, and in fact must, assume the care of the religious interests of the child; and the religion taught cannot be of the kind known as unsectarian religion; it must be the religion of a particular denomination. Unsectarian religious instruction is recommended for the schools supported by public taxes, but such unsectarian religion is of a character far from satisfactory, and it is impossible to have any such unsectarian religion that is not regarded as sectarian by the more earnest religious denominations. The reading of the Bible, the offering of prayers, the teaching of some simple catechism are devices borrowed from some particular forms of Protestantism, namely, from those forms which do not use the ceremonial of the church in the most impressive manner to create a spiritual sense in the pupils who are receiving religious instruction.

In the meanwhile it is claimed by the serious-minded people who see good citizenship as the foundation of what is valuable in civilization that the separation of pupils in parochial schools and the division of the community into religious classes do a positive injury to the state. It is better for the state to have the children of the community mingle in the common school, and the barriers of religious caste should be broken down so that a universal spirit of toleration shall come to exist. Children of all confessions should mingle in the common school and learn to know and

to respect and love one another. This is necessary to moral education. The parochial school runs the risk of creating a feeling of caste that is not truly religious. There lies the possibility of fanaticism and bigotry in the fact of isolation which is necessary in the church, but it should not be carried over into the school. There is danger of making the child think that he and his family belong to the sheep, while his neighbor who attends a different parochial school or some public school is one of the goats. If he comes to believe that God hates his neighbor, he will next conclude that it is wrong for him to love that neighbor. Toleration thus becomes a sin. And yet the good citizen will nearly always quote approvingly the words of President Eliot, in which he claims that toleration is the most precious fruit of human development in the past three hundred years.

It is this danger which has been seen very clearly by those who wish to retain in the school only an "unsectarian" instruction in religion. There are certain essential things in religion—such as the being of God, his revelation of his will in the Bible—which they think all people in modern civilization should desire to have made a part of school instruction. The difficulty with this view, however, as I have already indicated, lies in the fact that it amounts only to the setting up of a new religious sect and adding one more to the many denominations of religious beliefs. It is impossible to make a generalization of Christianity without depriving it of something that is necessary to the form of religion, namely, an appeal to the senses and the imagination. For it is essential to the nature of religion that it shall not only be an abstract theological theory addressed to the highest intellect of man, but that it shall also present those highest truths clothed in symbols addressed partly to the imagination, partly to the understanding, and wholly to the religious sense. Quoting from Tennyson, one would say:

> And truth embodied in a tale
> Shall enter in at lowly doors.

A religion is not religion if it cannot arouse the spiritual sense in children and uneducated people as well as in learned and deep-thinking people. Herein lies the occasion for denominational differences among Christians, which arise oftener in the method of appeal to the spiritual sense than in the ultimate theologic dogmas.

I know that it will be said, and truly said, that Christianity of all religions requires a subtle theology demanding the highest philosophical insight as well as these other vehicles carrying the truth to the senses and the imagination in the form of a solemn ceremonial; for Christianity is alone among world-religions in holding that God is not a hidden God, but a revealed God whose will is known. The theoretical part of Christian theology exhibits the most striking difference between the religion of the highest civilization and the nature-religions which are found in

various degrees of development among the lower civilizations. A general statement of its view of the world in the language of philosophy rather than in the language of theology will show us the impossibility of attempting an unsectarian instruction in religion in the schools supported by public taxes. Religious instruction based on Christianity teaches first the nature of the true God as opposed to the gods of the heathen. The true God creates the world of nature, not for its own sake, but for the sake of the human creatures which are to exist in and thru it. Nature is the method of creating and educating human souls. They are to subordinate nature to their uses. These souls are placed over all lower forms of existence. It is their privilege and duty to recognize God as personal and as divine-human-personal, having will and intellect. God loves men and has sent his divine Son to die for humanity lost in sin and worldliness, in order that men may be saved, altho not without their co-operation.

This doctrine of the divine human nature of the true God contains in it as a germ all of Christian civilization. All of the good things which form the power and the glory of civilization flow as a result from this doctrine, viz.: science, the useful arts by which nature is conquered for the service of man; literature, history, and philosophy—all these have a particular endowment derived from the religious doctrine of Christianity; and you cannot successfully teach them to a people that is bound to a heathen creed.

A mere nature-religion does not admit of science, free thought, and the control of matter and force by machinery; for these are the elements that the heathen mind worships, or dreads with a mortal fear as evil demons; and the savage man spends his whole life in trying to propitiate them with ceremonies and sacrifices. Christianity was the first of all religions which taught that God transcends nature, that he created it by the divine Word, and that he did this for the sake of man. All time and space is therefore the cradle of man, and the processes of nature exist for the purpose of nurture—the nurture of individuality—individuality as a basis of personality; first the crystal, next the plant, next the animal, finally man. God is absolute Personal Reason, desiring to share his independence of thought and will with other beings whom he creates thru nature and raises above nature, to be immortal persons and to live in his kingdom forever; not as mere beholders of the spectacle of infinite grace that gives life and freedom to creatures, but to be active workers in that kingdom, participators in the missionary activity that continually works in the universe to make over the evil into good, and the good into the better.

According to this doctrine, God is love and grace, and the nearest approach to the divine life that man can make is to be filled with the missionary spirit—the spirit that strives with all its might to aid others to see the light and persuade them to become active in helping their fellows.

This theological doctrine is the beginning of religion in its truest and highest sense, as Christ taught it, and as all denominations of Christians agree in professing it, however much they disagree in the manner of celebrating it by ecclesiastical ceremonies — i. e., forms of worship — and however much they differ as to claims of authority or as to application of this doctrine to human life existing on the earth or in other worlds in space.

In nature-religions — religions that conceive the divine to be some form of being in time and space — superstition has had and must have so large a sway in the human soul as to make impossible the free development of science and the invention of arts which are needed to conquer nature. Only with the advent of a doctrine that nature is not a god nor a demon, nor a collection of demons, but only a vast process of creating and nurturing individuality — only with the arrival of this view of nature, this theory of the world as a theological doctrine, science and free thought become possible.

With the doctrine of the transcendence of the human soul, its separation from nature even while in the body, and in its immortal individual and social life beyond the grave, man attains a free attitude toward nature and may explore it, not only without fear, but with a confidence that it ought to be made of service to man in every one of its processes. Human invention may freely discover combinations thru which the elemental forces — wind, water, fire, electricity, and gravitation — may be harnessed for the use of man — nay, even for his comfort and for his amusement; that is to say, for his bodily wants of food, clothing, shelter, and recreation; for his bodily wants as well as for his spiritual wants, such as intercommunication of all men with all men, sharing in all experience of life, sharing in all discoveries in science, in the use of all discoveries and inventions — sharing in all insights into the divine conduct of the world or into the ultimate ends of nature and man, participating in all the great deeds that tend to benefit the race.

Superstition sets up on all hands some opposing powers in nature of a demonic sort that are jealous of man's dominion, and revengeful against his intrusion into their realms by scientific investigations or by mechanical inventions.

It took long centuries to arrive, under Christianity, at the stage of conviction and insight which dispossessed nature of its demons, and reached the doctrine of a divine Reason acting thru beneficial laws. The earlier view was that of a divine power which could manifest its transcendence over nature only by occasional arbitrary interventions that set aside those beneficent laws. The opposition to science on the part of the superstition which is inseparable from nature-religions took a new form in the Hebrew religion, the religion of the Old Testament. The great doctrine of God's transcendence, on which depends man's freedom and immortal-

ity, was revealed first in the form of miraculous interference with the course of nature. God in the Old Testament was seen, not so much as a Providence creating and nurturing individuality into freedom and responsibility thru nature, as a God manifesting his independence of the world and of its laws by interference for occasional reasons with the order of nature. Hence, too, death, and its causes thru pestilence, famine, floods, storms, conflagrations, accidents by sea and land, have been dwelt upon in the past by religious teachers with more emphasis as revelations of divine power than the far deeper revelation of the divine in nature as creative and nurturing power. The Son of God as the divine archetype of the missionary spirit in the church has been preached from the day of Pentecost, but it has not been so fully realized in thought as have those other important dogmas of sin and redemption, and the transcendence over nature, until the advent of modern natural science with its doctrine of evolution. It is all-inclusively stated in the doctrine of the Trinity, which especially names the work of the Logos as that of creation and salvation.

The bare enumeration of Christian doctrines in language partly secular is sufficient to show the impossibility of their introduction into the curriculum of schools supported by public taxes. The necessity of considering the rights of conscience of all citizens alike in the state schools renders it impossible to bring in religious ceremonial or teach doctrines that are distinctively religious. An undenominational religion is not to be found. Even the doctrine of the existence of God implies a specific conception of him, and the conception of the divine varies from that of the finite deities of animism to the infinite deity of East Indian pantheism and the holy Bible. It varies from the pantheistic Brahma, whose concept is that of negation of all attributes, to the Jehovah of the Bible, who is self-determined and personal, but elevated entirely above nature. Mere deism is opposed to all of the creeds of Christendom. When we come to teaching a live religion in the schools, we see that it must take a denominational form, and, moreover, it must take on the form of authority, and address itself to the religious sense and not to the mere intellect. All the studies of the school, addressed as they are to the intellect, are opposed to the healthful action of the religious sense. We are forced, therefore, to conclude that the proper place for instruction in religion is the church. Only as propounded from the sacred desk and clothed in the consecrated text of the Bible can the dogmas of Christianity be made to edify the people of the congregation, young and old alike.

Religion has two elements, worship and sacrifice. Worship is the action of the intellect and emotion, and sacrifice is the action of the will. The church provides for both of these things, and for ages it has been at work elaborating its means of instruction. The church pedagogy is far more difficult than the pedagogy of the schools, because it has been

obliged to take most pains with the instruction of the senses and the imagination, while the school has done little in this respect. The church has been obliged to educate the senses into a habit of interpreting its impressions symbolically. In the act of perceiving the sensuous objects of religion the mind is trained into neglecting the particular concrete meaning of what is before it, and preferring in its place a symbolic or allegoric interpretation, putting a spiritual reality in the place of a material reality. The things of sense are subordinated, and the realities of the spiritual world are made to take their place; and one cannot lay too great stress on the part which the archaic style and figurative modes of expression of the Bible have in appealing directly to the spiritual sense.

It is difficult for most people to comprehend how important the isolation of the Bible from all other books, and the consecration of it as a divine book that has come to us direct from God and not thru the authorship of man, is to the effectiveness of religious instruction. If the higher criticism should destroy entirely the theory of the special inspiration of the Bible and make it like other ancient literature, so long as it was not read much in the way that a secular book is read and studied, the language of the Scriptures would retain its peculiar force as addressed to the spiritual sense—a force which no other literature possesses or is likely to possess, for these Scriptures were written by people in whom the spiritual sense was more pronounced than in any other people among the nations of mankind. Just as the Roman mind was sharpened to observe and record the ordinances by which the individual will can embarrass or reinforce the will of the state, and thereby was enabled to contribute the priceless gift of Roman law to future civilizations; and just as the Greek mind discovered the æsthetic forms, which constitute what may be called the piety of the senses—the discovery of gracefulness as the perfect revelation of the beautiful—in the art of sculpture; and, on the other hand, in poetry discovered how to use the forms of all nature as tropes and images of the mind, and in the later or prosaic form of philosophy the Greek mind discovers the scientific point of view—so the Hebrew mind seizes the transcendent cause, self-subsistent, omnipotent, and omniscient as the absolute being—divine-human in the sense that the divine personality, having will and intellect and affections, creates the human being with intelligence and will and affections, and with the high privilege of communication with God. In the course of its long centuries of checkered experience the Hebrew mind elaborates and ripens its spiritual theory and unfolds the doctrine of a messiahship, which in the fullness of time becomes the Logos doctrine as the theory of a second divine person, and the doctrine of the Holy Spirit as a third divine personality, an institutional personality which presides over the infinite invisible church.

We may thus get a partial glimpse into the significance of the Bible as an instrument of religious education; but it is in the nature of things that what is symbolic has not merely two meanings, the one literal and the other symbolic, but there is an infinite series of meanings possible to each symbol; and it requires, therefore, the authoritative interpretation of the church to settle the orthodox meaning. The spiritual sense is other-worldly, and when its insights are translated into what is secular it may be made to contravene the moral world-order; and this has happened in a myriad cases.

We must conclude, therefore, that the prerogative of religious instruction is in the church, that it must remain in the church, and that, in the nature of things, it cannot be farmed out to the secular school without degenerating into mere deism bereft of a living Providence, or else changing the school into a parochial school and destroying the efficiency of secular instruction.

The church ceremonial that is the most elaborate will suffer least injury from the disenchantment produced by the higher criticism of the Scriptures and by the mechanical and atheistic interpretation of scientific discoveries. The great hymns of the church, such as the *Dies Irae*, the *Stabat Mater*, and the entire galaxy of Latin hymns which express all the phases of Christian feeling and thought and will, rendered by fitting music that is religious to the core, furnish a perennial vehicle for religious instruction. One is thankful to remember that religious music of the highest order is in process of composition in our time, altho painting and sculpture have not discovered how to retain religion in the realistic forms of art. Music and poetry yield themselves to religion; and the highest poetry and music have done this for hundreds of years. The true æsthetic is the vestibule and forecourt of religion. One feels sure that the church must not relax whatever of strict theological teaching it has in operation, and its theological seminaries must recover from the blighting effect of Kant's Third Antinomy. And I for one must think that those denominations which have least ceremonial should consider carefully the use and function of ceremonial, such as it is and has existed, in reaching the spiritual sense thru its transformation of imagination and sense-perception. Above all, the church management must not rest in security on the belief that the time is coming when it may safely rely on an unsectarian instruction in the elementary schools for the spread of true religion, nor rely upon the re-establishment of parochial schools in place of free schools under government control and supported by public taxes.

DISCUSSION

NATHAN C. SCHAEFFER.—The value of Bible-reading depends upon the spirit in which the book is read. I have seen instances in which the irreverence of teacher and pupils made the opening exercises worse than a farce. In such instances I sympathize

and agree with Dr. Harris that it were better to separate the methods of the Sunday school from those of the public school. On the other hand, a favorite word of Jesus is the word "truth." "Truth" is a word of the intellect, and a teacher who is continually using this word as Jesus did certainly does not demand the sacrifice of intellect which Dr. Harris seems to demand in his paper. The methods of arriving at truth in the domain of science and philosophy need not be cast aside when we take up the study of the Bible and give religious instruction.

J. W. CARR.—I wish to express a faith rather than to submit a plan—a faith in the possibility and the practicability of religious instruction being given in the public schools without reasonable ground of offense to anyone. I believe that the public schools are too great an enginery not to be used by God for the promotion and extension of his kingdom.

I am as much opposed to the teaching of dogmatic theology of any kind in the public schools as Dr. Harris or anyone else. I believe that even an attempt to introduce such religious teaching in the schools would be hazardous, if not disastrous. The public school can never take the place of the church and the home in giving religious training, but I believe it *can* and *should* supplement both in the religious training of children. There is no time for elaboration, yet I believe that the following fundamental religious truths should be taught in every public school: (1) the belief in God as the Creator and Ruler of the universe; (2) the brotherhood of man; (3) the dignity and value of life; (4) the moral order of the universe. Children should be taught even in the public school that there *is* moral order in this world, and that all rational beings are held responsible for their deeds. However secret may be the act, be assured "our sins will find us out," and that "even-handed justice will commend the ingredients of our poisoned chalice to our own lips."

I had hoped, Mr. President, that Dr. Harris would have given the weight of his great name to help on what I believe is destined to be the greatest movement in education of the last half-century—the introduction of a workable form of religious instruction in the public schools. But if I understand his paper aright—and I hope I do not—he would completely divorce the public schools from all religious instruction. Nevertheless, it seems to me to be our plain duty as teachers to use our influence to secure the religious as well as the intellectual development of the children intrusted to our care. Public education must be Christian, not pagan.

MISS LUCIA STICKNEY.—It is possible to accept all that Dr. Harris has said and yet feel a keen disappointment at what he has left unsaid; for the impression that he seems to leave with us is that we are not responsible for any definite religious teaching in the schoolroom. I believe there is such a responsibility resting upon us, which we are too prone to forget. Dr. Pace has made an appeal in behalf of the boys and girls who are destitute of any religious instruction in church or home. I wish to plead for those who hear the Word, but are in danger of doubting its authority, because of the careless or studied negligence of the teacher to recognize the value and importance of the church service and the Sunday-school lesson. The text for a sermon comes often to the watchful teacher, and the attention is arrested by the utterance of religious truth in the schoolroom which delivered in its accustomed place would pass unnoticed. The letters I. H. S. on the cookies which Dolly Winthrop carried to Silas Marner call for an explanation. I am regularly told by some child of the Catholic church that they stand for "I have suffered." Correct the mistake by a reverent explanation of the Latin words, *Jesu Salvator Hominum*, and unawares the gospel has been preached. It is but natural when we come to the song of the little maid in *Launcelot and Elaine*, "Too late—ye cannot enter now," to call upon some one who goes to Sunday school for the parable of the Wise and Foolish Virgins in such a way as to imply that the lessons learned there are to be remembered and cherished for weekday use. *Hamlet* is a story of the struggle of a soul under the conflict-

ing influences of Norse paganism and Christianity, a struggle evidently going on in the soul of Shakespeare while he was living the great drama that he wrote. The metaphysical problems that *Hamlet* presents to the mature scholar are beyond the reach of our pupils, but this lesson they grasp at and never forget. Many of us, it is likely, are unfamiliar with the details of the creation as it is told in Genesis; but after the Greek and Norse myths of the creation have been studied, the effect of reading in the class the first chapter, with an outline hastily sketched upon the board, is thrilling. Its majesty and simplicity, when compared with those other accounts, impress the children with such power that they cannot forget them.

We must remember that the school is not neutral in regard to religious influence. The careless and frivolous allusions to church and creed and minister, which often find expression on the school platform in such a way as to imply a sneer, need to be counteracted in the class-room by the earnest teacher. The restrictions and prohibitions with regard to religious instruction are so much emphasized with many of us that we are to forget our opportunity or think we have it not. Yet under all these restrictions it is likely our right and privilege to indorse and enforce the religious teaching of Catholic, Protestant, and Jew in such a way as to show our sympathy with the best in the creeds of all.

JAMES M. GREENWOOD.—There are certain fundamental ideas which enter into the discussion of this subject which lie at the foundation of our form of government. When the colonists came from Europe to America, they were entirely familiar with the religious questions which had involved the different countries of Europe in bloody and expensive wars. The colonists came to Massachusetts, to New York, to Virginia, to South Carolina, as well as to Maryland, with deep and settled convictions. They believed that the governments founded in America should recognize the entire separation of church and state, and this conception was so strongly fixed in the minds of our forefathers that they did not believe in state religion.

It is a cardinal doctrine held in this country that true religion flourishes best when it is left to individual effort. For instance, in nearly all of the newer states of the American Union, the constitutions contain an express provision that no public money shall be appropriated for the support or maintenance of any sectarian or denominational school; and this is as it should be.

I believe that the position of entire separation of church and state is the correct one, because if we admit that the state and church in this country should be united, with our freedom of speech and liberality of opinions, it would be only a short time until great complications would arise. There are so many great religions in the world, it would be only a short time until we should have to get a council to decide what particular religion should be selected for our people to practice.

I freely admit that the instruction the children received a generation or two ago from Bible literature has been greatly weakened of recent years. Formerly the parents and grandparents told the little children the stories of the Bible, and then our reading books also contained many extracts—both from the Old and New Testament Scriptures. But these extracts have been largely eliminated from all our modern readers. The children who attend Sunday school are turned over frequently to young and inexperienced Sunday school teachers, so that they receive little instruction of any value. In fact, the average Sunday-school class, as conducted, is about the poorest makeshift in the matter of instruction and discipline that I have ever witnessed.

In my opinion it is sound statesmanship to maintain with firmness and decision the plan our forefathers outlined in all matters of religion. Let the parents look well to the religious instruction of their children in Bible history, and teach them those lessons which they ought to know. Bible literature is of a higher spiritual order than the literature of Greece and Rome, and more of it should be put into our reading books.

With the proper teaching at home, in the church, and in the Sunday school, supplemented by the great truths of morality inculcated in our public schools by our teachers, the religious training of the young will not suffer.

CARROLL G. PEARSE.—The scene here this morning has made a great impression upon me. The interest displayed has been intense, and, during much of this discussion, many of the members of this Council, and of devout women not a few who have come in to hear the proceedings, have been standing all about in the back part of the hall, leaning forward to catch every word of the papers and the discussion upon them. As I have watched the scene I have wondered if we have not let the Boston atmosphere, charged as it has been for centuries with intenseness of religious interest and controversy, get into our heads a little; if we have not been somewhat influenced by the spirit of the environment.

In that beautiful literature which has been referred to by more than one speaker this morning, the literature of the Hebrews, there is an account of a goat which, upon a stated occasion, was led to the edge of the wilderness, and, before he departed into loneliness and solitude, had laid upon him the sins and burdens of the whole people. I have wondered if this move for religious teaching in the schools, if successful, would not result in making more perfect the likeness between the Hebrew scapegoat and the modern public-school system.

This system has now laid upon it the intellectual instruction of the children of the land. We begin to fear that the schools must bear the burden of their instruction in morals and manners. I am certain, so far at least as town children are concerned, that upon the schools must be laid the burden of the physical education of the children as well as the education of that side of their natures which proper hand employment alone can give. All these may, perhaps, legitimately be laid upon the schools, since they have to do with the life of today—the temporal, material, life of here and now; but are we to have added to these the burden of responsibility for instruction in the things of the soul —that side of life which has to do with the future, the hereafter? I fear the home and the church abdicate too much when they desire to divest themselves of this responsibility for religious education and to lay it upon the public schools.

Another point should be considered also. We have in the schools children from homes where every kind of religious belief exists, and from homes where no religious faith is found; we have in the schools teachers of every shade of religious faith and unfaith. What religious teaching shall these be required to give? Shall it be that which you approve, or shall it be that which I approve? Shall the teacher who professes no belief in any religion be asked to teach, in the public schools, some religion in which she has no belief?

Have we not been swayed, some of us, in this discussion, by our general altruistic wish that all children might enjoy the benefit of religious training? Have we not, seeing in the public schools an engine ready-made to our hands and of such potentiality, rather impulsively cried, "Let us use this great institution to teach these children the religious truths which most of us believe?"

REV. EDWARD A. PACE.—From the interesting discussion, in the course of which so many aspects of this subject have been presented, it seems clear that, on one hand, the need of religious education in some form is recognized, and that, on the other hand, our differences of religious belief and our political philosophy stand in the way of teaching religion in the public school. It is well that these difficulties should be frankly stated and fully realized. But it would be neither logical nor in keeping with our national character to regard them as insuperable. If religious education is a vital element in the development of the moral life, and if morality is the root of healthy political growth, a way must be found to get rid of the difficulties, whatever be their source.

In other countries whose educational system is certainly not inferior to our own this problem has been brought to a happy solution. In our own country far more difficult problems have been settled. It may be that just now this question of religious education is the hardest with which we have to deal. It is also possible that by postponing it, or by finally setting it aside as hopeless, we are simply clearing the ground for problems, or rather for very definite movements, the results of which will leave us little of our political philosophy and less of our social organization.

For my part, I prefer to believe that the common-sense and the energy of the American people will keep them steadily at work on this important issue; and I am therefore free to say, at the close of this meeting, that the outlook for religious education is more hopeful now that we have made some beginning of a calmer discussion on the large basis of our national welfare.

Memorial Addresses

J. L. M. Curry

BY EDWIN A. ALDERMAN, PRESIDENT OF TULANE UNIVERSITY

Jabez Lamar Munroe Curry was born in Lincoln county, Ga., on June 5, 1825, and died in Asheville, N. C., on February 12, 1903. This long life was a purposeful life, rich in experience of men and governments, and full of devotion, of service, of struggle and achievement. There was never a pause in its unceasing, virile activities, and when the end came I know of no man of whom it could be more truthfully said that he had drunk honorable life to its lees. Dr. Curry had been a soldier in two wars, a maker of laws in state and nation, a teacher and preacher, a writer of useful books, twice a representative of his government at the court of Spain, and a statesman of that truest sort whose faith in the perfectibility of men was unfailing, and whose ambition was to give to all men a chance to inherit the power, the beauty, and the richness of life.

The intense, rich life of Dr. Curry covered an equally rich period of his country's history. Thomas Jefferson was still alive when he entered the world. The scene of his youthful activity was the isolated lower South; for, tho born in Georgia, Alabama was the state which he served from his entrance into the Alabama legislature in 1847 to his presidency of Howard College in 1868. He was well born and well educated, and he inherited a certain distinction of manner and presence that commended him well to the genius of his age and region. His young manhood was passed amid the storm of a great argument, made necessary by the silence and indecision of the constitution as to the nature of this Union. To our minds, cleared of the hot temper of the time, that age seems an unhappy, groping age; but it was a good age in which to be born, for men were in earnest about deep, vital things. It was, indeed, an age of passion, but of passion based on principles and enthusiasm and deep loyalties. The cynic, the political idler, the self-seeker, fled before these fiery-eyed men who were probing into governmental theories and constitutional interpretations, and who counted their ideas as of more value than their lives. The time had its obvious faults, and was doomed to fall before the Avatar of progress; but there lived in it beauty and force, and a great central note of exaltation of personality above social progress. Around the fireside the talk did not fall so much upon the kind of man who forms the syndicate or corners the stock market, or who wages the warfare of trade around the world, but, rather, simple, old questions were asked which might have been

asked in the Homeric age: Is he free from sordidness or stain? Has he borne himself bravely in battle? Has he suffered somewhere with courage and dignity? Has he kept faith with ideals?

Dr. Curry had reached his prime when the great drama, fate-driven and fate-determined, passed from argument into war, and he himself, caught in the grip of that same fate, notwithstanding all his gentleness and tenderness, played the part of a man and a soldier. He had reached the heights of middle age when the storm had passed and pain and despair had smitten so many souls. What is there for a strong man to do—a man of heart and courage, with a spirit unspoiled by hate or bitter memories, with a purpose unshaken by any doubt? This was the great interrogatory that faced him in the silence of his soul. There could be no bickerings for such men as he. There could be no crude racial scorn, no pettiness, no puerile obstinacy. His passion was for *constructiveness*. His supreme genius was for adaptability to environment. He saw his task lying before him like a sunlit road that stretches straight before the traveler's feet. He was to walk in that path for all his remaining days. The quality of his mind, the sum of his gifts and graces, the ideals of contemporary civilization suggested forensic preferment, but no consideration of fortune or of self could swerve him from his course. The quiet man at Lexington who had borne the greatest burden of all saw the same vision that appeared to Curry. It was a vision of many millions of children standing impoverished and untaught amid new duties, new occasions, new needs; appealing to the grown-up strength of their generation to know why they should not have a country to love, an age to serve, a work to do, and training for that work. The vision was life—unconquered, tumultuous, renewing, regenerative young life. The elders had had their day. Here stood undefeated youth asking a chance to live worthily in its world and time. George Peabody away off in Massachusetts saw the same vision. It did not matter to him that these youths were the sons of men who had been enemies to his cause. It did matter to him that youth which the nation needed was springing up untrained; and, rising clear above small passions, he poured his great fortune into the stricken states. Our amazing democracy has nothing finer to show than the spectacle of these three men acting thus largely in a time of national passion and headiness.

The general agency of the Peabody and Slater Boards came to Dr. Curry in 1881 as the opportunity of his life, and his last years were to be years of splendid youth wherein he was able to work resolutely for high national ends. The task that confronted him, in its larger lines, was to democratize the point of view of an aristocratic society, to re-nationalize its ideals and its impulses, to preach the gospel of national unity to both sections, to stimulate the habit of community effort for public ends, to incarnate in young men the ideal of social service, and to set the public

school, in its proper correlation to all other educational agencies, in the front of the public mind as the chief concern of educational statesmanship. His task, in its more technical aspect, was to reveal the public school as it should be—actually at work in a democratic form of society, with all of its necessities, with trained and cultured teachers, varied curricula, industrial training, and worthy surroundings. From 1881 to 1895 his work was to be a battle for public opinion. Slowly that public opinion got born, and many earnest men gathered around this splendid power, and under its influence young scholars had their creative instincts awakened and public men felt its stirrings in the air. Above it all and energizing it all stood this genuinely gifted man—I had thought to say old man, but there was never any suggestion of age about Dr. Curry. He met youth on its own grounds and asked no odds. As the things of sense faded from his sight, there was vouchsafed to him that supremest good of life—an honest bit of creative work well done and bearing fruit.

At the beginning of his work not a single southern state had a system of free public schools. At his death there existed in every one of the southern states a system of public schools more or less complete, and a wonderful activity in university, normal, technical, and industrial education. And, greater than all this, a generous and triumphant public sentiment had been aroused that will never stop short of efficiency and perfection. It was given to him to see southern governors from Montagu to Heard turned into educational statesmen, and to behold the best brain and heart of the North and the South united in a common and intelligent purpose, to get at this great task rightly and heartily.

His was the first voice to declare that the strategic point of this whole battle was the untaught white man and his child. He was among the first to declare that there was no place for a helot in our system, and that the negro should be properly trained for life in the republic. He was among the first to urge common-sense as against sentimentality in the education of the negro. He caused the world to know something of the courage and patience and self-reliance of the southern struggle for self-realization, and he made the world believe that there was strength and purpose enough in this people to solve their own problems with justice and wisdom. In the discharge of all these duties of the pioneer and propagandist no man who has lived in America since Horace Mann has shown such energy and enthusiasm as J. L. M. Curry.

Personally, Dr. Curry was a man to enjoy and to love. He had the grand manner and the social instincts of the old order. He moved in a fine, lordly way among his fellows. But at his heart he was a democrat to the core, and an individualist in the structure of his mind, and in his sublime belief in the unfailing rectitude of public impulse. He had the genius for giving himself out, and the equipment of intellect and temperament necessary for his many-sided duties. It did not matter to him

whether he spoke before this learned body or in some little country village—he was all there, heart and soul. The real genius of the man, as I have said, was for adaptability to his time, and for sympathy and service on the side of its better forces.

The most vivid characteristic of the man was his intense and complete Americanism. He had believed in his youth in the ethics, at least, of secession. He did not change that belief in his old age. Calhoun was second only to Aristotle in his regard; and yet I have never seen a man to whom the flag made such an appeal, or to whom the great unrended nation was so dear.

The unforgettable service of J. L. M. Curry was the development of an irresistible public opinion for the education of all the people in the southern states. The great lesson of his life is the joyous fruitfulness of unselfish striving for high impersonal aims.

His fame is secure, for it is the persistent fame of the teacher and reformer. Is it not our task—the task of the living—to press forward with patience and quiet resolve not to be deterred, not to despair nor fret nor doubt? Surely this work we are in is the nation's work, and this nation is a great spiritual adventure, worth living for and working for, as well as dying for.

William Miller Beardshear

BY HOMER H. SEERLEY, PRESIDENT OF THE STATE NORMAL SCHOOL, CEDAR RAPIDS, IA.

William Miller Beardshear was of Scotch-Welsh ancestry. He was born at Dayton, O., November 7, 1850, and died at Ames. Ia., August 5, 1902. He received his elementary education in the public schools of Ohio. At the age of fourteen he enlisted as a private in the volunteer service of the United States army and served until the close of the war in the One Hundred and Eighty-fourth Ohio Infantry, which was assigned to the Fourth Army Corps, Army of the Cumberland. At the close of the war he turned his attention to securing an education, and graduated from the classical course at Otterbein University in 1876. He was given the M.A. degree in 1879 and the LL.D. degree in 1885. In his early manhood he was drawn very strongly to the ministry. He attended the Theological Seminary of Yale University for two years, accepting finally a pastorate in Ohio. But his career was to be educational rather than ministerial, and in 1881 he was called to the presidency of Western College, at Toledo, Ia. This was an institution that had been located originally at Western, Ia., but the changes brought by railroads necessitated a change in location, and Toledo was selected.

Great results came at once in the progress and development of the college under the able administration of the new president. For eight

years he was active in getting the endowment and the building funds necessary to take care of the rapidly growing college, but at the same time he gave equivalent attention to securing a competent faculty, excellent equipment, and a large attendance of promising students. At the close of the eight years he was so well known and appreciated that he was called to the city superintendency of the West Des Moines public schools, the most important public-school work in Iowa. Here he remained for two years, the honored and admired leader of a large and successful corps of superior workers in elementary and secondary education.

In 1891 he was elected president of the Iowa State College of Agriculture and Mechanic Arts, at Ames, Ia. At once he put his time, strength, and judgment into the service of the state to advance the interests of industrial education, and in a decade accomplished such great results that the college at Ames is known at home and abroad as one of the most progressive and successful institutions of its kind in the United States.

He was always active in every line that contributed to the development and the advancement of public interests. His influence was recognized in Iowa by his being given every prominent official position in the Iowa State Teachers' Association, being president in 1894. He was also active in the National Educational Association, being director for Iowa and state manager for a number of years, and also being for one year president of the Department of Manual Training. He became President of the National Educational Association for 1902–3, but was not permitted to preside at a single session, his last illness beginning at Minneapolis the evening before the opening session.

As an institute worker among teachers and farmers he enjoyed special popularity, giving many public lectures and addresses. He was recognized by President McKinley, who appointed him one of the Indian commissioners. His entire career was noted for its rapid progress and efficiency. His funeral occurred on the campus at the State College at Ames, being largely attended by prominent officials, educators, and people of Iowa. His last resting-place is in the college cemetery, where a monument will be erected to commemorate his public services, his private character, and his noble life.

Emerson Elbridge White

BY E. W. COY, PRINCIPAL OF HUGHES HIGH SCHOOL, CINCINNATI, O.

Emerson Elbridge White was one of a notable group of Ohio men who in their day were a recognized power in the educational affairs of their state and of the nation. Among them may be mentioned Andrew J. Rickoff, John Hancock, Eli T. Tappan, Israel W. Andrews, W. D.

Henkle, and B. A. Hinsdale. He was contemporary with these men, labored with them in the cause of education, and lived to see them all pass off the stage of action.

Dr. White was born in the little town of Mantua, in northeastern Ohio, January 10, 1829, and died after a few weeks' illness, at his home in Columbus, O., October 21, 1902, in his seventy-fourth year. He was present at the meeting of this Association last summer in Minneapolis, and took an active part, as usual, in the proceedings. In the memorial exercises before this Council he paid his tribute to Colonel Parker and Dr. C. C. Rounds, deceased during the year, with even more than his customary feeling and eloquence. He spent the summer, as had been his wont for several years, in lecturing before teachers' institutes, and returned to his home in September with a feeling of exhaustion from his labors. Rest failed to bring relief, and his ailment soon developed into the malady that terminated fatally.

Dr. White's early education was obtained in a country school, in Twinsburg Academy, not far from his home, a famous school in those days, and in what was then known as Cleveland University. A part of the time he was both student and teacher in the same school. After serving for a time as principal of Mt. Union Academy, he was appointed to take charge of one of the Cleveland grammar schools. He showed such efficiency here that he was promoted to the principalship of the Central High School of that city. In 1856, at the age of twenty-seven, he resigned this position to accept the superintendency of the schools of Portsmouth, O. He remained here five years, and in 1861 removed to Columbus, and purchased the *Ohio Educational Monthly*, of which he was editor and proprietor for more than thirteen years. It was in this period that he served for three years as state school commissioner. While holding this important office he was instrumental in securing many modifications and improvements in the school laws of the state.

Just after the close of the Civil War he was a candidate for Congress on the Republican ticket for the Columbus district, but was defeated by a small majority.

In 1876 he was chosen president of Purdue University, Lafayette, Ind., an institution for mechanical and technical training, where he rendered efficient service for the following seven years, when he resigned and took up his residence in Cincinnati. During the few years in which he held no public office he was engaged in lecturing, in general literary work, and especially in the preparation of his series of text-books.

In 1887 he was called to the superintendency of the Cincinnati schools, which position he held for a term of three years. This was a field of labor for which he was eminently fitted, and he came to the office admirably equipped for its duties. He rendered most valuable service to the schools of the city, winning the friendship and esteem of the teachers in an

unusual degree and the respect of all with whom he came in contact. He was a thoughtful and sympathetic counselor, always generous and just in his judgment of those under his supervision. Under his administration the morale of the teaching force was improved and the methods of the schoolroom rendered more rational. His retirement from the superintendency was deeply regretted by all who had at heart the best interests of the schools of Cincinnati.

Soon after the close of his term of service as superintendent of the Cincinnati schools he removed to Columbus, where he continued to reside until the time of his death. Tho occupying no public position, he abated not a jot his interest in everything relating to education. While he still spent a part of every year in lecturing to teachers, the greater part of his time was occupied in preparing for the press his educational publications. It was during these years that the following volumes of his works appeared: *Elements of Pedagogy*, *School Management*, *Elements of Geometry*, and *The Art of Teaching*.

His active life covered a period of more than fifty-five years—years filled with efficient service as teacher, city superintendent, state superintendent, college president, editor, lecturer, and author. In whatever position he held he bore himself with a dignity, a courtesy, and a straightforward honesty of purpose that command respect and admiration. His life was a busy one. He was a man of profound convictions that did not allow him to rest. But he had no disposition to be the leader of an educational crusade. He was ill fitted by nature for such a task. He was not a fanatical, root-and-branch reformer, so called, nor a stolid, immovable conservative. He chose rather that middle course which, while less picturesque, is not only the safest but the surest to lead to wholesome and abiding results. He was wise enough to see that some of the revolutionary ideas in education which, in the last twenty-five years of his life, found so many zealous advocates, were visionary and ephemeral. His works on education, however, furnish evidence that he was wisely progressive, and was always ready to accept whatever innovation commended itself to sound judgment.

His writings are characterized by clearness, force, and directness—qualities that have commended them to the members of the teaching profession. They have been widely read and have exerted a healthy influence wherever they are known.

As a public speaker Dr. White had few superiors in the profession. His tall, erect figure, his dignified demeanor, and his graceful manner lent added force and attractiveness to his message. He spoke because he had something to say, and he said it in a way that was calculated to carry conviction. He was a welcome speaker at educational gatherings, and probably no man in the country ever met and addressed as many teachers as did Dr. White.

In the associations of teachers, state and national, he was a conspicuous figure. He was regular in his attendance upon these meetings, and took a prominent part in their deliberations. He received due recognition from them in the honors that were conferred upon him. He served as president of the Ohio State Association, of the National Educational Association, of the Department of Superintendence, and of this Council. He was one of the founders of the National Council of Education, and was one of the earliest and foremost advocates of the establishment of the Bureau of Education. He drafted the bill for its organization and was influential in securing its passage thru Congress.

He received the honorary degree of A.M. from Western Reserve University, and the degree of LL.D. from Marietta College and from Miami University.

Dr. White came of pure Puritan stock, his ancestry running back to the early settlement of New England. It is said that one of his ancestors was a member of the Long Parliament. From his Puritan ancestry he inherited some of his most striking characteristics—his high sense of duty, his moral earnestness, his fidelity to conscience, and his religious convictions. In religious faith he was a Presbyterian. For many years he was a ruling elder in that church and a member of the board of trustees of Lane Seminary, a theological school of that denomination in Cincinnati. At the time of his death he was president of that board.

Dr. White was married in 1853 to Mary Ann Sabin, who died one year and three months before him. There were born to them five children. Of the three who survive him, one is at the present time governor of the state of West Virginia, and another holds an important official position in the United States revenue service. In his domestic relations Dr. White was true and tender and gentle. On this subject I cannot do better than quote from a letter of Governor White found in *Education* for January, 1903. "My father," he says, "was the truest, kindest, and gentlest of husbands and fathers. I never knew him to do an unkind or an unjust act, or to permit anger to master him. His ideals were high, and his thoughts pure, and his influence uplifting. He exemplified in his daily life those Christian graces and virtues which adorn and are the fruitage of a noble nature. If his public life was uplifting and inspiring, his private life was even more so. He used the Bible daily in his home life, and the family devotions were never omitted. His greatest pleasure was in doing something for others."

Those who knew him slightly and saw him but seldom sometimes thought him cold and distant, but those who enjoyed his intimate acquaintance knew that he had a warm heart and a quick sympathy. He was ever ready to speak a word of encouragement or to extend a helping hand.

He will long be missed by this Council and by the general Associa-

tion where for so many years he bore a conspicuous part and in the work of which he always felt so lively an interest. We shall remember him as a dignified, courtly, Christian gentleman — one whose motives were pure, whose path was straight, and who did the work given him to do with earnestness, fidelity, and singleness of purpose. The world is better that such men have lived. They cannot wholly die. Their life, their character, and their work will survive and serve as an inspiration and a benediction to all of us who remain.

REMARKS

JOSEPH SWAIN.— It gives me pleasure to testify to the very excellent and discriminating paper of Principal Coy on the lamented leader, Dr. E. E. White, whose loss we mourn.

As one who knew Dr. White intimately for many years, I should like to say a few words. While he was president of Purdue University in Indiana he was known very widely and valued very greatly by the common-school teachers of the state. Along with his work as president of a technical and agricultural college he found much time to lecture before county institutes and other educational gatherings. Wherever he went to these educational meetings he was a central figure, and always had something to say of benefit and encouragement to the common-school teacher. He used excellent language, and he spoke with force and ease. He was blessed with a good voice and a commanding presence and commanding manners. I remember well the first time I heard him speak. He gave an evening lecture at Anderson, Ind., before a teacher's institute. His first words were: "Childhood is a constant warfare — a warfare between its lower and higher nature." He commanded the attention at once, and did not lose it during a lecture of an hour and a half in length on the subject of the child. He had at that time recently published his arithmetic, which was widely used by the schools. This book was very clearly written and revealed his analytic mind. This latter characteristic we have often seen in this Council. He was a clear thinker, entirely honest, and was quick to recognize merit or error in others. In Dr. White the Council loses one of its ablest leaders, and American education loses one of its best friends and defenders.

JAMES M. GREENWOOD. — I wish to add a thought or two in regard to Dr. Emerson E. White's habits of mind and social characteristics. His mind was of the John Calvin type — legal and moral in every aspect. He always held to the original views entertained by those who founded the Council, and he adhered to these opinions with a fidelity that never wavered. He remembered what ideas were expressed originally in reference to each line of work or investigation, and from these he never varied. He was always closely in touch with all the rules and regulations governing the entire scope of the National Educational Association and all its departments, and no change was ever proposed in his presence that he failed to scrutinize most carefully.

Some, because he did not unbosom himself fully in social converse, looked upon him as a distant, reserved man. I have spent many hours with him in the most familiar conversation, and I know him to have been one of the most sympathetic and tender-hearted of men. His thoughts were always high and serious, yet they were simple, pure, and noble. His questions always showed the breadth of his mind, and his answers its delicacy.

WILLIAM H. BARTHOLOMEW. — In addition to what has been said by members of the Council, the following incident, which occurred during the summer of 1893, when the Southern Educational Association met in the city of Louisville, Ky., is given as an accurate picture which portrays the lovable disposition and splendid character of Dr. Emerson E. White. Your speaker had just assumed the gavel as president of that body.

One of the series of entertainments provided for the members was an excursion up the Ohio River on one of those beautiful steamers for which that locality is noted. There was an abundance of refreshments and music, but the most interesting and inspiring item on the program for that evening was the address of Dr. White.

His topic was "The Little Child," suggested, as he said, by that stirring scene in the life of the Great Teacher when he placed a little child in the midst of his disciples and said: "Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven." Dr. White immediately entered into the spirit of his subject, and the inimitable description which he gave of that memorable scene in which his great Model was the central figure will never be forgotten by those who heard him. He lovingly and pathetically disclosed the fact that his power and usefulness came from a trustful faith in Him who is the embodiment of all wisdom and all power. He also disclosed his faith in the possibilities of the child; how that, under the inspiration and training of the faithful teacher, it might become stalwart in intelligence and virtue, a positive factor for good in the community in which it lived and moved. He stirred his audience with his masterful effort, and the helpful influence of his burning words has reached the remotest corners of the beautiful Southland. Dr. White possessed a tall and imposing physical form, but upon this occasion it seemed to be charged with supernatural splendor and power. He was not only a man goodly to look upon, but he was a man whom one could confidently trust.

Your speaker has enjoyed the friendship of Dr. White for more than a quarter of a century, and he always found him to be the courteous gentleman, the loyal friend, and the faithful Christian.

"He rests from his labors, but his works do follow him."

Edward R. Shaw

BY J. F. REIGART, PROFESSOR OF PEDAGOGY, UNIVERSITY OF CINCINNATI, CINCINNATI, O.

Edward Richard Shaw, an active member of the National Educational Association since 1893, and a member of the Council, died February 11, 1903, in Yonkers, N. Y. He was born at Bellport, Long Island, January 13, 1850. He was graduated from Delaware college in 1878, having made his preparation for college while teaching in the schools of Long Island. After a brief return to teaching, he resumed his studies and was graduated from Lafayette college in 1881 with the degree of Bachelor of Philosophy. After graduation he taught at Greenport, Long Island, and in 1883 he went to Yonkers, N. Y., as principal of the Central School, which, within two years, developed into a high school. While principal of the Yonkers High School he carried on graduate work in New York University, and received in 1890 the degree of Doctor of Philosophy. In the fall, after receiving this degree, he was appointed lecturer on educational classics in the New York University School of Pedagogy. In 1892 he was made professor of the Institutes of Pedagogy, and in 1895 dean of the school.

Dr. Shaw's connection with the School of Pedagogy terminated February 1, 1903, on account of his election to the superintendency of the schools of Rochester, N. Y. The new field of work, however, was never

entered upon, and, as it proved, the last as well as the most important period of his life was given to the School of Pedagogy and devoted to the professional training of teachers. Appropriately enough, while heartfelt tribute from friends and associates has been paid to the memory of one who was recognized as a leader in the educational world, it was reserved for the students and graduates of the School of Pedagogy to give to this appreciation the most appropriate and practical expression, in the foundation of a permanent scholarship in the School of Pedagogy to be known as the "Edward R. Shaw scholarship." A memorial meeting at which this plan was announced offered occasion for the expression of estimates of Dr. Shaw's work and influence by means of letters from educators of prominence, and addresses by Dr. W. T. Harris, United States Commissioner of Education, Chancellor McCracken, and other representatives of the New York University, and by graduates and students of the School of Pedagogy.

The briefest account of Dr. Shaw's life should include an estimate of his writings, his administration, and his teaching. In authorship, the most important as well as his latest completed work is the *School Hygiene*, published in 1901 and already generally recognized as authoritative. He also wrote several books on method, edited for school reading a number of classics, and contributed to the magazines many studies in educational principles and methods. All of his writings bear the marks of scholarship, clearness, and practical suggestiveness.

Here follows a list of Dr. Shaw's books and more important articles: *Selections for Written Reproduction* (New York, 1899); *National Question Book* (1887); "Inventional Geometry" (in *Popular Science Monthly*, January, 1889); *School Devices* (in collaboration, New York, 1891); *Physics by Experiment* (New York, 1892); *English Composition by Practice* (New York, 1892); *Legends of Fire Island Beach and the South Side* (New York, 1895); "The Employment of the Motor Activities in Teaching" (in *Popular Science Monthly*, November, 1896); "Some Observations upon Teaching Children to Write" (in *Child-Study Monthly*, February, 1896); "A Comparative Study on Children's Interests" (*ibid.*, July, 1896); *Two Years Before the Mast*, with Introduction and Notes (New York, 1897); *Robinson Crusoe*, with Introduction and Notes (New York, 1897); *Black Beauty*, with Introduction and Notes (New York, 1898); *Fairy Tales for the Second School Year* (New York, 1899); *The Peasant and the Prince*, with Introduction and Notes (New York, 1899); *Three Studies in Education* (New York, 1899); *Interest in Relation to Pedagogy*, a translation of William Osterman's *Das Interesse* (New York, 1899); *Big People and Little People of Other Lands* (New York, 1900); *Discoverers and Explorers* (New York, 1900); *School Hygiene* (New York, 1901); "Outline for a Course of Study for Elementary Schools" (in *Journal of Pedagogy*, March, 1903).

Dr. Shaw's ability as an administrator was demonstrated in his super-

vision of village schools during his early experience in Long Island, in his organization of the Yonkers High School, and in his direction of the School of Pedagogy. The public schools which came under his influence gained in more systematic grading, enriched and advanced courses of study, and higher standards of efficiency. In the university training of teachers there were few precedents to follow. The New York University School of Pedagogy was in its infancy when Dr. Shaw became dean, and its form and later growth were chiefly due to his earnest efforts to develop a high type of professional training characterized by thoroness, breadth of view, and serviceableness.

Yet, however creditable Dr. Shaw's work was in the field of educational literature and in administration, it was in the class-room that his full strength manifested itself. He was, above all, a teacher.

A broad and exact practical experience constituted the foundation of his power in dealing with the problems of teaching. New meaning was infused into psychological terms and into educational doctrines. Theory was explained in terms of practice. Yet Dr. Shaw's teaching was in no sense empiric. No school problem was considered to be adequately treated without careful research in all its important relations, psychological, physiological, and historical; witness the scientific treatment of such subjects as motor ability, vertical writing, or school hygiene. Even more important than the results of research was the influence upon the students of the spirit and method of investigation and of the most conscientious exactness. Dr. Shaw's class work was an exemplification of the doctrines taught. To appreciate the great secret of his influence over his pupils one need but compare the insistence upon the principle of self-activity and the method of discovery with the plan actually followed in class work, in utilizing individuality, and in stimulating to highest endeavors.

This harmony of thought and practice, and the power resulting therefrom, were due in great measure to a firmness of conviction united to a sympathetic attitude of mind, a strong faith in the value of a scientific method, and a personal interest in the professional career of every member of his classes. As an exponent of sound doctrine and a master of method, as well as by force of his personality, Dr. Shaw not only made a deep impression upon those who were privileged to be associated with him, but also accomplished much in elevating the standard of the profession to which he devoted his life.

DEPARTMENT OF KINDERGARTEN EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—THURSDAY, JULY 9, 1903

The department met in South Congregational Church at 9:30 A. M., and was called to order by President Charles W. Eliot of Harvard University, who announced that the president of the department, Mrs. Pauline Agassiz Shaw, owing to ill-health, was unable to be present. He then introduced the vice-president, Miss Stella L. Wood, Minneapolis, Minn., who took the chair.

Announcement was made that an overflow meeting would be held in the lecture-room of the church. At this point word was received that Mechanics' Hall was available for the sessions of the Kindergarten Department. Both meetings at once adjourned to that place. The number present was estimated at three thousand.

Miss Wood, presiding, introduced Mr. Joseph Lee, vice-president of the Massachusetts Civic League, Boston, Mass., who presented the subject: "Kindergarten Principles in Social Work."

Miss Sarah Louise Arnold, dean of Simmons College, Boston, Mass., then gave an address on "Kindergarten Principles in General Education."

The following took part in the discussion of these subjects: Charles W. Eliot, president of Harvard University; Michael Anagnos, director of Perkins Institution for the Blind, Boston, Mass.; James J. Greenough, master of Noble & Greenough's School, Boston, Mass.; F. Louis Soldan, superintendent of schools, St. Louis, Mo.

The following committees were appointed:

ON NOMINATIONS

Miss Caroline T. Haven, New York, N. Y. Miss Mary C. McCullough, St. Louis, Mo.
Miss Evelyn Holmes, Charleston, S. C.

ON RESOLUTIONS

Miss Fanniebelle Curtis, Brooklyn, N. Y. Miss Ella C. Elder, Buffalo, N. Y.
Miss Mary A. Birch, St. Louis, Mo.

The department then adjourned to meet on Friday morning at 9:30 A. M.

SECOND SESSION.—FRIDAY, JULY 10

The department met in Mechanics' Hall, the vice-president, Miss Wood, presiding. The first speaker, Mr. Richard Watson Gilder, editor of the *Century* magazine, New York city, presented "The Kindergarten an Uplifting Social Influence in the Home and District."

Miss Caroline M. C. Hart, of the Kindergarten Association, Baltimore, Md., gave an address on "The Power of the Kindergarten Training School in the Education of Young Women."

Miss Elizabeth Harrison, principal of the Kindergarten College, Chicago, Ill., read a paper on "The Scope and Results of Mothers' Classes."

The following speakers took part in the general discussion: Mrs. Marion M. B. Langzettel, New York, N. Y., and Mrs. Ella Flagg Young, professor of education, University of Chicago.

Miss Stella L. Wood, superintendent of the Kindergarten Normal School, Minneapolis, Minn., and corresponding secretary of the International Kindergarten Union, gave a brief history of the International Kindergarten Union and its work.

The nominating committee presented the following names:

For *President*— Dr. Jenny B. Merrill, New York, N. Y.
For *Vice-President*— Mrs. Margaret J. Stannard, Boston, Mass.
For *Secretary*— Mrs. O. S. Chittenden, Omaha, Neb.

The report of the committee was adopted, and the nominees were declared elected as officers of the department for the ensuing year.

The chairman then presented the department gavel to the incoming president, who accepted it with a brief and appropriate response.

Upon motion, the meeting adjourned.

CLARA WHEELER, *Secretary*.

PAPERS AND DISCUSSIONS

KINDERGARTEN PRINCIPLES IN SOCIAL WORK

JOSEPH LEE, VICE-PRESIDENT OF THE MASSACHUSETTS CIVIC LEAGUE, BOSTON, MASS.

"*That ye may have life and that ye may have it more abundantly.*"

[AN ABSTRACT]

In tracing the application of kindergarten principles in social work, I do not claim that such application has in every case been the result of Froebel's teaching. Indeed, some of the applications of which I shall speak were made before Froebel's time. What I do claim is: first, that the principles, as I shall show them at work, are the same as Froebel's; and, secondly, that Froebel by his writing, and more especially by his detailed and concrete embodiment of these principles in the kindergarten and in his *Mother Play*, has made them peculiarly his own; that he has been their clearest expositor, the teacher of them who is most easily understood and most inspiring to follow.

"Happy is the man who finds the word." It was a happy day for Froebel and for all of us when the word "kindergarten" was applied to the great institution that he founded; for Froebel's central principle, which is embodied in every line he wrote, in every educational means that he suggested, is that education consists in the cultivation of the child as a living and growing organism—in the fostering of life. We are now all of us convinced that educating is not simply imparting information. Froebel teaches the further truth that neither is it merely the cultivation of powers. The thing we are trying to educate is that which

acquires information, by the exercise of its powers. It is not a question of the development of the muscles or of the mind, but of the cultivation of that which uses the muscles and the mind, the central and vital essence, the child himself. The purpose and test of a school are not more knowledge or more power, but more boy, for all purposes. Every true lesson leaves a residuum of character; if your arithmetic has reached him, he will play better football; if his football has been the real thing, he will do better at arithmetic.

Such being the aim of education, what is Froebel's idea of the method? He believes, first, that the soul, like the muscles and the faculties, grows by action; that it creates itself by self-assertion, by putting itself forth into overt deeds and into concrete form. A truly educational experience is one in which, not merely the powers and faculties, but the heart, is engaged. In proportion as you put your whole self into a piece of work shall you receive a larger self in return: the way to win life is by living.

Secondly, the direction in which life is to be sought is determined by the nature of the living thing. The question of the sort of thing in which the child shall find his true work and expression is not a matter of whim or of arbitrary choice; is not a matter of choice at all, on our part, or on the part of the child, but of discovery. What the main elements of his life shall be, so far as he is to attain to life at all, is a question that has not been left for us or for him to determine. The vital force within him is not indefinite, undetermined, without specific direction and specific needs. The soul as well as the body has its appropriate food. It is open to a man to choose what he shall put into his mouth, but he cannot choose whether it shall nourish him or not. A man can eat grass or fill his belly with the east wind, but he cannot make his body grow and be strong except by supplying it with the food that belongs to it. You can give the child, spiritually as well as physically, the food he needs, or you can withhold it; you cannot in either case avoid the natural consequences of your choice.

And, finally, Froebel believed that the relation of the vital principle in man to its appropriate objects is something more than a mechanical relation of means to ends. It is not merely that the soul is a definite sort of thing, and therefore must of necessity be definite in its needs, so that some things must be more conducive to its development than others. It is a question, not of being adapted to our use, but of belonging to us; not of coming in handy, but of being already our own. Study of a fish's body or of a bird's wings would have enabled us to infer the existence of water from the one and of air from the other. It is plain that the nature of each of these creatures calls for its appropriate element. We could in a large measure reconstruct the tiger's world from its claws, the heron's from its beak. So fitted is the animal to its surroundings that we are not

surprised to learn that in the long run it is the surroundings that have in large measure made the animal. The resulting need is absolute and exclusive. It is not that a fish can swim better in the water than on dry land, but that water is a part of him; that he cannot exist, or even be conceived of, without it; that fish and water are, in a certain true sense, two sides of the same fact.

Consider the relation of a man to the family and to the country. Whether such relation be the result of selection or of the transmission of acquired adaptation to our surroundings, or however it was created or brought about, it is a fact that today man is a family man and a citizen. Whatever one may encounter at an afternoon tea in the way of petulant and semi-humorous protest, it remains true that neither protestor nor defender of the existing order can imagine what human beings would be like without these two relations. The children of the man who, in the eons before the invention of charitable relief, would not work for his family are not with us. The man who did not feel the passion of patriotism, the sense of team play, who would not work with the tribe for mutual defense, belongs to some distant geological period, and his strain has long since been worked out of our inheritance; we could no more understand him, if we were to meet him, than we can enter with sympathy into the purposes and pursuits of a tiger or a rattlesnake. Among men, as we know them, the man without a home, the man without a country—whether he be the inhabitant of a Mills Hotel or one of those gilded products of materialism who is too busy or too rich to vote—is a sick man, an outcast, incomplete, necessarily falling short of the standard of humanity.

It is the same with man's relation to manual labor. The story of our rise above our competitors among the brute creation has been mainly the story of the hand, the story of tools, of materials, the history of handiwork. A snake has a mouth and a stomach; other creatures add flippers, feet, or wings; the hand is man's great means of power and expression, of impressing his will and personality on the outside world. The hand implies the tool and the material to work in as clearly and inevitably as the fin implies the water. If it were possible to bring up a child wholly without manual training, his development would be like that of a fish on dry land.

You find your little girl playing with her doll, your boy whittling out a boat. You say to them: "Come, let us study Latin grammar." You can by the exercise of sufficient force make the small child go thru the motions of studying Latin, and with a certain apparent and tangible result; but do you think you can make their life prematurely reach out toward a dead language in the way in which the nature of the little girl reaches out in obedience to the maternal instinct, or the nature of the boy in obedience to the instinct of workmanship? A growing plant will choose from the

soil and the rain and the air that which belongs to it, and it can by its nature make use of nothing else. It is the same with a growing child; and this is as true of the growth of the spirit as it is of the growth of the body. The three relations I have used for illustration — family, country, manual occupation — are typical of all. The need and hunger of a growing thing are ever toward its own completion; its thirst and longing are the prophecy of possession of that for which it longs, and constitute its title to it. It is always seeking, questioning the universe, looking for its own, for its home, for its mate. It is looking for the other half of itself, seeking its complement. It is this other half — our home, our mate, the tools for which our hands were made — to which God has given the key that can liberate the force that is within us.

"In proportion to our relatedness we are strong." Emerson, prophet of the soul, has put Froebel's whole philosophy of education into a single phrase. Live to your deepest relations: deepen them by the heartiest and most accurate expression you can give. Take possession of them with all your strength, that they may possess you. The relation of mother and child is typical of all vital relations.

I believe that, as almost all social work is in its aim purely educational, our best social work is a conscious or unconscious application of this one central kindergarten principle of attaining life thru living toward our deepest relations; for this I take to be the central principle of all true education. I will cite three instances of fostering the vital relations to the home, to play, and to work, respectively. My first is the instance of the child-helpers, of those who make a profession of caring for children separated from their natural homes by reason of the poverty or depravity of their parents. Nothing has been more striking in the recent development of child-helping work than the growing conviction that the home is the only true children's institution, the only soil in which a child can grow. An average death-rate of something like 90 per cent. a year in infant asylums in this country has taught its lesson as regards the physical life, and today the state of Massachusetts, for instance, keeps even the sickly waif and foundling only a few days in a small temporary nursery — time enough merely to get it clean — before boarding it out in some country or suburban home. If separation from the home means physical death to the infant, what does it mean to the growing boy or girl? We have learned that in a great majority of cases the best treatment, even for semi-criminal children, requires their return, sooner or later, to the family, their natural habitat.

The playgrounds springing up so rapidly thruout the country in the last ten years are a recognition of the vital relation of the child to play. At the age of eleven or thereabouts, in obedience to an instinct that he neither questions nor understands, the boy forms the gang and begins taking part in a series of combined and strenuous exploits,

sometimes purely athletic, sometimes such as to become of special and immediate interest to the police. Some people—with a mighty array of facts upon their side, it must be confessed—say the boy is becoming lawless; but the educator, tracing the gang impulse to its source, finds it, on the contrary, about the most lawful thing there is. It is not lawlessness, but law, that has come into the boy's life. What is dawning in him is the political spirit—the spirit of citizenship in its first form, that of loyalty to the tribe; and the expression of this spirit in hard game or daring exploit is merely the reflection, in the boy of today, of the centuries of tribal war in which the instinct of citizenship received its first fierce training. The gang, in short, means the coming of the citizen; it is the budding in the boy's life of the instinct of which laws and social institutions are the expression. This new need of his nature is calling aloud for its own. Give it its own in the hard team game, lead it on from the team to a larger loyalty to the school, the playground, the city, and it will do its work of making a citizen of him. Deny it its proper fulfillment, and stunting and perversion result.

Great institutions like the Pratt Institute, the Armour Institute, the Drexel Institute, have been founded by philanthropists in order that culture should be placed within the reach of those who cannot go to college. It is characteristic of these institutions that their whole teaching tends toward the acquiring of a trade. They constitute a notable recognition of the fact that culture consists in the promotion of vital relations to vital things; that it is to be sought, not in the ornaments and adjuncts of life, but in life itself; that it is in proportion to the depth and reality of living that it exists. These great philanthropists have recognized that to a great extent the man's work is his life—the source from which his spiritual income must be derived; and that the essence of this relation of the worker to his work is expression. That the man may be master of his craft, that it may be plastic to him and afford some little utterance to his soul, is the aim of all our trade-teaching; and that the trade may be such as can afford some sort of expression must be the chief aim of all philanthropy as applied to industrial affairs. The need of artistic or creative expression as the essential element in all constructive work is one of the great secondary principles of the kindergarten. Froebel was the prophet in education, not only of man the foreordained, to whom certain great relations are necessities of the spiritual life, but also of man the creator. The great relations in which we must look for the fulfillment of our life are fixed; our way of fulfilling them is left for each of us to shape. Here is the field for the expression of individual character. And—because the nature of every man partakes of the infinite nature, because human character can never be stated in prose—the manner of such expression must in the end, in some one line at least, be made a fine art.

DISCUSSION

CHARLES W. ELIOT, president of Harvard University.—Tho I have had less personal observation of kindergarten work than of the secondary and higher work, I am sure that the fundamental ideas of the kindergarten are just what are needed in all grades of schools. The best principles and practices of the kindergarten are that the children should learn by doing things, and should be happy while they learn; and that they learn better while interested, and therefore happy. The older view was that there could be no real work or valuable discipline in school except thru processes which were disagreeable, painful, or repulsive to the children. This idea received support from the kindred theological doctrine that solid good can come to poor humanity only thru pain, deprivation, and unhappiness. Against this hideous error in education the kindergarten has successfully contended. For generations, systematic education had been looked on by the young as a mysterious interference with the natural joys of life, a hostile régime to be resisted, an affliction to be endured, if escape were impossible. The kindergarten brought the antidote for this poison in the mind of youth.

It is not the children only who need deliverance from this view of life. How many adults still regard labor as a curse and the earning of a livelihood as an obstacle to happiness! Yet labor creates the home and civilized society. It is always the interest in labor and in the product of labor that makes it happy. Every intelligent person today seeks his fundamental satisfactions thru labor—labor with a motive of service. For instance, the hard work done to prepare for this convention called for patience with details and persistence in overcoming obstacles, under no little anxiety about the outcome; but there are no better-satisfied men at this moment than the local executive committee for this convention. They are happy in their legitimate reward—these profitable meetings, these glad thousands.

At school the child should work with hope of achievement and with the sense of having achieved; and that child only is to be pitied who is unable to win this satisfaction. Are not these the inducements to hard work which satisfy and profit grown-up people? The kindergarten sets them before little children.

The motive of the kindergarten, "Joy in doing," should be the motive in all education, and the inspiring, the happy motive at every stage of human life.

MICHAEL ANAGNOS, director of Perkins Institution for the Blind, Boston, Mass.—There is no clearer evidence of the value and significance of the kindergarten than the fact that its methods, as systematized and put into practice by Froebel, are the basis in all education at the present day. They are definite in their purpose and universal in their scope. They form the foundation of rational pedagogy, and have infused new life and vitality into this science. They run parallel with the entire educational career of the child, the youth, and the man. They contain within themselves the elements of that idealistic philosophy which aims to unfold the mental faculties, cultivate the heart, promote self-activity, plant the seeds of altruism, transform thought, and sweeten life. The educational fires fed by them burn so steadily that their glow not only illumines and brightens the horizon of the kindergarten, but penetrates into the rooms of the different grades of public schools, from the lowest to the highest, whence it is banishing the prevalence of mechanical modes of teaching and learning, and the gloom which these are likely to produce.

These methods apply with even greater force to the training of the little blind boys and girls than they do to that of normal children. Bereft of one of the royal avenues of sense, and born for the most part to poverty and misery, these hapless children live in ever-enduring darkness, and are terribly hampered in their movements and greatly circumscribed in their opportunities for bodily exercise. Their infirmity exerts a baneful influence upon all sides of their being, and impedes the harmonious development of their

physical, intellectual, and moral powers. It deprives them of all incentives to locomotion and cuts them off from the ordinary ways of play. It weakens the springs of activity, and engenders timidity, irresolution, and habits of indolence and idleness. Pale faces, flaccid muscles, enervated constitutions, stamina far below the normal standard, unsightly bodily idiosyncrasies and peculiarities, aversion to steady exertion, erroneous or imperfect conceptions and mental pictures of the outer world, undeveloped and unregulated powers of imagination, narrow and incorrect views of things, strong tendencies to selfishness — these are some of the undesirable effects which are inherent in the loss of sight, and which beset the path of education of the victims of this calamity with serious obstructions and peculiar hindrances.

Owing to the low state of his organic constitution, the life of a blind child is set in that minor key which produces what Wordsworth calls the "still, sad music of humanity." When he enters school he is burdened with all the disabilities which have just been enumerated, and the problem how to unfold his mental faculties and foster his native capacities is rendered thereby greatly perplexed and very hard to solve satisfactorily. His development must of necessity be chiefly gained thru his fingers; but the inevitable difficulties which in the natural order of things are to be encountered in his training are enormously increased by the feeble condition of his nerveless little hands, which are destined to interpret the universe to his mind, and upon which he must depend for a great part of his objective knowledge.

Now, of all the instrumentalities which can be successfully employed with a fair prospect of overcoming these obstacles and of producing results of a superior character, the kindergarten is the most promising. This system is admirably suited for the training of little blind boys and girls, containing, as it does, within itself that principle of organic life manifested in gradual development and the power of counteracting the undesirable effects produced by the destruction of the visual sense, and by the weakening and degrading influences to which sightless children are exposed. It supplies the air, the sunlight, and the showers which make them grow strong and healthy, and which are needed to secure the germination of the seed of their faculties planted in the soil of a parched and imperfect physical organization. Thru the gifts and occupations it provides the best and most effective means of training the tiny fingers to ordinary uses, and of inducing that muscular control of the hand which renders it an intelligent executor of the decrees of the will and a faithful servant to the mental faculties. It stimulates the inventive powers of the children and promotes their love of construction. It sets the wheel of their observation in motion, and gives to them correct mental images of objects and of representative processes in the world of nature and of industry. It teaches them to perceive distinctly, to speak plainly, and to reason rightly. It affords them unequaled facilities for gaining an adequate conception of forms of various kinds, and rare opportunities for the cultivation and refinement of their remaining senses. It enables them to acquire patience, perseverance, manual dexterity, self-control, and force of will. Finally, by its daily exercises in right thinking and doing, it infuses into them a spirit of uprightness and truthfulness, and encourages them to deeds of honesty, helpfulness, self-reliance, and courtesy, until these little periodical acts become habitual.

Of the numerous beneficent results obtained from the methods and processes of the kindergarten, supplemented by the simple exercises in the gymnasium, the following are the most noticeable: good physical development; muscular strength and suppleness; habits of attention and order; freedom and grace of movement; quickness of invention and sanity of imagination; manual dexterity, together with love of construction and appreciation of utility; an elementary idea of symmetry and harmony; and initiation into the conventionalities of polite society, as shown in the demeanor of one child toward another, and in matters of eating, drinking, and personal cleanliness.

The methods of the kindergarten are as beneficial to many older blind persons as they are to children of tender age. Indeed, without their aid there is no possibility of

satisfactory development in the case of a large number of grown-up pupils whose minds are immature and untrained, and whose muscles have become rigid on acconnt of the lack of use. The excellent work which Ramabai, the high-caste widow, is doing in India affords a striking proof of this neeessity. She begins all her educational efforts in behalf of girls and young women from the age of four to twenty years by employing the methods of the kindergarten, with all its gifts, occupations, games, and songs; and a great deal of the remarkable success of her plan is attributable to this procedure.

Certain blind young men and women are in a similar condition, and they should be treated in the same way precisely. They should have a thoro preliminary training in the elementary occupations of the kindergarten, such as card-pricking and sewing, weaving, and the use of various gifts, so that they may develop constructive and creative power before they are taught to read and write, and before they learn a trade. Thus, besides receiving the advantage of the ethical and intuitional training, which is the main power of the kindergarten system, they will at the same time gain an idea of industry, thrift, and citizenship.

Froebel's methods of education are no less valuable for the harmonious development of deaf and dumb persons than they are for the blind. In addition to the numerous essential benefits which the kindergarten confers upon all classes of children, defective as well as normal, it bestows special ones upon those bereft of hearing who have no means of communication with those around them, and who live in entire isolation from their environment and in perfect ignorance of what is going on in the world. Thru the activity of their fingers and the exertion of their attention, it opens the portals of the vacant mind, which seems to be a veritable *tabula rasa*, and creates in it certain simple and elementary ideas, together with the necessity of using some kind of symbols or signs for their expression. These are valuable steps toward awakening the intellect from its dormant condition to consciousness, and, by being steadily followed in a rational way, lead to the constant development of thought and the acquisition of adequate language for its interpretation.

So far as backward and feeble-minded children are concerned, there are no better or more fruitful methods for their training than those afforded by the gifts and occcupations of the kindergarten. These can be most successfully employed in kindling the sparks of intelligence which may be found buried in the convolutions of weak and imperfect, if not distorted, brains.

Thus it is evident that the principles underlying the kindergarten are fundamental in all education, from the nursery to the university, and that, by adapting their application to all classes of children and to different stages of growth, they will produce such results as cannot be obtained thru any other system of training.

For these, and much more, Froebel deserves to be honored as one of the most eminent educators of the world, and his name is to be be praised and blessed as that of a great apostle of humanity.

JAMES J. GREENOUGH, master of Noble and Greenough's School, Boston, Mass.—Because I recognize the debt which all educâtion owes to the principles of the kindergarten, I wish to point out some dangerous tendencies in the application of these principles which I have noticed in my work with older children.

To children of parents whose environment has cut them off either wholly or partially from the æsthetic side of life, from literature and art, from the truth and beauty of life, the kindergarten has opened a new world of thought. It has uplifted them and increased their powers of enjoyment a hundredfold. Into lives of monotonous dullness it has brought its message of sweetness and light. Upon such children the effects of the kindergarten must be good.

But it has some serious dangers for children of more fortunate parents, unless applied with great care. I have prepared boys for Harvard College for twenty years in Boston

—boys whose parents are well-to-do. Their fathers and grandfathers have generally had a college education. Their surroundings from infancy have been such as to stimulate the mental processes. In their first dozen years they have often lived thru experiences which would have sufficed our ancestors for a lifetime. They had horses and boats, spent their summers in the country and their winters in the city. They have had everything in their lives except the struggle to obtain, and the development and enjoyment which come from this struggle. Their needs are very different from those of the children I first mentioned. They do not need the widening of their horizon—it seems sometimes far too wide already. They do need the training in manual dexterity and the unselfish ideals of the kindergarten. They do not need sentimentality, such as I heard of in a private kindergarten this winter, to which a child took a favorite doll, named by the child herself Mary Jane O'Reilly, after a very dear nurse, only to come back in tears because the name had been changed to Bluebell on the ground that the old name was not a pretty one. They do need to have impressed upon them, more than anything else, the lesson, which the other children learn from their daily lives, that *man must work.*

These boys form a small proportion of the total number of schoolboys, but in all our large cities there are two or more private schools for them, besides the large boarding schools which fit for college, so that their needs are at least worth consideration. Many of these boys will have large responsibilities of wealth and position. They must be trained to meet these responsibilities. They must learn to be industrious and persistent. It is easy to learn the lesson of industry and persistence if our daily bread depends upon our own exertions; if we must struggle to obtain. "Needs must when the devil drives." It is hard to learn it if the bread is put into our mouths; if we obtain without a struggle. It is absolutely necessary in the education of this type of boy to make him realize that work is worth while, to form in him a habit of doing his work without stopping to question whether it is interesting or not. He has so much in his surroundings to interest and distract him, and so little to make him work, that school must above all teach him application and persistence. Anything in his education which tends to weaken his sense of duty and his self-dependence unfits him for the burdens he is to bear. It has been my experience that kindergarten training with this type of boy has this dangerous tendency, altho nothing in the principles of Froebel ought to produce this result, if rightly applied.

It had been my general impression for many years, in common with many secondary fitting-school teachers, that boys who had received kindergarten training were for some reason less successful in preparing for college than those who had not had it; but, distrusting a mere impression, I consulted my school records for evidence to support or contradict my previous impression. The list of kindergarten-trained boys was startling from the similarity of the characteristics of the boys whose names appeared in it. This similarity was so pronounced that one teacher in the school, after hearing the first ten or a dozen names on the list, named a dozen more without a single mistake, merely because he recognized in them these same characteristics. Almost all of these boys were deficient in just those qualities which I have said are particularly necessary for this type of boy—application and persistence. They make mistakes in translations from foreign languages and the classics because they have only half-learned the paradigms of inflection. English suffers from bad spelling and inaccurate use of syntax. They understand the theory of mathematical processes, but somehow fail to reach correct results. In history their conclusions are vitiated by inaccurate data about actual events. They are not thoro. They are weak thruout on facts and details which are hard to master and offer very little excitement or interest in themselves. These facts and details are drudgery to us all, unless we have formed a habit of doing what we set out to do, whether we find it interesting or not; unless we find our excitement and interest in the successful accomplishment of a difficult task; unless we do our duty, either consciously or unconsciously, because it is our duty. These boys are weak in this particular kind of knowledge, because things have been made too easy in their early training and they have become accustomed to have someone supply an

adventitious interest to hold their attention. They are easily interested as long as a teacher can work with them, but when they study by themselves their interest soon flags and comparatively little is accomplished. Their attention is easily diverted from the subject in hand. They have a scattering versatility, a wide, but too superficial, interest, a quickness revolting against hard work, a dependence upon others, and too little ability to work by themselves.

The principles of Froebel, if properly applied, can and should strengthen them just where they need it, in the realization of the need of work and the power to work; but an abuse of these principles, co-operating with their environment in which there is no incentive to work, is bound to weaken them. Such an abuse of kindergarten principles is only too easy. Mawkish sentimentality, constant help by the teacher, allowing a child to abandon work which he has once begun before it is finished, and continuance of methods adapted to the infant minds after the child is old enough to need stronger mental food, were never contemplated by Froebel, and are directly contrary to his ideas, but do exist in many private kindergartens today, especially in the intermediate and advanced classes conducted on kindergarten principles thru which most of my pupils have passed.

An average of the year's record in both recitations and examinations by classes still further supported my general impression. The average of kindergarten boys was lower in every class from the first class, which had already passed the Harvard preliminary examination, down to the seventh class of boys from ten to eleven years old. There is, of course, nothing conclusive in statistics from only one hundred and fifty boys of whom one-third had received kindergarten training; but the uniformity of marked characteristics in the kindergarten-trained boys and their lower standing certainly sound a note of warning and point to possible dangers to this type of child. The kindergarten seems to have tended to make these boys less industrious, less persistent, and less able to endure drudgery, which cannot be eliminated from life, either at school or in the world outside. It seems to have failed to arouse in them a sense of duty, which ought, above all things, to be fostered in this particular type. Either my experience has been peculiarly unfortunate, or kindergarten principles have dangerous possibilities, if wrongly applied.

If rightly applied, I know that kindergarten principles will not produce these effects, from my experience of my own children, all three of whom have attended an excellent kindergarten and profited immensely therefrom.

A second danger in the extension of kindergarten principles to older children is closely allied to this — that of weakening a growing mind by allowing a child to develop along the line of least resistance by permitting him to choose his own course of study. Froebel rightly lays down the principle that no education is of value which is impressed upon a child from without; that interest must be aroused in every subject, so that the desire for information and instruction shall come from within. This is very different, however, from following the lead of the child and teaching him only those subjects which he wishes to pursue or for which he shows a particular taste.

It is, of course, preposterous to say that a child who does not wish to study mathematics should be allowed to choose some other subject in its place and abandon mathematics entirely. Is it not true that the clear, logical mind which takes naturally to geometry needs it far less than the illogical mind which turns away from it? Natural aptitudes, of course, differ. One man's meat is another man's poison; but can we decide for a child, or can we let him decide, that he shall not take a certain study before we have tried to arouse his interest in it? It is our duty to lead as intelligently as we can. It is his duty to follow. It is so difficult to arouse interest in some subjects, and so easy to take advantage of the child's momentary desires, that the importance of leading is frequently lost sight of in the ease of following. Such a course is fatal to the best development of both mind and character. It is weakening to both, and bound to exaggerate still more the failings I have previously mentioned. Every man must do many things which are

disagreeable in the doing. His education must not unfit him to do this or make it more difficult for him to do it. Heaven help the child who has always followed his own inclinations!

In applying kindergarten principles, then, to education, to secure their innumerable benefits, let us remember that man must be persistent and self-dependent, ready to meet and overcome obstacles in order to reach his best development. Let us beware of smoothing the child's road, helping him over all the rough places, or of following his lead so that he becomes desultory, dependent upon others, and ready to turn aside at any obstacle because too weak to surmount or remove it.

The poor or bad kindergarten may do infinite harm to mind and character. The good kindergarten is invaluable.

F. Louis Soldan, superintendent of public schools, St. Louis, Mo.—The appliances of the kindergarten—the occupations, games, plays, building blocks, and toys—appertain to the earliest stage of the child's education, and cannot wisely be carried beyond. But there are principles involved in kindergarten training which are generally valid and apply to general education as well as to the kindergarten.

One of these principles is that which lays stress on the self-activity of the child. There is a twofold process in education. Froebel describes it by saying that education must make the external internal and the internal external. The one process is that the child should learn the facts of life. Information is conveyed to him from without, thru parent, teacher, and school. The facts of life, history, geography, etc., become part of his store of information. External facts are converted, as it were, into ideas of the mind. This was largely the old idea of education, in which the pupil was made the recipient of knowledge conveyed from without. There is another and still more important process in education. To be a scholar is not man's highest destiny. He must be a worker. He learns in order that he may use his knowledge in life. The work which his mind conceives and plans his hand must be able to execute; that is to say, he must learn how to translate thought into deeds. The ideas of the mind create the external fact. These two processes in education, that of learning and that of doing, are the important principles which the kindergarten emphasizes; they admit of general application to the education of every age.

Education is but too often looked upon as the activity of teachers and schools. Its proper purpose is the reaction which the educator, thru his influence, calls forth in the child. It is the child's action, rather than the teacher's, which is the vital point in education, and it is this feature of education on which the kindergarten lays stress.

THE KINDERGARTEN: AN UPLIFTING SOCIAL INFLUENCE IN THE HOME AND THE DISTRICT

RICHARD WATSON GILDER, EDITOR OF THE "CENTURY" MAGAZINE, NEW YORK, N. Y.

The attempt to support the above proposition with detailed and exact evidence seems to us in New York somewhat like going about to prove circumstantially that light and air, sunshine and happiness, are wholesome elements in the life of the people.

In 1889 an associated effort was begun by men and women who desired to extend the kindergarten system in the metropolis. The kindergarten established in 1877 in connection with the Normal College, and that established in 1878 in connection with the Society of Ethical Cul-

ture, and two or three other, either charitable or private, institutions, represented the movement at the beginning of the last decade of the nineteenth century in the then city of New York. The idea of the founders of the new association was to establish some model kindergartens under charge of the association and to prevail upon the city to establish kindergartens in connection with the public-school system. The things accomplished within the past fourteen years have been extraordinary. The association has now twenty-three kindergartens; twenty-two have been established in the borough of Brooklyn by the Free Kindergarten Society there; and the public-school kindergartens number in Greater New York about 362. In addition, there are about 55 public kindergartens of a charitable character, and some 51 private, making in all about 513 kindergartens.

Our population in New York is rushing up toward the four million line (Board of Health estimate for 1902: 3,640,693). We are trying to Americanize this great mass in the best sense of the word. As an example of the obstacles in the way, look at a single element of our population. One of our best Hebrew authorities estimates that there are not less than half a million Jews among us—he is inclined to think that the number approaches 600,000—a number which is said to be greater than that of any other Jewish community that has ever existed. Then again you know how the Italians are pouring in upon us; we have more than one Little Italy in New York. Dante's and Michelangelo's countrymen ought to be worth working over into Americans, no matter how troublesome the fresh material offered. Over one million two hundred and seventy thousand of us (1,270,080) were actually born in other countries, of whom less than one-third are from English-speaking countries. Furthermore, there are two millions three hundred and forty thousand (2,339,895) of us both of whose parents are foreign born.

As to the individual condition of the children, take one or two illustrations. I had heard of the custom of sewing up, but it was hard to believe except on the personal testimony of the superintendent of one of our public schools which is full of enchanting Raphael faces, who told me that he had made it his duty himself to rip open at times the sewed-on clothes of his pupils. The kindergartner in this school has also come into contact with the custom more than once. The mothers sometimes actually sew the little creatures up for the whole winter. A boy of eleven had everything sewed on him but his trousers. Sometimes the garment is a sort of unremovable "altogether;" sometimes it consists of six-inch strips of cloth wound around the child and sewed. A kindergartner in the same school, which I visited in a recent warm spell, said that one of the children came every day in a nice, clean skirt—put on over the two, three, four, five, or more other skirts! As the heat of the weather increased, so increased the clothing.

As to the manners with which the little ones are often familiar at home, Jacob Riis, when I asked him for a hint, said that the remark of the boy to Miss Addams at the Chicago Hull House was typical. There was a picture of a harvest scene — the woman reclining, the man standing by quietly mopping his brow. After looking at it attentively the boy said: "Well, he knocked her down, didn't he?"

You cannot catch your citizen too early in order to make him a good citizen. The kindergarten age marks our earliest opportunity to catch the little Russian, the little Italian, the little German, Pole, Syrian, and the rest and begin to make good American citizens of them. And your little American-born citizen is often in quite as much need of early catching and training.

The direct effect of the kindergarten upon the children it is easy to grasp. The teachers will tell you that not only surly young ones soon succumb to the amiable environment, but that the difference in the average child is quickly perceived. The children are brought into a new social order; they are taught to have regard for one another, and they do acquire such regard—along with a new and highly valuable respect for law and order.

No one can speak of the kindergarten without including the work of the mothers' meeting and club, with library annex; the teaching there of games and of handiwork, along with practical discussions on food, cooking, sleep, play, open air, cleanliness, health; on manners, housework, overstimulating of young children, and the like; sometimes with talks by physicians of incalculable benefit to uninstructed parents. A vital element of the kindergarten, too, is the visitation by the teachers in the homes of the children. Then there are the mothers' and fathers' visits to the kindergartens, and occasionally there are fathers' meetings also. Perhaps hitherto the father has been regarded too much as a negligible quantity in kindergarten work.

Home visitation, mothers' meetings, and social work are an integral part of the system, and with us are being constantly pressed farther and farther. Special efforts are made, too, to bring the children more into touch with nature; seeds are distributed and flowers raised; there are indoor gardens and outdoor gardens, visits to the parks, and play festivals in the parks. There is a loan collection of animals, and a movement is on foot to have a few animals kept for kindergarten purposes in some, at least, of the small parks of the city; this is, in fact, already done in one of our minor parks. The kindergarten work is by no means limited to the daily routine of exercises.

There is a very close bond between the kindergarten and the home; and the closest of all is, of course, the child itself. The first thing learned, perhaps, is cleanliness. Both the child and the mother soon learn that. In the case of the mother lack of hygiene means lack of knowledge; she is quick to learn and to profit by her new knowledge.

Again, the success of the kindergarten method in the management of the child is a revelation to the parents. They naturally come to acquire new parental manners. One philosophical observer of the good effects of the kindergarten said lately: "I used to hit my Josie something awful, and now I don't."

The whole family comes under the influence of what I may call the kindergarten charm. A change comes over the little children. The kindergarten songs and games are introduced into the home. The father often is deeply interested, learns the songs, supplements the handiwork of the children. One father said to the mother: "Be sure and go to the meeting; when you get home you always act lively, as you did before we were married." Two mothers said to the same teacher, lately, that they dreaded promotion for their children, as they would "rather they would be trained than taught." "Many mothers laughingly informed me," one of the teachers says, "that no one of the various members of the family was exempt from the criticism of the table manners." This reversal as to the usual source of home instruction is, in the circumstances, necessary and helpful, and tends powerfully to social improvement. It often leads also, to be sure, to the inevitable tragedy, later in life, that comes from separation in sentiment, such as is depicted in Tourguéneff's *Fathers and Sons;* but in the case of a new national environment this cannot be helped; it is, in fact, wholesomely evolutionary. Kindergarten children are more willing and better assistants to their mothers than the older children who have not been in kindergarten. Tidiness in the home with regard to the children's playthings is the direct effect of the "putting away" in the kindergarten. Personal cleanliness, as intimated, is the first note struck by the kindergarten—and it reverberates promptly in the home.

The influence of the kindergarten upon the child's home is unescapable. And if the individual child and the child's family are influenced, there is the beginning, at least, of an influence upon the district. We find that parents become so deeply interested in the kindergarten that they send one child there after another; and that, when the child grows up, the second generation is sure to be sent also. The growing-up and grown-up kindergarten children are apt to revisit the kindergarten, and keep up an intelligent interest in its work and sympathy with its spirit. The spell of the kindergarten remains upon them.

The social uplift is felt—first, by the child; second, by the family; and, third, by the neighborhood. This is the contemporaneous influence; but if the direct influence upon the child is good, if certain social principles are deeply implanted in it at a highly susceptible age, surely the social uplift will not be confined to the few years that the child remains in the kindergarten; the training will naturally tend to good manners, good morals, and good citizenship in the years to come.

In the matter of immediate social benefits must be counted the awakened

spirit of helpfulness and neighborliness among mothers. It is no little thing to find a strong common interest that binds together socially many antipathetic nationalities.

Along with this spirit of friendliness and co-operation among the mothers is the aroused sentiment of independence and self-respect and self-help. One factor in the social uplift is the great advantage to the mother, as one of the mothers herself puts it, "of contact with the trained mind of the teacher." The mothers do not always drop out of the meetings when their children leave the kindergarten. The relation between the kindergarten teacher and the mother is decidedly to be reckoned with in this question of social uplift. Courtesy is of the essence of the kindergarten, and the home and neighborhood are uplifted, among other things, by the respect and regard of the mothers and the fathers for the teachers.

When one thinks what the streets of a crowded city are as schools for unsocial manners and morals, the influence there of the kindergarten is something hard to overvalue. Kindergarten children are constantly playing their games in the streets. In the cramped space between front and rear tenements you might at one time have seen a dozen children playing every afternoon. Says a teacher: "I have never seen one of my big boys going to fight with a younger child or tormenting him."

Another of my witnesses gives me this pretty picture: "During this last winter one of the mothers came to me and said: 'You know that five of my children have been in your kindergarten these last seven years. My neighbors in the tenement houses want to know why my older children are so nice to the little ones; they play and sing together every day and make the whole house happy with their laughter. Not alone that; they take other children, who cannot find room in the few kindergartens of the East Side, and teach them *their* songs and *their* games. The younger ones teach the older ones the new songs, too, and so the entire neighborhood is one happy kindergarten.'"

Occasionally, in our own and other cities, the kindergarten has been credited with being the means of spreading a decenter sentiment thruout a limited district, more respect for ownership, less noisy quarreling. A correspondent in Boston sends word about the way that, in some cases, the older boys have guarded from depredation the gardens of the little ones, "because they were the kids;" constituting themselves "a police force where they were once a part of the robber band."

It is significant that more and more have our social settlements and churches found the kindergarten a necessary means of access to the darkened home and neighborhood. The kindergarten and the kindergarten idea have been actively useful in the relief of crippled and variously defective children. To the inspiration of the kindergarten the summer playground may be largely credited; and kindergartners are sought after as directors in these playgrounds and on the recreation piers. To the

kindergarten may be credited also the practice of giving children attractive, artistic, and useful handiwork in the vacation schools. A leading physician, by the way, said recently that he was astonished at the change for the better in the spirit of the teachers toward the children in the primary grades; that it was more gentle, friendly, and natural than before. The kindergarten is at least one of the factors in this happy change.

So, to summarize, we have the direct effect of the kindergarten upon the child, teaching it an interest in nature, observation, gentleness, helpfulness, cleanliness, order, law; substituting mutual service for cunning and selfish violence — besides bringing the child good cheer and clean and natural joy. In the immediate home the "ideal of nurture" is, thru this instrumentality, communicated to the brutal or ignorant parent; gentleness, patience, respect for the child, and a knowledge of a better way with it, are substituted for force and fury. Thru the individual and the home the contemporaneous district is reached, and the natural result of the training upon the child and upon the district is to build up a lasting sentiment in the little ones and in the community that will elevate future homes and future districts.

There is a further element in the kindergarten of which I have not spoken, and that is the education in understanding and sympathy it affords to the long roll of its own teachers — the direct effect upon them, and upon all those who are promoting these institutions, or who for any reason come into contact with them.

In all these ways we in New York are constant witnesses of the kindergarten's "uplifting social influence in the home and the district." We have a right to say: It is doing this work; if you should think that Froebel was mistaken, and that the kindergarten is founded upon a wrong principle, and if you should take it from us, what have you to offer in its place that will do this work better?

No excessive claim should be put forth for any single one of the various successful and co-ordinated means of social uplift. In New York there are many mighty agencies at work in the field of secular and religious education, and social and political reform; benevolences of various kinds, some of them voluntary, some governmental. There is a quickening in our whole public-school system, in which system the courses of lectures for the people constitute a new and striking feature, very favorably affecting the home and the district. But it may be claimed for the kindergarten, without exaggeration, that, while impressing the mind and morals of the child at the earliest age it is possible for outside influences to lay a strong hand upon it — the institution forms a social center of a very compelling nature. It is a great event, not only to the child, but to the parents, when the little one first goes out from the home; an event that naturally draws the mothers of a neighborhood to a focus of information and of effort

in behalf of their tender offspring. It is not strange that such an institution, with its accompaniments, should prove to be socially so great a force, and so great a force for good.

Speaking of all our kindergartens together — those of the public schools and those conducted by voluntary organizations, and leaving aside the question whether or not there might be improvement in this or that group — thus, broadly speaking, I venture the opinion that this work is so delicate and intimate, so vast in aggregate and so admirably effective, that in no community in the world is there a social force in operation greater in interest, in its constantly extending field more powerful, or, on the whole, better adapted to a beneficent purpose, than is the kindergarten in New York.

We must not be oblivious of the claim made for the kindergarten by an authority as high as Commissioner Harris, that the children of the very rich, who are apt early to become willful and self-indulgent, no less than the children of the very poor, are in special need of the civilizing influence of the kindergarten. But with the masses of our people the salutary effect of the kindergarten is seen on an imposing scale; and the future of our country depends upon the molding of these masses.

America is bravely attempting to be a true democracy, and the American kindergarten is forever strengthening the foundations of that democracy in its influence upon the children, and thru them upon the people at large. In our social life of today there are influences that strongly militate against what have hitherto been thought to be the fundamental principles of this democracy of ours, namely, fair dealing between men, and the protection and preservation of rights thru public and established agencies of law, open to all citizens. But today there is a reign of illegal procedure and ghastly brutality in connection with the suppression of crime. There is, too, an increase of selfish violence, not only as between the supposedly opposing interests of labor and capital, but also as between the interests of various groups of labor; and there is an alarming extension of the violence of venality in the domain of local and other government. Along with this there is a brutal display of unsocial luxury — the semi-insanity of irresponsible wealth. The teachings of the kindergarten are all devoted to the correction of the temper that brings these evils upon society. Its influence may not actually prevent them; but in its nature its work tends to be preventive of them.

In such a time as ours, amid such conditions as these — some local, such as I have described as existing in New York and other large cities, and some general, existing to a certain degree in almost every division of our enormous commonwealth — in such a time, I ask, applying an old question to a present situation, if there were no such thing as the kindergarten, would it not be necessary to invent it?

THE POWER OF THE KINDERGARTEN TRAINING SCHOOL IN THE EDUCATION OF YOUNG WOMEN

CAROLINE M. C. HART, BALTIMORE KINDERGARTEN ASSOCIATION, BALTIMORE, MD.

What does the kindergarten training school offer? That the study of the kindergarten arouses enthusiasm no one can dispute, and enthusiasm has been defined as the "genius of sincerity;" that is, it springs from some inward conviction, and action following that conviction is elevated, because it is action moved by the soul.

The kindergarten arouses enthusiasm in its advocates, because there is this inner conviction of its truth. There is something within us, something elementary, that shapes our spirits, and the influence of which is felt long before we are capable of defining it. It is the voice of the kindergartner's spirit, calling for truth; and the spirit of the kindergarten answers it. It is "spirit witnessing of spirit," and this awakening becomes the element of a mighty power. But this very fact of strong conviction founded upon faith alone, this "genius of sincerity," has too often proved disastrous to the general welfare, and now it is proving disastrous to the kindergarten. We are confronted today by an army of "enthusiastic kindergartners," whose sentimental, and therefore false, ideals, because founded upon feeling alone, are bringing disaster to the system.

I do not underrate this first enthusiasm of the kindergartner. It makes a great beginning. It is the inward stimulus toward the great aims which the kindergarten proposes. We can all attest to the joy and reverence and love with which the first gleams of kindergarten light filled our souls; but if these first gleams are not kindled into stronger light, the kindergartner becomes, not only useless and incompetent, but dangerous. This joy and reverence and love has a source deep and powerful and lasting within her own nature; but if she knows nothing of this source, if it is simply some unknown correspondence to her feelings, her enthusiasm will fasten itself upon half-truths, and she will drift about at the mercy of every kindergarten fad.

Now, the strength of the training school lies here—that it justifies to the kindergartner the existence of the power from which her enthusiasm springs, giving it clear, distinct expression, developing this feeling of truth into knowledge of the truth; changing the wavering conviction of feeling into the unwavering conviction of reason, as the first enthusiasm of feeling grows into the deeper enthusiasm of insight.

To understand how this change can be effected, we must recognize the kindergarten, not as a principle limited to itself, but as the application to education of the highest and most sublime thought yet reached by the human mind. It has taken thousands of years to reach it, and it is the culmination of all the efforts of the soul to understand itself. The

movement by which this thought has been reached stands out clear and vivid to the student of history; and this is what she sees: Planted deep in the earliest intuitions of primitive men, moving on slowly thru the ages to its last and highest insight, there has been but one thought —to understand the relationship between God, the world, and the human soul. Because this is no dead universe, because the light and the sea and the mountains and the stars hint to us of spiritual things, the thought of spirit is uppermost. So moving from nature to spirit, from one extreme to the other, separating and combining, this is the swing of history—the unaided search of the human soul to realize its own intuitions. And so this thought has moved on, forced by its own logic to ever higher conceptions of itself, until its final recognition is of God as the heart and soul of all life.

The whole kindergarten is an appeal to this intuition of unity; and when Froebel counsels, "Seek ye first the kingdom of God *within*,"[2] it is his recognition of a complete ethical—yes, more than ethical, of an infinite—principle existing from the first in the child's soul—a dim, vague feeling that all life—not only human life, but *all* life—mingles with his own. That feeling of the oneness of all life is the child's soul, the divine part of him. It is reason, or the soul, in its first form of feeling, saying to the child: "All things are one—nature, man, and God." Knowledge, which means relation to the physical world, and love, which means relation to the world of man, in their final analysis are one: Both are implied in the first intuition of the child. To understand one's relationship to the physical world is to know, and complete understanding would be complete knowing; and to understand one's relationship to the world of man is to love, and complete understanding would be complete loving; and these two, even partially realized, prove identity with God, who is all-knowing and all-loving, and in their completeness man as the image of God, in perfect identity with him, would be realized. Now, we see how the two things meet—the intuition of the child (the intuition, too, of men in the childhood of the race) and the insight of the developed man. The child *feels* that all things are one; the man *knows* it. "There are no barriers between God, the world, and the human soul," is the last and highest proved insight.

As science teaches that in the universe exerything is united—the smallest atom to the star, and star to star, in interaction or physical force—its one aim being to prove a connected world thru all the changing forms, so ethics teaches us the solidarity of mankind—the least and lowest linked to the highest by interaction of spiritual force—the whole aim of ethics being to demonstrate the spiritual world as one. But this great insight is more than scientific, more than ethical; it holds them both; it is infinite, linking low and high, matter and spirit—God, the world, and the human soul.

This insight has been reached by the soul's growing consciousness of itself, and it grows into this higher consciousness by looking long and steadily *within.* Thru introspection mind reads its own history. The most general deductions from this introspective view are these: It knows that within itself there is an allurement to right, to what is true and good; or, in other words, to knowledge and love. It knows that something within itself allures to these two things. It reads the struggle, the inevitable conflict; but it reads, too, the free will to carry out this aspiration toward knowledge and love—knowledge which binds the physical universe into one, and love which binds the spiritual influence into one. Its own freedom it has discovered. The soul knows that it is *free;* that no environment can bind, no circumstances enslave, the free soul; that it alone is the creator, the author, the originator of all its actions. Looking within, we become conscious of a power that tells us of things without any help from without, in which the senses and the world of experience are not; we become conscious of an inner force within ourselves which can go on forever, with changing centers and ever-widening circumference, toward infinite knowledge and infinite love; and we recognize this power as so infinite, so limitless, that the very best we can say of the God of knowledge and of love arises out of our own conceptions of what we may make ourselves: "There is something within me that draws me to the right; I have the free will to do it." This is the highest revelation the human soul has made of itself; it is read from the human breast, and there is no other source of its knowledge.

"Once read thy breast aright
And thou hast done with fears,
Man finds no other light
Search he a thousand years."

This means identity with God. In finding how free and infinite it is, the soul has found its source. This proves "what may be known of the invisible God through the things he has made, even his power and divinity." Inspired words come to corroborate the inspiration of the soul, and the boundary line which separated man and God is blotted out. Our true relationship, as the child felt, is oneness with God.

Science still separates God and man, God and nature, nature and man. "The myth-makers confused the human and divine, and poets and philosophers still keep up the confusion; but it is all a mistake," says science; "nature bears no relation to God or the human soul." But a higher seeing interprets the life of the universe by the soul's consciousness of itself. If mountains and rocks could know anything of themselves, they would say the principle of the universe is "force;" and if plants could know, they would say "life;" but spirit says "spirit." We know what nature is, not from the mountains or the sea, or the tides, but from within ourselves. We know that God is behind force, creating every-

where beauty and harmony, guiding all nature to its flowering, because we know of the free, purposeful power in ourselves — free to create beauty and harmony in our lives, free to guide life to perfection. Nature is the revelation of God's intellect and the condition of ours; it is bound up with our whole spiritual life; with our intellects, as we build them up thru contact with God's intellect in nature; with our hearts, as they are stirred thru contact with God's heart in the symbols of nature. A flying bird can thrill us with a sense of freedom, we can feel the power of our wills in the wind, and we can feel in the light a premonition of all that truth does for the soul. Thus there is kinship everywhere, and nature, man, and God are one.

This is the substance of that wonderful first chapter in the *Education of Man* on "Life Unity as the Groundwork of the Whole." "I have within me the aspiration towards the right; I have free will to carry out that aspiration." Freedom is the result of these two — not either alone, for aspiration without action is valueless, and free will without its exertion upon the things the soul aspires to is valueless; in their combination, the free human soul is the result. This insight reached calls for a re-creation of everything that the mind does. Therefore religion, government, art, literature, and education have made a new confession of belief, and the result is in government, the free republic, the great types of character in art and literature, and the free developing method in education. The educational problem then becomes: "How can I lead the child's free will to act upon the intuitions that God has planted in his soul," or, "How can I generate spontaneity?" The *Mother Play* is the answer to this, and because it solves the problem it is one of the greatest of educational works.

This is its method: to stir into stronger life the seed principle of knowledge and love, the feeling that all life is one, and bring forth out of it, by its own energy, all that it holds. Every organism generates its own differences. The seed sends forth, by its own energy, its differences. It is all spontaneous growth. And under all these differences the flower is working, trying to realize its own perfection. Reason is the flower of the soul, working even thru the child's intuitions toward its perfections. Every song of the *Mother Play* is an appeal to the intuitions of unity by making an outward picture of the solidarity of life, thus stirring and strengthening the dim feeling and generating out of it some act that was hidden away, coiled up in the germ feeling. We will take but one example out of the fifty-two that the *Mother Play* furnishes. The grass-mowing is a story in song of human dependence upon nature, man, and God. The child sees so many people working for him, so many animals working for him, the grain working to grow, God sending rain and sunshine to help it — all for him. This stirs and vitalizes the dim feeling that all life is bound together, until spontaneously, out of the aroused feeling, springs gratitude. One of the possibilities hidden away in the seed has

come to light, one of the steps in the development of reason has been taken; for reason has reached its fullest meaning when a person is capable of performing all the acts that, gathered under the name of love, bind humanity together. Gratitude is one of these acts, voiced by the "Thank you" of the grateful child. No other "Thank you" but one generated in this way will avail. Education fails absolutely if results are sought in any other way. The free will is carrying out an aspiration of the soul. That is spontaneity, that is freedom, because the true nature is ruling. No doctrine of interest, no hope of reward, no fear of punishment, not even a sense of "I ought," can become a motive. If these outward things become the moving principle of action, there is no freedom. "All things are bondage until the heart goes with them."

The "gifts" furnish a similar appeal. Knowledge and love are the two forms of the soul—really but one. As we generate by means of the *Mother Play* songs the different forms of love, in the same way, with the "gifts" we generate knowledge, so that each step from known to unknown becomes a new discovery, the mind's own true, loving act. These balls and blocks are types, as you know, which unify all the apparent differences in things. The *Mother Play* makes a picture of human dependencies, and with this picture stirs the sense of human solidarity, so that out of it spontaneously flow its own differences, and reason as love begins to actualize itself. The "gifts" make a picture of the dependencies of things, and this reflection stirs the sense of the solidarity of things, which is the knowledge sense, and reason as knowledge begins to actualize itself. Work that is useful, but not useful in the highest sense, does not offer material that answers to this unfolding of knowledge out of itself; and to occupy children in this way is going back to the Pestalozzian idea of work and ignoring the profound principle that Froebel illustrates.

This great insight becomes the possession of the kindergartner, and its power over her life is immeasurable. It is not the principle of the kindergarten nor of education, altho it seems to belong to the kindergarten more than to any other grade of education, because of the unrivaled adaptability of the *Mother Play* and "gifts" to the development of the principle. But it belongs to none of them. It is the principle, universal in its sweep, by which to measure the right and wrong, the truth and falsity, of everything in life. In her first and second year the study of the *Mother Play* and "gifts" begin to awaken this new and commanding principle within the heart of the kindergartner. But this is not enough; the insight must be deepened, she must see it in everything that touches human life. She must see in history, not separated nations—Persia here, Greece there—but a great collective life, marching toward freedom by working out its intuitions, and reaching its goal by the development of knowledge and love that bind the worlds.

Literature views life from the standpoint of history. The great world-poets tell the same story, that out of the potential life given to man he must create his own destiny. Ulysses' wanderings and struggles are the story of the battle of life to be won by subordination of the senses and listening to the voice of reason; Dante takes the fearful journey that we may see in the stern logic of events the fate of those who strike at the sacred bond of fellowship; Shakespeare's kings uncrown themselves because they fail to see that the principle that binds king to people is the same principle that binds the moral universe into one; and

> "Woe, woe, thou hast destroyed it,
> The beautiful world,"

is the lament of Faust's own heart. "I am no nearer the Infinite," he cries, because he has denied that infinite power which allies man to God and is the condition of knowledge and love. He will build up again the beautiful world in his own breast, out of its shattered fragments, and he will learn, what all the great world-poets tell us, that freedom can be won only in the service of love.

Thru all the variety of illustration the kindergartner reaches a definite principle at the root of knowledge and character. She sees the universal sweep of the principle; and it becomes far more than an intellectual conviction; it touches the deepest springs of feeling and thought, going out in vital action, fitting her for the work of the kindergarten, fitting her for life's most sacred duties and for the immortal life to come. For whereever we go in this infinite universe we shall still be in God's worlds, and wherever he is there is knowledge and love. For these are his attributes. Everything else passes, our thoughts are outgrown, our standards change; but these remain, and the things that will make life beautiful for the kindergartner and for all with whom she comes in contact, will be as fresh in those new worlds as when the first breath of their inspiration roused her enthusiasm in her happy kindergarten days.

THE SCOPE AND RESULTS OF MOTHERS' CLASSES

MISS ELIZABETH HARRISON, CO-PRINCIPAL OF THE CHICAGO KINDERGARTEN COLLEGE, CHICAGO, ILL.

There is a homely old adage which says: "You must first catch your fish before you can fry them." But its meaning is of especial value to the kindergartner who is about to organize "a mothers' class." The time has passed for educated mothers, in intelligent communities, to lift their eyebrows when told that a mothers' class is about to be started in the neighborhood, and that it is to be conducted by a kindergartner who is an unmarried woman. Educational conventions, child-study clubs, scientific magazines,

and sometimes the pulpit have brought to such a class of women the facts that chemistry, biology, psychology, and sociology, all of them comparatively recent sciences, have revealed many things which will be of value to them in the bringing up of their children.

In such communities the kindergartner needs only to have tact, a certain amount of polish of manner, a due sense of her own limitations, and "a divine enthusiasm" for the cause which she has, at least partially, mastered, and she wins the day. The mothers themselves will teach her many things and give her flashes of insight far deeper than they realize. She has only to hold to the few eternal verities which have made the kindergarten a power in the land, and the mothers will supply illustration after illustration of the genuineness of the truth she has proclaimed, and will astonish her with its applicability to the details of ordinary home life.

The intelligent mother is always willing to listen to anything which may help her to rationalize her efforts in her child's behalf, if she can be convinced that this is the case.

In ignorant, or even in half-informed, neighborhoods much tact and ingenuity have to be exercised, first to bring the mothers together, and then to continue the class long enough to enable them to realize that there are certain inborn instincts in *all* children which should be understood; that there are certain laws of child-nature which cannot be violated without bringing inevitable punishment. This is not an easy task. Yet the mother-heart is there waiting to be touched.

One of the most successful devices for getting these mothers interested in mothers' classes is visiting in the homes of the children. Another efficient method of getting into the hearts of the mothers to whom you would teach the better way is to invite them to the birthday celebration, Christmas and Easter festivals, valentine parties, and similar red-letter days of the kindergarten. Every mother enjoys seeing her child made happy, and the sight brings her a step nearer to the woman who has given this joy to her child.

Next in importance, in this socializing process, comes a cup of good, warm coffee, with perhaps a bit of coffee bread. It is well known in social circles that the click of the cup breaks the ice of reserve, and it is just as true among these shy, oftentimes tired, mothers in the lower walks of life as it is among the rich. It warms them up in more senses of the word than one.

Experience from all over the land shows that, except in the neighborhoods of the abjectly poor, the mothers soon offer to provide these simple refreshments and enjoy dividing themselves into groups of entertainment committees, each serving in turn. The mothers' class thus becomes their social club. Any real activity in which all can take part is as valuable in a mothers' class as in a kindergarten. Music is always a help; finger songs may be learned, or ball games for the baby.

Another common device has been to have kindergarten songs and games with the children and mothers together, and then to send the children with an assistant to the park or to another room, and explain in simple fashion to the mothers the value of the exercise.

Some easily accomplished hand-work may be brought in, such as cutting out of patterns for children's garments. In such cases a ready-made garment should always be shown to encourage the class to try to make one like it. A lesson on the construction of simple toys with which to amuse the younger children on rainy days leads naturally into a talk about the value of keeping children employed as the best preventive of mischief. The making of Christmas cards and childish valentines have started many a mother of limited means in the right way to cultivate her children's self-activities.

Among foreign-born populations an eager interest has been awakened by showing pictures of famous places in the "old country" and by means of someone of them who speaks English calling from them reminiscences of their own early days or their trip across the Atlantic, thus giving them an opportunity to describe what is the great event by which they record time. It is well to follow such an afternoon by one in which the famous and beautiful places and buildings of America are shown and explained, in order that they may realize that this country also has a history and a future of which they may be proud.

A whole volume could be filled with such suggestions as these. Yet each live kindergartner creates her own methods of winning the interest and confidence of her mothers. It must always be kept in mind that such meetings, however, are introductory merely to the real aim of a kindergarten class for mothers. It must never descend into a gossip club. Nor must the kindergartner rest satisfied to have it continue an amusement hour, much as such hours may be needed in some neighborhoods.

A mothers' class, to be a real, vital power in a community, must lead its members, first, to realize the tremendous significance of their work as mothers. The divine-right-of-kings idea has worked untold mischief in the past. A man born a king must do kingly deeds. But where is the unwritten history of the wrongs and crimes that have been committed under the equally erroneous idea that because a woman has borne a child her treatment of it *must* be motherly? I could cause your blood to curdle with harrowing details of the treatment by mothers from which our humane society rescues children. But we need not turn to the debased element of society to see a mother who is injuring her child even while loving him. Who does not know the weak mother who yields to her child's caprice, the vain mother who overdresses her child, the ambitious mother who pushes her child's studies at the sacrifice of his health and character, the preoccupied mother who never plays with her child, the fault-finding mother who never praises her child's honest efforts, the unsympathetic

mother who never sees the child's point of view? But I need not add to the list to convince you that, great as is the power of mother-love, it needs to be rationalized to be made conscious of its power, or else it may work untold evil as well as immeasurable good.

A direct appeal must be made to the nurture element which lies in the breast of every woman who is worthy of the name of woman. From the dawn of recorded history wherever women have been found nurture has been found. The old myth of the she-wolf suckling Romulus and Remus is but the primitive way of asserting what the experience of the race had already proved, namely, that even the mother who has not risen beyond the brute instincts has the nurture element within her. A belief in this nurture element is the keynote to the truly successful mothers' class. It is the highest element in woman, and, if rightly developed, leads her into the highest form of womanhood. I do not mean sentimental gush, nor do I refer to the morbid love of self-renunciation which is sometimes called unselfishness; but rather that deep spiritual element in woman which makes her intuitively feel the weakness or need or discouragement of another when her more outward-looking brother has not yet perceived it, and that makes her rejoice in serving, rejoice in growing, that she may serve the more and the better. This spontaneous unconscious nurturing element in her must be rationalized and made a conscious power. This is the aim and scope of mothers' classes.

When you ask me what are the results, a vision comes before my eyes, the richest vision that all my work has left me, of class after class which have grown in such a thought-atmosphere as this; and I see their faces grow luminous as little by little they learn to think of their work, not merely as an individual work of love which concerns their own children, but as a great world-work whose influence will go on for generation after generation.

The first great result of rationalizing mother-love is that it dignifies the office of mother. With this dignifying of the office comes the dignifying of its every detail for the sake of the end in view — the giving to the world of one more man or woman, strong in body, clear in intellect, warm in heart, and deep in that spiritual life which feels the God-presence every hour. This trained mother knows that sending her child out into the world without a strong body is sending him to his life-task with broken tools. Aye, more, she knows that his body reacts on his mind and soul; that the health of the three is inseparable. It is the inner life of her child that she has learned to watch and to nourish as well as the outer. So she prepares his food, or sees that it is prepared, in the most wholesome manner possible, not merely that he may have good digestion and grow in stature and in size, but with his feeding comes her guardian care that he may learn to eat to live, not live to eat. She watches over his sleep and his quiet waking hours, not merely because she has learned that diseased

nerves are generally the result of too much excitement during childhood, and that fatigue poisons the blood, and poisoned blood unbalances the mind, but also that the peace which passeth all understanding comes only from quiet, serene communing with nature and with self. The too "strenuous" life that is being forced upon our American children is preparing a generation that will fear not God nor keep his commandments. I say this from both a physiological and psychological standpoint. The child that hears not "the God-voice" in his childhood will not be able unhesitatingly to distinguish its words of command in later life. I do not mean by this that each child should not have active life — an abundance of it; that, whenever it is possible, there should be allowed perfect freedom for the "motor nerves" to respond to the "sensor nerves." This nature will see to, if we will permit her. But I had reference to the overstimulation of the sense-perception in childhood — a common fault of today.

Let us return to the rationally trained mother. She has learned that she cannot too early begin her child's social training in gratitude, courtesy, and compensation toward the world-workers by whom he is surrounded and sustained. Even in the nursery she begins to help him play that he is a carpenter, a blacksmith, a cab driver, or other server of mankind; for unless he can enter into the consciousness of the solidarity of the race, she knows he will never comprehend the height nor the depth nor the true meaning of living. Nothing that affects the life of her child is uninteresting or unimportant to such a mother; for she has learned to see it in its bearing on the inmost life, by which all outer life is made rich and beautiful, or mean and poor.

Again, such a study leads the mother to look upon her work from the standpoint of a universal work. She learns that most of her problems are the problems of all mothers. I have held possibly a hundred mothers' classes. Some have been large, containing many mothers, and some small, with not more than a score of members. Yet when "Questions and Answers" day came, I have never failed to have asked in some form the question: "What would you do with a child who lies?" "How should I manage a boy of ten who teases his little brother?" "What would you do with a girl of thirteen who is disrespectful?" "How can a slow child be cured of dallying?" etc., etc. A little book written for a small circle of Chicago mothers and dealing with these universal characteristics of children has already leaped the boundary of five foreign languages.

Does not this short outline show where the stress of mothers' class work should be placed? Not until a mother has learned to look upon her child, not as *her* child, but as a life given to the world that she is allowed to unfold and develop for humanity's service; not until she has learned to look upon her newborn infant as one more effort of the divine

life trying to manifest itself in concrete form, is she ready for the highest work of motherhood, the real spiritual motherhood of her child. When this day comes there will be such a religious awakening as the world has never dreamed of.

DISCUSSION

MRS. MARION B. B. LANGZETTEL, New York city.—The subject assigned me for discussion today is the influence of the private kindergarten upon the family and the home. The private kindergarten, as distinguished from the public and philanthropic kindergarten, has greater dangers as well as greater opportunities. It is without the supervision and inspiration which come from being associated with a large educational system, and hence often lacks a standard for comparison and becomes a mere caterer to the whims and caprices of its patrons. On the other hand, there may be greater freedom of spirit, better selection of rooms and sanitary arrangements, and less pressure from conditions artificial to an ideal environment for children of kindergarten age. In many states the age limit prevents children of four from entering our public kindergartens. In other cases the adoption of school methods thwarts the very spirit of play for which the kindergarten stands, and forces a child too early out of that waking period of unconsciousness which, properly enjoyed, makes a richer foundation for all later life.

Again, there is often lacking the real spirit of fellowship between the parents of the children and the kindergartner which is coming to be so large a factor in our mission kindergartens. There are many interests for women, many clubs and lectures, social duties and opportunities for self-culture and self-expression, and the average mother does not stop to realize the importance of the first few years of babyhood, beyond providing a good doctor, a good nurse, and possibly a good kindergarten for her child. Or the so-called intelligent mother, realizing the importance of training in early childhood, overcrowds his life with numerous classes and engagements.

Short hours, lack of punctuality, and irregularity of attendance, an insistence upon small numbers and those the children of intimate friends, all tend to weaken the work of private kindergartens. The cure for this is the organization of parents' classes among its patrons and the education of the community.

The private kindergarten belongs largely to the child of the rich, and it is here perhaps that it is to do its most important work. And by "rich" I mean not only the moneyed rich, but people rich in inheritance and in intelligence.

The following estimate, gathered from many years of experience with the children of private kindergartens, may prove of interest. These children are often one-third larger in size than the children of our mission kindergartens. This may be accounted for by the fact that science has done much to foster intelligence in the feeding and physical care of children. Roughly speaking, they are one-third more developed intellectually, owing doubtless to the wide variety of experiences open to them and to the response of cultured minds to childish inquiries. But they are one-third behind in dramatic expression and creative power. They fall short in symbolic games and original handwork, showing that increased perception has not been balanced by deepened feeling. A child may know the names of fifty birds and yet his bird game lack all suggestion of a mother's nurturing love. He may have a fund of facts, but not the inner feeling which makes these facts live.

The constant stimulus of city conditions and the many sources of amusement give keen sense-impressions without corresponding opportunities for expression. With many attendants the child fails to exert his own force, and hence does not feel the joy of action, nor gain control of his own desires. One little girl, who was asked to bring something to kindergarten to match a yellow ball, returned the next morning with the excuse: "I asked the butler for it, but he was too busy to find anything." It had not occurred to

that small child of four that she might have hunted up something herself, and why? Because she was washed, dressed, fed, walked with, and played with by some older attendant. Often children either stay out of kindergarten twice a week or are excused early, that they may attend dancing school in the afternoon. Another child of my acquaintance, when asked what she wanted most for a birthday present, said: "Oh, a whole half-day to do exactly what I please."

Surely Fiske's theory of the value of the lengthened period of infancy has been eagerly grasped by many mothers, and they are mistakenly using these early years to train children for the social life which is to be theirs later. Dancing school, riding lessons, military drills, children's parties, and missionary meetings, while each may be valuable in itself, are all crowded too closely together in the lives of young children. There is a tendency to do too much, and consequently it is done superficially.

Much of this may be counteracted by private kindergartens. Here is provided a natural place where minds and hearts as well as bodies may be trained. The child is given few experiences, and these fundamental ones. He has time and opportunity to enjoy and digest them, because they are touched from many points. He comes into a community of his equals under the law of the whole, and takes his place as one of many, as well as the one to whom many attend. But, perhaps best of all, he is given a task in proportion to his ability, and is encouraged and expected to give, create, and share, as well as receive, control, and demand.

THE INTERNATIONAL KINDERGARTEN UNION

MISS STELLA L. WOOD, CORRESPONDING SECRETARY, INTERNATIONAL KINDERGARTEN UNION, MINNEAPOLIS, MINN.

The kindergartners first organized at the Saratoga Springs meeting of the National Educational Association in 1892 to prepare for the Columbian Exposition of 1893. Thirty signed at Saratoga as charter members. Thirty-nine more joined before the meeting at Chicago in 1893. There were nine branches and two life members. Later the crowded condition of the National Educational Association programs, owing to its large number of departments, made it seem necessary to appoint a separate time and place of meeting, just as the Department of Superintendence had done.

In 1903 the International Kindergarten Union held its tenth meeting at Pittsburg, Pa., April 14–17. At that time it reported five life members, two honorary life members, ninety-six associate members, eighty-one branches, representing eight thousand members. There are represented in the union twenty-seven different states, besides Canada and South America. At the Pittsburg meeting among the most important things done was the appointment of a committee of fifteen to formulate a restatement of kindergarten principles and belief, and a revision of the constitution to fit the needs of our rapidly growing institution.

The question of meeting on alternate years with the National Educational Association has been discussed, but is not yet decided.

The committee named will report at the next annual meeting, to be held in Rochester, 1904.

DEPARTMENT OF ELEMENTARY EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 7, 1903

The Department of Elementary Education met in the South Congregational Church, and was called to order at 9.30 A. M., by the president, Miss M. Adelaide Holton, of Minneapolis, Minn.

The following program was carried out:

1. "The Lock-Step in the Public Schools," by William J. Shearer, superintendent of schools, Elizabeth, N. J.

Discussion by Richard G. Boone, superintendent of schools, Cincinnati, O.; Isaac Freeman Hall, superintendent of schools, North Adams, Mass.

2. "Nature Study True to Life," by Clifton F. Hodge, Clark University, Worcester, Mass.

Discussion by Wilbur S. Jackman, dean of School of Education, University of Chicago, Chicago, Ill.; Miss Emma G. Olmstead, principal of Training School, Scranton, Pa.

3. "The Child's Favorite Study in the Elementary Curriculum," by Earl Barnes, lecturer for the American Society for Extension of University Teaching, Philadelphia, Pa.

Discussed by J. H. Van Sickle, superintendent of schools, Baltimore, Md.; Miss Ada Van Stone Harris, supervisor of kindergartens and primary schools, Rochester, N. Y.

The church auditorium proved inadequate to accommodate the numbers seeking admission, and an overflow meeting was held in the lecture-room in the basement.

At this meeting Dr. Richard G. Boone presided, and the papers of Mr. Shearer, Mr. Hodge, Mr. Jackman, and Mr. Barnes were repeated to a second large audience.

On motion of Superintendent F. W. Cooley, of Indiana, the president was authorized to appoint a committee of three to nominate officers for the ensuing year. The following were so appointed:

Superintendent F. W. Cooley, of Indiana. Mrs. Mary R. Davis, of Connecticut.
Superintendent J. H. Van Sickle, of Maryland.

The department adjourned.

SECOND SESSION.—WEDNESDAY, JULY 8

The Department of Elementary Education met in the Old South Church in joint session with the Art and Manual Training Departments; for program, see minutes of the Department of Manual Training.

THIRD SESSION.—THURSDAY, JULY 9

The Department of Elementary Education met in the Old South Church in joint session with the Departments of Indian Education and Manual Training; for program, see minutes of the Department of Manual Training.

At the close of the session the Committee on Nominations reported as follows:

For *President*—Miss Ada Van Stone Harris, Rochester, N. Y.
For *Vice-President*—Superintendent Calvin N. Kendall, Indianapolis, Ind.
For *Secretary*—Miss Emma G. Olmstead, Scranton, Pa.

The report was received and adopted, and the officers nominated were declared elected for the ensuing year.

The department then adjourned.

ADDA P. WERTZ, *Secretary.*

PAPERS AND DISCUSSIONS

THE LOCK-STEP IN THE PUBLIC SCHOOLS[1]

RICHARD G. BOONE, EDITOR OF "EDUCATION," BOSTON, MASS.

1. Some grouping of pupils for class work is essential to the organization of a school. This proposition implies that a school is more than a number of individuals working at learning, in one place. In a school, as in any other society, there is necessary co-operation, and mutual reactions, and forbearance, and conventional prohibitions and privileges, and the give-and-take that goes along with any congregate life. To constitute a school, these individuals must submit, as elsewhere in social groups, to more or less subordination to others, and to mutual reinforcement. This also is a wholesome lesson. Real preparation for adult life requires some such preparatory training. The term "school" implies organization, a recognition of and planning for some common good. In certain affairs the several children are considered as a whole, the individuals organically related in a larger unit. Equally also, the proposition implies that certain work of this school may be conducted as class work; i. e., a smaller or larger number of the individuals may be dealt with as one group. This is done in games, in singing, in floor or open-air exercises for physical training, in a common program for school attendance, in hearing or telling the same stories, in the assignment of a definite number of children to each teacher, in directions concerning deportment and moving about the house, and, generally, in more or less uniform rules concerning behavior.

The conservative teacher may well ask: If children may be safely grouped for all or a part of these requirements, why not for the more narrowly academic lessons? Are children less unlike in these matters than in their understanding of history, the forces and phenomena of nature, the formal lessons of reading, and the relations of number?

I conclude that much of the work of the school, in any grade, may be well done with children taken in groups, and that only so can the school do its legitimate service, and the child receive the training its future demands.

2. But this grouping must be determined, manifestly, by the needs of the pupils, not the conveniences of the teacher. I think it is not unfair to say that most of the arguments for close grading, or for any fixed classification for a considerable period, for holding pupils together because they have once been put together, and requiring of all the same lessons,

[1] A paper on "The Lock-Step in Education" by Superintendent William J. Shearer, of Elizabeth, N. J., was sent to the author for necessary abridgment and was not returned in time. [EDITOR.]

take their meaning from the conveniences of the system in administration. It is easier for the teacher to keep track of the children; it simplifies the work of examination and teaching; it makes class work possible; fewer teachers are needed for the same number of pupils; the teacher has fewer lessons to prepare; such mass work shows to better advantage — these are some of the pleas made. It must be apparent that none of these are valid reasons for any classification, certainly not the determining conditions. What the individual child can do with any assignment, and what the effort will do for him, should decide the matter. Lack of funds, lack of teachers, or adverse public sentiment, may make another course expedient; but *we* should not make the mistake of thinking that these are ideal conditions. In any classification those pupils are placed in the same group who can work together, for more or less of their assignment, to advantage, the connection for any individual pupil, or any number of them, being held so loosely as to allow of change, when change is a benefit to them.

3. This suggests a third statement: that any grouping must obviously be subject to frequent readjustments. If a child has mastered books so as to be able to use them for his own purposes, and expression fairly adequate to his experience, and has acquired or native alertness suited to his years, there is almost no sequence of lessons or production that may not safely be exchanged for some other series, not only with no harm to the child, but often with actual profit. Teachers — often successful teachers, sometimes very superior teachers — work upon the assumption that the purpose of the school is to fix and communicate set lessons; whereas it would seem rather to be to cultivate, by some exercise or other, preferably of the child's own setting, certain habits of mind, and worthy interests, and personal initiative, indifferent as to the particular lesson learned.

4. "Promotion" is a much misused term. Primarily it means advancement, a going or sending forward. In the school it goes on constantly, as pupils make daily advances in their work and grow in maturity. Growing in power to correspond with the increasing difficulties of arithmetic, or earth-knowledge, or the literary meanings of the reading lessons, or the complexities of nature, is the essence of promotion. The child is promoted whenever he takes up, with others or alone, a new and subsequent phase of the old subject. Promotion is a constant process. It has come to mean, technically, the separation of the strong from the less advanced, and periodically putting the former forward into what is characterized as a new stage of learning. As a matter of fact, there is no more marked difference in either the difficulty or the quality of the work between the fifth and sixth grades in most schools than between certain stages of any important subject within either grade.

We make much of the arbitrary division of elementary instruction into years or half-years, as if there were some virtue in spreading a certain

amount of lesson matter over just so much time, or in holding all the members of a class the same number of days on the same number of exercises. Superficially it does seem to be convenient to chop up the elementary course into eight steps to equal the eight years which tradition has fixed as essential for this work. Without doubt some children will acquire more maturity, and experience, and resourcefulness, and initiative in six years than others will in eight. Some may require nine years. And it is obviously well-furnished maturity and power to use one's experience that is purposed by the school, not an arbitrarily fixed time in getting them.

5. So that, if "promotion" be taken in the current sense as meaning the periodical advancement of some and the withholding of others, it should come to a child, not merely when he has completed the assignments to his group, nor when he can probably keep along with the next higher class in their more difficult exercises, but whenever the effort to do the work of the more advanced group will be more profitable to him personally than that of the lower class.

Ordinarily he will have fairly mastered the requirements of one grade before he would be benefited by being transferred to another. Ordinarily the assurance that he could and would do satisfactory work in a higher class would be a factor in suggesting his promotion; but the answers to these questions, whether affirmative or negative, cannot be taken as final in determining his classification or reclassification. The effect or influence of the work upon the pupil, as incentive, or mental furnishing, or self-reliance, or quality of interest—not his learning of so many lessons, or acquisition of so much knowledge, or attendance at school so many days—must be taken as vital.

This is not a plea for pushing the child on thru the grades. It is not meant as an encouragement of hothouse methods. It is simply intended to urge that children be placed as individuals where their individual needs will best be met; in higher or lower classes, with only incidental reference to whether a given assignment has been *finished*. Of course, the answer is made that such a procedure would destroy the organization; it would make class work impossible; it would make ragged and unattractive recitations. But the school does not exist for the organization, for the class, for the recitation, but for the individual pupil.

6. The viciousness of the current system of examinations and promotions lies in the fact that they rest upon the measuring of one pupil by another by a more or less arbitrary standard; while, in the process of education, simple justice would seem to require that each be measured by himself—his attainments and maturity at a given time compared with those of a former date.

It will be objected that when the boy leaves school and begins his adult service in business or profession, he will be judged by what he can

do as compared with others. But this non-school life exists not primarily for education, tho it is incidentally educative, but for other purposes, economic and human. It is a primary principle of life, and must be more true of the immature than of men and women, that each may be fairly judged only "according to that he hath, not according to that he hath not," tho someone else have it. The child particularly, in conduct, understanding, personal biases, and constitutional temperament, has a right to treatment as a distinct individual, and to have his actions and purposes measured by the standard of his possibilities, not by what may be possible or easy for someone else. Both abstractly and as a means of education, what is good for one child may be poor for another. On a scale of 100, a rapidly growing, improving child may show poor marks, and the brilliant boy of fine answers be mentally loitering. No examination is worth much that does not reveal the conditions and character of his growth, just as if he were the only member of his class.

7. Other vicious conditions result from the prevalent notion that all children of the same grade in different rooms, or in the same room, must learn the same lessons and be judged by the same exercises and products.

All the children of any group may reasonably be required, while they are kept in the same group, to do work of practically the same grade of difficulty; but not necessarily the same assignments. To many teachers this seems to be a "hard saying." Better the "lock-step." Children of the same "grade" are very much alike; the same lessons can be used for all, and with profit to all. It conserves the class; if one is held back a little, it will not hurt him; and if another is urged to keep pace with the stronger ones, he probably needs the stimulus. So it is argued. But the argument, again, is altogether from the side of convenience to the teacher or respect for the organization. We easily forget that the child's particular need should determine the matter. Besides, in every recitation (if there must be formal recitations) the specific contribution of each from his own point of view greatly enriches the experience of all. Less and less is a course of study regarded as a prescription to be filled, or an inventory to be memorized, or an exclusive series of tasks to be done. Rather a course of study is a suggestive grading of material suitable for educational purposes, with many exercises for each stage or grade, any or several or all of which may be used as individual conditions may require. All the children of any group may reasonably be held, while they remain members of the same group, to do work of the same grade of difficulty, but not necessarily the same assignments.

8. It is what the pupil is able to do, and tries to do, and does do with his knowledge as the work progresses, not what he remembers of it upon a set occasion, that must stand to the teacher as a mark of his progress and of his fitness for advancement from his group. The reproducing of knowledge does not necessarily carry along with it the power or

the disposition to use it; nor does a discrimination of truth insure truth-telling; nor does acquaintance with the forms of conventional courtesy guarantee considerateness. Knowledge and feeling and purpose worked into life-behavior cannot be tested by the traditional examination, under whatever name it may go. Besides, the examination, as properly known and used, is meaningless unless there be behind it some form or degree of the lock-step martinetism. This is in no sense a condemnation of the legitimate tests imposed upon each child to determine what he knows and what he can do with it; what he likes and with what sincerity; what are his plans, and how he is adjusting the means at his command for their realization.

9. Finally, let it be summarized: Some grouping of pupils is essential to the organization of the school as a school; but as all acquisition and maturing are individual processes, the work of the school is good to the degree that it habitually takes the individual into account in its several exercises.

NATURE STUDY TRUE TO LIFE

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Life on one side, nature on the other. Life, as we know it, impossible without nature to support it; nature, meaningless without life to interpret it. The bond of harmony or adjustment between life and nature—knowledge. Nature is poweful, overflowing with resource, and true to the core; life must play true to the nature in which it exists, for to play false means failure and invites the penalty of death. These conceptions are imbedded in the very foundations of human thought, as evidenced by the words used to express them. The Greek word *βίος*—from which we derive "biology," the science of life—denoted a player true to the life. The Aryan roots *can*, "to be able," and *ken*, "to know," *kennen* and *können*—are the same in origin.

In truth, so fundamental is this relation between life and nature that our best definition of life itself—given us as long ago as Aristotle and in modern form by Brooks—is simply this: "Life is response to the order of nature;" and, since, as Brooks follows out the thought, the essential element is the knowledge of how to respond in such wise as to preserve life, he is enabled to say: "Life is that which, when joined to mind, is knowledge—knowledge in use." Life is knowledge in use. To know is to live; to ken is to can.

These ideas, it seems to me, are the bed-rock of every true philosophy of education and of every true philosophy of life. I think we shall find that every animal which educates its young ones at all—except some men—educates them on this basis. All the plays of young animals with one

another and with their parents are calculated to fit them for their life with nature.

I once overheard two little boys of five or six talking this over as they walked along the street. One said: "It's easy enough to do it, if you only know how; everything is easy if you only know how." Here we have our problem in a nutshell. Contrast the delight there is in doing something which we know how to do perfectly, with the distress of trying to do something which we do not know how to do. Nature is infinite and powerful, and buoys up and makes easy, and at the same time most effective, the life that knows how to use its forces. Conversely, the life that does not know how is hard and futile.

It is a matter of frequent remark how perfectly animal life is adjusted to the natural environment; how well, in general, animals know how to do the things upon which their lives depend. Are we not sometimes inclined to think that their lives in this respect are more perfect than our own, that within their narrow lines of interest they have learned their nature-study lessons better than we? They seem to live so easily and know how to live so well. No doubt we have all stood speechless before this problem many times; or if, like George Ade's "Gabby Will," we are able to articulate at all times, we may have said "instinct," "animal instinct;" but such words give us no light, they explain nothing. Many animal species are much older in the world than man, and have thus had more time to perfect their education. If we knew more about how they con their lessons, we might gain some valuable hints for human nature study. We can say at least this much: animals learn solely by direct observation and first-hand experience with nature. Their language lessons are not arduous, and, for the most part, each must learn for himself by original investigation. The child learns practically in the same way during the first years of life; and we may say that this method of nature study is fundamentally and universally true to nature and true to life. Again animals—and generally children—do not try to learn too much. Each one learns just what he can use, and is content. There is not much nervous prostration or weariness of the flesh among animals from too much study. May we not herein find gentle admonition?

Nature gives room for practically unlimited evolution. No species, man included, has developed responses to more than a small part of the order of nature. Each species fits its little niche—molds itself and is molded by nature in shell or feather, muscle and nerve, heart and brain, until it fits like the bolt its nut. The psychic process within the organism, which impels it to learn those elements in the environment essential to its life, we may call interest. On the purely physical plane the analogue of interest is hunger. Who ever saw a wild bird or other wild animal, not asleep, that was not interested in something? And certainly each species has developed its own peculiar lines of interest, woven into the

warp and woof of its organization thruout the entire history of its evolution. A chick and duckling from the same nest soon part company, as their differing interests dictate. To the duckling water is intensely interesting. With the first touch, it finds that it fits: the feathers shed water; the body is buoyed up; the feet are excellent paddles; the bill is adapted to straining out the worms from the soft mud, and they taste good; every organ and faculty is brought into full play of wholesome activity, and the duckling is supremely happy. The teacher of a brood of ducklings, if she happen to be a hen, has a trying task.

Not to multiply illustrations, we must clearly recognize that interests are as much matters of organization as are brains or bones. The fact that certain elements in nature satisfy the needs of an organism makes these elements interesting to the organism. The problem becomes much complicated when we enter the sphere of human life, where we find so many different interests interwoven in endless ways, and each true to some special occupation or field of human life and effort. But is there not a central core of human interest in nature so true to life, so deep and universal, so intimately linked with human evolution, that everyone everywhere shall say: "This is good, this fits my need"? If there is such a central core of nature interests, it must retain its place in education. That there is such a body of knowledge is as certain as the fact that man depends on nature for his life, mental and moral as well as physical.

The circus draws the crowd, and fads attract attention; but fads pass by, and the circus is only for the hour. Life may be stimulated, but cannot be fed on such things. The nature study that is true to life must be like wholesome daily bread. It must lie close to the daily life. It must be so wholesome as never to cloy the mental appetite, but rather be perennially a source of refreshment and strength.

If you have followed me thus far, you will agree that such a body of nature knowledge must be, like folklore or religion, something permanent and real, determined in the organization of the human body and mind, and in the solid constitution of natural forces. As such it must be sought out and discovered. It is not a scheme to be devised or invented by any degree of human ingenuity. We might as well try to invent a hen's egg that would hatch or a milk to rear babies on that would be as good as the genuine article.

Clearly the place to seek for the nature study that is true to human life is first of all in the historic development of man's relations toward nature. Here we may find the results of thousands of years of nature study wrought into the very life of the race; and when we discover a relation to nature that has raised the tone of life, that has developed a higher response, we must see to it that it retain its place in a rational system of education. Still we shall need to check constantly our findings in this

field by a study of the modern problems of human life as they touch the individual and the social order; especially, of course, as they are related to the child and his real educational needs, the teacher and the school. The obverse of this human side is, of course, nature itself as it supports life at every point. Nature is not a series of dead museum specimens, but a living process, and we must find a nature study that is true to the great life of nature; for no species, man included, can continue to do violence to nature without injuring itself.

I have so often, in season and out of season, insisted upon the historic development of human nature study that I may be pardoned for slighting this side of the subject under my present limitations of time. This, however, remains as the beaten pathway of the race which every child that comes out into civilized relations to nature must tread. It is our record of the accumulated experience and wisdom of mankind, and gives us our deepest insights into the process of becoming civilized.

We find in this three great streams of human effort, beginning with the dawn of legend and myth and flowing down thru history to the present; and, if progress is to continue, they must flow out into the future. "Subdue the earth;" "have dominion over every living thing;" "make the earth a garden"—these are all logical steps in a rational process, and they represent thousands of years of human nature study before any of our special sciences were so much as dreamed of. I am at a loss to conceive how, or by the use of what other materials than the living animals and plants about us, we can get so much real and valuable education. I cannot see how any amount of astronomy or chemistry, physics or mineralogy, botany, zoölogy, or comparative anatomy, can in any degree take the place in the life of the child of this practical acquaintanceship with his living fellow-beings on the earth. I cannot imagine how the race could have risen to the level of civilized life along the lines of any other relations toward nature; nor how society is to retain its present level—especially how the home is to hold its place against the encroachments of the tenement system—if these fundamental relations to nature are permitted to fall away.

When we discover the fundamental lines of nature study that have stood the test of time and experience and have proved true to the life of the race, we shall find, I think, that they give us equally true solutions to many of the special problems of our modern school life. We shall find them true to the life of the child, and true to the life of the teacher as well. True to the life of the home, they will unite the home and school by natural bonds.

The first law of child-life—and of education as well—is commonly recognized to be that of self-activity. In other words, the child learns everything that he really knows by doing things or trying to do things. As Carlyle says:

Knowledge? The knowledge that will hold good in working, cleave thou to that; for Nature herself accredits that, says yes to that. Properly thou hast no other knowledge but what thou hast got by working; the rest is yet all a hypothesis of knowledge; a thing to be argued of in schools, a thing floating in the clouds, in endless logic-vortices, till we try it and fix it. Doubt of whatever kind can be ended by action alone.

To be true to child-life, nature study must first of all give the widest possible scope for spontaneous activity, and its distinctive function should be to lead this activity out toward human good and into harmony with the creative forces of nature. We all know what the immortal George did with his little hatchet, and many are inclined to descant upon the instinctive destructiveness and the inborn cruelty of children. I hope your own experience with children, as mine certainly does, leads you to repudiate this. Any child who has not been ill-taught or maltreated will choose to do good rather than evil, if he knows how, and if the good affords his passion for activity equal scope.

Suppose we set down in a garden a ten-year-old boy who does not know beans from burdocks, and we at once begin to realize the truth of Goethe's aphorism: "Nichts ist schrecklicher als unwissende Thätigkeit" (nothing is more terrible than ignorant activity). Contrast the result with the actions of a child who knows the garden plants and weeds. How easily his feet keep in the paths and between the rows, and how efficiently his knowledge enables him to work! Contrast, too, the relative degrees of satisfaction the two get from their experience. The one finds nothing of special interest, while the other works with motive and purpose. Contrast the satisfaction that the youthful George Washington had in hacking down the cherry tree with that he might have had from the same amount of effort in planting a tree. The one act yields a painful memory, the other a lifelong delight. This homely illustration applies to the entire range of a child's activities in relation to nature. In nature study the teacher has unlimited opportunity, with the gardens, the flowers, and the trees, the birds and insects and all the rest, to open up endless vistas of wholesome activity for the child. And every step in such work will establish the child more firmly on the side of law and order in the community.

With the child normally interested, and consequently happy, in the work, the battle of the teacher is more than half won. I have sincere respect for the teacher of young children. I have taught a grade school, and am free to confess that it was the hardest work I ever did; but we had no nature study then. No plan of nature study can make good its claim of being true to the life of the teacher which does not lighten rather than weigh down the load he already carries.

As I have looked teachers, often weary and hard pressed, squarely in the face, and have asked myself what we can do to break the dead lock-step and infuse fresh life and spontaneity into the school task, it has

seemed to me that there is a knowledge of nature which lies so close to everyday life that it will buoy it up, make it easier and more cheerful, and continually more and more worth the living. It is just this, and no more, which will constitute the nature study true to the life of the teacher. When it comes, the nature-study lesson will be a period of genuine refreshment and delight for teacher and pupil alike.

It is a wise saying that wherever there is difference of opinion there lies a problem to be solved. In matters of elementary science teaching, object-lessons, and finally nature study, we have certainly had differences of opinion enough. The problem remains to discover the nature study that is fundamentally true to human life. Experiments may be tried and be discarded, fads may come and go, books may be written and forgotten. The nature study that is true to life must and will come; and this will live as long as mankind and nature endure.

DISCUSSION

WILBUR S. JACKMAN, dean of the College of Education, University of Chicago.— Nature study true to life! There is no other. If there is anything abroad imposing itself upon childhood that is not true to life, it is not nature study; it is its caricature; it is an impostor and a cheat. Nature study true to life has existed with children before they entered school since the creation of man. In their early years they learn because they love nature; if in after years they fail to learn of her, it is because they hate science. They surrender themselves unconditionally to nature, but with science they barter and make terms.

A few years ago someone, in Boston I believe, sought by a questionnaire to find out whether children loved nature or spelling the more; and spelling won the votes. But the decision was not against nature, but against the teacher and the teaching. If it were a question of either the spelling-book or a day in the wood, the groves would surely win.

Nature's methods with the young learner are strictly scientific and rational. She offers herself to the child as a coherent and well-ordered whole. This whole appeals to the child thru its function and purpose, which are primarily to him its beauty, then its use. The young learner meets these overtures of nature with an intellectual attitude that is ideally scientific. He is not blinded by prejudice, nor enslaved by creeds, nor frightened nor coerced by authority. He is immersed in nature, and it thrills in him. Nature study here is true to life.

In the schools nature study becomes false for many reasons. The school usually fails to estimate properly the value and the thoroness of the lessons already learned. Many of nature's teachings have misled the child, but the lessons have been well taught and thoroly learned. For this incomparable study of nature the teacher too often substitutes that of definitions, and the study then becomes false to life.

The picture of nature which the child gradually built up for himself is shattered to fragments by the methods of the schools. This is accomplished by picking out bits here and there for special study, to the exclusion of much that is necessary to a clear understanding of what is presented. This false specialization renders nature study untrue to the life of the child. The function of the school should be to preserve the original picture and to further develop it in breadth and in detail. The school, as now usually constituted, cuts him off from his original sources of material; it limits his contact with

nature to the occasional excursion; and thus nature study becomes a discordant note in his life.

The schools should leave nothing undone that will make the pupils skillful in the various forms of expression. Children are stifled in their growth by the average school thru a lack of proper and adequate means whereby they may express themselves. Left to himself, the child exhausts every resource in his attempt to do this. Nothing creates a greater demand for variety and amount of expression than the study of nature. He lives, as do we all, in a world of color, and nothing makes nature study seem more untrue to life than the fact that in the schools there is as yet almost no means whereby he may express his mind-pictures of color.

So, too, his images of force, the questions of how much and how strong, receive almost no help in their further development thru the study of mathematics. The study of form and proportion is yet hardly applied to the centers of the pupil's interests, and his artistic taste in form is not stimulated because he has little or no opportunity for training thru the use of plastic materials. From lack of adequate opportunity to express himself in these various ways, a large part of the energies that are started and dimly outlined by his early contact with nature are never further developed at all. They shrivel up and pass out of consciousness, nevermore to return, because the methods of study and teaching are not true to life.

There is another aspect of nature study of the utmost importance that teachers do not yet fully appreciate. It is the relation of nature study to moral development. The center of all human interests lies in human conduct, and it must be shown that the study of nature directly affects this, if it is to hold a permanent place in the curriculum. It is not the final aim of nature study to make man comfortable thru the clothes, the food, and the shelter it provides, important as these are; its ultimate effect must be shown to be to make him good. Because it has not yet been fully accepted as being capable of doing this, nature study and scientific study have always been compelled to stand in an unfortunate relationship with the so-called humanistic studies. We *may* study *man and* the *tree*, but we *must* study *man;* whereas the fact is that all studies are or should be humanistic, and all studies are or should be scientific. As long as man, the *carnal* being, is set over against man, the *spiritual* being, the house will be divided against itself. When at last our study shall be no longer man *and* nature, but man *in* nature, then it will be possible for the first time to have nature study entirely true to life.

Miss Emma G. Olmstead, principal of Training School, Scranton, Pa.—One error almost universal is to interpret nature study as nature teaching. Nature study must be by the child, not by the teacher. The unfolding and the growth must come from the child's own efforts. The teacher may quicken and warm it into life, but she cannot do the child's work; that is the child's privilege.

Nature study must be natural. With all due regard to the wisdom of the gentlemen who have spoken, both of whom have been greatly enjoyed this morning, and have done so much to give life to this subject, yet the final word has not been said. The common error is to give the child too much, to give it to him too early and too fast. There can be nothing unnatural in nature study, nothing perfunctory, and nothing stilted. Unless the study of nature can be rational, it would better be learned about from books.

Who of us has not seen children painting "from nature" in an unnatural way? Placed upon the wall is a branch of cherries. Childern are allowed, if not actively encouraged, to begin by painting the brilliant cherries, and then put in the leaves, and finally the branch. Such treatment of nature is demoralizing. There is a study about nature from the printed books that is heaven-high above such travesty. Education, to be true, does not draw away from nature, but takes us to her to know her as she is.

The problems multiply when we try to decide what to study. If we are willing to be led by little children — which is one of nature's ways of guiding — their interests will be shown first in living things about them. Later, as they develop, they will lead us to the inanimate in life.

There are many helpful books for this study now, but the bookshops are full of so-called nature books; some a compilation of facts and some of fancy. It is evident that the authors up to the time of writing have gone thru life with the windows to their souls closed, the shades drawn, the shutters tightly fastened, and a sign out, "Wanted — Material for a Nature Book." Why were these books published? Is it a case of supply and demand? Do the teachers choose these books, or do the publishers choose to give the teachers these books? However, let us hope that even the effort of compilation will arouse an interest in nature, and react on the writers, so that the books will not have been written in vain. There are some excellent books, but how are you to choose? Go to nature for the truths as to the what and the how.

The method in nature study must be natural in three essentials. First, it must be the natural method of the child. He is first of all interested in the ungrown and the undeveloped. It is the baby dolls, kittens, puppies, bunnies, chickens, and lambs, and not the large doll, cat, dog, rabbit, hen, and sheep that attract him most. He studies for a long time animals of size and action that are attractive and substantial — that he can get hold of by using the larger muscles. He does not naturally take kindly to worms and caterpillars, to flies and bugs. Many of the animals selected for school study are those that a child would never study if left to himself. He may chase a butterfly, but he cares nothing for it after he has it. Moralizing may not be harmful; but teach it as ethics, and do not call it nature study.

In the second place, the method in nature study must be natural in that a child deals with but one thing at a time and that he enjoys it for its own sake. When a boy plays with jacks he has no use for marbles; when he rolls the hoop he cares not for mud pies. He has but one love, one fad, at a time, and you do violence to his whole nature when you make him go with a hop, skip, and a jump from bugs to buds, from pebbles to cherry stones, and from cotton to snow.

In the third place, the method must be natural in that nature is studied out of doors. The arbutus is not natural unless it is trailing, nor clematis unless it is climbing; the violets must be in the field and the lilies in the pond. Nothing outrages a child more than to make him think he is studying nature when he is handling grasshoppers or crickets by the pint or quart that have been preserved in alcohol, or pulling apart wilted violets, hepaticas, and forget-me-nots.

There is no more noble mission for a teacher than to follow the child in his nature study of the works of God, out into God's sunshine, thru fresh fields and forests. There is no more ignoble work done by a well-intentioned teacher than to dismantle God's works and try to make a child think that the wreckage which she shows him represents creative wisdom, power, and beauty.

If the child studies nature only when and where you lead him, you have done no more for him than when you solve his problems or translate his French. Field days and school gardening are valuable, no doubt; but if there are no field days but school days, and no pulling up of weeds except as a school exercise, then you have scarcely put a veneer upon his aimless life and soulless nature.

Reverence for Him in whom all things live, move, and have their being must be natural, or it is not reverential. The rocks in their solidity; the fruits and grains in their life-giving; the flowers, birds, and animals in their beauty; the heavens in their majesty — all speak God's goodness.

THE CHILD'S FAVORITE STUDY IN THE ELEMENTARY CURRICULUM

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During the past fifty years the boundaries of knowledge have been vastly extended. The perfecting of our means of transportation has carried men into every corner of the earth; while the perfecting of the scientific method has led men to exploit all living and all inanimate things at home and abroad. This extensive and intensive study has accumulated knowledge until we stand appalled in the presence of the mass of facts we have brought together. To facilitate our work of assimilation and classification we have split up old subjects of knowledge, such as history and geography, into dozens of new subjects; and since 1870 we have been busily at work extending and enriching the elementary-school curriculum with all this new and untried knowledge.

Since the child is to be cultivated by his studies, it is obvious that he is one of the factors to be considered in selecting them; we must know the child's reaction upon a subject of study if we are to estimate its culture value upon him. And let us recognize that this knowledge of the child's reaction upon a subject of study is equally important, whether our philosophy of education seeks development thru opposing a child's interests or thru following them. Whether one is paddling up or down a stream, it is equally important for him to know its currents, its shallows, and its falls.

Just now the tendency to introduce some measure of election into the high school, and even into the higher grades of the elementary school, and the attempts on every side to formulate an ideal course of study, make an inquiry into children's attitude toward the various subjects of the curriculum of immediate practical value.

In 1897 Superintendent H. E. Kratz, then of Sioux City, published "A Study of Pupils' Preferences" in the September number of the *North Western Monthly*. This study still remains the most important contribution to the subject. In 1899 Miss Kate Stevens made an extended study on the children of her own school in North London, and published the results in five numbers of *Child Life*, beginning with July. In the same year, 1899, M. Chabot made a study on four hundred children in Lyons, and published the results in the *Revue pédagogique* for April, under the title "Une enquête pédagogique dans les écoles primaires de Lyon." So far as I know, these are the only quantitative studies so far made covering the general field of the elementary curriculum.

In making the present study I have used Superintendent Kratz's questions: "What school study do you like best? Why? Which one do you like least? Why?" These questions were given as a composition subject

in three different cities of Pennsylvania. While I shall draw material from all these cities, I shall base this study primarily upon 1,150 papers written by boys and 1,200 by girls in a progressive manufacturing city of about 50,000 inhabitants. The city has a rather large foreign population, but, from the point of view of superintendence, teaching force, and actual school work, I know of no more progressive or effective school work in Pennsylvania. Some of the conclusions that I shall reach may seem like criticisms on the school where the papers were collected, but they are instead criticisms on our general course of study in America, for I doubt if many other cities could make a better showing.

In such a study as this much will depend upon the course of study in use where the investigation is made. In the city under examination provision is made thru all the nine grades of the primary and elementary departments for all the subjects which we shall discuss. Subjects like history, geography, and physiology appear in the lower grades in elementary forms of story and conversation, and physiology is superseded by algebra in the ninth grade. Ages can be changed to grades pretty accurately by counting the children of the first grade as six years old. The distribution of the subjects liked and disliked is represented in the following table:

Subject	Like		Dislike	
	Boys	Girls	Boys	Girls
Reading	24%	25%	8%	8%
Spelling	12	19	15	10
Language	2.5	7	19	13
Number	30	24	14	21
Geography	7	7	5	12
History	8	4	1	4
Physiology	1	2	9	12
Writing	0	1	2	1
Drawing	1	1	2	3
Music	1	2	5	1
Manual training	0.5	0	0	0
No answer	13	8	20	15

The boys' favorite subjects, as one sees, are number, 30 per cent., and reading, 24 per cent., with spelling third, 12 per cent. Penmanship, with the newer subjects, physiology, music, and drawing, are none of them chosen by more than one boy in a hundred. If we turn to the girls, we find that they, too, choose reading, 25 per cent., and number, 24 per cent. As with the boys, the newer subjects of physiology, music, and drawing play an utterly unimportant part in the girls' choices, except that physiology is greatly disliked.

Is it not surprising that in the most advanced schools of the state, after all our attempts to enrich the curriculum with agreeable subjects, we

have not made the children care for them, but instead they cling to reading and arithmetic? Is it possible that we have not found the right subjects, or have we failed to make the children feel their intrinsic charm? That this choice is not due entirely to habit is shown by the fact that writing, one of the oldest and best-established subjects, is neglected. If it is said that children like to learn what teachers like to teach, then we must still account for the teachers' choices, for they were also educated in the public schools.

If from these general considerations we turn to an examination of the separate subjects of study, we find interesting conditions. Reading in the elementary school has two purposes: to teach the child the mechanics of reading, and then so to store his mind with good literature and so practice him in using it that he will go out into life an intelligent reader of books and periodicals. If, as the first aim is gradually accomplished, the mechanics could be subordinated to the right content, our libraries should be well used and bad periodicals should atrophy away. The following table shows how strongly reading appeals to children in the earlier, mechanical stages:

	Ages							
	8	9	10	11	12	13	14	15
Boys like	39%	38%	28%	22%	21%	11%	8%	4%
Boys dislike	10	12	12	6	7	5	5	0
Girls like	39	33	33	31	16	12	5	0
Girls dislike	22	16	11	7	3	2	4	0

But what about the reading for content which should gradually take the place of the more mechanical drill? The provision in the published course of study for the city examined is admirable, and it is as well executed as anywhere else in the state. Judging from the children's response, however, it is not very attractive; nor can I find developments in the children's attitude toward language and history which would indicate that interest in the content of reading had been transferred to these subjects. In all the cities examined I find children of twelve and thirteen frequently saying: "I like least reading because it's so dry;" "Reading because it isn't any good." "Reading, it's sometimes simple." Has not the content of our reading suffered in all parts of the country from the great attention that has been given to the mechanics of the subject? And is not the aim of reading content, or is the aim of reading to read?

Spelling is attractive to the little children and it is also disliked, 10 to 20 per cent. of both boys and girls declaring themselves both for and against it at all ages. Judging from the answers given, spelling is liked mainly because of the definiteness of the lesson. As a boy of eleven

says: "I like spelling because it's write there to study." At the same time the irregularity of the forms is the cause generally assigned for dislike. "I like spelling least," says a boy of eleven, "because the least little thing makes it wrong."

If reading is the key to what man has done and thought, language is the key to what man is thinking and doing. As here used, the term covers oral expression, composition, and grammar. The provision made in the city's course of study is most excellent; but nevertheless, the children dislike it more than any other subject except physiology.

	Ages							
	8	9	10	11	12	13	14	15
Boys like	2%	2%	2%	3%	3%	1%	1%	4%
Boys dislike	6	14	21	19	19	24	23	36
Girls like	1	6	9	8	6	9	6	17
Girls dislike	11	10	17	15	18	13	7	6

No more than 4 per cent. of the boys at any age select language as their favorite, and the girls do not rise above 10 per cent. of liking at any age before fifteen. But if the quantitative results are eloquent of dislike, the papers themselves are still more so. Here are some representative expressions: Boy of eleven: "I like language least because I do not know what it means;" girl of eleven: "language because it is always telling us something we know;" girl of eleven: "I don't like it because it don't tell you about anything." The utter emptiness and weariness of the subject is beaten into one's mind as he goes thru these hundreds of papers, until he feels that a recognition of the wickedness of "It is me" may be bought at too great a price.

Number in this study includes the primary exercises generally classed under that name, and arithmetic. Algebra is unimportant, being brought into the course of study only in the ninth grade. The lines of like and dislike with number sustain a relation to each other not found in any other subject of the curriculum:

	Ages							
	8	9	10	11	12	13	14	15
Boys like	9%	17%	23%	34%	33%	41%	43%	44%
Boys dislike	28	21	15	14	15	8	4	0
Girls like	7	13	21	25	32	33	35	34
Girls dislike	22	28	31	22	12	12	12	14

What is the cause of this early repugnance for number and the later intense liking for it? Personally I have no doubt that number, being necessarily abstract, is unfitted for young children. After ten or eleven,

the children naturally like it. That this change cannot be produced by merely sticking to an abstraction is proved by the case of language, where the hatred grows with the years. Studies in all parts of the world bear out the conclusions of these charts. When shall we cease wasting time on number with little children?

No formal provision is made for nature work in the schools under examination, but physiology is taught thru the eight earlier grades. The suggestions in the course of study are most progressive and intelligent, but the children detest physiology, and, as this table shows, the more they have of it, the less they like it:

	Ages						
	8	9	10	11	12	13	14
Boys like	0%	0%	0%	1%	4%	4%	1%
Boys dislike	0	1	2	4	17	22	25
Girls like	0	0	1	2	6	6	6
Girls dislike	0	1	2	13	22	18	29

The reasons given for this dislike are as striking and as vivid as those for the dislike of language. "I do not like it," they say, "because I do not like to hear about different parts of the body" (girl of eleven); "I am so tired about hearing about the bones" (girl of eleven); "It fairly makes me sick when I think of it" (girl of fifteen); "There is too much alcohol in it" (girl of eleven); "I do not like it because it tells you how you look inside" (girl of thirteen).

Several deeper reasons for this hatred for physiology will occur to every teacher. In the first place, the subject has not grown up in response to a real need of the schools, but it has been forced into the schools by reformers; hence it fails to command the sympathy of the teaching force. In the second place, all the functions of mind and body come into existence without our thinking about them; and for a long time they tend to remain unconscious. No amount of forcing will make a Zulu think about the way he thinks, nor about the way he digests his food. The charm of life consists in filling his stomach; he is not yet ready for the joy of watching the food after he has swallowed it. This wise unconsciousness of functions demands respect.

Music and drawing have hardly any warm friends or violent enemies. They are ignored, tho they are taught in all the nine grades of the schools.

The study seems to justify the following generalizations for the cities studied:

1. The old-established subjects of reading and number are today the favorite studies in schools.

2. The broadening and enriching of the curriculum has given us subjects that, under existing conditions, do not appeal strongly to children.

3. We handle the preliminary work in reading so as to command the children's interest; but when technicalities have been mastered, interest dies out. Reading for content, or to cultivate taste, seems ineffective.

4. Young children like definiteness and concrete content. Our present language and grammar work annoys them thru its indefiniteness and its emptiness.

5. Number is strongly disliked at the beginning of the elementary course and greatly liked at the end. We begin it too early.

6. Physiology is cordially disliked, and there seems little prospect that we shall make it liked in the elementary grades.

DISCUSSION

J. H. VAN SICKLE, superintendent of schools, Baltimore, Md.— Professor Barnes has rendered a service to the schools by compelling attention to considerations too often overlooked, namely, how our teaching appeals to children. The quantitative studies on children which he has carried on for many years have interested progressive teachers everywhere, and in many instances there has resulted a radical change in the school atmosphere. Professor Barnes comes to Baltimore sometimes. He was with us a few months ago. It was then my privilege to note the effect which a quantitative study of this kind produced upon the minds of some ninety students in our training school for teachers, as they worked with material which, when tabulated, showed the tremendous influence of environment in education. They had a revelation which no book work or any other kind of study that I can think of could so effectively have given them. It was the finest sort of introduction to the important work for which they were preparing.

But there are studies and studies. If the aim be limited to infusing into the teaching force the proper attitude, the study presented today must be counted highly successful. I am sure no one can go away without a deeper sense of the importance of knowing the child's attitude toward the subject-matter of instruction, if the teaching is to be of any value. But if it is expected that thru such studies we shall gain a body of exact knowledge concerning the development of mind and character comparable to that possessed by the physician of the development and care of the body, then this study seems to me faulty in a number of particulars.

Professor Barnes sent me a copy of his paper some weeks ago. Since then, with the aid of two of my associates, I have gained some data the study of which compels me to question the method used by Professor Barnes and to dissent from several of his findings.

1. The questions do not give the child liberty to express his real attitude toward all of his school studies. He is allowed to mention but two—the one best liked and the one least liked. If you want the true attitude of the child toward the several studies, you ought not thus to limit his choice. Many children have difficulty in choosing one study from among the number which they like. Some say they like them all. This attitude was most pronounced in the rooms of the best teachers.

2. Under such circumstances, the answers do not appear to me to have any great scientific value, since by using these questions you can on different days get a radically different set of answers in the same room.

3. The effect of the teacher as a factor in the result is not and cannot be taken into consideration in a study like this, conducted at long range. The personality of the teacher and his skill in using methods that call into play all of the activities of the child are factors that make a vast difference in the quantitative results obtained. An especially

interesting lesson upon any topic will materially change the result. We took physiology, which Professor Barnes says is not liked at all. In a fifth-grade room this subject was not mentioned at all. The children disclosed no attitude toward it either of like or dislike. A week later, after oral lessons had been given in which there was some experimentation in which the children had an active part, seven pupils out of forty liked physiology best of all studies. Method is, therefore, seen to be a most important factor. I find sixth-grade rooms in which even grammar is much liked; yet this fact does not prove that grammar belongs in that part of the course. Under good teaching votes could be had for Choctaw as well.

4. While it is true that we ought to be influenced very greatly in our opinion of the existing course of study by the attitude of the child toward it, unless we select for our tests classes skillfully taught, we get no results that can be taken as a fair criticism of the subject-matter of the curriculum. Is not what we do get, if properly interpreted, a criticism of the teaching as shown in the selection of material, and the method used in its presentation? In the study before us undue emphasis seems to me to be placed upon the children's preference and dislike for studies as taught, since how and by whom they are taught are modifying factors unknown to the speaker. Even without any elaborate quantitative studies most of us readily agree to four of the six generalizations which Professor Barnes makes; but let us look for a moment at the fifth. Professor Barnes' statement is that "number is strongly disliked at the beginning of the elementary course." In two third-grade classes well taught the following results were obtained: On June 22 41 per cent. of the children chose arithmetic, while reading, which was second in popularity, was chosen by only 8 per cent. of the pupils. In three other third-grade classes results were as follows:

In class No. 1, 29 out of 35 present chose arithmetic — 83 per cent.
In class No. 2, 24 out of 39 present chose arithmetic — 62 per cent.
In class No. 3, 16 out of 34 present chose arithmetic — 47 per cent.

5. It seems to me that we are not justified in saying that "the broadening and enriching of the curriculum has given us subjects that do not appeal strongly to children," when we base our judgment upon a questionnaire that does not allow the child to say what his attitude toward them is. We force him to select one of them either as his first choice or as least liked. They may be liked very well indeed without getting into the quantitative study. The phrase "under existing conditions" is the saving clause in this statement. Shall we throw the new subjects out or change existing conditions? Conditions are changing. Those now entering the service as teachers have been taught to draw and to sing; as pupils in the grades they have had sewing and industrial work of various kinds. They will teach these subjects as naturally and as readily as they teach any others. The teacher likes subjects which he can teach well, and as a rule children like what the teacher likes, if they like the teacher. Broadening and enriching the curriculum has not been long enough in evidence to produce its due effect upon the teaching force the country over. Fully one-half of the teachers now in the service have had to take up drawing and music after becoming teachers. In ten or fifteen years more this period of adaptation will have passed.

The study that has been presented to us is extremely suggestive. It is highly desirable that teachers should find out the attitude of children toward what they are required to study, but it does not seem to me scientific to make such generalizations as have been made today from the data used. In my judgment, no amount of material thus selected would settle the question of the course of study. Social needs must largely control. Within the range of social needs the child's interest is an important factor, but we must guard against the error of thinking that a topic is not intrinsically interesting when, for all we know, the seeming lack of interest may be the result of indifferent teaching.

Such studies as "The Growth of Personality," "Intellectual Accuracy," "The Property Sense," "Rewards and Punishments," and a score of others made by Professor Barnes, have in many a schoolroom given the teacher an entirely new point of view. Expectation has become more reasonable, procedure more rational, sympathy and patience greater, and there has been a more energetic and cheerful response. This is a sufficient justification of such studies, entirely aside from the disputed question of absolute scientific value.

Miss Ada Van Stone Harris, supervisor of kindergartens and primary schools, Rochester, N. Y.—We are given certain data in Dr. Barnes' paper from which anyone can draw any kind of a conclusion according to his or her experience. To draw conclusions with reference to the course of study in America from data collected from one or two states, or from several cities in one state, seems to me to indicate a lack of knowledge of the working results of educational methods in general.

According to the figures given, we must conclude one of three things: that reading and number are vastly more important than any other subject; that all the others disliked are unimportant; or that the subjects disliked reflect on the teaching. To the first and second we cannot agree. To the latter, yes.

I cordially indorse the statement that we begin number work too early, and that physiology, as required by law, has no right to the forced place it occupies, and brings not a shadow of the desired results expected from it.

Reading and number are favorite subjects; they should be; they are utilitarian. They can both be taught mechanically with better results relatively than can geography, history, language, and other subjects. It takes more of an artist to teach the latter than the former with corresponding results.

I agree also "that the preliminary work in reading is so handled as to command the children's interest, but when technicalities have been mastered the interest dies out." The reason for this is that after the children have mastered the mechanics of reading the teacher has other subjects to occupy her attention; therefore she pays less attention than formerly to her preparation for instruction in this subject.

Teachers of children at this stage do not put the vitality into a reading lesson that a teacher of beginners does. The teacher of the beginners has to embellish her instruction in order to make the mechanics attractive. With older children the recitation is unfortunately inclined to consist mainly of the mere act of reading. The teacher's part is a direction to "read the next paragraph, and so on, around the class," rather than to clothe the subject-matter with life. Teachers themselves, as a rule, do not see and feel the beauties of the reading matter given to the children. They fail to recognize that a higher interest is implied in the upper grades than when teaching the mechanics of reading.

"Our present language and grammar work annoys them thru its indefiniteness and emptiness." This generalization is, of course, based upon the *old way* of teaching language—that is, the teaching of technicalities, the glib use of certain terms, and the construction of meaningless sentences, rather than cultivating the power of beauty and elegance of expression by utilizing interest as a basis and the great thought subjects as material, thus making it more of a culture subject than formerly. It is because of the former being taught first that it is "indefinite and empty," and the young child sees "no value in it."

As regards the statement that "the broadening and enriching of the curriculum has given us subjects that under existing conditions do not appeal strongly to children," I wish to say that enriching the curriculum does not mean simply the affixing of certain subjects to a list already existing; it does mean, in addition to appending these subjects, an infusion and a vitalizing of interest, a quickening of the blood, and a reanimation of the spirit and attitude of the teacher toward these subjects, toward her work, and toward

the child. In our teaching of the subjects of the curriculum we have failed in the true interpretation, because so many of us fall short of the highest conception of what teaching and education mean.

Having had the opportunity to study school systems in different parts of the country, I am convinced, from observation and actual contact with the children, that the results in any subject depend upon the way it is presented. If one subject is better liked than another, it is because it is better taught. If any school system excels in a certain subject, it is because that subject is well taught in those schools and the teachers excel in the teaching of it.

I have known school systems which might reflect, in whole or part, the generalizations made, providing these questions had been presented to the children where the curriculum had been enriched in name only. I have also known school systems that have been enriched in spirit and in the interpretation of the letter. The results in answer to the questions in the latter case would widely differ from those in the former; hence the phrase "existing conditions" with which Mr. Barnes has modified his statement seems to me to center wholly upon weaknesses in the quality of the teaching.

From personal investigations made at different times, under different conditions, I have found it is that subject which last held the attention under an all-around skillful teacher that was most liked by the children; e. g., on one occasion, at the close of a very interesting water-color lesson, in answer to the same questions which Mr. Barnes has used, it was found that 75 per cent. of the children liked the drawing hour the best. On another occasion, in questioning the children of the several class-rooms of a thoroly progressive school — one where the principal and teachers had caught the real spirit of the enriched curriculum and had power so to relate the culture subjects as to lead the children to an equalization of interest in them — it was found that the subject which last held their attention was the favorite one. In another school of like character the children had been given, with other stories, the classic tales of Beowulf and Sigfried. The stories had been told and retold, and discussed again and again. The teachers loved these old tales were inspired by their beauty and significance. The children had caught their spirit and enthusiasm, until they were as familiar with Beowulf and his fourteen men, with Alberick, Mime, Brunhilde, and Sigfried, as with the members of their own family. They were given opportunities for oral and written reproduction, and for representations upon the sand table. In this school, the children liked the story, literature, or language hour the best of all. In another school, where the interest and success of the teacher centered upon arithmetic, the majority of the children liked arithmetic best.

There are children who would not like a certain *kind* of manual training, but in all of my observations I have found children so delighted with the hour that they would hasten to complete other tasks in order to have more time to devote to the making of some useful article.

The fault in the educational system of today lies, not in the fact that there are too many subjects, but in the lack of preparation and lack of knowledge of the subjects on the part of the teacher. The trouble lies, not in a congestion of the course of study, but in a congestion of teachers illy prepared for the work they are supposed to undertake. The multiplicity of subjects grows out of the fact that teachers fail to interpret the work laid down for them. They are not prepared to correlate the various branches.

DEPARTMENT OF SECONDARY EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—THURSDAY, JULY 9, 1903

The first session of this department was called to order in the Central Congregational Church, Boston, at 9:35 A. M., by the president, Charles F. Wheelock, Albany, N. Y., who delivered the opening address.

Reuben Post Halleck, principal of the Boys' High School, Louisville, Ky., read a paper on "Tendencies as to the Enlargement of the Secondary Field."

The paper was discussed by George D. Pettee, principal of the University School, Cleveland; Wilson Farrand, head master of Newark Academy, Newark, N. J.; and Isaac Thomas, principal of Edmunds High School, Burlington, Vt.

The president then appointed the following Committee on Nominations:

E. W. Lyttle, Albany, N. Y. C. W. Irish, Lowell, Mass.
Edwin Twitmyer, Seattle, Wash.

The meeting then adjourned to the different conferences, as follows:

I. *Round Table of Teachers of Classics*, in the assembly room of the Central Congregational Church. Leader, Henry White Callahan, head master of the State Preparatory School, Boulder, Colo.

II. *Round Table of Teachers of English*, in the First Church in Boston. Leader, Charles Swain Thomas, English department, Shortridge High School, Indianapolis, Ind.

III. *Round Table of Principals*, in the chapel of the Central Congregational Church. Leader, William J. S. Bryan, principal of Normal and High School, St. Louis, Mo.

The topic for discussion was "The Formation of a Federation of Secondary School Associations."

SECOND SESSION.—FRIDAY, JULY 10

The meeting was called to order in the Central Congregational Church by President Wheelock at 9:30 A. M.

G. Stanley Hall, president of Clark University, Worcester, Mass., addressed the meeting on "Coeducation in the High School."

The paper was discussed by Frank Fosdick, principal of Masten Park High School, Buffalo, N. Y.; J. Remsen Bishop, principal of Walnut Hills High School, Cincinnati, O.; and J. A. Bivins, principal of High School, Charlotte, N. C.

G. P. Baker, assistant professor of English, Harvard University, Cambridge, Mass., read a paper on "The Teaching of Argumentative Discourse in High Schools."

The paper was discussed by J. A. Tufts, professor in Phillips Academy, Exeter, N. H.; and Charles S. Hartwell, teacher of English in the Boys' High School, Brooklyn, N. Y.

The Committee on Nominations reported as follows:

For *President*—Reuben Post Halleck, Louisville, Ky.
For *First Vice-President*—Wilbur Fisk Gordy, Hartford, Conn.
For *Second Vice-President*—William H. Smiley, Denver, Colo.
For *Secretary*—William Schuyler, St. Louis, Mo.

The meeting then adjourned to the different conferences, as follows:

Round Table of Teachers of Mathematics, in the assembly room of the Central Congregational Church. Leader, David Eugene Smith, professor of mathematics, Columbia University, New York city.

Round Table of Teachers of History, in the chapel. Leader, James Sullivan, head teacher of history in the High School of Commerce, New York city.

Round Table of Teachers of Modern Languages, in the First Church in Boston. Leader, Miss Augusta Prescott, teacher of French and German in the Edward Little High School, Auburn, Me.

WILBUR FISK GORDY, *Secretary*.

PAPERS AND DISCUSSIONS

OPENING REMARKS

CHARLES F. WHEELOCK, PRESIDENT OF THE DEPARTMENT

As a brief preface to the important work that is planned for us today, I wish to occupy five minutes of your time in stating what seems to me to be the two most pressing problems of secondary education — problems to which no reference has been made in the program that is before us.

Within recent times the secondary school has advanced from a position of questioned utility and of doubtful propriety into a firmly established place as an essential part of our system of public education. Most of us remember the time when a common-school education, limited by the three R's, was generally considered a sufficient preparation for the life-work of those who were not intending to enter the learned professions, and it was simply desirable, but not essential, for the latter class to have a more advanced training before beginning their professional studies. Only recently the secondary school was an institution specially intended for the well-to-do, for the more aristocratic portion of the community, and there was no thought of its being opened or required for the masses. The question of the justice of the maintenance of a public high school by public taxation has been openly discussed and frequently decided in the negative within our recollection; but, happily, all questions of this character have been transferred from the list of problems into the list of axioms. There is now no further question as to whether there shall be a high school or whether all our children should attend it. We are now occupying ourselves mainly in seeking to determine what kind of high school will best satisfy our needs. We have reached decisions regarding many of the important phases of this general question. We no longer insist that all students shall pursue the same course of study. The value of manual training is universally recognized. The commercial course is an established fact for those who wish to pursue it. But there are still

some questions unanswered, and to me the most serious of them is the English question.

There has never been any question as to the supreme importance to every person of the ability to express himself clearly, accurately, and readily in his vernacular. The universal recognition of this fact has led to the placing of great emphasis on the study of English in recent times. Colleges are requiring of candidates for admission an acquaintance with English that their graduates of ten years ago did not possess. Many of our high schools are making the study of English a required subject for all students thru the greater part of the course. The demagog as well as the pedagog is abroad in the land, and the former is proclaiming to large audiences the failure of our high schools because some of them still teach some foreign language before the students have attained a full mastery of English. If any of you have doubts regarding the seriousness or the urgency of the English problem, read the symposium on the conflicting ideals in the teaching of English published in the *Educational Review* for March of this year, and I believe you will be convinced that we have not yet reached any generally accepted conclusions as to what ideals should guide us or what methods we should pursue in this most important subject. The question of what to do, how much to do, and how to do it is a question of such supreme importance that it should occupy the attention of every secondary teacher until more light is obtained. It has been left off the program of this meeting purposely, because there seemed to be no new light available, not because we have thought it settled.

The problem which seems to me second in importance is that of estimating educational results. While the English problem is among the newest questions, this problem of estimating results is among the oldest; but recent developments have given it a new importance. Twenty years ago we discussed this question simply as a question of admission to college. Then, as now, each college determined, as was its proper function, which candidates should be received and which rejected; but in recent years there has grown up a body of statutory educational requirements governing admission, not only to the teaching profession, but to the study of law, of medicine, of dentistry, of veterinary medicine, and governing also admission to the service of the state. On this account the measurement of educational results has become a matter of greater importance than ever before. If we are to administer these laws justly, we must establish correct standards that may be justly applied. That we have not yet reached such standards that are generally satisfactory is evident from the vacillating nature of our practice for the past twenty years. We have measured by examinations alone, by the certificates of teachers alone, and by the actual trial of the candidate to do the work required; and we have found defects in all the methods. Examinations were charged with leading to the awful sin of cramming. Certification alone has been found

unsatisfactory by many, because principals, in their zeal to help pupils along, have sometimes certified the unworthy, or, in their zeal to establish reputations for thoroness, have sometimes held back the worthy. Inspection sufficiently thoro to be of value in measuring results in individual cases has been found impracticable.

Expressions of opinion that come to me from a wide field indicate that we have made small progress toward a final solution. Recent events in this section of the Union, especially the establishment of the College Entrance Examination Board of the Middle States and Maryland Association, and the establishment of a system of examinations conducted by persons other than teachers in the schools of Greater New York, seem to indicate a growing tendency in the East to return to the written examination as the best available means of determining the success or the failure of school work in individual cases. But the number of those who object to examinations is so great that we cannot consider this as a final solution. It may be possible that we shall find the true solution in a system of examinations supplemented by inspection and by certification — something after the manner in which these three teachers are now employed by the University of the State of New York. Certainly, the importance of the subject is so great that every secondary teacher in the Union should devote at least a portion of his energies to its study. This problem has also been purposely omitted from the program of this department for the same reason that the English problem has been omitted.

The two problems that I have mentioned are not the only important ones; neither are all the great questions that confront us to be discussed in the two sessions of this department at this meeting. But we sincerely hope and expect that much valuable light will be thrown on important questions in the discussions in which we are about to participate.

TENDENCIES AS TO THE ENLARGEMENT OF THE SECONDARY FIELD

REUBEN POST HALLECK, PRINCIPAL OF THE BOYS' HIGH SCHOOL, LOUISVILLE, KY.

All fields are enlarging, and of course secondary education is no exception to the rule. We are getting three times as much steam power from a pound of coal as we did a half-century ago. We are also obtaining nearly three times as much result from the same mental effort as we did then. A boy was then put to learning a dozen pages of Latin grammar in advance of any actual use for either rule or exception. Today, with the aid of machinery, the workman can make in three hours a day all the absolutely necessary things of life — in fact, more than he could have

produced by working all his time a century ago. Today, with skilled teachers who know how to quicken intellect with sympathy, how to join facts together with hoops of logical steel, how to avoid the waste of marking time and of mere unintellectual repetition that adds nothing, we can accomplish in one-third the time all that we achieved a half-century ago. Just as the workmen go out into new fields to employ their added increment of time, so the secondary school must enlarge its field of operation to use up the time gained. The secondary school has already enlarged so much, due to the pressure of the colleges without and to its own needs within, that it finds that it requires more time than it has at its disposal. This time must be gained both by having pupils come to the high school earlier and also by reducing the amount of time and energy now misspent in the secondary school. A consideration of the second factor is left to one of the papers following this.

The grades are so much better taught than they were a half-century ago that they spend a part of the time thus gained in marking time, in the mere mechanics of repetition that does not instruct, and in advancing into jungles that might better be left for high-school exploration. The secondary school wants at least one, and perhaps two, years of this time. The secondary school would like to begin two years earlier to teach such subjects as Latin, the modern languages, and the relation of common things sometimes known as science. Instruction in these branches without a skilled specialist is a hundred fold more damaging than no instruction. The secondary school alone can afford such specialists.

Some would say that the subject of this discussion is a misnomer; that we cannot speak of enlarging primary or secondary or college or university education; that, since education is a continuous process, each step depending on foregoing steps, we can speak only of enlarging education. Probably no one who has given the subject any thought doubts the continuity of education. Probably no one not entangled in metaphysical argument would contend that there is no difference between primary and university education. It is true that water goes thru a continuous orderly process to become ice, and even then it does not change its essential nature; but you and I would hardly care to trust ourselves to any captain of an Atlantic liner who in the vicinity of icebergs paid too much attention to arguments about the essential unity of water. We should expect such a captain to wreck his vessel. Those who introduce primary methods and discipline into a high school will wreck the school.

Professor Stratton D. Brooks, in his discussion of the reasons for withdrawing from school, shows that some pupils in the upper grades leave because they require different treatment from that of younger pupils. He emphasizes the fact that high-school ideals and management should differ from those of the grades. Commenting on cases where they do not, he says — and I quote him word for word: "This accounts for the fact that

grade teachers when transferred to high-school work almost always fail." I myself believe that grade teachers frequently succeed, but only in cases where they have the power of adapting themselves to the changed needs of the high-school pupils. Secondary schools need enlarged ideals, more freedom, and methods that drop the plummet deeper. Dispose of your apron strings faster and faster as you advance in the seventh grade is sound advice in the economics of education. I hope to live to hear more high-school economists say: "There's husbandry in my school. My stock of apron strings is nearly all closed out."

This paper intentionally leaves to those that follow the exact statement of enlarged secondary programs. It endeavors to indicate some general ways in which secondary education must be enlarged if it is to fit for life.

The secondary school must be so enlarged as to give more scope to probable reasoning, as opposed to mathematical reasoning. Few things in life are certain except death and taxes. One reason why the farm proved such a magnificent school for our ancestors was because it gave them so much practice in probable reasoning. This type of reasoning is the one always employed to deal with new and untried emergencies, with changing conditions; in fact, with the vast majority of issues that confront us in life. A country youth one March night hitched his horse to an old buggy and started to see his sweetheart. In the darkness he drove into a mud hole. The whiffletree began to crack when he urged the horse forward. Another pull and it would break. He would then have to get out in the mud, ruin the polish on his shoes, and be compelled to return home. With hardly a second's hesitation, he seized the ends of the whiffletree, and with his own muscular arms he relieved the strain, as he called "Go-long" to the horse. The buggy came out all right. That country boy deserved his girl, and we hope that he won her. The city boy has received from athletics and from dealing with his fellows on the playground his best training in probable reasoning.

When a farmer plants a crop, or when a business man makes an investment, he can look at the end of no arithmetic to find out his certain profit. No teacher can give a mathematical answer to the question: "What degree of success will my pupils have reached five years after graduation?" Life never points to more than probable success. In school the tyranny of mathematics has been as great as that of the classics. President Eliot has complained that from one-sixth to one-third of the whole time of American children is given to arithmetic, and he has impeached it because, as he says, "it has nothing to do with observing correctly, or with recording accurately the results of observation, or with collating facts and drawing just inferences therefrom, or with expressing clearly and forcibly logical thought."

Much of the mathematical reasoning taught in our high schools, as

well as in our grammar schools, is necessary for experts only. It has not the excuse of affording exercise in the probable reasoning necessary to deal with the changing conditions of life. In developing rule-of-thumb reasoners our schools have already done fairly good work.

There cannot be the usual uniformity in courses that are best for developing probable reasoning. Those ages which advanced the world most were the least uniform. The world took a mighty stride ahead in Elizabethan times, but there was less uniformity in belief and action than in the preceding reigns. When Drake met the Spanish Armada, he fought against captains of whom Philip of Spain had required absolute submission and sameness of opinion in all matters pertaining to church and state. This uniformity had produced an uninventive frame of mind. The individuality and skill of the English won the battle for them in spite of the small size of their ships. If scientific investigation of the nineteenth century has proved any one thing, it is that progress comes only from those who vary from the common type.

The secondary course must be so enlarged that no one pupil can take it all. Life is so complex that no one person can live it in all its phases. All of us are constrained to omit something that we should like to do. As the pupil grows older and has mastered those foundation studies on which advancement in all depends, he should be given increasing opportunity to select studies in terms of his own individuality. Division of labor has added so much to life because it has allowed individuals to be classified according to their capacity and natural tastes. Foreigners have said that the success of American manufacturers is largely due to their "scrap heaps" on which they throw an old machine as soon as a better one appears. Optional courses may serve as a stepping-stone to relegating to the "scrap heap" many unnecessary branches and inferior teachers.

The tendency toward secondary enlargement has been felt for a long time. The English course has been so enlarged and improved during the past twenty years that we are justified in saying that a new English course has been added. During this period manual training has been introduced. Right here critics are saying that this tendency to enlargement results in expensive mistakes; that it fails to hold pupils in school as well as the older régime. They are quoting, in answer to those who claimed that manual-training enlargement would furnish the secondary bliss for which we sighed, the testimony of one of the great superintendents of the country, who at the superintendents' meeting in February, 1903, said:

> With the largest city manual-training school in this country, after several years of experience, we have found thus far that it neither holds pupils in school so well as do the other high schools, nor do they pursue their studies so persistently; that is, they do not stick to what they start in with so continuously, especially in mathematics, Latin, German, French, English, and natural science.

The trouble here is not entirely with the manual-training enlargement, but with the fact that much of it is put in the wrong place. In manual training many schools have reversed the correct order of things, for the young child should be busy getting control of his body. Later, at high-school age, it is the proper time for him to lay the main stress on getting control of the field of ideas. There is much time wasted for the majority in passing over the long stretch between the intellectual element in manual work and the acquisition of machine expertness thru uninstructive repetition, such expertness as is in evidence in many of the "show" products of the schools. The pupil has a sort of blind consciousness of what should be his work in the high school, and if he is too much diverted from this end, he grows uneasy and leaves. Much of the manual-training work given is fit only for the grades. The fact that a mistake has been made is not in itself an argument against secondary enlargement. But before we proceed further we ought to feel that additions to the secondary course are not to be made on mere theory. The chances of mistakes are many. We cannot recall the youth of our pupils to remedy those mistakes. It is the business of educational organizations to recommend a change only after careful deliberation. But our hesitation must not be so pronounced as to preclude growth. The enlarged English course is of itself sufficient to justify attendance at the secondary schools.

We come now to the point of transcendent importance. Secondary education stands most in need of enlargement on its moral side; in its aims and ideals. How shall the high school fit its pupils better for life? is a question often asked. Even its friends would hardly contend that vast improvment is not necessary in this direction. To fit for life requires two things. The first essential is ready adaptation to varying needs and emergencies. This is the intellectual element, and progress in this direction has been more marked than in the second requisite, which is moral development. Of course, the intellectual cannot be entirely divorced from the moral. But intellectual progress for the past fifty years has been much more pronounced than moral development. The secondary school has not played the part in moral advancement that the nation has a right to demand. There must be enlargement along moral lines. The high-school graduate must be so fashioned that he can become his own master at the day of graduation. He must order intelligently the use of his own spare time. This is as important as to harness Niagara's waters. He must have sufficient power of moral resistance to enable him to walk by the gambling house, to avoid spirituous liquors, to spurn "get rich quick" methods, to battle for civic and social righteousness, to be content to stand entirely alone during some of life's bitter hours, not joining the crowd to deny the right ere the cock has crowed thrice.

Is it true that an old Grecian Stoic would notice that almost all our

high-school examinations are examinations of the intellect, in so far as it is in our power to make them so? If this is true, it is a severe impeachment. We often give the pupil who has copied his problem a high intellectual mark. The one who after two hours' work failed to solve that problem and who refused to copy it receives zero, altho his moral mark should be one hundred. In practice the schools are stressing the intellectual more than the moral. Can knowledge without character ever furnish maximum results to either the individual or the world, no matter whether it is knowledge of bookkeeping, of how to run a bank, or of a city government? Moral backbone alone will secure a hundred-fold yield from individual, social, and commercial life. If the high-school graduate continues his intellectual development on the right plane, it will be because moral development furnishes the incentive. Character will apply the spur, and the individual, like Milton, will feel that he is ever in his great Taskmaster's eye. We can train our pupils to say: "What matter if the winter is long at Valley Forge, if the opposing forces are strong, if the craven calls in our ear to sign a truce, if the enemy offers us bribes? You need never doubt us. There are no Arnolds here. We have been chosen to perpetuate this republic, to tend its hearth fires and keep them brightly burning."

I would not have the high school pay less attention to the things of intellect, but I would have it heed more that moral development which should be as all-enveloping as the summer air and sunshine which enwrap the earth and ripen fruit and grain. Every time that teachers aid a pupil in doing something for another, and in recognizing that all commerce is based on doing something for others; every time they aid him in inhibiting the expression of an undesirable emotion, in repressing the tendency to waste his time when left to himself, in suppressing an inclination toward irregularity, in reacting rightly toward the small duties of life; every time they teach him to form intelligent moral judgments on the acts of his classmates, teachers, the citizens and public officials of his town; every time that they cause him to feel deeper sympathy with others from noticing his own lack of perfection; every time that they give him a glimpse of the laws of life and show him that anything immoral is necessarily in immutable conflict with them; every time they lead him to recognize the fact that he himself naturally dislikes what is wrong in others, and, as they teach, call to their aid the force of human gravity toward what is joyous and noble and self-sacrificing and divine, by throwing on the screen of school life a well-ordered change of pictures embodying such traits; every time the teachers recognize that they themselves must be the fountain whence the moral waters flow, and that the pupils of an enthusiastic moral teacher, moral every time in small things as well as in great, will themselves as naturally tend to be moral as the buds tend to unfold when the warm

spring sun shines; every time that education advances on lines like these, it is enlarging in the noblest sense. I think that the tendency in this direction today should be the most pronounced of all.

No matter if the intellectual element apparently lags behind, time must be taken to secure more certain moral results and to add to the world of self-governing republics every graduate of the secondary school. Those graduates who have had developed in them moral sinews of steel are already fitted to grapple with the most of life's emergencies.

DISCUSSION

GEORGE D. PETTEE, principal of the University School, Cleveland, O.[1]—The last decade of the closing century brought profitable discussions of *topic-values* in the curriculum. The present decade finds us measuring the *time-values* of our courses. In a comparatively new country and a rapidly expanding civilization, the order could scarcely be reversed.

As a result of awakened and widened interest, and by virtue of specific reports by committees originating in this Association, we have a clearer conception today of the essential value and the educational significance of certain studies than was possible twenty years ago.

We have exalted the study of English, our mother-tongue, not so much for discipline in linguistics, as for itself, in choice literature, and as tending to liberal culture. The history of the world and of its peoples, of its institutions and of its gradual conquest by man, has demanded and received its larger place. The beginnings of science and the elements of manual training fulfill a legitimate function in the curriculum. We are imitating the old world in correlating our mathematical studies, and in finding their affiliations to each other and their numerous applications in the physical world.

Latin, more and more, holds commanding position, both as master-tool in discipline study and as foundation stone for language-building. *Per contra*, we are probably witnessing the passing of Greek, at least from our secondary schools. It does not reflect upon language-study as a key to knowledge to admit that the double course in the dead languages brought into peril the so-called classical course, making, as it did, Greek the supreme test of scholarly ambition, but closing the doors of culture training to many who should and would otherwise have entered.

In recent years we are more thoroly cultivating the *entire* secondary field, and we are not appreciably increasing our acreage. We begin to see that practically all boys should cover the whole field, that specialization in the early years is dangerous to character and to intellect-building. A high-school boy must have his doors to life kept open for him as late as possible and as wide as possible. The tendency is to open a boy's mind by a *wider* curriculum, not by a lengthened curriculum.

This fragmentary comment upon a few of the newer topic-values may modestly justify the statement that in these later days we are trying to study and to teach in our schools the elements of wisdom, rather than of learning. A little learning is said to be a dangerous thing, but first steps in wisdom are always safe. Wisdom is the correlation of truth, and the acquisition of wisdom must not be deferred until school days are over. In estimating topic-values, I believe we are judging branches of study in truer proportion, and our educational structure is, therefore, assuming fairer lines.

Every teacher will think of his own illustrations. I may be excused for dwelling

[1] By request of the author, the amended spellings adopted by the Board of Directors do not appear in this discussion (see resolutions adopted by the Board of Directors July 12, 1899).

briefly upon a single topic wherein new assessments of subject-value have been made, wherein a little wisdom is coming to take the place of very doubtful learning. Correlated geometry may be the practical name for the theme. Many of us recall two or three text-books of demonstrative geometry reasonably mastered by us in school and college days. I believe I knew personally some four or five hundred young men who at the same time were gaining their geometric conceptions by the same processes. Since those days I am sure I have met some thirteen or fourteen hundred boys in class-room in this and kindred topics. Only within recent years, however, have I felt urgently impelled practically to reject the elaborated form of logical deduction — of major premise, minor premise, and conclusion, of restricted axioms, of enforced abstractions. All this should come, and I would not minimize the rigorous analyses and testing of relations for boys at the right age; but I frankly lament the fact that boys of twelve or fourteen are not mastering the essential relations of geometry in correlation with their first bench and laboratory work, and I welcome the signs of the better day when this is to be possible. What Perry is doing in England, what some of our teachers at Chicago and elsewhere are beginning among us, constitute one of the hopeful tendencies of today.

Correlated geometry is so designated because the pupil is shown true relations, and by drawing and model, preferably of his own making, he finds the relations, never to lose them; he *senses* the form, the equality, the inequality, the regularity, the similarity, the parallelism, the difference in direction; he may measure lines and may also measure physical forces. He must know the number of ounces or pounds which will break a string, and he will then know the breaking strength of the big cable. He may find by experiment the relative capacity of small water-pipes, and he will readily determine the capacity of large city water-mains. By time measurements on his stop-watch he must compute the heights of falling bodies. The solution of the 30° and 60° right triangle will readily open up problems in the inclined plane, and at an early age he may safely be shown that the trigonometric sine of an angle of 30° is ½.

In brief, geometry, disassociated from elementary physics and experimental mechanics, is not geometry at all, but a refined form of logic, couched in mathematical terms. It would have been quite as possible to develop a physical logic as a geometric logic.

Algebra must, of course, find itself included in the correlated geometry, i. e., the elements of the subject, in equations and factors. When these modifications are made, the bugbear of mathematical study will go from every normal boy.

These and similar steps have been taken in assigning new *topic-values*. One by one, and in the aggregate, they point to new *time-values* within the curriculum.

For two parallel, but wholly different, reasons, we may strongly favor the early expansion of our high-school curriculum into a six-year course. The proposition is not a new one, but it is still somewhat a suggestion of novelty, not wholly digested or worked out, but surely worthy of careful discussion. The two great facts which justify the six-year high-school course are, first, the economic waste below the high school; and, secondly, the pressure within the secondary curriculum.

Some fifteen years ago he who is now the honored President of this Association wrote papers and delivered addresses looking to condensation within the primary and grammar grades; little, if anything, seemed to be left unproved. Yet conservatism has been slow to yield the points at issue, and probably only as the legitimate demands of the high school are made clear, will downward pressure carry conviction to the teachers who bear the educational burden of the lower grades.

For my own gratification, several months ago I sent some seven or eight hundred circular letters to grammar and high-school principals, endeavoring to secure something like a composite opinion, if not a consensus of opinion, upon the familiar topics of reading, writing, arithmetic, English, and geography.

The responses were more than a gratification — they were almost a surprise. We may feel much surer today than ever of our ground in the following propositions:

1. The ambitious grammar-school teacher of today believes that a boy can and should master the essentials of arithmetic in five or six years, and that the balance of his training in number work should be met in elementary algebra and geometry and in the commercial arithmetic of the later high school.

2. That geography should soon merge into history and natural and physical science, and that its study should never cease.

3. That intelligent reading and accurate, forceful writing should be cultivated and magnified; that grammatical, technical linguistic study may be reduced to lowest terms; that a still larger percentage of pupils may properly pursue the elements of Latin, and that in this study the inflection and more minute syntax may find their elaboration.

4. That much of the repetition of the earlier years does not lead to thoroughness in mastery, but often to staleness of ambition and to destructive apathy.

Fortunately, these categorical statements are still open to some dispute and surely to revision of form, but they will serve as postulates in the problem of getting pupils ready for a modified high school at twelve years of age. I remember that a large percentage of our young people leave school at fourteen or fifteen years, and it is partly in the interest of such pupils that I would hasten the day of the six-year high-school course.

Such a course naturally divides into the lower high school — say, for boys of twelve to fifteen—and the upper high school, for boys fifteen to eighteen. Through the lower high school it should be hoped or required that all pupils pass. Into this lower high school also should be put those studies which are general rather than technical — those which magnify the facts of life, just as the physical life of the boy takes on new vigor; studies which postpone the abstract analysis, but cultivate the concrete expression of topics which teach the boy to appreciate, to the highest possible degree, the world in which he lives, physical, intellectual, and moral; its men, and something of its books. If into these years may come other language study than that of the mother-tongue, his Latin, French, or German should be begun.

Every boy should be given more than at present of botany, physical geography, geology, physiology, current history; something of manual training in clay, wood and metal; here should come his correlated geometry, with its mensuration, its construction, its laboratory experiments; his field excursions, his visits to great industrial plants, to the rare and wonderful in nature. Here should the reading habit and an intelligent relish for good books be cultivated.

With such a course, wisely handled, the boy who leaves school at fifteen is vastly better fitted for his little place in the world than the boys we see quitting school days at the end of the grammar grade.

In the upper high schools will be found the boys who are ambitious to reach out to the best. More should be drawn into this upper school, through the tastes which they have already acquired of studies broad and inspiring. Better fitted by far will every boy be to decide what his future school days shall hold. If the so-called classical course is selected, with far more reason is the choice made, far less narrow will be his vision as he goes on toward college.

Say what we will of Greek and Latin being the surest tests of ambition — and after knowing intimately and well several thousand boys, ambitious and otherwise, I frankly say I know of no surer tests — the fact remains that our quickest, brightest boys are pitifully narrowed and starved on important sides of their being, by being forced directly from their grammar-school subjects into college-preparatory subjects. Only in the upper high school should the differentiation begin, and I would gladly see the course practically the same for all boys until they are eighteen. Once again, the wise boy is better than the learned boy, and it is well for a young man to know his nature on all its sides, with its broad possibilities, before he has to close the doors of his choice.

Some of our colleges are taking a great step forward from the free elective system,

in saying that a student shall touch several of the great departments of human knowledge by choosing within several well-defined groups.

The new three-year consistency in the curriculum may finally come to have numerical beauty of its own, equal to that of the old four-year courses. We may profitably assume a primary course above the kindergarten of six years, subdivided into the upper primary and the lower primary, of three years each. Following comes the secondary course, the lower high school from twelve to fifteen, and the upper high school from fifteen to eighteen. I may exceed the bounds of my paper and of my experience if I should suggest that the third stage, or university period, of our system shows at least in its lower half, or the strictly college course, a tendency toward a three-year course. I believe that the tendency of the present day is wholly toward a three-year college course.

I believe that the broadest field in which a man by personal worth can influence younger lives is in the secondary school, and, if my experience has given me insight, the fully complete college man is a better teacher of boys than the university graduate, with his greater learning. We still need the college course, as an integral thing, for its own sake, and we do not want it cut up into an aggregation of courses with vague beginning and indeterminate ending. We do not want our boys to go to college at sixteen and seventeen simply because they are quick to learn. We rightly hold them back until they are eighteen, broadening their preparation that we may more surely enrich their lives. The six-year high-school and academic course permits the largest thoughts of character-building and of rounding out a boy's nature. The four-year period is proved too short.

In conclusion, one must consider briefly the ways and means. Apparently, in buildings and equipment, a transition to the extended high-school course would not be an expensive step. Except for a rather natural increase in the number of pupils who would be kept in school, it would cost not very much more to teach boys of twelve to fourteen high-school subjects than grammar-school subjects, though there would be some advance.

In the teaching department, in which every valuable plan has its last and best testing, I believe the newer naming of the years will finally give satisfaction and the teacher's powers will be stimulated. I can think of no kinder thing to say to our grammar-school teachers than this: "We must ask you in some way to give our boys, prior to twelve years of age, their elementary training. We believe you can do it better in six years, above the kindergarten, than you can do it in eight. Six years' work spread over eight years breeds the same intellectual apathy that a three-year college course breeds when spread over what is only vaguely called the traditional four years; and in the primary school the apathy is more pernicious and more contagious."

In the exact middle of the sixth grade of an eight-year elementary course I asked a superior teacher of arithmetic if she would try to finish the two and a half years of number work in one and a half years, and if she would do the best she could, safely and discreetly, in condensing the work of the seventh grade also, so that eventually some time might there be saved. In four and a half months of special stimulus, and attended by eager response on the part of the pupils, the teacher had not only accomplished all she was urged to with her sixth grade, but found, almost to her amazement, that she was finishing with her seventh grade in a half-year nearly the entire schedule for a year and a half. That class deserved and received its first introduction to algebra and geometry in the following September.

In general, our universities must develop in their education departments young men and women who are competent to correlate truth; to foster zeal through association of topics, to set purpose and power above mere technical accomplishments — broad-minded, warm-hearted teachers, to whom the task of educating a boy is a delight in spite of its exactions; for whom there is no drudgery, because he or she creates no drudgery. When these teachers are ours in increasing numbers, when we teach things in right proportion because we *feel* the correlation of truth, then we shall not hesitate to claim the boys in

the strictly secondary course for six full years; we shall then be seeking the wisdom which outranketh learning.

The appended outline is supplied chiefly to illustrate the significance of the six-year periods, each subdivided into two three-year periods:

THE SIX-YEAR HIGH SCHOOL COURSE

AS A PART OF THE COMPLETE CURRICULUM AND WITH A THREE-YEAR PERIOD AS A UNIT

Educational Orders	Schools	Ages	Grades	Characteristics
PRIMARY	Lower Primary School	6 to 9	1, 2, 3	Reading, writing, spelling, arithmetic, drawing, music.
	Upper Primary School	9 to 12	4, 5, 6	The same, with language forms, geography, and elementary science. Object-lessons with familiar animals and plants, metals, rain, snow, brooks, etc. Making of collections.
SECONDARY	Lower High School	12 to 15	7, 8, 9	General studies, aiming at the true appreciation of nature, men, and books. Major half of curriculum devoted to facts and to processes rather than to abstractions and forms.
	Upper High School	15 to 18	10, 11, 12	Similar studies, in more technical form. Processes more exhaustive. College preparatory courses.
UNIVERSITY (TERTIARY)	College or Technical School	18 to 21		Greek begun only in college and forming the basis of the classical collegiate course. The college and technical courses largely free from professional studies.
	Professional or Graduate School	21 to 24		The age of admission, for average students, two years lower than at present.

WILSON FARRAND, master of Newark Academy, N. J.—There are visible at the present time three distinct tendencies as to enlargement of the secondary field—to extend it downward, to extend it outward, and to extend it upward. The tendency to extend it downward, by lopping off the last two years of the grammar school and establishing a six-year secondary course, or by beginning secondary studies earlier, is good and should be encouraged, altho the saving in time will not be as great as is sometimes fancied. Still there will be some saving of time and a distinct gain in relieving the pressure that now exists in the secondary course. The second tendency, to broaden the field by the introduction of new subjects, has about reached its limit. The movement was inevitable, and on the whole wise, altho there are some attendant evils that need to be guarded against. The third tendency, to extend the secondary course upward so as to include part of the present college work, is perhaps not so clearly formulated as the other two, but it is none the less real, and it is a movement that, if it advances, will affect profoundly our whole school and college system. I say college system advisedly, for the matter is not one that concerns the school alone, and the question is inextricably bound up with that of shortening the college course.

The assumption of college work by the schools has been fostered in the past by two forces—the natural desire of the colleges, on the one hand, to have their students as far advanced as possible before undertaking college work, and the equally natural desire of the schools, on the other hand, to increase the scope and dignity of their own sphere. The movement has been so gradual that its extent has not always been fully realized, but it is a safe statement that the best schools in the country now take their pupils to a point formerly reached only at the end of the sophomore year.

Harvard illustrates the extreme to which this has been carried. The Harvard admission requirements are now greater, I believe, than those of any other American college, and the pushing up of these requirements is one of the forces that have been operating to extend upward the secondary field. A student can complete the Harvard course in three

years; work done in the schools in excess of the regular admission requirements counts toward securing the degree, and a considerable number of the students who go thru in three years have done part of their college work before entrance. If the Harvard course is shortened to three years, the result will have been gained largely, if not mainly, by adding to the work of the secondary schools.

This is one of the strongest points in the argument for shortening the college course. If pupils now reach college two years later than formerly, and if at that time they have accomplished two years more of work than before, why should they not shorten the college course by that amount and leave at the same point as their grandfathers? I am not now concerned with answering this question either in the affirmative or in the negative, but I am concerned to show what effect this movement will have upon the question of enlarging the secondary field. Would the result not be inevitably to throw on the school the burden of compensating, in part at least, for the shortened course? That there would be such a tendency is certain, and it is a question whether it could be successfully resisted.

Another element that enters into the case is the advanced age at which young men, on account of the increased college requirements and the steadily growing demands of the professional schools, are compelled to begin their life-work, and the consequent tendency to skip the college altogether. Now the ordinary school course does not afford satisfactory foundation for professional study, and there is beginning to be heard a demand for more extended work in the schools that will supply an adequate preparation. The establishment of a one- or two-year course supplementary to the ordinary secondary-school work would today meet a genuine demand. It is precisely to meet this situation that the proposal is made to shorten the college course, so that here is another point at which these two questions touch.

These are the forces that are today operating to extend upward the secondary field. I have said that the tendency is perhaps not yet fully formulated, but it is real, and the demand *is* formulated in no uncertain tones. Two days ago, from this platform, President Eliot and President Harper calmly spoke of turning over still more of the college work to the schools. These men are high authorities; they do not speak idly, and their words carry weight; but I wish to take this opportunity, calmly, deliberately, and with all of the emphasis at my command, to utter a distinct and unqualified protest.

I protest against transferring any more work from the college to the school, because it means the turning of our colleges into universities and the sacrifice of one of the strongest factors in our educational scheme. The American college is an institution peculiar to this country, and has no counterpart in other educational systems. It has been developed to suit our needs, and it has proved its right to exist by the results that it has achieved. It is more than a course of study, and it is doing a work that can never be accomplished by any system of schools, however exalted. It will be a sad day for American education if students ever come to pass directly from the schools to university work.

I protest, in the second place, against transferring any more work from the college to the school because the beast is already sinking beneath the burden. We are now doing more college work than is wise or best. The secondary field has been extended outward, and at the same time forced upward, until one of the most serious evils that exist in our educational system today is the overloaded school. President Harper said on Tuesday that we could expect methods of secondary education to be greatly improved in the near future, and that because of the saving of time involved more college work could then be unloaded on the school. President Harper was right. There has been great improvement in secondary instruction in the immediate past, and we may expect more in the immediate future. But I protest against compensating for this gain by piling more work upon us, thus leaving our condition as bad as it is at present.

Personally I believe—I have no thought that it can ever be carried out, but I believe—that it would be better if college requirements were distinctly less in quantity than at present. We could do better work, and we could send better students to college, if

the amount exacted of us were less, and we had the opportunity to do the smaller quantity in the best possible manner, without cramming and without undue pressure. Time will not allow me to enlarge on this point, but I believe that the curse of secondary education today is the unreasonable pressure that now exists. Let the secondary field be extended downward, with the resultant saving of time and relief from strain; let the field be extended outward, with the consequent gain in breadth and richness; but let what is thus gained be applied to making more efficient the work that rightly belongs to us, not to making room for more work from above. Thus we shall do a double service: we shall preserve the American college to fill its rightful place between the school and the university; and we shall make it possible for the American school to become an even more efficient educational instrument than it is at present.

ISAAC THOMAS, principal of Edmunds High School, Burlington, Vt.—Whether the tendencies we are discussing are real or speculative, widespread or not, is not now the question. Of course, it would be interesting, and perhaps important, if we could determine how widespread they are, but even that knowledge would not enable us to know their character definitely. They exist in one or the other form or in both, and probably owe their existence to three causes at least: (1) the knowledge that the secondary field is not well occupied at present; (2) a feeling that it is not definitely occupied; (3) a desire — sometimes sincere, sometimes simply ambitious — to give the secondary school a larger place in our educational system. This paper discusses the tendency to the enlargement of the secondary field that owes its existence to the first cause assigned above: the knowledge that the secondary field is not well occupied at present.

However highly we may think of the work now done by the secondary school, we are compelled to admit that the demands made upon it by both the public and the college are not only not well met, but cannot be so met under existing educational conditions. We may complain, with justice too, that the college demands too much; we may say, not unjustly, that the lower schools are not meeting our demands upon them; we may cry out, with good show of reason, against an impatient and unreasonable public demand upon us; yet there the fact of our insufficiency stubbornly stands. What is to be done about it? The remedy commonly and almost universally suggested is an extension of time to the secondary school for its work, an enlargement of the secondary field in time.

An extension of time can be made in only two directions — backward into the grammar school or forward into college. Let me consider these two alternatives in their order. To extend the time of secondary work backward would shorten the school life, except as hindered by compulsory laws, of all those who now end that life with the grammar school. Can we afford to do that? Again, the average age of entrance into the high school is now between fourteen and fifteen years, or, roughly speaking, the time of transition from childhood to youth; and so the boy passes naturally, at the end of his childhood, out of the grammar school into the high school, where, because of its larger and freer ways, he finds a place in which he may better begin to realize himself.

If, on the other hand, we push the time limit forward into college, we make a similar disturbance at the other end of the line; for the average age of graduation from high school and of entrance into college and life is now between eighteen and nineteen years — an age at which the boy has come out of his youth and must begin to put on the man. The high school is no longer the place for him, needing, as he does, a place for the larger development of his better-realized self. It seems to me, therefore, that here are two time limits set in nature and good sense for secondary work, beyond which we may not pass far in either direction.

But raising objections to the remedy suggested — extension of time — removes neither the cause nor the manifestation of the cause. I have thus far spoken of what may not be done. In the brief time left I shall speak of what may be done; for I believe that the demands, both of the college and of the public, upon the secondary school can be ade-

quately met without any extension of time, without an enlargement of our field in that direction. How? In reply I make two suggestions: First, by insisting that the quantity requirement for the individual pupil be lessened, and the quality requirement be correspondingly raised. I mean by this, not that the secondary curriculum shall be made less full, shall have anything cut out of it, nor that the pupil shall work less hard than at present, but that he shall not only study fewer subjects, but cover less ground. In a word, that he shall learn how to do and do well all he undertakes; capability and quality first, with as great quantity as possible. Secondly—and I believe the two suggestions must go together for a right solution of our problem—by insisting upon and working for such an arrangement and division of work, from the kindergarten to the college, as will give to each department, in turn, that which is fitted for it and for which it is fitted. This means, of course, that such an arrangement of work does not now exist, and is merely the statement of a fact; it means that the grades are doing many things badly because unfittingly, and leaving undone many things they might do well because fittingly; it means that many things which the grades ought to have done the secondary schools are doing, and doing badly because unfittingly, and that they are also doing foolishly and ambitiously some things they ought not to be doing; it means that, wherever the blame may lie, those who are rightly held responsible for an intelligent and sane arrangement of school work have not yet brought to their task that thought for the public welfare and that harmony of action which the people, whose servants they are, have a right to expect. Their just expectations will be fulfilled only when as much time and thought are given to the practical and local problem as are now given to the abstract and general one, and when we fully realize that we constantly face a condition and not a theory.

Dr. Julius Sachs, New York city.—The discussion this morning supplements that of Tuesday. The three-year college course definitely affects the high school. Secondary schools do not wish to invade the college field, because they wish to do thoroly and intensively what they have now to do. It is quality rather than quantity that should receive emphasis. Method and methods have not been made sufficiently prominent. We need to strive, as teachers, for intellectual equipment. Here the college can greatly help the work of secondary schools. The colleges can do more in this respect than they do now. They should give special training for teaching.

E. V. Robinson, principal of Central High School, St. Paul, Minn.—College requirements do not primarily affect the high school, because the majority of pupils in the high school do not go to college. The present system is a historical development. Ours is the only country in the world that has a fifth wheel in its educational system. Going thru all the departments of our educational course brings a young man to his twenty-seventh or twenty-eighth year before he can enter upon his life-work. This is an absurdity, which the people are not likely to allow much longer to exist.

J. H. Pillsbury, principal of Waban School, Newton, Mass.—Let us extend our work downward. We can teach our geometry much better by beginning it in connection with arithmetic in the higher grades of the grammar school. So of modern languages and of Latin. It may not be profitable to take college work in secondary schools, but we have had no difficulty in our own school.

Francis Burke Brandt, Central High School, Philadelphia, Pa.—There are two distinct tendencies in extending the field of secondary work. One is downward and the other upward. The high school stands for the second tendency. This school is asking for two more years. The additional work asked for is not to be done in the same time as now. Of 700,000 students doing secondary work in the United States 500,000 are in public high schools. We must multiply colleges. We have not enough now.

William Schuyler, High School, St. Louis, Mo.—In our western high schools most of the pupils finish education for life. We have gradually changed the curriculum

to an *omnium gatherum*. How are we going to do it all? The public will have it. That is why we do it. We of the public high school must look out for what the public wants.

OLIVER S. WESTCOTT, principal of Robert A. Waller High School, Chicago, Ill.—The people will not vote all the taxes we need to satisfy the fulminations of various speakers.

GEORGE W. ROLLINS, master of Public Latin School, Boston, Mass.—For at least twenty-five years the high school has been dipping down into the grammar school. We take pupils at the close of the sixth grade. We may, by this process, save one year.

WILLIAM H. BLACK, president of Missouri Valley College, Marshall, Mo.—We are in danger of making an unnecessary ado about two things. It is very dangerous for a young man to get out of school before the age of twenty-five. Many people have done their best work after forty. A well-mastered life is the all-important thing. That takes time. Quality is important. The quality of the student makes for ability to do qualitative work in the course. It makes no difference so far as the Republic and its great mission are concerned whether we conform to foreign systems or not.

COEDUCATION IN THE HIGH SCHOOL

G. STANLEY HALL, PRESIDENT OF CLARK UNIVERSITY, WORCESTER, MASS.

Men and women differ in their dimension, sense, tissue, organ, in their abilities, in crime, disease; and these differences, which science is now multiplying and emphasizing, increase with advancing civilization. In savagery women and men are more alike in their physical structure and in their occupations, but with real progress the sexes diverge and draw apart, and the diversities always present are multiplied and accentuated. Intersexual differences culminate during the sexual period. Little boys and girls play together, do the same things, in many respects have the same tastes, are unconscious of sex, as too in senescence there is reapproximation. Old men and women become more like each other and are again in a sense sexless.

Divergence is most marked and sudden in the pubescent period—in the early teens. At this time, by almost world-wide consent, boys and girls separate, and lead their lives during this most critical period of inception more or less apart, at least for a few years, until the ferment of mind and body which results in maturity of functions then born and culminating in nubility has done its work. The family and the home abundantly recognize this tendency. At twelve or fourteen brothers and sisters develop a life more independent of each other than before. Their home occupations differ, as do their plays, games, tastes. This is normal and biological. What our school and other institutions should do is to push distinctions to their uttermost, to make boys more manly and girls more womanly. We should respect the law of sexual differences, and not forget that motherhood is a very different thing from fatherhood. Neither

sex should copy or set patterns to the other, but all parts should be played harmoniously and clearly in the great sex symphony.

I have here nothing to say against coeducation in college, still less in university grades after the maturity which comes at eighteen or twenty has been achieved; but it is high time to ask ourselves whether the theory and practice of identical coeducation, which has lately been carried to a greater extreme in this country than the rest of the world recognizes, has not brought certain grave dangers; whether it does not interfere with the natural differentiations everywhere seen in home and society. I recognize, of course, the great argument of economy. We should save money and effort, could we unite churches of not too diverse creeds; could give better preaching, music, improve the edifice, etc. I am by no means ready to advocate the abolition of coeducation, but my purpose today is to sum up in a rough, brief way our account of profit and loss with it.

On the one hand, I believe that each sex best develops some of its own best qualities in the presence of the other; but the question still remains: How much? when? and in what way? Association secures this end. I think that girls and boys are often interested in different aspects of the same topic, and this may have a tendency to broaden the view-point of each and bring it into sympathy with that of the other; but the question still remains whether one be not too much attracted to the sphere of the other. No doubt some girls become a little less gushy and sentimental, their conduct more thoughtful; their sense of responsibility for one of woman's great functions, which is bestowing praise, is increased. There is much evidence that certain boys' vices are mitigated; they are made more urbane; thoughts of sex are made more healthful. In some respects boys are stimulated to good scholarship by girls, who in many schools and topics excel them. We should ask, however, what nature's way is at this stage of life; whether boys, in order to be well verified later, ought to be so boisterous and even rough as to be at times unfit companions for girls; or whether, on the other hand, girls, to be best matured, ought not to have their sentimental periods of instability, especially when we venture to raise the question, whether for a girl in the early teens, when her health for her whole life depends upon normalizing the lunar month, there is not something unhygienic, unnatural, not to say a little monstrous, in school associations with boys when she must suppress and conceal her instincts, feelings, and instinctive promptings, and these times which suggest withdrawing, stepping aside to let Lord Nature do its beautiful, magnificent work of efflorescence. It is a sacred time of reverent exemption from the hard struggle of existence in the world, mental effort in the school. Medical specialists, many of the best of whom now insist that she thru this should be, as it were, "turned out to grass," or should lie fallow so far as intellectual efforts go, one-fourth the time no doubt, often go too far; but their unanimous voice should not entirely be disregarded.

It is not of this, however, that I would speak, but of the effects of too familiar relations, and especially of the identical work, treatment, and environment of the modern school.

We have now at least eight good and independent statistical studies which show that the ideals of boys from ten years on are almost always those of their own sex, while girls' ideals are increasingly of the opposite sex, or also of men. That the ideals of pubescent girls are not found in great and noble women of the world, or in their literature, but more and more in men, suggests a diversity "between the ideals adopted and the line of life best suited to the interests of the race," and also that we are not furnished in our public schools with adequate womanly ideals in history or literature. The new love of freedom and fame which women have lately felt has produced a reaction toward the other extreme, which inclines girls to abandon the home for the office. "It surely can hardly be called an ideal education for women that permits eighteen out of one hundred college girls to state boldly that they would rather be men than women." More than one-half of the schoolgirls in these censuses choose male ideals, as if those of femininity are disintegrating. A recent writer, in view of this fact, states that "unless there is a change of trend we shall soon have a female sex without a female character." In the progressive feminization of our schools most teachers, perhaps naturally and necessarily, have more or less masculine ideals, and this does not encourage the development of those that constitute the glory of womanhood. "At every age from eight to sixteen girls named from three to twenty more ideals than boys." All these facts indicate a condition of diffused interests and lack of clear-cut purposes, and a need of integration.

When we turn to boys, the case is different. In most public high schools girls preponderate, especially in the upper classes; and in many of them the boys that remain are practically in a girls' school, sometimes taught chiefly, if not solely, by women teachers, at an age when strong men should be in control more than at any other period of life. Boys need a different discipline and moral regimen and atmosphere. They also need a different method of work. Girls excel them in learning, memorization, excepting studies upon suggestion or authority, but are often quite at sea when set to make tests and experiments that give individuality, which is one of the best things in boyhood, a chance to express itself. Girls preponderate in high-school Latin and algebra, because custom and tradition, and perhaps advice, incline them to it. They preponderate in English and history classes more often, let us say, from inner inclination. The boy sooner grows restless in a curriculum where form takes precedence over content. He revolts at much method with meager matter. He craves utility; and when all these instincts are denied, without knowing what is the matter, he drops out of school; when if a robust tone and a true boy life prevailed, such as is found at Harrow,

Eton, and Rugby, he would have fought it thru and done well. This feminization of the school spirit, discipline, and personnel is bad for boys. Of course, on the whole perhaps they are made more gentlemanly, at ease, their manners improved; and all this to a woman teacher seems excellent; but something is the matter with the boy in the early teens who can be truly called "a perfect gentleman." That should come later, when the brute and animal element have had opportunity to work themselves off in a healthful normal way. They still have football to themselves, and are the majority perhaps in chemistry, and sometimes in physics; but there is danger of a settled eviration.

The segregation which even our schools are now attempting is always in some degree necessary for full and complete development. Just as the boys' language is apt to creep in and to roughen that of the girls, so girls' interests, ways, standards, and tastes, which are crude at this age, often attract boys out of their orbit. While some differences are emphasized by contact, others are compromised. Boys tend to grow content with mechanical memorata work, and, excelling on the lines of girls' qualities, fail to develop those of their own. There is a little charm and bloom rubbed off the ideal of girlhood by close contact, and boyhood seems less ideal to the girls at close range. In place of the mystic attraction of the other sex that has inspired so much that is best in the world, familiar comradery brings a little disenchantment. The impulse to be at one's best in the presence of the other sex grows lax, and each comes to feel itself seen thru, so that there is less motive to indulge in the ideal conduct which such contact inspires, because the call for it is incessant.

This disillusioning weakens the motivation to marriage, sometimes on both sides. When girls grow careless in their dress and too negligent of their manners—the best school of morals—and when boys lose all restraint which the presence of girls usually enforces, there is a subtle deterioration. Thus I believe, altho of course it is impossible to prove, that this is one of the factors of a decreasing percentage of marriage among educated young men and women.

At eighteen or twenty the girl normally reaches this maturity, when her ideas of life are amazingly keen and true; when, if her body is developed, she can endure a great deal; when she is nearest, perhaps, the ideal of feminine beauty and perfection. We have lately in this country and Europe had a dozen books, of a more or less naïve or else confessional character, written by girls of this age, showing the first glorious inflorescence of womanly genius and power. In our environment, however, there is little danger that, this age once well past, there will slowly arise a slight sense of aimlessness or lassitude, unrest, uneasiness, as if one were almost unconsciously feeling along the wall for a door to which the key was not at hand. Thus some lose their bloom and, yielding to the great danger of young womanhood, slowly lapse to an anxious state

of expectancy, or they desire something not within reach; and so the diathesis of anxiety slowly supervenes. The best thing about college life for girls is, perhaps, that it postpones this incipient disappointment; but it is a little pathetic to read, as I have lately done, the class letters of hundreds of girl graduates, out of college one, two, or three years, turning a little to art, music, travel, teaching, charity work, or trying to find something to which they can devote themselves—some cause, movement, occupation, where their glorious capacity for altruism and self-sacrifice can find a field. The tension is almost imperceptible, perhaps quite unconscious. It is everywhere overborne by a keen interest in life, by a desire to know the world at first hand, while susceptibilities are at their height. The apple of intelligence has been plucked at perhaps a little too great a cost of health. The purely mental has not been quite sufficiently kept back. They wish to know a good deal more of the world and to perfect their own personalities, and they would not marry, altho every cell of their bodies and every unconscious impulse point to just that end. Soon—it may be in five or ten years or more—the complexion of ill-health is seen in these notes; or else life has been adjusted to independence and self-support.

But I must be brief. What should be done? We can, at least, enlarge the elective system and wait for spontaneous interest and needs to declare themselves even yet more fully; but we must not forget that this has its limits. Already we have the complaint that where one sex preponderates in a subject it tends to be avoided by the other. Again, we can multiply high schools for girls, and study and utilize their conclusions and experiences to fit them to their nature and needs, as boys' schools have been adjusted to theirs. Already we have suggestions of a girls' botany, biology, and chemistry, emphasizing different methods and topics from those that prevail today. Again, we can investigate the suggestion of two kinds of schools for girls: one for those who wish to follow the principle of training for a support, leaving motherhood, if it comes, to take care of itself; and the other, for those who would be trained first for motherhood and home life, which come to the vast majority of women, developing a curriculum on this basis, which is as different from the agenic and agamic principle as one sex is from the other. At all events, we must utterly eradicate the now prevalent idea of intersexual competition. There is no war of sex against sex, and by imagining one, woman has brought great hardship upon us.

Lastly, we must pass beyond the purely personal type of discussion of this topic to which men, and especially women, are too prone. If statistics show that the majority of college women do not marry, and that those who do marry have few children, it is irrelevant to detail the case of Mrs. A. who bore twelve children, reared them all to maturity, and died herself at the age of eighty-six. If anthropology shows that in general

women less often specialize, and, where they do so, later by several years than men, it is not necessary to point to the brilliant women who have shown precocious signs of genius and have had great careers. If in every race, and by the concurrent testimony of biology and medicine, women need periods of rest, it is no refutation to sight the women who declare that they have never known pain, ill-health, or remission of a strenuous life at these times.

In fine, my conviction is that woman needs the best. She has won, by almost universal consent, the battle of equal opportunities and privileges. The world and posterity now wait with growing concern to see whether she will be able to face the next and far higher problem of selecting from all the fields now open which interest decrees to be her own, or be content with a second best, with man-made methods, and, lapsing to a cheap idolatry of intellect, forget that she better than man represents the feeling instincts which are higher, deeper, and broader than mere mental culture; that she is a generic being, nearer to the race; that every individual of her sex is a better representative of it; and that the real solution of her problem is in the future.

DISCUSSION

FRANK SHELDON FOSDICK, principal of Masten Park High School, Buffalo, N. Y.— It is very difficult to engage in a discussion upon a subject that needs no demonstration. Some things are so axiomatic in their very nature that they require neither proof nor defense. Such a one is "coeducation in the high school," which has so commended itself to the people of our country that 98 per cent. of the public high schools reporting to the United States Commissioner of Education are coeducational, and 93.6 per cent. of all the pupils in all our secondary schools are receiving their education where boys and girls meet on a common level. If there had been any great defects in the scheme, if the finished products of these schools had not been well equipped for the duties of life, it would not have been long before we should have heard unmistakable expressions of dissatisfaction, and the segregation of the sexes in the high schools would have gained great momentum. On the contrary, during the past twenty-five years the trend of puplic opinion has been toward coeducation; the current of the best thought is still flowing steadily in that direction, notwithstanding the fact that some of the largest dealers in educational theories have maximized all the fancied defects in the system and minimized its advantages. In such a condition of affairs it is impossible to do more in this paper than to accentuate again the benefits that obtain to this plan and to answer any objections that may be discovered.

1. Coeducation tends to give our boys and girls proper conceptions of the amenities of life. It was gratifying to hear this commended in no uncertain terms in the scholarly paper to which we have just listened. When so eminent an authority as President Hall speaks of coeducation with approval and avers that "each sex develops some of its best qualities in the presence of the other," it is needless to spend any time in argument to prove the assertion. But he has handled the topic mainly from a psycho-physiological standpoint, and into that sphere it is not my purpose to enter save incidentally. It may be interesting, however, to bring out with some detail the situation that confronts the workers in a large city high school. We draw our pupils from every stratum of society. There assemble together the rich and the poor, the children of native-born Americans and

those whose parents came from across the sea. With different ideals, in many cases without any well-defined standard of perfection, they flock to us for instruction and guidance. In short, we have just the condition that those who believe in segregation insist is most unsuitable for coeducation. And yet, as the result of observation and of a practical experience extending over more than a quarter of a century, I affirm that the greatest power in softening the asperities of the average boy's manners, in teaching the observance of those courtesies that mark the true gentleman, in implanting in his very soul pure and lofty thoughts; the most efficient means of effacing from the mind of the average girl the tendency to fictitious romance that grows apace when she associates with only those of her own sex, of instilling into her life a virility that ennobles, while it takes nothing from the sweetness that is a natural element of the female character, of creating the ability to form correct judgments — is found in coeducation, in the coming together of our boys and girls in frank, open comradeship. I have to see the first intimation of "feminization of the school spirit" or a tendency toward masculinity. The charm of tenderness that is inborn in the girls, balancing the strength of true manliness that is imminent in the boys, conduces to the production of a complete, perfect manhood and womanhood.

Permit me to digress for a moment and call attention to a statement in the previous paper. "There is a little charm and bloom rubbed off the ideal of girlhood by close contact, and boyhood seems less ideal to girls at close range. . . . . This is one of the factors of a decreasing percentage of marriage among educated young men and women." Dr. Hall is right when he says that such a statement cannot be proved. Experience and observation have shown that the ties of friendship, not to say affection, that are formed during the high-school period are not, in a majority of cases, lasting, and are prone to pass away when maturity succeeds adolescence. It is not the familiar comradery so much as the natural change that comes to the boy and girl when the activities of life and the duties of the home circle have strengthened their judgment and made keener their ideas. But if it were otherwise and the statement of Dr. Hall could be absolutely proved, it would add an invicible argument in favor of coeducation. Better, far better, fewer marriages than some we wot of. Better a still greater diminution than the present congested condition of the divorce market. If it could be substantiated beyond a doubt that coeducation in the high school had even a little influence in making men and women less hasty in entering upon that most sacred of all human ties, causing them to use most scrupulous care in the choice of a husband or wife, righteous men and women all over this country would rise up and insist that this system of education be extended still further until it included every institution of learning in the land.

2. Coeducation in our high schools is of immense value in furnishing a well-rounded intellectual development to our boys and girls. On this point we begin a real separation from the views of those who believe in segregation. We all agree, however, that competition along any line, whether of business or intellectual pursuits, is productive of the best results. "No rivalry, no improvement," is a proverb as old as civilization, and nowhere is this more apparent than in our secondary schools. Eliminate the healthy emulation that exists between our classes, our pupils, our boys and girls if you will, and one great element of success has been taken away, and there ensues a dead level of mediocre effort. Now, it is urged that competition between boys alone or girls alone will accomplish the desired end without any of the disadvantages that are attributed to coeducation. I grant that in college life, where the added years have increased the mental powers, the argument is one of weight. But in the formative period of boy and girl life, as we meet it in our high schools, there is needed just the stimulus that comes from the meeting of the sexes in the class-room, where the quicker intuitive faculties of the girl are offset by the slower judgment of the boy; where both, animated with a commendable desire of doing well before those of the opposite sex — of making a good appearance, if you wish to term it so — will strive with renewed energy and the zest that comes from a healthy rivalry to accomplish with correctness the tasks set before them. It is an inspiration to stand before

a class of boys and girls and watch the play of intelligence as it appears in the different types of mind. In comparison with this, a class made up of one sex — I care not how bright, how eager it may be — is dull, spiritless, indeed, lacking that incentive to persevering work that is found in coeducation.

But it is urged that we do wrong to the boy by feeding him a girl's intellectual rations, and *vice versa;* that the former becomes effeminate, and the latter, if she retains her health after so much strenuous effort, becomes mannish, with masculine ideals, etc. Then follows what to many is a decided *reductio ad absurdum* — a plea for female algebra, female botany, female physics, etc., *ad infinitum;* and many are the so-called proofs of injury that are cited to reinforce this appeal. I presume that it can be proved by a course of physiological reasoning that such things are necessary to save the coming woman from practical annihilation, but to a practical man a request for female bread, female salad, and female pickles would be equally forceful. That there are mental dissimilarities no one will deny, but almost equal divergences are noted when girls are compared with girls or boys with boys. That the differences, however, are so great as to demand a different education is a question that has not yet been proved in the affirmative. A prominent educator summed up the whole matter very correctly and pithily when he said: "The mere fact of mental diversity no more necessitates a diversity of education than physical diversity necessitates a diversity of food and air. What must be shown is that the mental difference of the two sexes is such as to necessitate a difference of education; and this necessity must be proved, it cannot be inferred."

But many of the arguments urged against coeducation have lost their force by the adoption in recent years by the majority of high schools of a more flexible course of study, with a wide choice of options. This was done, not to bolster up coeducation, but because it was believed that our boys and girls would be greatly benefited if, while pursuing those subjects that are believed to be essential to any education, they might be given an opportunity of differentiating into channels where the natural bent of mind would find full play. Our boys are interested in physics; so are our girls. Our girls are interested in drawing and history; so are the boys. And side by side in these optional studies we find them adding zest to the work, because they look at the subjects from different mental view-points, and because each in the presence of the other aims to do the best.

3. Coeducation adds much to the moral tone of the school, gives it an uplift that it cannot get when there is but one sex represented. It was a trite saying that the poet sang:

> More human, more divine than we,
> In fact, half human, half divine, is woman.

Yet, I must say, I believe there is nothing on earth that surpasses a clean-souled, manly boy. But in the daily contact with those to whom we of the sterner sex look for examples in matters moral and spiritual there is breathed into the school life a spirit of purity that is uplifting and ennobling. There is also inculcated in the minds of our girls and boys the thought that wrong is wrong, no matter who shelters or defends it; that the same judgment must in justice be accorded a boy as a girl; that the world is entirely awry when it insists upon one code of ethics for manhood and another for womanhood; that immorality is immorality, whether seen in man or woman. Nowhere else than in a coeducational school can these principles be so firmly rooted.

Twenty centuries ago this world was honored by the presence of One who spent his whole life in ministry for others and spake as never man spake before. Altho he did not originate all the sayings that are attributed to him, he placed upon them the stamp of approval that partook of divinity. "By their fruits ye shall know them." Coeducation is distinctively the American idea. Ever since the founding of the high schools the men and women of this great country have opened them to both sexes. Side by side the boys and girls have learned the lessons of life; the great thoughts of the centuries have found a resting-place in their minds as they studied together; they have grown strong under the

moral influences that came from their endeavors to be at their best at all times; and as they have gone out into broader responsibilities and have taken up the burdens that belong to more mature years, they have made this government what it is—the home of manly men and noble women.

J. REMSEN BISHOP, principal of Walnut Hills High School, Cincinnati, O.—Few human problems are simple. Analysis usually discloses the fact that variable factors so complicate the problem as to make one definite solution impossible. We must perforce be content with a series of solutions that satisfy the conditions, or, making use of judgment, range ourselves for the solution that seems to be most generally true.

Educational problems are eminently human problems. Among these problems, that of how to combine the sexes in our educational institutions, or whether there should be any such combination beyond the primary grades, has somewhat suddenly presented itself for discussion.

No enlightened person in Europe or America denies the right of the female of our race to the fullest opportunity for intellectual development that her parents can give her or the community in which she lives provide for her. This much of women's rights has become a principle of western civilization. If there were any question of limiting a woman's opportunity to learn what she craves to learn, of cutting her off from any training for which she may demonstrate her fitness, there would be no need to add one more to the myriad protests that would be heard.

If, then, there can be, under certain financial conditions, but one accessible high school, it must admit both boys and girls. No disadvantages that could be shown would weigh in the balance against the wrong of depriving all girls dependent upon public schools for their education of the privileges of the public secondary school. Such conditions actually exist in many communities. The stern arbitrament of necessity settles the question there, and the school authorities need pay no attention to such discussions as this in progress here today, except as it may help them determine a future policy, or turn their attention to remediable defects in the coeducational high schools.

Before entering the public high school boys and girls, as a rule, have received their school training together. Sex, in certain of its manifestations, has not yet asserted itself in the normal boy and girl of thirteen to a degree that causes sex influence to be greatly felt by either the boy or the girl. If instruction in home knowledge is provided for the girls in the primary school, this, with what is learned in helping the mother, is all that they need in the way of special training. The girl as well as the boy, up to this age, should be largely occupied with childish pastimes. Boys and girls of the primary grades are, and should be, merely children together.

That there is any sudden change in all boys and girls just at the age of fourteen is not true; there is a radical change somewhere in their early "teens." The transference from the regimen of the primary grades to the regimen of the high school at approximately the age of fourteen seems to be based upon the observed fact that a fairly complete primary education can be finished by that time, and parents needing their children's services can be forced by law or custom to leave their children thus long in school. There are many who believe that the high school, in the interests of secondary education, should receive pupils two years earlier. Differentiation on the score of sex alone might be deferred to the age of fifteen. At any rate, individuality grows apace in the boy and girl of the high-school age; more slowly in the boy, more swiftly in the girl.

It is especially the girl that needs, at the age when she is most susceptible to formative influence, protection from a confusion of ideals. The boy roams almost at will and widens his horizon; the life of the girl is comparatively circumscribed, and the influences brought to bear upon her are, because fewer, more potent.

The coeducational high school should so arrange its elective system that much training in home knowledge would characterize the work plan for girls, while the work plan

for boys would be adapted to their probable future scheme of life. In practice this proves difficult. When so-called domestic science is found in the coeducational high school, it often has a position in the course in time allowance, equipment, and quality of instruction that makes it a mere appendage, properly classed, when thus treated, among fads. The daughters of the well-to-do elect it, for the fun of it, or to acquire a genteel accomplishment. The daughters of the poor shun it, because they conscientiously devote themselves to what school opinion declares the solid work of the school. The basis of this school opinion is not far to seek; to train the boy for a man's part in life or to prepare him for a higher institution is tacitly accepted by the pupils in general as the dominating aim of the school.

The best that can be hoped for by those who feel that the high-school girl needs more care than the high-school boy is that the departments of home knowledge in the coeducational schools may by their growing excellence attract more of the female pupils.

The coeducational high schools have done fine work. No disparagement is intended in pointing out their drawbacks. "Nothing," says Cardinal Newman, "carried on by human instruments but has its irregularities, and affords ground for criticism, when minutely scrutinized in matters of detail." That this scheme has succeeded where another succeeds more easily and better redounds to the honor of all concerned. The difficulty in establishing upon a useful scale the home-knowledge work for girls in the coeducational schools has been mentioned. Social distractions directly traceable to the association of the sexes also present a problem of increasing gravity. The high-school authorities can curtail within due bounds social meetings held in the school building, but they are well-nigh powerless to control the social gatherings of their pupils in private dwellings and rented halls, altho the basis of attendance at these excessively frequent functions is openly advertised to be membership in the school. The unnecessarily elaborate and expensive entertainments of the commencement season are the natural outcome of action and reaction of the sexes. And all this social excess leads to a precocity and premature satiety that must be, in the end, harmful.

A word here, too, for the boy in the coeducational high school, especially for the awkward, semi-articulate fellow. The girl of nimble intellect and glib tongue discourages this boy. In general, the girl is more of a plodder. The boy who can be made to plod only by an aroused interest suffers in the mixed class. The teacher gets such satisfactory "results" from the girls that she is not compelled to stimulate the boys; she simply "marks them down" (Heaven save the mark !). What the awkward fellow needs is self-confidence, which he has a right to gain, can only perhaps gain, amid more sympathetic surroundings. The lazy boys must be spurred by quickened interest, and the teacher must supply the inspiration; this she does not always do if she has in her class a preponderance of girls who need little inspiration.

The high school for boys only has a oneness and definiteness of aim expressed in preparation for immediate active work or for further training in higher institutions. Its departments, notably the departments of physics, commerce, and manual training, are simply and efficiently organized. Its teachers are men only and present the manly ideal. Strenuousity charges its atmosphere and is altogether good.

The girls' high school prepares for active life and for the higher institutions. At the same time, its departments of home knowledge are so wisely organized and so thoroly equipped that the majority of its graduates leave school ready for scientific home direction or home service. What the public girls' high school can do in this way toward making better-ordered and happier home life makes for the social uplift of the community; the sphere of most women will be the home. Let women be in business or politics to what extent they feel impelled to participate, but let them at least know how to manage the economics of home life.

High schools confined to one sex at least afford no stimulus to excessive "going out to parties," in which the pleasure largely consists of the exercise of sex-attraction. Young

girlhood, now almost a curiosity in some of our communities, might to some extent be restored by co-operation of girls' high schools and parents. Parents often deplore the precocity of their daughters and lay the blame upon the schools, while the schools plead want of jurisdiction and inability thru moral influence alone to accomplish what belongs to the domain of authority.

Another matter worthy of consideration: Many girls have been injured by the nervous strain due to their ambition to do all the work of the high school at a period of their physical development when strains are dangerous. In the school for girls alone, sagacious teachers can so arrange the work as to remove all stigma from those pupils who are doing all they should, but not all that others are doing. In the coeducational school an easy course for girls only would be contrary to theory.

Several notices to the effect that this paper must not exceed seven minutes have terrified it into even smaller compass, and into a sententiousness excusable only on the score of extreme brevity. It merely contends that coeducational high schools are good, but that separate high schools, if they can be maintained in accessible proximity to pupils' homes, are better. The boy and the girl are different, with different natural interests, thru the agency of which they can be best developed. If the girl grows to womanhood amid womanly activities, and the boy hammers out his much more toilsome process of growth toward manhood among boys and men, it is thought that both will emerge from puberty with a better contribution to society. So short a paper does not venture to hint that separate high schools might slightly counteract the strange feminization of employments, which is, indeed, chiefly an economic phenomenon.

J. A. BIVINS, principal of High School, Charlotte, N. C.—In treating the subject of coeducation in the high school, I should like to place some limitations on the term "high school." By it I do not mean the boarding school, which, for various reasons, should be restricted to one sex or the other. It is rather of the public high school that I wish to treat. Being irresponsible for the home life, and to a large extent for the social life, of the pupils, such a school is exempt from some of the drawbacks attending coeducation, while it affords a field for the display of many of its advantages.

In the consideration of this subject we are not at a loss for statistics. The Commissioner of Education recently sent a circular letter to the leading high schools thruout the country asking for definite information regarding separate and mixed schools. An examination of the replies shows that coeducation has held its ground during the past decade. It is a matter of record that the great majority of the secondary schools in America are at present attended by both sexes. In 1891 only fifteen cities out of 628 reported separate schools; and in 1902 three of these fifteen had joined the ranks of coeducation, no change being reported in the others. It seems, too, that mixed schools have proved satisfactory in the main. In England, France, and Germany, where the conventionality of centuries may not be changed in a day, separate schools are still the rule. It is often a matter of surprise to our foreign visitors to see boys and girls sitting together in the same class-rooms, reciting the same lessons, engaging in the same calisthenic drills. Is America, with her greater freedom, in the right? Is coeducation, despite the fact that it is seemingly well intrenched, an unnatural and an unhealthy system?

To study the subject in all of its necessary phases we shall have to consider the physical, social, moral, and intellectual effects of coeducation upon the well-being of the pupils.

From the physical standpoint, it is argued that girls cannot, in the nature of the case, follow the same regimen as the boys without serious detriment to their health; that girls are naturally prone, during the high-school age, to contract nervous disorders, especially if they are subjected to severe mental or physical strain. The last word on this subject seemed to have been uttered when Dr. Clarke published his *Sex in Education*. But subsequent inquiry and experience have served to show that many of his contentions

are overdrawn, or are unsupported by facts. Recently the editor of the *Ladies' Home Journal* endeavored to help the cause of nervous and overworked schoolgirls by publishing a page of so-called letters from mothers. The artificial and uniform style of these letters, however, stamped them as coming largely from the same "mother." Their general tenor went to show how "Mary, just budding into sweet womanhood, entered the high school. She became ambitious in her studies, and now she is an angel in heaven." If these melodramatic epistles were half true, we should close the doors of our schools against girls and go to feed them on Mellin's Food. No one denies that the girl sometimes makes shipwreck of her health by working too hard at her studies. But he who asserts that the majority of cases of ill-health among girls can be traced to the school would perhaps find it difficult to verify his assertion. It was pointed out by Thomas Wentworth Higginson, in reply to Dr. Clarke's book, that "in country villages where there are only very poor district schools, kept for less than half the year, the traveler constantly observes among the farmers' daughters cheeks as pale and vitality as deficient as in the best-educated metropolis." My own observation bears out the truth of this statement. In fact, I should be inclined to assert that, according to population, there were *more* cases of debility among females in the country than in the city. Mr. Higginson further observes that of the wealthy classes who attend private schools, as compared with the middle class who go to the public schools, we should expect to find, on the basis of Dr. Clarke's contention, a higher degree of health among the former than the latter. But, despite the fact that the daughters of the rich may study as little as they please, one would have a hard time proving that they were better favored in point of health than their more humble sisters. Study, when not carried to excess or pursued in violation of all the laws of hygiene or common-sense, promotes rather than hinders physical development. It adds tenfold to one's capacity for appropriating and enjoying the good things of life, and thus promotes a happy reaction between the mental and the physical Now, it would seem on examination that the mixed high school is an advantage rather than otherwise from the health standpoint. All courses of instruction are arranged to suit the capacity of the average pupil. Furthermore, it is generally conceded that up to the age of eighteen a boy's mental development is slower than that of the girl. Therefore, while this condition serves as an intellectual stimulus to the boy, who can stand to be stimulated, it also operates to lower the standard for the girl at a time when she ought not to be taxed to the full limit of her powers.

On the other hand, it is fair to infer that girls receive physical stimulus from association with boys. A normal, healthy boy is nothing if not active. One cannot be long in his presence without feeling the magnetic influence that arises from his overflowing animal spirits. His very attitude is an unconscious banter to go out for a frolic. It is worthy of note that the girls who have brothers are far more natural and unaffected than those who do not. Such a girl may be something of the tomboy, but what of that? Along with her romping, her horseback riding, her tennis, and her golf, she is getting health, self-reliance, happiness, and that style of beauty that needs no cosmetic art to enhance it. Girls are today far more inclined to outdoor sports than they used to be—and much to their advantage. And to what can we attribute this more than to our natural, free, American way of educating the sexes together?

To say that boys and girls attend the same school is not equivalent to saying that the same regimen must be required of both. There is sufficient variety in the courses offered by our high schools to suit the most exacting requirements of sex or of individual taste. For the boys there may be shop-work, mechanical drawing, laboratory work, and the more strenuous exercises of the gymnasium; for the girls, cooking and sewing, music, painting, and the lighter Swedish gymnastics. But there will be many things which they may take in common, to their mutual benefit.

In considering the social side of this question, we note first that coeducation makes for better manners, especially among the boys. When a boy is ready to enter the high

school he is neither "fish nor flesh." He is just emerging from the semi-barbaric state of the grammar school, where he has a downright disgust for girls. Soon, however, he begins to take them as a matter of course, and even progresses so far as to wish to appear well in their sight. Hence more attention to his shoes, his hair, and other details of dress. His shyness and awkwardness disappear after a while, and he learns to speak to a girl without stammering or blushing to the roots of his hair. The innate sense of chivalry that every manly heart has for woman finds daily expression, in a mixed school, in little acts of courtesy, until what is innate becomes a fixed habit of life. And by the time the boy leaves the high school he is transformed into a courteous, self-respecting young gentleman, with pleasing manners and address, and with the knowledge of how to appear natural and unaffected in the presence of ladies.

Needless to say, girls also gain by such social relations at school. It is good for the shy and distant girl who, perhaps, has not much social life at home. It is good even for the melodramatic girl who reads novels and sighs for a lover. It is far better for her to contemplate the boy present than the boy absent. The chances are that if she sees him every day he may appear less desirable. But in the monastic seclusion of the boarding school she may eat out her heart on his account; she may even grow desperate and try to elope at the first opportunity. *Similia similibus* is by no means a bad remedy in such cases. A few stolen glances, a few sighs — and the symptoms gradually subside.

Closely associated with the question of manners is that of discipline. Having had experience in teaching both separate and mixed classes, I am free to declare that discipline is a far easier matter when boys and girls are together. They somewhat act to the mutual restraint of each other. When boys are alone with a male teacher, unless that teacher has the genius of Napoleon for command, or the power of Apollo to charm, they are more than apt to give him his hands full. But when girls are present things are different. The rough horse play, the coarse jest, the rude trick are rarely thought of. It is the evident disposition in each sex to appear to the best advantage in the eyes of the other. One educator declares that a motion of the hand or a flash of the eye is all that is necessary to control disorder in a mixed school.

It is perhaps upon moral grounds that the opponents of coeducation object to it most strongly. And in city districts where there is a large and vicious foreign element this objection is doubtless well urged. But where the population is homogeneous, and of average stability, the criticism no longer has weight. After an experience of twelve years in a mixed high school, I have failed to find a single instance of improper conduct resulting from the mingling of the sexes. On the contrary, the better elements of human nature under such circumstances have seemed to be dominant. In addition to the corrective tendencies that the presence of each sex has upon the conduct of the other, there is the further advantage that comes from their dwelling together in an atmosphere of books and of mental activity. No wonder that Dr. Harris had noticed that the atmosphere of mixed schools was desexualized, whereas that of separate schools generally tended toward immorality. The often-quoted statement of Richter on this point is as forcible as it is true. He said: "To insure modesty I would advise the education of the sexes together, for two boys will preserve twelve girls or two girls twelve boys innocent amidst winks, jokes, and improprieties, merely by that instinctive sense which is the forerunner of natural modesty. But I will guarantee nothing in a school where girls are alone together, still less boys." From the foregoing we fail to see where the separate school has any advantage over the mixed school in point of morality. Rather it is true that both theory and practice confirm the opposite view.

As regards the intellectual phase of the question, the objection has been raised by some that girls require a different kind of training from boys, and should therefore be educated by themselves. There is no question that the majority of women are destined to the sphere of the home. This would naturally require some differentiation in their training, but not so much as was once thought necessary. It has been found, not only

that women can measure up with men in the so-called masculine studies, but also that such studies are beneficial to them; beneficial not only in the lines of independent activity that many women, either from choice or necessity, are now pursuing, but beneficial mentally. Shall the education of women be such as to make her visionary and impractical, full of sentiment and gush, simply because her nature is finer and more sympathetic than man's? Would it not be better, along with the poetry and music, to have some training in the exact sciences? But since these questions have been thoroly argued and generally agreed upon, it is not my purpose here to discuss them. Most assuredly, as I have before pointed out, the fundamental nature of the courses in our high schools permits that the sexes may study the same subjects together, while there is latitude enough to allow for varying conditions. This being granted, we may ask whether there is any intellectual gain to the pupil in coeducation. It is a well-known fact that girls are, as a rule, more studious than boys and more conscientious in their work. They thus set a high ideal for the class. A boy naturally feels ashamed to be outdone by a girl, and will spur up his efforts to prevent it. I have known cases in which girls have had a good influence over their boy admirers in arousing their ambition.

Somehow a subtle but distinct influence is felt in the schoolroom that contains both boys and girls. Each sex seems desirous of winning respect from the other, both in regard to behavior and work. Of course, there are exceptions; classes differ from each other almost as much as individuals. The mere fact that classes are mixed by no means insures perfection. But I fully believe that, all other things being equal, there is more interest, better behavior, better work in the class where the sexes recite together than where they are kept separate.

This mutual stimulus of the sexes keeps the routine work of the schoolroom oftentimes from becoming humdrum. It may sound like a bit of sentimentalism, but there is little doubt that a sort of romantic interest springs up along with the Latin and mathematics as a result of this sex-association. There is that in the fervid imagination of youth which makes of each lad a hero and of each lass a heroine, and transforms the prosaic schoolroom into a "field of cloth of gold." Nor do the Latin and the mathematics suffer on this account, but rather gain. Pleasure adds zest to work and work to pleasure. These young people do not have to fall in love to be interested in each other. The possibilities of the future lend a romance to the present, and that is sufficient. Affection under such circumstances is not the "master passion," and need not cause the slightest alarm.

Another good advantage of coeducation is that it permits teachers of both sexes. That instruction is necessarily more or less one-sided and incomplete which comes from teachers exclusively of one sex. What a misfortune, for instance, to be placed under the absolute dominion of a set of old maids who have very decided convictions and are terribly set in their ways. I hasten to correct the impression that may be formed that I think lady teachers are all of this class. Far from it. But I mention a condition by no means impossible or unheard of.

I believe thoroly in the coeducation of the sexes. It is the natural way. Nor do I believe that it cheapens woman to be associated with man in intellectual endeavor. If woman's charm is essential and not artificial, there is no danger that she will lose any of it or that it will be any the less appreciated. Besides, there is so much that she can impart to man as well as receive from him. In the earlier ages, when man had to contend with the elemental forces of nature, he had no time or need to cultivate the gentler graces of character. But now he finds that he needs more of patience and of the moral virtues, and less of brute strength and animal courage. So with woman. The ruder ages forced her to stay by the fireside. But advancing civilization and changing standards have made it possible for her to do a different service, for which she needs practical wisdom and intelligent training. So one by one have the pales of prejudice and convention been beaten down, until now man and woman stand together, distinct in individuality, but

helping each other to completer living, and blessing the world with their joint labors. If this new order of things indicates true progress, and not retrogression, then is coeducation a necessity, and will never depart from among us.

DR. G. STANLEY HALL, being called out by the audience, said that coeducation transforms and idealizes home and school influences. We cannot quite fairly compare the two kinds of education, because the old arguments must be used to justify things that are expedient. Newer arguments for the separation of the sexes in education are more difficult. Coeducation in the middle teens tends to sexual precocity. This is very bad; in fact, it is one of the subtlest dangers that can befall civilization. There are momentous changes in boys at the age of fourteen. Adolescence is a crisis in their lives. The first danger to a woman is over-brainwork. It affects that part of her organism which is sacred to heredity. This danger is seen in the diminishing number of marriages. The postponement of marriage is very unfortunate in its influence upon civilization. Many men neglect marriage with no adequate excuse.

THE TEACHING OF ARGUMENTATIVE DISCOURSE IN HIGH SCHOOLS

I

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The attitude toward an opponent of a college undergraduate preparing to discuss a topic of the day was forecast with mortifying accuracy by Oliver Goldsmith in his "Good-Natur'd Man." When Leontine begs his father, the lachrymose Croaker, to listen to reason, Croaker replies: "Come then, produce your reasons. I tell you I'm fixed, determined, so now produce your reasons. When I'm determined, I always listen to reason, because it can then do no harm." To such a beginner in the study of argumentation too often the man who can differ from him is either a fool or a dullard. You will find that a college student of the best sort has an opinion on many subjects; that, if you cross-question him skillfully, perhaps he will tell you clearly just what he thinks; that possibly he may with equal clearness tell you why he thinks as he does; but ask him to state why his opponent ventures to hold a different opinion! "The rest is silence." Surely, the danger, in a republic, of this attitude of mind is evident.

Moreover, when this undergraduate is assigned a topic for discussion, he rushes forthwith to the library. His train of thought is well illustrated by the fact that, if he is assigned a topic arising from conditions of college life, he is all at sea. He ranges thru the college publications, and if they contain little or nothing on the subject, he probably comes to his instructor asking to have the topic changed, because there is no evidence on it accessible. He hesitates to accept such topics as, "Should Work in the Gymnasium be Prescribed for Freshmen?" tho he was once an intel-

ligent freshman himself, but attacks unhesitatingly questions which have taxed the powers of our foremost students of economics and constitutional history. The reason is that he knows there is on the second kind of topic a wealth of published material; that on the first topic very little has been printed. The undergraduate of today has an undue regard for what is in print; for what other people say, as contrasted with the value of what they say. If my classes are discussing a question involving engineering, I can never be sure that some debater will not attempt to meet evidence of an authority on engineering with a quotation from a magazine article contributed by a hack writer or by a man who has made his reputation in a totally different field. Ever since "McAndrews' Hymn" Mr. Kipling has been for the undergraduate an authority on engineering. Very recently a professor in one of the leading medical colleges of the country said to me: "You college teachers must do more to make your graduates understand that not everything in print by a student of a subject is indubitable. I spend hours which I need for other purposes in making college graduates grasp that seemingly self-evident fact." To this very attitude of mind may be traced a large part of current inaccuracy. It is so much easier to repeat, parrot-like, than to examine, weigh, and adjudge. Yet in many departments of knowledge the discovery of new facts is well-nigh impossible, tho there is hardly a field of human thought in which facts, so called, when subjected to rigid scrutiny, will not reveal error or wrong emphasis, and bring the critical investigator contributive results and reputation.

Probably, too, the intense activity of our people manifests itself in this would-be debater in a feeling that at twenty-two he must be for some reason a marked man among his college mates. But, instead of winning slowly a reputation in some one of the many activities which college life offers, he rushes into all which open before him. Constantly I meet youths of much promise as speakers who so dissipate their energies in a half-dozen interests that they accomplish little even in the subject for which they have inborn capacity. Like many others in the college world, they have not the power to select, to distinguish what, with their equipment, they may do from what they may not. Our secondary education, then, develops the memory; it creates a zest for acquiring information; but only rarely, apparently, does it train youth to think for the pleasure of thinking. Watching the undergraduate in his restless activity, one is reminded of the wise words of Richard Brinsley Sheridan: "Now and then, be idle. Sit and think!" and wishes that they might be written large where the undergraduate should see them daily, and, seeing them, obey.

Who is responsible for these conditions—this narrow-mindedness, this lack of constructive thinking, this inability to see proportions justly? Both the college and the school, I think. Certainly, for years we of the

colleges have, in our teaching of English composition, been dwelling too much on the presentation of thought, too little on training our pupils to think. No normal boy wants a vocabulary for its own sake: he wants it when he has ideas which he cannot express with the words at his command. Recognizing this, we of the colleges are trying to rectify our past error; but that is not enough. What I have been describing in the undergraduate is an attitude of mind, well developed or even set by the time he can begin in college his special study of argumentation. Every year I spend a large amount of time battling bad methods of thinking which have, at least, not been rectified by the training of the student in the secondary school. I believe, therefore, that in the boarding schools and the high schools of the country much more attention should be given to training boys and girls to think, and that, as the quickest means to this end, the teaching of argumentation should be developed in these schools; for, properly taught, it creates or develops a love of thinking for its own sake, fair-mindedness, and a just sense of proportion.

Of course, I know the objection which instantly arises—that already the high-school curriculum is crowded; that to remove any subject is to take from a student what is as valuable as the study I suggest, or even more valuable. But must we crowd out anything? Possibly some readjustment may be made. Moreover, I doubt if, during the next five years, teachers in high schools will find themselves perfectly free to say whether or not the subject shall be taught to their pupils. Even now debating societies in the schools are increasing; and inter-scholastic debating gains recruits each year. For some time, I am told, there has been a successful inter-scholastic debating league of the schools in and about Chicago; and recently the Greater New York Inter-Scholastic Debating League has been organized. The history of inter-collegiate debating shows that certain results of this rapidly growing interest are inevitable. Defeat, especially repeated defeat, leaves its sting, and even its effect, on the reputation of the school. Sooner or later some teacher or teachers must take a hand, and show the ineffective debaters how to work. The better the work of the debaters and the more absorbing it is, the more it attracts attention from the regular course. Recognizing all this, some schools have yielded to the inevitable and made debating a part of their curriculum. And why not yield? In any course in preparatory English you face the great division, argumentation, as a subdivision of exposition. Usually in our high schools it is lightly touched; yet by argumentation you can teach structure in composition as you can in no other way. Now, the tendency of the past ten years in the teaching of English composition has been from a study of parts to a study of the whole. Train a boy to a proper sense of structure in argument, with its necessarily careful marshaling of facts, theories, and evidence, and you will find little difficulty in making him understand the freer structure of description, narration, and exposi-

tion. So true is this that I have for some time given the first half-year of a course on the forms of public discourse to a careful exposition of analysis and structure as illustrated in public argumentation. Once well grounded in these essentials of good argument, the class has found little difficulty with structure in the editorial, in letters to the press, and in the various kinds of addresses for special occasions. And when a boy or girl recognizes the need and the value of careful structure in his writing, he has passed two other important stages in his development: first, he has recognized that it is indeed a simple question which reveals its full significance at a glance, or which, without special thought given it, is so clear in our minds that we can present it convincingly for others. That is, he has learned to examine questions in order to find out what they involve; to ascertain what in the usual discussion of them is unnecessary or irrelevant; what, tho connected, may be admitted; what, for the sake of argument, under existing circumstances, may be granted; and on what the question turns. When he has found what technically we term the special issue, he will find that the remaining ideas fall into groups around it. That discovery means something of the greatest importance — acquiring the power to see the right values among ideas, to see proportions justly. Yet this power of distinguishing the important from the unimportant has often been declared to be the best result of the higher education. Certainly, the exercise of this power is the duty from moment to moment of the man or woman of affairs, of the leaders in any activity — from education to statesmanship.

But, it may be said, your suggestion will simply overcrowd the course in English composition. If so, may not a readjustment in another direction help matters? I yield to no one in my respect for what elocution may do for the growing boy or girl, but I believe that during the next ten years the work of elocution in our schools must be largely changed. It should become, not a co-ordinate, but a subordinate subject; and in that position it can gain swiftly the recognition which it has vainly struggled for in the past. Declamation, except in so far as it trains the voice, I believe to be well-nigh worthless. Indeed, that we should have special teachers of elocution seems to me unnecessary. Instead, our younger teachers of English, at least, should be required to give themselves such preparation as shall enable them to set standards for their pupils and to train them in right speaking and in proper delivery of their own work. For the educated — that is, for the cultivated — man and woman the spoken word is as important as the written. Let us make of elocution, not a special preparation for prize declamations, but let us incorporate it with our English work as a means to the end of correct speech, in an agreeable voice, of the thought of the pupil, and I am sure the support for elocution from pupil and general public will be that which teachers of elocution have long desired for their subject. But such com-

bination should mean a saving of time; and here is a chance for the training in discussion which I recommend; for it and the work in elocution must go hand in hand.

In schools where there is already a strong interest in debating among the pupils, I think it desirable for another reason that argumentation should become a recognized part of the curriculum. A boy who debates with only occasional guidance gains the idea that debating includes all that is most important in public speaking, and also, if his team be successful, the idea that it is an easily acquired art, which he has completely mastered. The most difficult student I have to deal with is the youth who, successful in school debates in which he has relied chiefly on his own resources, has competed at inter-collegiate trial debates only to be disregarded because of his flamboyant oratory and his inability to develop a case consecutively and evidentially. Advised by old debaters, he enters a course in argumentation. At the outset he is convinced that justice would recognize his worth, and that only an obstinate maintaining of arbitrarily established standards degrades him to association with students who have not had his advantages. His regeneration begins only when he sees that his correct theory and practice are but a few grains amidst the abundant chaff of his prejudices and misinformation. Too often, indeed, this self-trained or very slightly trained person, after his essay at college debating has not been received with acclaim, sulks in his tent for a time, and then goes over to some other less exacting college interest.

But even the boys who have been well coached fall into the error of believing that debating is the most important division of public discourse. In the first place, the preponderance is greatly in favor of work not strictly argumentative, and even forensic oratory is under no such rigid regulations as is inter-collegiate debating or its offspring, inter-scholastic debating. Boys trained in debating without any instruction as to its relation to the other forms of public discourse are like youths who take a course in journalism before they have mastered their rhetoric. Debating is the athletics of public discussion, and just as the athlete plays to win, the debater speaks to win. Yet in education one works not for an immediate result, but for an ultimate state of mind; and the desideratum in teaching argumentation should be, not the winning of a special debate, but creating in a boy a love of truth from investigation, be it for or against his original idea; a zest for constructive thinking; and an increasing interest in the excitement and satisfaction that the overcoming of intellectual difficulties may bring.

First of all, then, it seems to me that any instruction in the high schools in argumentation should treat, not debating simply, but the principles which underlie all public discourse, and should make students understand clearly the relation of debating to the other forms of public speaking. Secondly, I think the schools could do much in training boys

and girls to think for themselves if, especially in any class-room work, not always the topics set for inter-collegiate debates, many of them very intricate and difficult, but sometimes topics pertinent to the life of the school itself, be discussed. Such topics may not at first produce results as gratifying as may be obtained from subjects on which much has been printed, but they will force the pupil to think for himself, and they will make the whole subject of argumentation more vital and less a mere intellectual feat. Moreover, why should not the inter-scholastic debating be somewhat differentiated from that of the colleges? That final five minutes of rebuttal, or that series of short rebuttal speeches, in which a speaker is to hold up before the audience a large section of the case, or even the whole case itself, reduced to its simplest proportion, bringing out what is essential and striking final blows, is a difficult task for even a matured, skilled mind. Few college men can do this kind of rebutting at will; none do it without the hardest training under severe criticism. Why strain the boy or girl with that? Why, too, worry them with persuasion, beyond training them in the persuasion which comes in the delivery of a well-planned speech in a pleasant voice and manner. Persuasion may be studied better in the college than in the school, but, after all, it cannot be fully studied except by the man himself as he faces audience after audience. What any boy or girl may be taught, and what he or she will be the better for knowing, are the main rules for briefing; how to search for what is central in the question; the difference between assertion and proof; and the common-sense tests of evidence. He or she may be made to understand, too, that often one cannot prove effectively till one has cleared the ground by disproving; but that disproof of error does not necessarily establish an opposing theory. And the value of all this is twofold. It teaches what will be useful in all the forms of public discourse, and it tends to create a state of mind in which selection becomes easier than it usually is for youth, constructive thinking grows attractive, and an opponent is regarded, not with mere hostility, but with interest. Force a student to struggle with the two sides of a question by analysis, by the offsetting of the ideas *pro* and *con*, and by a careful valuation of what he finds to be essential in each of the opposing views; and he attains, first, a detestation of snap judgments and a desire, in approaching any discussion, to know the full strength of both sides before settling on an opinion; secondly, an opinion worth something; and thirdly, an opinion he can state in a way to be useful to others. Above all, he gains firmly the idea that unswerving consistency is intellectual and even moral cowardice; that the self-respecting, rational being, as he grows, will and must change his mind.

The attitude of mind thus created will be helpful, too, in all the other work of the student. Moreover, the success of the individual in life largely depends upon his ability to see, among the multiplicity of pleas-

ures and duties that each day brings, what is essential. Finally, the narrow-mindedness this training tends to destroy is responsible for the caste and the sectionalism which have threatened, and, in other forms, may again threaten, the life of the republic. The history of our country has shown more than once that only so long as we can be sure that, at a crisis in the affairs of the nation, public opinion will rally to sane and wise leadership, or, itself commanding by its sanity, force the hand of politicians, is our nation safe. Training of this kind is, then, training for good citizenship.

II

CHARLES S. HARTWELL, TEACHER OF ENGLISH IN THE BOYS' HIGH SCHOOL, BROOKLYN, N. Y.

With Professor Baker's main propositions, as set forth in the preceding paper, I heartily concur. Passing directly to lines not specifically treated in his paper, my part is to touch upon the following three points:

1. How argumentative discourse has been or may be a part of the high-school curriculum.

Professor Baker pleads for the introduction of the teaching of argumentative discourse into the high-school curriculum and speaks of argumentation as a division of exposition. In many cases the opportunity is already there. Three-fourths of the popular text-books in rhetoric which discuss exposition and argumentation give them equal prominence with narration and description, and one-fourth treat them still more in detail. The best rhetorics help the teacher to bring out the main features of argumentation.

The importance of this subject is recognized in the new syllabus in English adopted for the high schools of Greater New York by the Board of Superintendents. Argumentation is taught in the fourth and seventh semesters, and exposition in the third and sixth. In four of eight terms thus composition work encourages logical thinking. The Board of Superintendents in our metropolis has done its part. Courses elsewhere making no provision for constructive thinking and failing to recognize the educative value of argumentative discourse should be revised, and text-books in rhetoric which minimize this subject were better discarded.

2. Methods of treatment in high schools.

Methods employed in teaching argumentative discourse vary with the personality of the instructor. Resources are taxed to devise ways to illustrate clearly the inductive and the deductive syllogism, burden of proof, arrangement, motives, interests, development and summaries of proof. Models of briefs and specimens of sound argument are useful, but need the interesting teacher. One method of creating interest is on certain days to organize the class into a debating society. Two pupils who have

successfully brought out both sides of a live question before their section may discuss it before the school.

In many schools literary and debating societies are expected to do all this. Sometimes they are organized as Senate and House of state or nation, and manuals of parliamentary procedure are carefully studied. Readiness of expression and quickness of thought before an audience are cultivated, and, unconsciously, preparation is made for the actual struggles of life. But let us not allow a factious spirit to creep in, and let us discourage anything that resembles a sneer. Much prejudice against this form of discourse is due to this tendency. Our object is to cultivate the habit of looking at both sides of a real question, and to develop the power of independent thought and expression.

The motive for special interest in the study of argumentative discourse is found in inter-class or in inter-scholastic debating. A league between schools in the same city or in neighboring towns will enlist the co-operation of teachers and pupils in the schools involved. Debates in a school prepare for debates between schools, and these give stimulus to the societies in each school engaged.

3. Concrete instances of attempts to teach argumentation in high schools.

In Minnesota enthusiasm has been aroused by a series of contests among schools within the same congressional district.

In Michigan, resulting probably from the success of the state university in intercollegiate debating, unusual success has been achieved. I have solicited a report from one of the high schools. Miss Agnes B. Powell writes from Marshall, Mich.:

> Our school debates originated in the necessity of training to enable pupils to speak clearly and forcefully upon their feet. The last four years the entire high school has been divided into small sections meeting once a week. At first these sections corresponded to the grade sections—9, 10, 11, and 12—and met on four consecutive afternoons at 3 o'clock, when our session closes, but when any teacher has the right to hold special sessions for forty-five minutes more.
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> Last year the element of rivalry was introduced by cutting each grade into halves, and holding one-half of the ninth with one-half of the tenth, the other halves the next night; and on the third and fourth nights the eleventh and twelfth grades divided similarly. In this way ninths debated tenths; elevenths debated twelfths. The score grew very close at the end of the semesters. The winning grade in the half-year contest between ninths and tenths chose debaters to contest elevenths and twelfths. In both cases freshmen debated seniors and lost only by a small margin in the finals, so enthusiastic had been their preparation.
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> This year the twelfth grade pupils were assigned, three at a time, to various sections to judge the debates, each senior judging four or five times in the semester. The debates were varied by short reports on current topics once a month. Another year the ninth will devote most meetings to speeches on news, increasing the proportion of speech to debate as the year progresses. Our debates are usually upon current events.
>
> Each section was assigned to a different teacher, and all met at the same time in their respective rooms for twenty minutes. In one section of ninths each member appeared

four times during the year, never in exactly the same position. Most members were called on in the general discussion at least once in two weeks. The interest was keen throughout.

The self-possession and unembarrassed thinking of our high-school pupils when called upon to speak upon their feet in recitation or in other situations is unusual. The improvement among the ninths was marked during the year. The bearing of some tenth-grade pupils, when asked to step to the front and report briefly a magazine article read for class, would not discredit adult speakers.

Debates begin in November, and are discontinued at the first hint of spring languor.

The following plan for a half-hour debate has been thoroly tested in a Brooklyn high school. A public-spirited citizen has provided a fine cup to be held for the ensuing term by the room which wins. Each term the four rooms of the senior class have a championship series consisting of six debates at fortnightly intervals before the school. Each room debates with the other three in succession. In each twelve representatives are elected by ballot to form three teams of three speakers with one alternate. The three boys receiving the highest number of votes act as captains. The class teacher acts as coach. One team chooses the question, and its opponent chooses the side. Seldom does a substitute get a chance to speak. Not only is it an honor to represent the room, but a mark for the debate is allowed in place of that for one formal composition. A schedule is prepared, teams are elected, questions selected, and sides arranged for the entire term. This schedule is gazetted within the first month and it is strictly carried out. Three judges, teachers, appointed for the entire series, are bound by the following rules:

A maximum of ten credits shall be given each captain for his opening statement of the issue joined, and of the limitations of the question.

A maximum of ten credits shall be given each speaker for argument, refutation, and presentation respectively.

By argument is meant direct proof of the position taken.

By refutation is meant either the answering of anticipated objections or the rebuttal of advanced opposing arguments.

By presentation is meant dignity and ease of bearing, and force and gracefulness of expression.

The maximum of credits possible for either team from one judge is one hundred.

Each judge shall thus on a scale of ten record his judgment ten times for each side and cast his vote for the side making the higher aggregate.

Only the aggregate marks of all the judges shall be announced with the decision.

The order of debate is as follows:

Captains are allowed two minutes to open and five minutes to close the debate for their sides.

Associates are allowed four minutes each.

A minute's warning is to be given each speaker.

The entire debate is completed thus in thirty minutes. Then the school proceeds to sing, and the timekeeper collects the ratings from the three judges, who by no means confer with one another, notes the comparative results, and hands the decision to the principal. After

making comments appropriate and encouraging, the principal announces the decision of the judges, and gives the aggregate number of points made by either side; as, for example, 216 to 195 out of the possible 300 according to the rules. No speaker is commended at the expense of the others. Thirty-six different pupils thus in a semester have the benefit of participation in one public debate.

In the Greater New York Inter Scholastic Debating League four of the five boroughs in New York city are represented in the eight high schools which form this league. The schedule arranged for next year provides for a championship on each side of the East River, and then one of the entire city. During the year each school debates with the three others in its group, and the two winners meet in a final contest. A flag, which may be carried at future debates, is presented to each winning school.

The first step in preparation for a debate with another institution is the selection of the participants. In another Brooklyn high school, which has won fifteen out of twenty debates with six other public or private high schools in the past seven years, one method of selection is as follows: Six boys are chosen by three teachers from all comers in a trial discussion where either side of the question advertised may be presented. These are arranged alphabetically and divided into two sets to discuss a week later the sides of the question. The first and the fourth act as leaders, and thus speak twice or "sum up" for their sides. The sets are then turned about to discuss the opposite side of the question, and the second and the fifth act as captains. The third and sixth then draw lots for choice of side or first choice of associate. After three trials each judge decides separately on the three he selects and, comparing lists, the team is finally chosen, the remaining three agreeing to debate against the regular team to afford it practice. No boy is allowed to write out and memorize his arguments, but fallacies and sophistries in his reasoning are pointed out by the three trainers. Picking flaws and trying to be smart are discouraged. A fundamental injunction is: Find the strongest point your opponent can bring to bear and an answer for it. The direct arguments are separated, each speaker having a line to develop which will prove cumulative. The boy weakest in rebuttal is assigned a place after the leader, so that the third may have more opportunity to refute, while the leader in his second speech is to demolish any opposing arguments advanced which slip the attention of his colleagues and then close with a powerful summary of the points on his side.

Keen enthusiasm pervades these mental contests. It is delightful to watch the alertness of opposing teams, to note that peculiar aggressiveness and dash which only boys seem to have. It is easy to see which teams make set speeches and which analyze their problem as they would a game of chess. The value to pupils of a critical study of both sides of live

questions cannot be overestimated. Simply to appreciate the fact that there are two sides is an important lesson.

When we think of the enthusiasm of pupils along the purely physical side, we wonder if there may not be similar zest in mental struggles. Teachers and principals have great influence in popularizing the various forms of public speaking. Educators enthusiastic about inter-scholastic debating deepen interest in oratory, and a working appreciation of one form of public speaking will extend interest in other forms of oral expression.

ROUND TABLE CONFERENCES

I. CLASSICAL CONFERENCE

LEADER, HENRY WHITE CALLAHAN, STATE PREPARATORY SCHOOL, BOULDER, COLO.

GENERAL DISCUSSION

R. W. HUSBAND, Dartmouth College, Hanover, N. H.—Since I understand that this is to a large extent to be an experience meeting, the object being mutual encouragement, I want to begin by relating three things that have encouraged me this year. First, I think I have not been more merciful than usual, and yet my freshmen have taken an average mark 10 per cent. higher than for two or three years past. I attribute the gain to their better preparation for college and to their unusually good spirit. Secondly, at the end of the first semester I suggested to my second-division freshman class that I should be much pleased if they would decide to abstain from using a translation for the remainder of the year. They voted unanimously to do so, and they have stuck to it. I think this accounts for the fact that they now stand 15 per cent. higher than did my corresponding class of last year. Thirdly, about a year ago I printed a small pamphlet containing the titles of two hundred and fifty classical books recommended for a teacher's library. These have been distributed, some to the schools that fit for Dartmouth, others upon request of teachers, and I have sent out over nine hundred copies. From letters that come to me, I am sure many of them are being well used. This is to me a certain indication that teachers are anxious to broaden their classical knowledge. I am convinced that we teachers here this morning could do no more effective work for the encouragement of classical studies, than the printing of such a list of books, containing from three hundred to five hundred titles (the expense would be trifling), and spread them broadcast among classical teachers in America.

These are encouraging signs that have come to me personally within a year, and yet I do not want to feel, or make you feel, too optimistic as a result of these, which are really trifling things in themselves, altho they have shown me the tendency toward which our efforts must be directed. We have many difficulties to face, many great ones. It is needless to speak of the rush toward practical studies—a tendency as old as Pericles and Aristophanes, but no less crippling on that account; needless to point to the legislation in several colleges recently against retaining Greek as a requirement for the A. B. degree. The Greek battle that is now being waged is also a Latin battle, for I am convinced that not many years hence a similar assault will be made upon the position of Latin. The fight of the two languages is the same, and no teacher of Latin can afford to stand idly

by and allow the place of Greek to be assailed, without a serious struggle. But this is not a killing matter; it gives us a few bruises — rather hard ones at times; but bruises heal, and our spirits rise again. The outcome remains with ourselves, for all the legislation in the world will not kill the classics in our colleges and schools. We rest on a firm footing, and our business is to see that this footing continues firm. I am a graduate of a university that requires neither Greek nor Latin for entrance or for the A. B. degree, yet even there Greek is not the smallest department, and Latin is one of the large ones. Our fight is one not for existence, but for position; and if we are but ready to put on our fighting clothes, the classics will always hold an honorable and honored position.

We have an opportunity now, such as never before existed, to strengthen our position. This is to be found in that lamentable indifference on the part of students which is the greatest curse of present-day education. Not one-third of our students do their best; not one-third have a genuine interest in their work. As a fine old man in California said of his school, quoting Herodotus, πολλοὶ μὲν ἄνθρωποι, παῦροι δὲ ἄνδρες — he had "many people, but few good men." Herein is our opportunity. Seize upon your careless students, teach skillfully and interestedly, and good results can be guaranteed. The influence of strong teaching in secondary schools is enormous, irrespective of department. Scholars are made in secondary schools much more frequently than in colleges, and the scholar remembers his teacher much longer than he does his course. Hard work, vigorous and interested teaching, backed by knowledge that compels respect, will banish forever the students besetting sin of indifference; and the teacher with these characteristics will draw students, whatever be his subject. The student needs an impetus, and if it comes from the classical teacher, the classics will flourish; if not, heaven help us! The secondary-school teachers have it in their hands to kill or restore the classics; it is with them the burden *must* rest. If a student has felt for three or four years that Greek and Latin are a drag, we can do nothing with him in college; our labor is lost; an angel from heaven could not reclaim him. I wish to repeat this point: students are afflicted with chronic indifference to all their work; strong teaching in some one department will cure the malady; and I appeal to the classical teachers to cure it.

There is but one way of making the most of our present opportunity, and that is by successful teaching. With the odds against us as they now are, it is not sufficient that we teach as well as the teachers of science or history. I am convinced we do that now, but we must do still better. I have no pedagogical theories; I hold to the old-fashioned belief that the greater our knowledge the better we teach. But before this, there is one quality that must be possessed, or effort is vain. This is *enthusiasm*, and enthusiasm for *each day's work*. I know a teacher who has such fondness for the Greek verb that his pupils believe it a work of art, and soon become as enthusiastic and familiar with it as he is. Here I wish to utter an earnest protest against allowing a pupil to think that *anything* he does is valuable only as a bridge, useful in aiding him to gain some other desired point. I therefore protest against those grammars which are written merely as an aid to later reading. We have grammars that appeal to our sense of beauty, symmetry, and clearness, and these are the only ones fit for use. Enthusiasm for his subject will certainly lead the teacher to widen and strengthen his own knowledge. He who has not increased his knowledge every year since graduation, cannot be a successful teacher. Either enthusiasm or industry is lacking, and a want of either quality should force a teacher out of the profession. I have made this statement before, and have been criticised for it on the ground that teachers have not time for extra work. I shall, however, continue to make the statement, and for evidence that I am right, need only point to those well-known secondary-school teachers who are both our most successful teachers and best editors of text-books. If I were a member of a school board, one of the first questions I should ask an applicant for a position would be: "What have you read or written on your subject since graduation?" A teacher should read broadly in his classical authors, and read intelligently, and with great accuracy. It is our business to work as

hard as health will permit, with but the single reservation that we should always appear before our classes in good physical condition.

There is one serious lack in the teaching of Latin and Greek that renders it surprising that *any* students realize the value of studying the classics. At the beginning of the last academic year I was amazed to find that freshmen could translate accurately three or four pages of Herodotus and not know what they had been reading about. We need the teaching in forceful, vigorous, virile manner of the historical, or linguistic, or religious, or rhetorical value of what we teach. The teacher who thinks, or allows his pupils to believe he thinks, that Cæsar is stupid, is deserving of instant dismissal. Another thing that is partly responsible for the students lack of appreciation is their excessive use of translations. Many begin their use with the first page of Cæsar and continue thru life. In college we can rarely secure sufficient personal interest to induce the dropping of this curse. It can be done in secondary schools, and must be done if students are to be saved. The teacher in secondary schools has the rare power of inducing boys and girls to do as he wishes, and this is one of the things he should set about instantly.

If, then, we realize that at this moment we have an opportunity to revive interest in the classics, and labor to the utmost of our ability to accomplish it, by teaching with greater skill, and by increasing our own enthusiasm and knowledge, the fate of classical study in America will not long be in doubt.

Walter B. Gunnison, principal of Erasmus Hall High School, Brooklyn, N. Y. — It is gratifying to those who are interested in classical education in secondary schools to know that with the greatly increasing growth in secondary work the interest in classical studies is showing such marked advance. In Latin particularly more pupils in proportion to the whole number enrolled are studying it than ever before, and this too when so much extra time is being given to other subjects, especially to science and English. This approval of the idea, so broadly urged for years, that Latin offers one of the best means for a broad and liberal culture and training, and the finest foundation for other work, is to our mind but natural and sound. And yet the obligation is upon us classical teachers to guard jealously this pronounced tendency and to hold the study to its legitimate limits. We must bear in mind that we are furnishing this for secondary pupils, not more than one-fourth of whom will carry their work into the college and university. What is, therefore, to be kept in mind all the time is the good to the greater number. Profound scholarship and complete mastery of this language must not be the aim alone. Four years of work must be put to the best use. With this in mind, I wish to protest against the too great emphasis being given to what can only be accomplished by long years of study of the subject by mature minds. A graduate of my school went to one of our leading colleges a short time ago. At the end of his freshman year I asked how he got along with his Latin. He said it was very hard on account of the great stress laid on Latin prose composition. The professor required the students to write Latin freely, and demanded that they must not only write it correctly, but must show distinctly that they appreciated and had acquired the distinctive literary style of their author, Livy. To me this seems a preposterous demand for a freshman in college, and makes an undesirable standard for the secondary school to strive for.

We cannot make Latin scholars in our fitting school, nor should we try to. I would urge, therefore, that less attention should be given to Latin prose, but greater attention to awakening a live interest from the free reading of Latin authors. This we can do and do well in our four years, and in so doing it seems to me we are best conserving the interest in classical study. We are to be more and more hard pushed by the advocates of the study of the modern languages, because they can make an apparent and usable accomplishment of the work they undertake. We can do the same service, I believe, better; but we must pay less attention to marking the quantity of long, short, and doubtful vowels, to archaic forms and useless idioms, and read — read largely of the authors of the great classic

period of the Roman language and literature. In this way only can we maintain the prestige we hold, and do the effective and useful work for our students which the times demand.

Miss Abby Leach, professor of Greek, Vassar College, Poughkeepsie, N. Y.—The one great aim in teaching the classics is to make their living power felt. "Drill" and "discipline" were the old words to conjure with, but now the striving is for quickened intelligence, breadth of knowledge, historical imagination. Read in this way, the *Anabasis* becomes the living record of men entrapped by circumstances, but clever enough and brave enough to extricate themselves and make the Retreat of the Ten Thousand famous for all time. This higher aim calls for teaching power first of all — that subtle power of sympathy that enters into the mental struggles of the individual and shows how victory can come; that can keep the minds of pupils alert, full of interest and enthusiasm for their work; that does not depend upon iteration or reiteration to carry home a truth, but knows how to vary the presentation so that apperception will surely come. And this higher aim demands, too, abundant knowledge on the part of the teacher; wide and thoro study; a mind liberalized by much reading in the classics, that has grasped a knowledge of the living and the thinking of these peoples, knows what archæology has revealed, what history can teach, and so, with rich stores of knowledge to draw from, takes up the work of the class-room, and with living interest and vital force re-creates the great past of Greece and Rome and unites it with their struggling but hopeful present. More knowledge, more study under competent teachers, is the great need of those who essay to teach the classics in such a way that the storied past becomes the actual present. In teaching Greek prose composition the teacher should have time enough to spend on each pupil so as to learn his difficulties and help him conquer them.

Study without illumination is profitless. No part of the work of learning a language should be treated as drudgery, and all the faculties should be brought into play. The aim ought to be, not to make the work easy by sliding over difficulties, but to make it so interesting that the pupil likes to work and has something for his mind to feed upon when his lessons are over. This is the natural result if the teacher has ability and adaptability, sympathy and understanding, ample knowledge, whole-hearted enjoyment in the work, and genuine appreciation of the value of classical study.

Aristotle has much to say of *κάθαρσις* in connection with tragedy, meaning by this medical term the purging of the emotions that comes when we see the tragic experiences of others vividly depicted before us, and our self-pity and our sorrow and pain are merged into the universal sorrow and grief and pain, so that we rise out of our own petty, narrow experiences into broad sympathy with humanity. This universalizing of experience is what the classics should do for us. The drama of life is enacted before our eyes, and our present fluttering hopes and fears are stilled as we see before us the past, with its hopes and fears and ambitions, its failures and successes, its magnanimity and generosity, and its envy and jealousy, and feel that times and places change, but human nature abides unchanging and unchanged. This is why the classics have won the name of the "humanities." It is because of the humanizing influence they exert.

And, further, the aim should be to make pupils feel the power of the intellectual life, and the possibilities of the intellectual life, and the love of the intellectual life, that never displayed themselves so richly and so gloriously as in these wonderful Greeks who in their responsiveness to the beauty and the joy and the charm of life, and their inimitable expression of it, are still our masters.

Maynard M. Hart, St. Louis, Mo.—One who has taught classics for any length of time cannot but recall that often he has felt as if he were beating the air; in other words, that his subject was not interesting, or perhaps was not made interesting. For my own part, I have often had this feeling, and at times have been discouraged over the results of my labors. How, then, shall we make classics more interesting? Our answer

will be found chiefly in the manner of instruction during the first year or so. It pleases me to note that of late much has been said in favor of employing thoroly competent teachers for the junior work in Latin and Greek. This means much, but it is not enough. There is a great advantage in having a resourceful, tactful teacher.

Let us take an ordinary case. A high-school teacher has before him thirty beginners in Latin. After imparting instruction, as well as he knows how, for a week or two, he becomes convinced that the class is practically divided into two or three parts: there are those who seem to master and enjoy the work, those who with frequent helps or words of encouragement may do fair work, and those who seem hopeless and appear to be discouraged almost at the outset. Is it right pedagogically, psychologically, or in any other respect to keep together these students of varying mental qualities? One may say, let the weak ones alone until after the examination, and then they will be permitted to take the same work over again. But is this best for all classes? Many pupils so treated have decided to give up the study of a language, simply because of discouragement at first or failure at the end of the first term. Some pupils cannot be made to believe that there is something in them, that their brains work slowly or differently from those of others. In my opinion, it is best for such slow or backward pupils to be placed in a class by themselves, just as soon as the instructor finds out the relative abilities of the members of his class. By being together these slow workers can go only so far as is best for them, understanding every step of the way. A person can be interested only in what he grasps or understands. It may happen that these slow workers will increase their pace and within a year or a year and a half be able to unite with other classes. The first class will certainly make much more progress than would be the case if the members of it remained with the so-called "dunces," tho I would not use that word at any time. Good work will create a wholesome rivalry, and by the time the class is ready for graduation or entrance to college you may be sure that all will have covered, not only the prescribed work, but much in addition thereto; and so the colleges will be better off. If the slow ones do not manage at length to complete the course in four years, they certainly will in five, at the least. My own thought is that after a thoro training in elementary work, even if it take a year and a half or more, they will thereafter proceed more rapidly. This may not be feasible in all schools; but I see no reason why it should not be applied in most high schools and preparatory institutions. It was tried in one of the Chicago schools, and with signal success, according to the statement of the former director of classics.

It never pays to allow students to start the regular translation of texts until they know well the forms and have a fair idea of constructions. My experience has taught me that herein lies a great defect in our classical instruction. Under ordinary circumstances students are not ready for the serious reading of an author in Latin until nearly one and one-half years have been spent in elementary work and a year at least in Greek. If the forms, etc., are concluded in Greek, say, at the end of the third term of the first year, I would spend the rest of the year in a thoro review and in reading interesting light selections, as, for instance, may be found in Turner's selections. When the author's textbook is taken up, be it Nepos or Cæsar in Latin, or Xenophon in Greek, the pupil will be less liable to use a translation — the bane to the proper study of the classics — and thereafter intelligent advancement will be made.

Finally, let me make the following suggestions:

1. The possibility of getting an introductory book taking up the declensions, pronouns, irregular verbs, etc., in the good old way, with illustrative sentences thruout. There is no use in worrying about the memorizing of these forms, for the boys find it easy enough to remember the base hits, errors, runs, etc., of eighteen players, and can find them all on Wednesday or Saturday and Sunday games. It has been said that freshmen do not know as much grammar as formerly when teachers did not despair so much of the memories of their pupils. A little more system and less high living would be a good thing for the student.

2. The need for some interesting illustrated reader prior to the taking up of the first regular text-book; for instance, *Viri Romæ* or Ritchie's *Fabulæ Faciles*. We should not rush the students into the critical study of an author.

3. The study of Greek and Roman history. If ancient history were started at the beginning of the high-school course, it would not be amiss. Perhaps the curriculum is full enough; for it does not pay to burden the minds of the pupils with too many subjects. At any rate, by the use of a historical reader enthusiasm may be created for the private study of ancient history. The student of classics ought to be encouraged to study history and literature. Certainly the teacher ought continually to keep up his studies in this direction. So many neglect this and devote their time and energy to syntax. As far as possible, matters relating to history, literature, mythology, and antiquities in general ought to receive more attention than has been the case. It might be advisable to have on the instructor's desk — not necessarily in the library — a number of books of reference. Maps ought always to be in the room of the classical teacher; otherwise the subjects will to some extent be aimless and dry reading. As much life as possible ought to be put into the work. I have found pupils really interested in classical geography — a study which may be regarded as a handmaid to ancient history. Attention should be paid to archæology — a subject of great interest at present.

4. The need of prose thruout the course. The translating of English into Latin, dry and difficult as it may seem to many, may be made interesting, if properly taught. English sentences involving the various constructions should be given for translation at least once a week after the beginning of author work. The teacher ought to receive and correct the papers, and return them marked according to merit, say by letters: *a*, a^1, a^2, *b*, b^1, b^2, *c*., etc. This method I tried in Greek and Latin, and found that it succeeded well. The pupils, in Greek especially, did their best to do the work as well as possible. By keeping up this prose work until the last the student gets a familiar acquaintance with declensions, verb forms, and syntactical points; he gains in accuracy, finds translation easier and more interesting, and has certainly more confidence in attacking a piece of sight work. My experience has taught me that a person may read author after author without gaining materially in facility in writing prose. To a very great extent prose is the key to the classics. It gives strength and creates a stimulus for rapid reading.

5. Impatient nagging and finding of fault prove a great hindrance. While being exacting in the matter of pronunciation, in the explanation of constructions, and in the reciting of poems, I believe it is best to help over the difficulties and to give encouragement and now and then to tell of the difficulty that you had. The feeling of sympathy is not pronounced enough in the class-room.

6. In our American schools we hurry too much. This restless hurrying is especially unfortunate for those who are beginning the study of subjects which, above all else, demand thoroness. What we want is more depth and less superficial work. Habits of thought- and character-building ought never to be obscured in our teaching.

There are many things that I should like to take up, but cannot because of lack of time. Methods have their place and go a long way to make the imparting of knowledge more interesting; but there is something else that we must not overlook. The mistaken idea of liberty of the young American must be taken into consideration. In certain sections of the country there is too much laxity. Children do not understand the meaning of "respect." Good discipline must be upheld, or our efforts will be largely a failure. The teacher must be the master in the class-room; otherwise the work will not be altogether interesting, let the methods be what they will.

DANIEL W. LOTHMAN, East High School, Columbus, O.—In attempting to create an interest in Latin let me keep in mind what is to be attained by the pupil in the study of this language. It is obviously not so much information as power, not so much the translating of a certain fixed amount as the power to get the meaning. In discussing

the means of acquiring this, I wish to speak, first, of the reading of the Latin; secondly, of translating at sight.

There is too little reading of the Latin, and too much of that which is done is not of the right sort. The reading ought to be a means of getting at the thought. Ordinarily, however, the pupil reverses the natural order, and gets the meaning first, then reads the Latin. An excellent way to get a pupil interested in the reading is to have him read a portion he has not translated, and to ask him simple questions in Latin which he can answer from the context, and which will help him get the thought without actually translating.

Secondly, in order to acquire the power we are after, the pupil should "translate at sight," which I define as "getting all the meaning possible out of a sentence or section before getting any outside help." Getting help is perfectly proper, provided the pupil does not get it until he has exhausted his own power. Never tell a pupil to guess, if he does not know. Translating ought not to be a guessing contest; it ought to show the very best kind of reasoning and thinking.

To recapitulate, in order to create a proper interest, show the pupil that what we want is power, and let all his efforts be directed toward the acquisition of this power. Get him interested in reading the Latin properly, and in translating always so as to get the kind of exercise that will give him the desired power.

II. PRINCIPALS' CONFERENCE

THE FORMATION OF A FEDERATION OF SECONDARY SCHOOL ASSOCIATIONS

WILLIAM J. S. BRYAN, PRINCIPAL OF NORMAL AND HIGH SCHOOL, ST. LOUIS, MO.

In November last a letter was addressed by the officers of this department to superintendents, inspectors of high schools, principals of high schools, officers of teachers' associations of various kinds, and others in the several states and territories who were identified with efforts to improve the work of teachers thru the influence of organizations. This extensive correspondence disclosed the fact that there is a separate association of secondary-school principals and teachers in ten states, a department of secondary schools connected with the state teachers' association in fourteen states, and an association of colleges and secondary schools in four states. In other states no information was obtained of the existence of separate or combined organizations of teachers of secondary schools. The non-existence or obscurity of such organizations in many states shows plainly the necessity of work along such lines. The importance and benefit of conventions of workers of all kinds seem to be admitted generally, and there is no present need of argument to establish the conviction already existing in the minds of men that meetings for conference are of great value as clearing-houses of thought and inspiration and improvement. To change the figure, conventions of teachers are seedtimes of suggestions that will germinate in conviction, grow into action, and bear fruit in the reorganization of vitalized methods of education.

A resolution was unanimously adopted by the Department of Secondary Education of the National Educational Association at its last meeting, in Minneapolis, namely, "That the officers of this department be instructed to act as a committee to seek a federation of the secondary associations in various states, and secure such an association in states where it does not exist."

From the correspondence of the officers of this department, it appears that before a federation of associations can be secured there must be created in many states the conviction that an independent organization of secondary-school men is desirable and necessary for the promotion of the best interests of secondary education. It further appears that it will require very great effort on the part of those who see the advantage to be gained by a federation of secondary-schoool associations to awaken and direct the thought of those actively connected with secondary schools thruout the country to the far-reaching importance of the modest resolution which was passed at the Forty-first Annual Convention of the National Educational Association and which has just been read in your hearing.

The great development in secondary education in this country in recent years has demonstrated the existence of a deep-rooted conviction that such schools are essential to the proper education of youth, requisite to the healthy growth in intelligence of states, cities, towns, and rural districts, and necessary for the stability and maintenance of republican institutions. The vast sums of money invested in high schools, the thousands of buildings, the tens of thousands of teachers, and the hundreds of thousands of pupils proclaim aloud the imperative need of organization and co-operation of the forces of secondary education for the accomplishment of the greatest possible good to the greatest possible number within the reach of available resources of secondary schools. Changes in courses and plans for equipment ought to originate, and to reach the practical stage, thru the co-ordinating agency of councils of principals and teachers of such schools. To be directed most wisely, the affairs of secondary schools must be ordered from within rather than from without. The college professor can regulate most wisely the higher education of the country, but he is not sufficiently acquainted with the conditions of secondary-school work to legislate for the secondary schools. He may know the stage of preparation seemingly most desirable for entrance upon the work the college has laid out for its students; he cannot know so well as the secondary teacher, who is familiar with the stage development and the immaturity of youth of high-school age, whether or not such preparation is to be secured within the years allotted to the high school. It is easy for the college to say to the high school: "Your pupils cannot enter until they have done the amount of work required for entrance." It were easy for the secondary school to pass the word along and say to the grammar school: "Your pupils cannot enter until they have done the work required for entrance to the high school, which is to fit for college in four years." But to meet these requirements the grammar school must say to its pupils: "You must stay with us long enough to acquire the preparation that the high school demands of those who enter, that they may be able in four years' time to make the preparation that the college requires of those who would reach a certain stage of development in four years at the most, but in three years if possible." The beginning of life is fixed; the beginning of school life can vary but a few months. The possibilities of education up to certain years of childhood are not hard to discover. The kindergarten has done much for childhood in making the entrance to school life natural and pleasing; but it has its limitations. It does not seek to burden infancy with the tasks of later years, nor to hasten the end of the period of education, so called. It does not seek to force maturitv, but to utilize natural tendencies.

It has been said that high-school teachers are lacking in initiative; that they are not students of youth; that they are indifferent to the problems that are pressing for solution; that they have been subservient to the colleges and universities to which their pupils expected to go. If this state of things exists anywhere outside of the mind of the critic, it surely is not to be found in the high schools of the north central section or the great middle West, which have had a natural development, and have given relatively little thought to the preparation of pupils for college, because not more than one in four intended to

go to college, and because the best preparation for life would be the best preparation for college also.

It is only recently that the growth of state universities has brought them into relation with the high school, and it is thru these state universities in the intimacy of their relation to other parts of the great system of public education, and in their recognition of the genuine work of the high school, that much has been done to articulate the parts of the great system of public education which embraces all stages of development within the scope of its scheme. It has been the purpose of the high schools, of the north central section at least, to give their pupils a clear vision of the world and a vivid conception of its movements and forces, to show them the fields of human effort, and to prepare them to enter their chosen field with conscious possession of all their faculties; breadth of view, integrity of purpose, intensity of application, accuracy of knowledge have been the special features of their preparation for life.

The object of the proposed federation of secondary associations is concert of action. If the teachers of secondary schools, recognizing the importance of their work, would in every state effect and maintain an active organization, holding state meetings for the consideration of living questions, and if these state organizations would choose delegates and alternates to attend a national convention to be held at a time immediately preceding the date of the meeting of the National Educational Association, with instructions to present for the discussion of this delegate body such questions as seemed of pressing importance, valuable practical results might follow. Then in turn the central delegate convention might deem it desirable to instruct the several delegates to report to their respective state associations for consideration such questions as seemed of special moment, that the sentiment of the country might be ascertained and formulated at a subsequent meeting of the federation of secondary organizations. The meeting of the Department of Superintendence is regarded by many as the most interesting and effective educational meeting of the year. Not less important might be the meeting of the federation of secondary associations. The influence of its deliberations and declarations of opinion would be of great weight, and would serve to call attention to questions of importance, if it did not determine their decision.

For the purpose of securing definite action with regard to the formation of a federation of secondary associations, these suggestions are offered in the form of resolutions:

RESOLUTIONS WITH REFERENCE TO THE FORMATION OF A FEDERATION OF SECONDARY SCHOOLS

WHEREAS, It seems very desirable that there should be a consensus of opinion of secondary-school men in regard to matters of general importance which pertain to the conduct of secondary schools, and concert of action in matters with regard to which an agreement of sentiment and a concurrence of judgment can be reached, in order that the best interests may be conserved and the wisest action secured; now, therefore,

Be it resolved, (1) That we, the undersigned, secondary-school men of the various states and territories affixed to our respective names, do hereby organize the Federation of Secondary Associations of the United States;

(2) That hereafter this Federation shall consist of delegates chosen at a meeting of the secondary-school men held annually in each state, and at such time and place as may be determined by the associations of secondary-school men of the respective states and territories in meeting assembled for this purpose;

(3) That each of the states and territories shall be entitled to two delegates, and as many more as will give it a representation proportionate to the high-school attendance as published in the latest annual report of the respective state superintendents; but to secure a full representation should choose alternates at the time of the election of delegates, to act as delegates in case of the absence of one or more delegates;

(4) That the meetings of the Federation shall be held the Friday and Saturday of the week preceding the meetings of the National Educational Association, in the place chosen by that body, and in such locality as may be selected by the executive committee of the Federation, unless another time and place shall have been selected at a previous meeting of the Federation;

(5) That the officers of the Federation of Secondary Associations shall be a president, a vice-president, a secretary, and a treasurer, and an executive committee of seven, consisting of the officers of the Federation and three other members chosen by the Federation at its regular annual meeting;

(6) That the annual dues of state organizations to this Federation shall be five dollars, which must be paid to entitle the delegates to take part in the proceedings of any meeting of the Federation;

(7) That enactment of further provisions for the conduct of the Federation shall be left to the Federation constituted as herein provided.

The resolutions were seconded by Principal E. V. Robinson of the Central High School, St. Paul, Minn.

DISCUSSION

CHARLES F. WHEELOCK, of the University of the State of New York, said that he had corresponded with many associations of secondary schools, some of which were composed partly of college professors and partly of secondary-school teachers. State teachers' associations had been requested to organize high-school associations. Such organization of high-school teachers was one of the leading aims to be realized by the proposed federation. He moved an amendment to the resolutions that the time of meeting correspond with that of the meeting of the Department of Superintendence of the National Educational Association, which meets in February each year.

E. W. LYTTLE, Albany, N. Y., opposed this amendment, because many state meetings would not be held before next year. It was also suggested that many high-school principals would not be allowed to go to a mid-year meeting without a loss of salary for the time lost.

The question was asked: What is the need of such a federation? Is not the National Educational Association doing all that is needed?

Another objection to the mid-year time of meeting for the federation was made to the effect that a large attendance was needed for the best success of the new organization. To this objection it was urged that nearly all the state meetings are held during the Christmas holidays, so as to make it feasible for plans affecting the federation to be carried out before the following February. Great numbers are not needed. Smaller meetings are better than large, crowded ones.

PRINCIPAL JOHN T. BUCHANAN, De Witt Clinton High School, New York city.—If meetings should be held in mid-winter, New York principals would not be allowed to attend. The new organization is not needed. If the National Educational Association cannot do the work required, the new body certainly could not.

MR. LYTTLE.—The gatherings of this proposed federation need not be large. Only delegates need attend. We should simplify the matter of arithmetic. Metric system could be secured if co-operation were brought about. Committees of correspondence are needed as in old days. We need to take hold and push together in the whole country. High-school principals and superintendents are losing places because the ethics of mutual relations are not known. We need to pass upon such questions. Lengthening the course of high schools to six years also needs much discussion.

PRINCIPAL O. S. KRIEDEL, Perkiomen Seminary, Pennsburg, Pa.—We need to get together to compare methods, plans of work, etc. One meeting a year is needed. Great good would come out of it. Each of some ninety secondary schools in Pennsylvania knows very little of the others' work. Private and public high schools need to do some things in common.

PRINCIPAL D. R. ELLABARGER, Richmond, Ind.—Superintendents have organized. They seem to guide the educational work of the country. In Indiana high-school principals have no educational standing. We are asking that we be recognized in the educational work of the country. We need to do something that will give us recognition.

W. A. WETZEL, Trenton, N. J.—We should go slowly in putting ourselves on record as attempting to secure recognition. We may at the outset arouse friction. The superintendent is naturally at the head of the educational system of any city.

III. MATHEMATICAL CONFERENCE

LEADER, DAVID EUGENE SMITH, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK CITY

The conference on mathematics was held Friday, July 10, at the close of a protracted session of the department.

The leader, David Eugene Smith, in introducing the topic said that the object of associations such as proposed should be not so much mathematical research as improvement in the teaching of mathematics. Other subjects of the curriculum of secondary schools have their associations of teachers, and the results have been improvement in the teaching of those subjects. In England, France, and Germany there has been of late undoubted progress in methods of instruction in mathematics, due to the influence of such associations. The part of associations of teachers of mathematics is to give to this country its share in this progress. Several associations of the sort have recently been formed. The object of the conference is to talk over the methods of organization and the work of these associations, with a view to securing more support for them on the part of teachers of mathematics, and the organization of associations in other convenient centers thruout the country.

CLARENCE E. COMSTOCK, Bradley Polytechnic Institute, Peoria, Ill., reporting upon the movement in the middle West, said that interest and consultation among teachers for a year or more past had culminated in the organization at Chicago, in April, 1903, of the Central Association of Science and Mathematics Teachers. The association is divided into various sections, including physics and mathematics, which hold special sessions in connection with the general annual meeting of the association. A system of local centers has been established in order to reach as many teachers as possible, and more frequent local meetings are held. Older clubs are being affiliated with this organization, and the Central Association will serve as a clearing-house for expression and discussion for the teachers of ten states.

The constitution states three objects: (1) to promote better teaching of science and mathematics, especially in secondary schools; (2) to obtain a better correlation of these subjects to each other and to the other subjects of the curriculum; (3) to bring the college and the secondary school into closer relations.

As to the teaching of mathematics, there appear to be three leading ideas at work in the mind of those most interested in the movement: (1) For the purposes of secondary education, pure mathematics does not in itself furnish the proper incentive for mathematical study; this implies a correlation of mathematics and natural science. (2) The meaning of mathematics is best appreciated, and its processes more easily and effectively mastered, by a disregard of the arbitrary divisions of mathematics; this implies a correlation of mathematical subjects — algebra, geometry, trigonometry, analytical geometry, and calculus. (3) The mind moves from the concrete to the abstract; this implies a recourse to experimental and inductive methods.

At the April meeting of the association a committee reported upon the correlation of physics and mathematics.[1] A monthly called *School Science*, with a quarterly mathematical supplement, has been made the organ of the Central Association and is furnished each member.

J. S. FRENCH, Jacob Tome Institute, Port Deposit, Md., reported for the movement in the middle states and Maryland that a preliminary conference of teachers of mathematics in those states was held at Columbia University in May, 1903, and the organiza-

[1] This report, filling a sixty-page pamphlet, may be procured for fifteen cents from Mr. E. C. Woodruff, 5735 Monroe avenue, Chicago.

tion would be effected, it was hoped, at the next Thanksgiving recess. Mr. French discussed the basis of the proposed organization and the work it might do.

EDGAR H. NICHOLS, Cambridge, Mass., reported that the Association of Teachers of Mathematics in New England perfected its organization in April, 1903. An effort is being made to obtain a list of all teachers of mathematics in New England and interest them in the association with a view to the organization of local centers. There are already 175 members. The object of the association is the planning and execution of definite work for the promoting of interest in mathematical study. The special work that the association is undertaking thru a committee is the preparation of a syllabus of concrete geometry. Letters of inquiry have been sent to a large number of teachers to ascertain the extent to which they are teaching concrete geometry, together with the methods used and the results obtained; and much valuable information has been received in response. The movement promises well in the way of bringing together information as to best known methods and selection of subject-matter, and at any rate in saving teachers from working at cross-purposes.

REPORT OF COMMITTEE ON ENTRANCE REQUIREMENTS IN MATHEMATICS

H. W. TYLER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, BOSTON, MASS., CHAIRMAN

In July, 1899, a committee of the Departments of Secondary Education and Higher Education presented a report on college-entrance requirements, including a discussion of the scope, aim, and place of mathematical studies in the secondary schools and in preparation for college, with model courses in algebra, plane and solid geometry, and trigonometry, with methods to be used, time to be consumed, etc. To the details of this report it is not my purpose to refer. For several years a standing committee of the Society for the Promotion of Engineering Education has been occupied with the study of entrance requirements for engineering colleges, and has sought by various means to secure agreement of these colleges on standard formulations of requirements, particularly in mathematics, chemistry, physics, and mechanic arts. Committees for conference and co-operation have been appointed also by the National Educational Association, the American Mathematical Society, and the Eastern Association of Teachers of Manual Training. The committee of the American Mathematical Society prepared a provisional report, which, as chairman of the committee, I desire to present, informally, to this conference, with the understanding that at the present stage the report, while based on careful study, has no authoritative significance:

PROVISIONAL REPORT OF THE COMMITTEE OF THE AMERICAN MATHEMATICAL SOCIETY ON DEFINITIONS OF COLLEGE ENTRANCE REQUIREMENTS IN MATHEMATICS

The committee understands its duties in the following sense:

First: To specify those mathematical subjects which are generally recognized as appropriate requirements for admission to college.

Second: To specify details under these subjects in such a manner as to represent the standards of the best secondary curricula — the word "best" being interpreted in a qualitative rather than a quantitative sense.

Third: The committee understands also that the consideration of pedagogic questions is not among its duties. It has therefore, made no attempt to deal with methods of secondary education in mathematics, or the order of taking up the subjects and their correlation with each other and with other sciences. The order in which the subjects and the topics under them are presented below does not necessarily imply preference of the committee as to order of teaching either the subjects or the topics. It is the opinion of the committee that these are the subjects and the topics which, according to the best present usage, should be offered for admission to colleges and scientific schools.

The formulation is not to be interpreted as exhaustive. It represents rather the extent to which, in the opinion of the committee, definite specification should be undertaken by it; it is expected that further details will be determined in accordance with the judgment of the particular college, school, or teacher.

The definitions proposed are based on present usage and standards. In case of divergence between standard text-books and what seemed a more scientific presentation of the subject in question, the committee has endeavored to make a choice which should not depart so far from current usage as to involve hardship to

schools or teachers. The committee is of opinion that no formulation should be considered as having more than temporary validity. No advantages attendant upon uniformity of definition could counterbalance any tendency of the definitions to retard progress of scondary education in mathematics. It is, therefore, recommended that if the definitions are approved, they be revised at intervals, perhaps of ten years.

Subjects

1. Elementary algebra.
2. Plane geometry.
3. Solid geometry.
4. Plane trigonometry.
5. Advanced algebra.

Formulations

I. ELEMENTARY ALGEBRA

Definitions.

The four fundamental operations for rational algebraic expressions.

Factoring, determination of highest common factor and lowest common multiple by factoring.

Fractions, including complex fractions, ratio, and proportion.

Equations of the first degree, both numerical and literal, containing one or more unknown quantities; problems depending on such equations.

Radicals, including the extraction of the square root of polynomials and of numbers.

Exponents, including the fractional and negative.

Quadratic equations, both numerical and literal, including simultaneous equations of which only one is quadratic.

Problems depending upon quadratic equations.

*Proof of the binomial theorem for positive integral exponents. (It is expected that the theorem will have been used at an earlier stage).

*Arithmetic and geometric progressions.

Thruout the course the pupil should be required to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration and from physics. The use of graphical methods in connection with the solution of equations is advised.

II. PLANE GEOMETRY

The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurements of angles; similar polygons; areas; regular polygons, and the measurement of the circle.

The solution of numerous original exercises, including loci problems.

Applications to the mensuration of lines and plane surfaces.

III. SOLID GEOMETRY

The usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

The solution of numerous original exercises, including loci problems.

Applications to the mensuration of surfaces and solids.

IV. PLANE TRIGONOMETRY

Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles.

Proofs of principal formulæ, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.

Inverse trigonometric functions.

Solution of simple trigonometric equations.

Theory and use of logarithms (without the introduction of work involving infinite series).

The solution of right and oblique triangles, and practical applications.

V. ADVANCED ALGEBRA

Permutations and combinations, limited to simple cases.

Complex numbers, with graphical representation limited to sums and differences.

Determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations, but not the multiplication of determinants.

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*A college finding it impracticable to meet this normal requirement is advised to require all topics not preceded by an asterisk.

Numerical equations of higher degree, and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes' rule of signs and Horner's method, but not Sturm's functions or multiple roots.

H. W. TYLER, *Chairman*,
Massachusetts Institute of Technology;
T. S. FISKE,
Columbia University;
W. F. OSGOOD,
Harvard University;
A. ZIWET,
University of Michigan;
J. W. A. YOUNG,
University of Chicago;
} *Committee.*

April, 1903.

It may be of interest to compare the above formulations with those of the College Entrance Examination Board, based themselves on recommendations of a committee of the National Educational Association. The College Board presents elementary algebra in three divisions: algebra to quadratics, quadratics, etc., and progressions, etc.; advanced algebra in two divisions — series, etc., and theory of equations. The committee includes under elementary algebra all of the College Board elementary algebra, except permutations and combinations, and the use of the tables of logarithms. It omits, also, highest common factor by division and simultaneous quadratic equations. Its phraseology is somewhat more explicit, and it emphasizes problems depending upon algebraic equations. In advanced algebra the committee's formulation differs from that of the College Board in omitting undetermined coefficients, infinite series, binomial theorem for fractional and negative exponents, and the theory of logarithms. It includes, on the other hand, complex numbers, determinants, and a somewhat fuller statement of the theory of equations, the general aim being, on the one hand, to omit subjects which the secondary scholar is not prepared to appreciate fully, and, on the other hand, to secure a somewhat higher degree of unity.

The definitions of plane and solid geometry do not differ in principle from those of the College Board, but are stated with somewhat more fullness, while they still contain the general expression "the usual theorems and constructions of good text-books."

The definitions of plane trigonometry present no important differences in principle, but that of the committee is considerably fuller.

In presenting formulations of these five subjects, it is by no means the opinion of the committee that any college should require all for admission. The committee has undertaken to define those mathematical subjects which are at present required by any considerable number of colleges, and expresses no opinion of its own as to the appropriateness of the more advanced of these subjects for secondary-school work. The committee appreciates that the value of its definitions must depend to a great extent on their conformity to the needs and interests of secondary schools and teachers. It therefore begs to invite the freest criticism on the part of secondary teachers by correspondence with any of its members.

WILLIAM T. CAMPBELL, Boston Latin School, speaking of geometry in the grammar school, said that a great deal of the subject-matter taught to pupils of fifteen might be grasped by them at twelve, but that in general there was no particular disadvantage in deferring the instruction, because with increased maturity and logical power in the pupil the subject may be grasped with greater facility and thoroness. The case is different with geometry, because, if the pupil of fifteen thinks better, he sees worse. The character of the geometry suited to the boy of twelve is very different from that suited to the boy of fifteen. The latter begins with lines, points, angles, and ends with the cube, pyramid, sphere; the former begins with the pyramid, cube, sphere, and ends with lines and points. Demonstrative geometry exalts the proof and may neglect the application; with

observational geometry it is the reverse. Geometry in the grammar school should be taught with reference to the cultivation of the constructive imagination and keenness of observation, the power of drawing good diagrams, accuracy of measurement.

PROFESSOR OSGOOD very briefly summarized the work of the conference. These movements promise much of benefit and improvement in the teaching of mathematics: They look toward the organization ultimately of a national association of teachers of mathematics — a step, however, which should not be taken until the movement shall make it inevitable. As to the relation of these associations to the American Mathematical Society, there should be the greatest interest on the part of the latter in the success of the former, and without doubt members of the American Mathematical Society will be influential in assisting in such associations. Any more close relationship is not, however, advisable.

IV. HISTORY CONFERENCE

LEADER, JAMES SULLIVAN, TEACHER OF HISTORY, HIGH SCHOOL OF COMMERCE, NEW YORK CITY

In opening the conference the leader said: In visiting schools I have been struck with the poor quality of teaching in such subjects as civics, and mediæval, and modern history. Such teaching is due, no doubt, in a certain degree to the poor quality of our texts, but in a far larger measure to the poor preparation of teachers in these subjects.

As the question of civics has already been considered in another section of this Association, it is our purpose here to take up the question of the teaching of mediæval and modern history in the secondary schools. In this subject poor teaching is due, aside from the question of poor texts, to an insufficient preparation of teachers in this line of history, and to a certain inability, due to lack of preparation, to present the subject in such a way as to make it possible for the pupils to seize the true meaning of mediæval life and history. Teachers who fail most lamentably are those who attempt to teach the history of the Middle Ages as a series of histories of separate nations. It is no wonder that they fail, and that their pupils are incapable of retaining so many contemporaneous events in their heads as are given them to remember as important. Listening to the complaints of such teachers, the board of superintendents of New York recently withdrew mediæval and modern history from the list of required subjects in the high-school curriculum and placed it on the optional list.

This was felt by many teachers to be a serious mistake, because the high school is the only place where the larger percentage of our population have any opportunity of learning anything about European history and institutions — the lack of knowledge of which leads to a bigoted patriotism and a narrow provincialism on the part of our people. It was also felt that if the teachers in general had a more thoro preparation in mediæval history and knew how to handle the subject, not as a series of national histories, but as the history of the great movements and institutions of Europe as a unit, they would have had such success in its teaching as to lead them to ask for its retention in the curriculum of the high school.

It is with the hope of interesting teachers in preparing themselves more thoroly in this special field of history that I have asked Professor Haskins, of Harvard, a former member of the Committee of Seven of the American Historical Association, to open the discussion today.

CHARLES H. HASKINS, Harvard University.— As matters stand at present, the question of the teaching of the history of mediæval and modern Europe in schools seems to relate not so much to the desirability of such instruction as to the practicability of giving

it effectively in the average school. It would be hard to maintain either that a systematic course of study ought to omit subjects of such importance, or that they cannot be made interesting and profitable to the ordinary school pupil. Mediæval history in particular, with its wealth of color and movements, and its vital relations to the origins of the modern world, can easily be made attractive. At the same time, we should not conceal from ourselves the considerable difficulties which this field presents. Some of these are temporary, such as the scarcity of good text-books and the inadequate training of teachers, and are fast being met. But there is also a permanent difficulty, inherent in the nature of the subject — namely, the great extent and complicated nature of the field, and its remoteness in time and place from the experience of American boys and girls. In no other of the subjects ordinarily taught in schools is there so great need of careful selection of material and firm grasp of essentials on the part of the teacher. Any attempt to cover the whole field in the time usually allotted is almost sure to result either in vague generalities or in a confused and lifeless mass of names and dates. In selecting topics for treatment it is possible either to take only certain culminating episodes or epochs, or to make a single country, such as France, the center of study, or to pay less attention to continuous narrative and emphasize the principal underlying institutions. Particularly for the Middle Ages, the teacher will find it desirable to make clear such topics as the ecclesiastical system, feudalism, the crusades, the mediæval empire, and the rise of France, by extensive use of concrete description, emphasizing continuous and typical conditions rather than individual events.

RAY GREENE HULING, Cambridge, Mass.— I think that there is something better than mediæval history. The field of mediæval history is not in general interesting to boys and girls of high-school age. Moreover, the study of that period does not conduce to the cultivation of a desire to read history later in life, with some knowledge of the books to be read and a good method of reading. For the first year in the high school he suggested English history; for the second, ancient history; for the third, American history in its constitutional development; and for the fourth, a careful and detailed study of the discovery and colonization of the eastern part of the United States. This would furnish good training for the imagination, and also for the budding powers of the reason and the judgment. Such a course would have three good results: the first is an interest in reading; the second, an ability to reason intelligently and record the results clearly; and the third, something of an expert's knowledge of the means of research to find out what the student wishes to know.

W. J. S. BRYANT, principal of the St. Louis High School, said that a large percentage of high-school pupils do not go beyond the high school. Mediæval history should be studied in the high school, or it will not be studied at all. The difficulty of a subject is not a good ground for leaving it out of the curriculum. Modern institutions cannot be understood unless we trace them back to their beginnings in the past. The pupils need a well-connected view of the whole scope of world-movements and forces. Pupils need preparation for minute study later.

MISS HARRIET G. KING, Oak Park, Ill.— Which of the various studies are to be preferred, if some must be left out? Colonial history is not so profitable in the middle West as it is in New England. What shall be done with all the books sent to us? Have not we too much to read and too much to do?

PROFESSOR HASKINS.— The date 800 was suggested by the Committee of Seven, not because it was considered a fixed dividing-line in history, but because it offered the most obvious and convenient break in a two-years' course covering ancient, mediæval, and modern history. No doubt it will often happen that the work of the first year cannot well be carried so far, and the newer text-books are so arranged that the four or five centuries preceding 800 may be placed with the work of either year. At the same time, by carrying the study of Roman history thru the later empire and into the early Middle Ages pupils

get a much more adequate idea of the place of Rome in the general history of the world than if the course breaks off somewhere in the early empire and fails to make proper connection with what followed.

E. W. LYTTLE, Albany, N. Y.— Mediæval history does not lack interest. We are farther away in experience from mediæval history than from the history of Greece and Rome. We therefore know the history of Greece and Rome better than we know mediæval history. Hence arises the difficulty of teaching mediæval history. For that very reason it should be taught, and it can be made interesting. Youth is intensely interested in religious questions. The great facts of the church in the Middle Ages, of the feudal system, of chivalry, and of the crusades, if rightly handled, will be full of interest and profit.

DEPARTMENT OF HIGHER EDUCATION

SECRETARY'S MINUTES

FIRST SESSION. — TUESDAY, JULY 7, 1903

The Department of Higher Education met at 9:30 A. M. in the Central Congregational Church of Boston, with the president, Benjamin Ide Wheeler, president of the University of California, in the chair. About twelve hundred persons were present.

It was moved and carried that the president appoint a committee on nominations for the ensuing year.

The topic for the morning was "The Length of the Baccalaureate Course and the Preparation for the Professional Schools."

Elmer E. Brown, professor of the theory and practice of education, University of California, introduced the subject in a paper setting forth the history and evolution of the American college and the bachelor's degree.

Papers dealing with the general subject from various standpoints were read by the following: Charles W. Eliot, president of Harvard University; Nicholas Murray Butler, president of Columbia University; William R. Harper, president of the University of Chicago; Andrew F. West, dean of the Graduate School, Princeton University.

Discussion was opened with a paper by Daniel W. Hering, dean of the Graduate School, New York University. A general discussion followed, which was participated in by G. Stanley Hall, president of Clark University; W. H. Hadow, dean of Worcester College, Oxford, England; Rev. G. A. Kratzer, pastor of the Universalist Church, Fitchburg, Mass.; James H. Baker, president of the University of Colorado; Charles W. Eliot, president of Harvard University; William DeWitt Hyde, president of Bowdoin College; W. H. P. Faunce, president of Brown University.

At the close of the discussion, President Wheeler announced the Committee on Nominations as follows:

Andrew S. Draper, president of the University of Illinois. W. H. P. Faunce, president of Brown University.
Andrew F. West, dean of the Graduate School, Princeton University.

The session then adjourned to meet in the same place on Wednesday morning at 9:30 o'clock.

SECOND SESSION. — WEDNESDAY, JULY 8

The second session of the Department of Higher Education was held Wednesday morning, July 8, at 9:30 o'clock, in the Central Congregational Church. President Wheeler presided.

About nine hundred persons were present.

President W. H. P. Faunce of Brown University presented the report of the Committee on Nominations, as follows:

For *President* — Benjamin Ide Wheeler, University of California.
For *Vice-President* — George Harris, Amherst College.
For *Secretary* — John Henry MacCracken, New York University.

On motion, the report was unanimously adopted, and the officers were declared elected for the ensuing year.

The topic for the morning was: "Shall the university concern itself more directly with the morals and manners of its students? If so, by what methods and devices? Should there be in every college and university a medical visitor who should also be an adviser for students on all matters relating to health and disease?"

President Wheeler, in announcing the subject, called attention to the fact that American institutions were in the beginning modeled after English patterns, that they had during the last half-century been strongly influenced by German ideals, and that now there were indications of a reaction setting in from the too great freedom of German institutions toward a wise regulation and control of students.

Papers were read by the following: George Harris, president of Amherst College; William J. Tucker, president of Dartmouth College; W. F. Slocum, president of Colorado College; Rt. Rev. Thomas F. Gailor, bishop of Tennessee, Memphis, Tenn.

General discussion followed by James H. Baker, president of the University of Colorado; William Aber, professor in the University of Montana; Joseph Swain, president of Swarthmore College; G. M. P. King, professor in the Virginia Union University, Richmond, Va.; George C. Chase, president of Bates College; G. Stanley Hall, president of Clark University; Charles C. Ramsay, Boston, Mass.; John Lee Brooks, Columbia University, New York.

The following report of a committee appointed at the last meeting was presented, and on motion received, and the committee continued for another year:

To the President of the Department of Higher Education of the National Educational Association:

DEAR SIR: Your committee, appointed at the last meeting of the Department of Higher Education, was instructed to participate in the conferences with the committee of the Society for the Promotion of Engineering Education in the effort to formulate entrance requirements in mathematics, chemistry, physics, and drawing.

The committee has had some correspondence, and on July 7 held a meeting in Boston, at which were present Henry S. Pritchett, chairman, William Hallock, and E. V. Robinson. With the committee met Dr. H. W. Tyler, who has been chairman of the committee of the Society for the Promotion of Engineering Education for the formulation of entrance requirements.

Your committee has to report that the following is the status of the work of the committee from the Society for Promotion of Engineering Education, as it stands at the present time:

In mathematics a committee was appointed at the September meeting of the Mathematical Society, at the request of the first-named committee, to formulate college-entrance requirements in that subject, and that committee has printed a provisional report which is now in circulation for criticism, and a copy of which is attached hereto.

In drawing and mechanic arts correspondence has been had between the committee of the Society for the Promotion of Engineering Education and the president of the Manual Training Teachers' Association, and it is believed that progress is being made toward a formulation of requirements in those subjects.

In chemistry correspondence has been had with representatives of the American Chemical Society, and the opinion has been expressed that the time is not yet ripe for an attempt to agree upon any formulation of chemistry as an entrance requirement, and much the same result has been reached in correspondence with the American Physical Society as regards physics.

As a result of the whole conference your committee is able to report that entrance requirements in mathematics and drawing of a definite sort are likely to be adopted at an early date by the committee of the Society for the Promotion of Engineering Education, and that but little progress has as yet been made toward a formulation of entrance requirements in physics and chemistry.

Your committee was instructed to act in co-operation and in conference with the committee of the Society for the Promotion of Engineering Education, and had no authority to take up anew the effort to formulate entrance requirements in the subjects assigned to it, nor does it seem to the committee wise that the Department of Higher Education of the National Educational Association should take up at this time a new effort to formulate such requirements, in view of the enormous amount of work expended on the formulated requirements issued four years ago. Your committee therefore recommends that this report be accepted as a report of progress, and that it be continued for another year, with the hope that at that time it may be able to report more definite results of its conferences with the committee of the Society for the Promotion of Engineering Education.

Respectfully submitted,
HENRY S. PRITCHETT.
WILLIAM HALLOCK.
E. V. ROBINSON.

BOSTON, MASS., July 8, 1903.

On motion, the department expressed its approval of the plan followed at this year's sessions of limiting the discussion at each session to a single topic.

On motion, the department adjourned.

JOHN H. MACCRACKEN, *Secretary*.

THE LENGTH OF THE BACCALAUREATE COURSE AND PREPARATION FOR THE PROFESSIONAL SCHOOLS

I

HISTORICAL SKETCH

ELMER ELLSWORTH BROWN, PROFESSOR OF THEORY AND PRACTICE OF EDUCATION, UNIVERSITY OF CALIFORNIA, BERKELEY, CAL.

It is not easy to set forth in few words the relation of the colonial colleges to preparation for professional life. Not much of the instruction which they offered was technically professional. Yet the professional bent was stronger in them than in the colleges of a later day. Colleges were for the service of God in church and commonwealth, and that service was to be rendered thru the professional and governmental activities of their alumni. It is not too much to say that the college course was regarded as the first, undifferentiated stage of professional training. It hardly need be added that the profession chiefly in view was the Christian ministry. A few subjects in divinity, of a pretty distinct and technical sort, found their way into the general college curriculum, and were pursued, willy-nilly, by students who were preparing for other than the ministerial calling. A large part of the immediate preparation for ordination, however, was made by young theological students thru private reading and practice in sermonizing under the direction of some ministerial friend engaged in an active pastorate. So the prospective physician learned of a practicing physician, the prospective lawyer of a practicing attorney. And all three, if their training was ideally complete, had taken the same

classical and philosophical course in college as the groundwork of their professional education.

If it was difficult to characterize briefly the colonial idea of higher education, it is hardly easier to trace the subtle change which came over this ideal and gave us the typical American college of the nineteenth century. In both Europe and America the revolutionary age brought forth a new estimate of human worth, as human, and a new demand for a purely humane culture. We cannot even attempt at this time to unravel the influences—religious, scientific, literary, revolutionary—which led to these shiftings of emphasis. But the distinctive college ideal of the nineteenth century was the ideal of purely liberal culture, in one of the noblest forms in which that conception has appeared in the history of human thought. If this lofty idealism dwelt over-much in the thin air of academic abstraction, it none the less called out upon its heights a devoted and enthusiastic following. The ideal of the colleges became the ideal of the academies. Somewhat modified it reappeared in the common schools; and the American people, with marvelous unanimity, embraced this common faith and purpose, that education shall be first and chiefly for manhood, irrespective of differences of family history or of prospective occupation. Thru the greater part of the nineteenth century, accordingly, we saw general—that is, liberal—education in the ascendency; and professional education rising indeed, but slowly and painfully. Professional schools had come into existence in large numbers, and were more and more largely attended. But their educational character was hardly taken seriously, and their courses of instruction were looked upon as only a slight improvement on the system of apprenticeship. An increasing number of students entered upon professional studies without having taken any part of the college course.[1] There had come to be an unmistakable rift between studies for culture and studies for vocation. The old college course was for a long time but little changed, but insensibly it had come to be pursued for culture rather than as preparation for the professions.

Out of the enormous literature relating to the American college which the nineteenth century brought forth we may take, as a single representative, *Thoughts on the Present Collegiate System of the United States*, by Francis Wayland, published in 1842. This work is of great historical value because of the detailed account which it presents of the actual col-

[1] The *American Almanac* for 1842 contained a list of 101 colleges, 39 theological seminaries, 10 law schools, and 31 medical schools in the United States. *Cf.* WAYLAND, *Present Collegiate System*, etc., p. 8. Dr. Wayland goes on to say: "I rather fear that the impression is gaining ground that this [college] preparation is not essential to success in professional study. A large proportion of our medical students are not graduates. The proportion of law students of the same class is, I rather think, increasing. The proportion of students for the ministry who resort to College is much larger than formerly."—*Op. cit.*, p. 153.

In 1890 it was estimated that 8 per cent. of the medical students, 18 per cent. of the law students, and 23 per cent. of the theological students of the whole country had taken a degree in arts or science.—*Report of a Special Committee* (of the Board of Overseers of Harvard University), p. 12.

lege administration of that day; and in its recommendations concerning improvements, moreover, it is prophetic of some of the best things in our later college history. Said President Wayland:

> No nation can derive the benefit which God intended from the intellect which he has conferred upon it, unless all that intellect, of what sort soever it be, have the means of full and adequate development. . . . . The colleges as now conducted are merely schools preparatory to entrance upon some one of the professions. . . . . In consequence of this unintentional restriction, a very large class of our people have been deprived of all participation in the benefits of higher education. It has been almost impossible in this country, for the merchant, the mechanic, the manufacturer, to educate his son, beyond the course of a common academy, unless he gave him the education preparatory for a profession.

At the same time, an increasing number were entering the professional schools without this preliminary college training. The colleges were not in close touch with the after-life of their graduates.

> The College or University forms no integral and necessary part of the social system. . . . . In no other country is the whole plan for the instruction of the young so entirely dissevered from connexion with the business of subsequent life.

It was this state of affairs which President Wayland would remedy in the following manner.

> Let the College be the grand centre of intelligence to all classes and conditions of men, diffusing among all the light of every kind of knowledge, and approving itself to the best feelings of every class of the community.

To this end, he would raise the requirements for admission, thus securing students of a more uniform and more advanced age. To this improved student body he would offer an improved college course, one of the suggested changes being the provision of a course parallel with that in arts, leading to the degree of bachelor of science or of literature.

> The question will here be asked what are we to do with the four-year course? I answer, it seems to me of but very little consequence whether we do with it or without it. . . . . I certainly would not have the period curtailed, commencing with the present or even with much higher requirements for admission to the University, But I would not have it a matter of time.

We will pause here to consider briefly the place which the baccalaureate course has occupied on the scale of years of college men's lives, thru our educational history. Harvard college settled down at a very early day to a four-year course, and from that time on the quadrennium was so nearly universal in the practice of our colleges that there is no need to seek for possible exceptions.[1] For generations this was the most rigid time allotment to be found anywhere in our educational system. When we came to have professional schools, they were for a long time without any com-

[1] Yale College had a very early provision under which the course might be shortened, but it seems not to have been carried into effect. The course of the College of Philadelphia before the Revolution was three years in length.

mon standards. Below the college, the preparatory schools were likewise variable. Their courses were largely determined by college-admission requirements, and only gradually shaped themselves into another four-year curriculum.

No extended inquiry has yet been made, so far as I can learn, into the actual ages of colonial college boys. We know that well-endowed students were occasionally graduated in their teens—in some instances before they were half thru their teens. These last were probably exceptional cases. The significant fact is that, however rigid the college course, the loose organization of the secondary schools made such early graduation possible.[1]

For the period since the Revolution we have now at hand the results of an extended inquiry made by Professor Thomas.[2] Full statistics were found to be available for only eleven institutions. The list does not include any of the greater universities of the country, but is made up of smaller universities and representative colleges, seven of them in New York and New England, one in the South, and three in the middle West. These statistics show in the period from the Revolution to the middle of the nineteenth century but little marked deviation from the standards of more recent times.[3] Professor Thomas has analyzed with especial care the records of the past fifty years. It appears from his summary that half a century ago the median age of graduation from these eleven institutions ranged from twenty years and seven months, at New York University, to twenty-five years and two months, at Oberlin. During the latest full decade, 1890–99, the range is less great, extending from twenty years and two months, at the University of Alabama, to twenty-three years and eleven months, at Oberlin College and Syracuse University. One institution, at the end of the half-century, was where it had been at the beginning. The remaining ten were equally divided, five of them showing a higher and five a lower median age of graduation. Counting still by institutions, the median age of graduation in this whole group, in the first of the five decades under consideration, was twenty-two years, nine

1 PRESIDENT F. A. P. BARNARD of Columbia College, in his *Annual Report* of 1880, "presented a list of eighty-one eminent men, all of them graduates of the early years of this [nineteenth] century or earlier, and none of whom graduated at a more advanced age than eighteen." In 1886 he presented the results of a similar study, relating to 230 persons, none of whom graduated later than the middle of the nineteenth century. The youngest of these graduated at the age of nine; the oldest at thirty-one. Three were thirteen, three were fourteen, and eight were twenty-six at graduation. The largest number graduated at nineteen, the next largest at eighteen, and the average of the whole number was 19.87.—*Annual Report of the President of Columbia College*, 1885–86, p. 32.

2 W. SCOTT THOMAS, "Changes in the Age of College Graduation," *Popular Science Monthly*, June, 1903, pp. 159–71.

3 *Cf.* the following, written in 1842: "Young persons may be admitted to our colleges at the close of their fourteenth year, and many enter at that early age. The requirements of our colleges are, however, so moderate, that a young man who has commenced life with other expectations, may, at a much more advanced age, change his pursuits, and in a year or two be prepared for admission to college. Thus a considerable proportion of every class have attained to twenty-five or thirty years of age. Thirty-two or three is not an uncommon age for a candidate for the degree of Bachelor of Arts."—WAYLAND, *op. cit.*, p. 31.

months, and six-tenths, while in the last decade it was twenty-two years, seven months, and five-tenths, showing a lower age at the end of the period, by about two months, than at its beginning.

By changing the method of computation, it is shown that in the first of these five decades the average age of graduation of all of the students included in the reckoning was twenty-three years and three months, while in the last decade it was twenty-three years and five-tenths of a month. Here again there appears a slight lowering of the age at which the baccalaureate was taken.

Professor Thomas has attacked his problem by a third line of approach, which yields the most interesting results of all. He has computed the percentages of students graduated at the different years of their age, and plotted the resulting curves, comparing the first decade of this period with the last. From this it appears that the student body is becoming somewhat more homogeneous with regard to age; that a smaller percentage is found either below or above the age of the bulk of the class; and that the favorite age of graduation — the "mode," as he calls it — which was between twenty and twenty-one in the decade 1850–59, has risen and is found between twenty-one and twenty-two in the decade 1890–99. In this we see brought to pass one of the changes which President Wayland proposed.[1]

In the latter part of the nineteenth century various influences combined to lend new emphasis to professional education. The great advance which had recently been made in the physical sciences had undoubtedly a great deal to do with the change. It is not surprising that schools of medicine should have been among the first institutions to respond to this new quickening. When these schools undertook seriously to lengthen and strengthen their courses of instruction, they found the age of graduation from college already so high that to add a sufficient professional course to the ordinary course in liberal arts would present serious practical difficulties. Then arose a demand for the shortening of the traditional college course, and this was followed by a demand for the shortening and enriching of the courses in lower schools. Harvard University was the storm-center in the earlier part of this discussion. I shall accordingly chronicle, as briefly as possible, the official

[1] Earlier discussions of the same problem may be found in the following papers:

E. BENJAMIN ANDREWS, "Time and Age in Relation to the College Curriculum," *Educational Review*, Vol. I (February, 1891), pp. 133–46. Table of ages of students entering freshman class of Brown University, by five-year periods, 1827–1890: 1827–30, 17.7 years; 1831–75, over 18 and not over 19; 1876–90, from 19.0 to 19.4. Age of students entering freshman class at Harvard: 1856–59, under 18; 1860–80, over 18 and under 19; 1881–90, six years out of the ten, 19, or over. Summary: "While the average age of graduation at New England colleges is rising, the usual age is falling."

S. C. BARTLETT, "Shortening the College Course," *Education*, Vol. XI (June, 1891), pp. 585–90. Average age of entrance has not been materially rising at Williams, Michigan, Tufts, Dartmouth. At Dartmouth average age of last four graduating classes was less than four months higher than that of classes 1832–36. At Michigan University average of present freshman class is one year less than that of the classes fifteen years ago.

history of Harvard's part in the movement down to the early nineties, and there this sketch will come to an end.

In his annual report for 1883–84 President Eliot started the discussion by suggesting, *à propos* of plans for lengthening the course of medical instruction to four years, the advisability of shortening the course in the college proper to three years, or of bringing undergraduates to avail themselves of the facilities already provided for abbreviating the college course.

The faculty of the medical school, in June, 1886, proposed to the Academic Council a plan for the abridgment of the college course, by those who would go from the college to a professional school of the university. The faculty of law concurred in this recommendation. After consideration in committee and extended discussion, the Academic Council, in November, 1887, requested the college faculty to consider the expediency of a reduction of the college course. The reply of the faculty was not given till March, 1890. It took the form of four recommendations addressed to the Corporation:

1. That the requirements for the degree of Bachelor of Arts be expressed . . . . in terms of courses of study satisfactorily accomplished.

2. That the number of courses required for the degree be sixteen.

3. That when a student enters college there shall be placed to his credit . . . . (1) any advanced studies on which he has passed in his admission examination beyond the number required for admission, and (2) any other college studies which he has anticipated.

4. That a student may be recommended for the degree of Bachelor of Arts in the middle as well as at the end of the academic year.

This report was approved by the president and fellows, who transmitted it to the Board of Overseers. From April, 1890, to April, 1891, the overseers had the matter under consideration, and during the same twelvemonth public discussion of the shortening of the college course was at its height. Then action was taken by the overseers, refusing consent to the first, second, and fourth proposals of the faculty, and approving the third, with unimportant modifications. In reporting this action, President Eliot called attention to the fact "that any student of fair parts can get the degree of Bachelor of Arts at Harvard College in three years under existing regulations without any unreasonable exertion."

Parallel with this movement at Harvard, important steps were taken at other institutions. In May, 1890, Columbia University adopted the plan of permitting seniors to elect their studies, under certain restrictions, from courses offered by the faculties of philosophy, political science, mines, and law. This arrangement came to be known as the "Columbia Plan," by way of distinction from the proposed "Harvard Plan." The University of Michigan had for several years prescribed its requirements for graduation in quantitative terms, and had permitted students who came up to the beginning of their senior year with not more than one half-year's work of their course remaining uncompleted, to take

professional studies during the senior year along with the remaining work of the undergraduate course. The further provision was now made at Michigan that students preparing for the (four-year) course in medicine might arrange for an overlapping of the two courses, with the result that the general and the professional degree might both be taken in seven years. The University of Chicago and the Leland Stanford Junior University appeared on the scene at this time, with their characteristic contributions to current discussion and practice. The proposals of President Butler respecting the baccalaureate, which have given a new impetus to the movement we are considering, are so recent that they belong rather to the present than to the province of the chronicler.

To sum up, the more significant aspects of this history seem to me to be these: that the bachelor's degree has in some sense determined our national educational standard; that it has come to be a general possession of our people, that is, the mark simply of the well-educated man irrespective of his calling; that, with better educational organization, it has come to represent normally a higher grade of training than it once stood for; that, in becoming both a higher degree and a more popular degree, it has largely lost its old-time connection with training for vocation, and has prompted young people, after they have come of legal age, to go on still with general studies, and without serious thought of occupation in life. To ward off the danger of chronic dilettantism, which is thus incurred; to integrate the baccalaureate with life, while keeping it still a degree of high standing and also a popular degree, has been, I think, the purpose of recent movements in this field. There has been some consideration, but not enough consideration as yet, of the problem of intermediate, connective courses, between general culture and professional training.

Of the extensive literature to which this question has given rise, attention may be called to the following, in addition to the papers already mentioned:

CHARLES KENDALL ADAMS, "The Next Step in Education," *Forum*, Vol. X (February, 1891), pp. 618–32.

ARTHUR M. COMEY, "The Growth of New England Colleges," *Educational Review*, Vol. I (March, 1891), pp. 209–19.

DANIEL C. GILMAN, "The Shortening of the College Curriculum," *ibid.* (January, 1891), pp. 1–7.

N. S. SHALER, "The Use and Limits of Academic Culture," *Atlantic Monthly*, Vol. LXVI (August, 1890), pp. 160–70.

Annual Report of the President of Columbia College: 1879–80 (Barnard), pp. 44–56; 1885–86 (Barnard), pp. 14–37; 1890–91 (Low), pp. 48–52; 1901–2 (Butler), pp. 29–49.

Annual Report of the President of Cornell University (Adams): 1889–90, pp. 20–22.

Report of the President of Harvard College (Eliot): 1883–84, pp. 36, 37; 1885–86, p. 14; 1886–87, pp. 14, 16, 17, 75, 76, 80; 1887–88, pp. 12, 13, 81–83; 1888–89, pp. 21, 116–19; 1890–91, pp. 7–9.

University of Michigan, The President's Report (Angell), for the year ending September 30, 1890, pp. 14–18.

Report of the President of Yale University (Hadley), for the academic year 1901–2, pp. 13–29, 42–51.

II

CHARLES W. ELIOT, PRESIDENT OF HARVARD UNIVERSITY, CAMBRIDGE, MASS.

The period devoted to professional education has been more than doubled within the last forty years in the United States, except in the divinity schools, where three years were early required and are still required. In Judge Story's law school at Harvard the period of residence was eighteen months. It is now three years. In 1869–70 the period of required residence in the Harvard Medical School was four months in each of three years. It is now nine months in each of four years. This tendency to increase the period of professional instruction has by no means exhausted itself; and, inasmuch as the amount of professional knowledge and skill to be acquired by every student is steadily increasing, we must expect more and more time to be devoted to professional education. This tendency is by no means to be regretted. The advanced studies of professional schools supply a better training than the elementary studies of school and college; and they are generally pursued by the professional student with greater zeal and energy than either schoolboys or college students manifest; but, inasmuch as it is the interest of society and the interest of the individual that young men should be enabled to enter, well trained, on the practice of a profession by the time they are twenty-five years old, it follows that the period of training preliminary or preparatory to professional training should come to its end by the time the young men are twenty-one years old.

If we ask, next, at what age a boy who has had good opportunities may best leave his secondary school — whether a high school in a city, or a country academy, or an endowed or private school for the sons of well-to-do parents — the most reasonable answer is, at the age of eighteen. At that age the average boy is ready for the liberty of a college or technical school, and will develop more rapidly in freedom than under the constant supervision of parents or schoolmasters. Seventeen is, for the average boy, rather young for college freedom, tho safe for steady boys of exceptional maturity. Between the secondary school and the professional school, then, there can be, as a rule, only three years for the college. The American colleges have been peculiar in expecting so long a residence as four years. For the A.B. degree Oxford and Cambridge have required residence during only three years, and during much less than one-half of each of those years. Even the honor men at Cambridge are in residence, as a rule, but three years. Until recent years the American colleges doubtless needed four years, because of the inadequacy of the secondary schools. These schools having steadily improved and taken on themselves more and more of the preliminary training of well-educated youth, it is natural that the colleges should now be able to relinquish, without lowering their own standards, a portion of the time which they have heretofore

claimed. What portion, is an interesting question. In the Latin countries the A.B. is given at the end of the secondary-school course. In Germany the college course and the degree of A.B. have disappeared altogether.

On this point I confine myself to stating what answer the Harvard faculty has given to this question about the relinquishment of a portion of the time heretofore devoted to the college. The principle on which the Harvard faculty has acted is this: They propose, in reducing the time required for the A.B. degree to three years, to make no reduction whatever in the amount of work required for that degree. In other words, they propose that the degree of A.B., taken in three years, shall represent the same amount of attainment, or power acquired, which the A.B. taken in four years has heretofore represented. Under the conditions which obtain at Harvard there is no difficulty whatever in bringing about this result. In the first place, the faculty has already pushed back into the secondary schools a good deal of work of proper school grade which used to be done in the college. Secondly, the faculty requires the young man who takes his degree in three years to pass exactly the same number of examinations on the same number of courses as are required of the man who takes the degree in four years. This demand can be readily met by the student, because the long summer vacations can be utilized, and the ordinary pace or rate of work of the student in the four-years' course can be considerably accelerated by the ambitious man who proposes to take his degree in three years. There are three months and two-thirds of vacation at Harvard in every academic year,—a superfluous amount. The standard of work in the four-years' course for the Harvard A.B. was decidedly lower than the standard of work in any of the Harvard professional schools. It is one of the advantages of the three-year plan that it raises this standard of work during the college residence. Pursuing this general policy that the requirements for the A.B. are not to be diminished, the Harvard faculty fixes the minimum regular residence for the Harvard A.B. at three years. They do not believe that the residence can be reduced to two years without diminishing the amount of work required for the degree. At several different times it was proposed in the Harvard faculty that they adopt the principle of counting the first year spent in one of the professional schools toward the degree of A.B., as well as toward the degree of the professional school; but the faculty always rejected that proposal, on the ground that this method implied a reduction of one-quarter in the requirements for the degree of A.B., and indeed of more than one-quarter, because the senior year ought to be a better year than the freshman year. To accentuate this determination not to abate the requirements for the degree of A.B., while shortening the period of residence, the faculty for some years required persons who were to take the degree in three years to obtain higher marks or grades than were required of persons who took the degree in four years. This particular requirement has now been removed; but

it was useful during the years of transition, because it made it evident that the three-years' man, on the average, had made greater attainments than the average four-years' man. The governing boards of the university have had precisely the same intentions as the faculty; so that insistence on the previous sum of the attainments for the degree is the characteristic feature of the evolution at Harvard. The result has been brought about by the use of the Harvard admission examinations to raise the standards of the secondary schools, by the utilization of parts of the long summer vacation, and by encouraging students to put more work into the day and into the year while they are in residence for the A.B.

The Harvard faculty has endeavored to hold fast to the actual facts of the case. It says nothing about an A.B. in five years, because none but men in some way disabled spend five years in getting a bachelor's degree. It does not try to bring boys to college in large number at sixteen or seventeen years of age; but it has for years advised that they come at eighteen instead of nineteen. It offers the bachelor's degree in three years or three years and a half, instead of four years, because many students can win the degree in these shorter periods of residence without any lowering of the standard. In short, it proposes to hold everything it has won for the college and the degree of bachelor of arts, and to meet the claims of professional education by better organization of the whole course of education from beginning to end, by better methods of teaching, and by large and early freedom of choice among different studies.

While this change was going on in Harvard College, the university took the important step of requiring the A.B. for admission to its three oldest professional schools, first in the Divinity School, then in the Law School, and lastly in the Medical School. It had already established the Graduate School in Arts and Sciences, for admission to which a preliminary degree was, of course, required. It is unnecessary to point out that this action gives the strongest possible support to the A.B. If taken by the leading universities of the country at large, it would settle at once in the affirmative the question of the continued existence of the American college. To preserve the college, the sure way is to keep down the age of leaving the secondary school, abbreviate the college course to three years, and require the A.B. for admission to university professional schools. Then we may avoid what has happened in all the nations of continental Europe, namely, the disappearance of the college course for the A.B.

The requirement of the degree of bachelor of arts for admission to the professional schools has the happiest effect on the whole course of professional study. The classes in the professional schools become at once much more homogeneous in quality, and that quality is distinctly higher than before. To believe that any other result were possible would be to discredit the college course itself.

The objections to this very decided improvement are two. It is

alleged, in the first place, that the professional schools of the universities cannot bear the reduction in their number of students which would follow the enforcement of this requirement. Doubtless there would be some temporary diminution in the number of students; but the experience at Harvard shows that this reduction would be only temporary. The reduction is lessened, if four or five years' notice of the change is given. After a few years the reduction would be overcome. Indeed, in the Harvard Law School the number of students rapidly increased after the requirement of a degree for admission to the school. As a rule, the men already engaged in the practice of a profession approve and actively support all measures which tend to raise the standard of education for their profession. This pecuniary argument, therefore, may safely be regarded as one of only temporary and limited force. The other objection is a sentimental one. It is said that the requirement of a degree for admission to all professional schools would exclude some young men of remarkable powers, who have had no opportunities in their early years to obtain a good, systematic education. The obvious answer to this objection is that the organized institutions of education are not planned for geniuses, and that geniuses do not need them. Moreover, it is not supposed that all the professional schools of the country would make this requirement. There would doubtless be plenty of private-venture schools in all the large cities, which would receive young men of an appropriate age without the slightest inquiry into their preliminary education. That is the case today, and the proposed change in university policy would, of course, be an advantage to such schools. The question before us, in this Department of Higher Education, is what the universities ought to do. I urge that the universities should maintain each its present standard for the degree of bachelor of arts, but should permit young men who are capable of reaching that standard in three years of residence to take the degree in three years; and, secondly, that, with notice of not less than four years, they should require some bachelor's degree in arts or sciences for admission to their professional schools. The long notice will enable parents, schools, and the whole community to adapt themselves to the change. The greater the number of universities which unite in this movement, the more easily will it be brought about.

It will be observed, perhaps, that I have said nothing about the degree of bachelor of science or bachelor of philosophy. My reason is that I regard those degrees as only temporary and inferior substitutes for the traditional degree of bachelor of arts. I believe that these lesser degrees will disappear as soon as an adequate variety of studies is allowed to count toward the degree of bachelor of arts. Toward this admirable consummation the Harvard faculty has already taken some important steps. Thus, many college studies can be counted toward the degree of bachelor of science; and many of the studies originally introduced into the univer-

sity thru the Scientific School may be counted toward the degree of bachelor of arts. Again, in 1903 and thereafter the requirements for admission to the Scientific School represent as large an amount of work done at the secondary school as the requirements for admission to Harvard college, altho the number of options is larger in the Scientific School requirements. A very moderate increase in the number of required studies for admission to the Scientific School, and in the number of optional studies allowed for admission to Harvard college, would make the requirements for admission to the two departments identical. For a time, in the development of the American universities, there was a strong tendency to multiply bachelor degrees. For ten years past the tendency has been all the other way. Until this simplification is brought about, however, the requirement for admission to the university professional schools will have to be a bachelor's degree in arts or sciences, this description including the miscellaneous degrees in letters, philosophy, engineering, and so forth.

Finally if a degree in arts or sciences is to be required for admission to university professional schools, the road to such a degree should be as smooth and broad as possible. No exclusive prescriptions should obstruct it; and the various needs of the individual pupil should be carefully provided for in both school and college.

III

NICHOLAS MURRAY BUTLER, PRESIDENT OF COLUMBIA UNIVERSITY, NEW YORK, N. Y.

In my judgment most participants in the discussion now going on thruout the land as to the length of the baccalaureate course and the preparation for the professional schools err in supposing that the two questions are necessarily reducible to one, and also in taking hold of that one by the wrong end. The nature, content, and proper length of the baccalaureate course are matters quite independent of the proper standards of professional education and are entitled to consideration on their own merits.

The one question to which the two are usually reduced is taken hold of by the wrong end when it is said that the baccalaureate course should be of a stated length, say four years or three years, and that everything else in education and in life must adapt itself accordingly. Those who take this stand give us no clear notion of (1) where the baccalaureate course begins, (2) what it consists of, or (3) what it exists for. They assume that all of these points are clearly understood and generally agreed upon. Nothing could be farther from the truth. Not even the so-called reputable colleges are in anything approaching agreement as to the stand-

ard to be enforced for admission to the baccalaureate course; and while there is an external pretense of unanimity as to what the baccalaureate course exists for, that course is, nevertheless, in too many instances fearfully and wonderfully made. Dr. Wayland said over sixty years ago that "there is nothing magical or imperative in the term of four years, nor has it any natural relation to a course of study. It was adopted as a matter of accident, and can have, by itself, no important bearing on the subject in hand." To suppose that a four-years' baccalaureate course is necessary *semper, ubique, ab omnibus* is to elevate an accident to the plane of a principle.

Others take hold of the question by the middle. They fix an arbitrary age at which professionally trained men should be ready for active work in life, and after subtracting the sum of the years that they propose to allot to the elementary school, the secondary school, and the professional school, the remaining years—three, or perhaps two—are held to be sufficient for the college.

Both of these methods appear to me to be arbitrary and unscientific, altho the former is the usual academic mode of settling the question and has behind it the support of uncritical public opinion.

One of the worst of all educational evils is that of quantitative standards, and it persists surprisingly in the discussion of college and university problems. Every higher course of study that I know of, except only that of graduate work leading to the degree of doctor of philosophy at the best universities, is primarily quantitative. These courses are all based on time spent, not upon performance. The adjustment of the period of work to the capacity of individual students, now so common in elementary schools and not unusual in secondary schools, is almost wholly absent from the colleges. The "lock-step" is seen there to perfection, and class after class of one hundred or even two hundred members moves forward (with the exception of a few delinquents) as if all its members were cast in a common mold. The place of the baccalaureate course and its standards will never be established on sound principles until the question of its length is made subordinate to those relating to its content and its purpose. Moreover, it is quite unreasonable to assume that the baccalaureate course should be of one and the same length for everybody. By the term "baccalaureate course" I mean those liberal studies in the arts and sciences that naturally and historically follow the secondary-school period.

My own views on the questions at issue are, briefly, these:

1. The baccalaureate or college course of study of the liberal arts and sciences should be preserved at all hazards as an essential part of our educational organization. It is distinctively American and a very powerful factor in the upbuilding of the nation's culture and idealism. It should be treated as a thing of value in and for itself, and not merely as an incident to graduate study or to professional schools.

2. The college course is in serious danger by reason of the fact that the secondary school is reaching up into its domain, on the one hand, and the professional school is reaching down into it, on the other. Purely professional subjects in law, medicine, engineering, and architecture are widely accepted as part of the baccalaureate or college course by university colleges, and now independent colleges in different parts of the country are trying various devices with a view to doing the same thing. If this tendency continues unchecked, at many institutions there will soon be little left of the old baccalaureate course but the name.

3. To preserve the college is (*a*) to fix and enforce a standard of admission which can be met normally by a combined elementary and secondary-school course of not more than ten years well spent, and (*b*) to keep out of the baccalaureate course purely professional subjects pursued for professional ends by professional methods. The college course, in other words, should be constructed for itself alone and for the intellectual, moral, and spiritual needs of the youth of our time, without reference or regard to specific careers. This course must be widely elective, and so offer material to enrich and develop minds of every type. This course is the best preparation for the professional study of law, medicine, divinity, engineering, architecture, and teaching, simply because it does what it does for the human mind and the human character, and not because it is so hammered and beaten as to serve as a conduit to a particular career or careers.

4. This course should be entered upon at seventeen, or in some cases at sixteen. Eighteen is too late for the normal boy; the boy who has had every educational advantage and is not ready to meet any existing college-entrance test before he is eighteen has been dawdling and weakening his mental powers by keeping them too long in contact with merely elementary studies.

5. For the boy who enters college at seventeen and who looks forward to a career as scholar, as teacher, or as man of affairs, four years is, ordinarily, not too long a time to spend in liberal studies. On the other hand, the boy who, entering college at seventeen, purposes to take up later the study of a profession in a university, ought not to be compelled to spend four years upon liberal studies just at that time in his life. To compel him to do so is to advance the standard of professional education arbitrarily without in any way raising it. It is a fallacy to suppose that the more time a boy spends in study, the more he knows and the more he grows. Whether he grows by study depends entirely upon whether he is studying subjects adapted to his needs, his interests, and his powers. Pedagogs suppose that the more time a boy spends in school and college, the better; educators know the contrary. There is a time to leave off as well as a time to begin. A boy *can* develop intellectual apathy in college as well as knowledge, weakness of will as well as strength of character.

6. The earlier parts of professional courses in law, medicine, engineering, and the like are most excellent material for the boy of nineteen or twenty. He should begin them at that time and complete his four years of professional study by twenty-three or twenty-four. To postpone his professional course later than this is not only to waste his time, but to waste his mind, which is far worse.

7. There should be a college course two years in length, carefully constructed as a thing by itself and not merely the first part of a three-year or a four-year course, which will enable intending professional students to spend this time as advantageously as possible in purely liberal studies. The university colleges can establish such a course readily enough; the independent colleges will have to establish such a course or see their influence and prestige steadily decline. To try to meet the new situation by simply reproducing all present conditions on a three-year scale instead of on a four-year scale is a case of *solvitur ambulando*. The shortening of the college to three years for all students involves an unnecessary sacrifice. As usually defended this policy involves no educational principle, but merely concedes a year of liberal study to the modern demand for haste and hurry.

8. Whether the completion of such a two-year course should be crowned with a degree, is to me a matter of indifference. Degrees are the tinsel of higher education and not its reality. Such a two-year course as I have in mind would imply a standard of attainment at least as high as that required for the degree of A.B. in 1860, which had many characteristics that we of today persistently undervalue. If this discussion could be diverted from degrees to real educational standards, it would be a great gain. The compromise plan as to degrees, now becoming so popular, whereby the baccalaureate degree is given either for two years of college study and two years of work in a professional school, or for three years of college study and one year of work in a professional school, is disastrous to the integrity of the college course. It deliberately shortens the college course by one year or two years, while proclaiming a four-year college course. It is a policy that only university colleges can adopt; independent colleges must suffer if it becomes a fixed and permanent policy.

9. The most difficult point to establish, apparently, is that at which the baccalaureate course should begin. Colleges with courses nominally four years in length are admitting students with from one to two years' less preparation than is demanded by other colleges with four-year courses. The lax enforcement of published requirements for admission, together with the very general acceptance of certificates from uninspected and unvisited schools, has demoralized college standards very generally. It does not make much difference how long the baccalaureate course is, if it does not begin anywhere.

10. A university ought not to admit to its professional schools students who have not had a college course of liberal study, or its equivalent. A minimum course of two years of such study should be insisted upon. A four-year course should not be required for the two reasons: (1) it delays too long entrance upon active life-work, and (2) it does not use the time and effort of the intending professional student to the best advantage.

11. For a university to admit professional students direct from the secondary schools is to throw the weight of its influence against the spirit and ideals of college training, and to prepare for the so-called learned professions a large body of very imperfectly educated men. To say that any other procedure is undemocratic is not only a grave misuse of words, but is to imply that the universities should not struggle to give this democracy what it most needs, namely, well-educated and highly trained professional service.

IV

WILLIAM R. HARPER, PRESIDENT OF THE UNIVERSITY OF CHICAGO, CHICAGO, ILL.

In view of the time allotted, I limit my statement to the presentation of some considerations which appear to me to be distinctly opposed to the proposition to make three years the normal period of residence for the college course instead of four.

Some students are, unquestionably, able to complete the course in three years. About the same number should perhaps, to do the work equally well, take five years. The question before us, however, is not one that relates to a small proportion of the students who enter college—the very brightest or the very dullest. It is a question which has to do with the normal college course, that is, the course of study intended for the average student.

It is easy to point out the origin of the difficulty which confronts us and has given rise to the proposition itself. It is a survival of the old idea which made the college curriculum something rigid, something into conformity with which every student must be brought, rather than something which should be made to conform to each individual student. It is not inconsistent with this suggestion that the first discussion of the question took place in an atmosphere friendly to the elective policy in distinction from the policy of a fixed curriculum. Adaptation to the needs of the individual along certain lines did not in this case carry with it flexibility and adaptation in other lines. It is not an adaptation of the college course to the needs of individual men to propose that the course shall be a three-year one. An adaptation would permit four years for those who need four years, five years for those who need five years, and three years for those who are able to do the work in three years.

1. The proposition for a three-year course is based upon the supposition that the entire work of the college course is really university work. This is a mistaken supposition. The work of the freshman and sophomore years is ordinarily of the same scope and character as that of the preceding years in the academy or high school. To cut off a full year means either the crowding of this higher preparatory or college work of the freshman and sophomore years, or the shortening of the real university work done in the junior and senior years of the college course. The adoption of either of these alternatives would occasion a serious loss to the student. The average man is not prepared to take up university work until he has reached the end of the sophomore year. No greater mistake is being made in the field of higher education than the confusion which is coming to exist between college and university methods of work. The adoption of a three-year college term would only add to a confusion already great.

2. The suggestion rests upon an incorrect idea as to the age of students beginning work. The average age of students entering college today is about the same as it was twenty-five or fifty years ago. The average age of students leaving college today is about the same as it was twenty-five or fifty years ago. The serious difficulty lies in the fact that the demands of professional education are greater today, and that, instead of courses of professional study extending over two years, we are confronted with courses of professional study extending over three or four years. It is a point of special interest, however, that, altho the requirements for entrance to college are so much greater than they were in former years, the student masters these requirements and enters at practically the same age. In other words, better educational facilities have made it possible to graduate the young man at the same age, but with nearly two years of additional work. With all this gain it is apparent to any student of the situation that even yet there is great waste, and that a better arrangement of the curriculum in the earlier stages of educational work will make it possible for one or two additional years to be gained. With the multiplication of high schools and their greater efficiency, and with the consequent improvement in the grammar schools, much may be expected. It is reasonable to suppose that a practical limit has been reached so far as concerns the requirements for admission to college. With this limit fixed, it is not unreasonable to expect that on the basis of the present requirements a boy may reach college one or two years earlier within the next decade. This will counterbalance the increase of time required in the professional schools referred to above. It is therefore unnecessary to shorten the college course merely to provide for an extension of the professional course.

3. The proposition is based upon a wrong idea of the high school. This institution is no longer a school preparatory to college. In its

most fully developed form it covers at least one-half the ground of the college of fifty years ago. It is a real college; at all events, it provides the earlier part of a college course. Its work may not be separated from that of the freshman and sophomore years either in method or scope. Many high schools are actually moving forward to include in their curriculum the work of the freshman and sophomore years. In these schools the entire college course, as it was known fifty years ago, besides the additional work in science which at that time was unknown, is included. This development of the high school has a significant bearing upon the question before us. How is this new college, the product of our own generation, to be brought into relationship with the old college which has come down to us from our ancestors? The correct appreciation of the modern high school and its proper adjustment to the situation as a whole makes strongly against the proposed three-year course.

4. The adoption of the three-year policy by the larger institutions would be followed immediately by an increase of requirements for admission to the first year of college work. This fact is seen in the history of the college of the Johns Hopkins University. While high schools as such show a tendency to increase the scope of their work, and while this tendency is certainly to be encouraged, such increase should be accepted as a substitute for the work of the college, but not as an additional requirement for admission to the college. Our present difficulties have their origin partly in the fact that from time to time we have increased the requirements for admission to college until, as has already been pointed out, a fairly good college course of instruction is now obtained before the so-called college work begins. This is an evil which should be corrected, and its correction lies in the direction of reducing the requirements for admission rather than in increasing them. The evil would be intensified by the adoption of the three-year policy.

5. The proposition is based upon the supposition that the time requirement is the essential thing. Starting from the tradition that the college course must be four years for all men of whatever grade, it proceeds upon the assumption that, for various reasons, this period, now the same for all students, must continue to be the same for all students, namely, three years. No idea has exerted a more injurious influence in the history of the college work than that the period of four years, however employed, if spent in college residence, guaranteed a college education. It is questionable whether the time limit in the undergraduate course is any more important a factor than the time limit in the work for the doctor's degree. This fondness for a time limit, which is the fundamental basis of the three-year proposition, is a survival of the old class system which disappeared long ago in the larger institutions, and is beginning to show decadence even in the smaller institutions.

6. The proposition is likewise to be opposed because of its deleterious

influence upon the smaller colleges. The American college is the glory of American spiritual life, and its existence must not be endangered. Granting that the larger institutions could adopt without injury the three-year plan, it would be impossible for the smaller colleges so to do. Two things would follow: (*a*) the decadence of the better colleges of this class, and (*b*) the adoption of the policy by colleges only slightly above the grade of high schools. When it comes to be seen that the college system is adjusted in its entirety with a view to its relationship to the professional schools, and that it is only a second college course following a first college course already received in the high school, the tendency will be to go directly from the high school to the university — a tendency to be discouraged as urgently as possible. Moreover, the colleges of lower grade will at once reduce their period to three years, even tho their curriculum be greatly inferior to that of the larger institution. In other words, the step proposed, in spite of protestations to the contrary, means, in the end, a lowering of requirements thruout the field of higher education.

7. Less than four years for a boy who enters college at the right age, sixteen or seventeen, is too short a time. The adoption, however, of the three-year course will compel every boy to limit his college course to three years. This is a serious difficulty. On the present basis he may take one, two, three, or four years according to circumstances. On the new plan he would be limited to three years, so far as college work is concerned. With the immense increase in attendance at college which has come within the last decade on the four-year basis, why should we deliberately plan to reduce the time to three years? Surely a preparation will be needed in the years to come as full and long as in the years that are passed. The one place in which it is unnecessary and undesirable to cut down the time of those who are willing and able to take four years is in the college period. Let the time be shortened in the earlier years, but at this stage of preparation, with the great number of subjects which may profitably be considered, let us have all the time possible.

8. The suggestion of the three-year course ignores the culture value of the subjects in the first year of professional work. For my own part I cannot conceive any work more valuable to a young man or woman, from the point of view of citizenship and general culture, than the first year's work in the curriculum of the law school, the medical school, the divinity school, or the school of education. In any one of these groups the student is brought into contact with living questions. The fact that the method of professional schools is different is, in the majority of cases, a distinct advantage, and in no case an injury, since it serves as a corrective of a tendency toward dilettanteism unquestionably encouraged by the more lax methods of the later years of college work. If any one question has been settled in the educational discussion of the last quarter of a century, it is that a line is no longer to be drawn between this class of subjects

and that, on the ground that one group, and not the other, may be regarded as culture-producing. The opportunity to elect subjects of this character in the last year of the college course does not injure the integrity of the college. It must be confessed that the adoption of this policy by larger institutions introduces a difficulty for the smaller institutions, but this difficulty is not insuperable, and several ways have been already suggested for meeting it.

9. The proposition, as already hinted, subordinates the college almost wholly to the professional school. It is largely because of the increased demands of the professional schools that it seems necessary to shorten the college course. This does not seem to be in harmony with the fact that a comparatively small number of students really expect to enter professional schools. Why should students who do not have the professional school in mind be required to shorten the term of college residence? If it is answered that the student who enters any line of business activity needs the year thus saved in order that he may begin his work earlier, it may be said that the facts do not bear out this proposition; and, in any case, a year of business is not to be treated as a year of college work in the sense that it is equivalent to the first year's course of study in a professional school. It is therefore as inexpedient to adjust the whole college policy to the supposed needs of a minority who are planning to enter the professional school as it is to adjust the whole policy of a high school to the needs of a minority who enter college.

10. In conclusion it is to be urged in opposition to the proposed movement that it is in general contrary to the drift of educational movements, and that the very thing which it proposes can easily be secured by other means. Among other educational tendencies today may be cited (*a*) that of the high school to enlarge its scope and add to its curriculum one or two years of additional work; (*b*) that of the average smaller college to strengthen its faculty and curriculum; (*c*) that of avoiding the waste in the earlier years, and the consequent possibility of college entrance at an earlier age; (*d*) that of distinct separation between college and university methods. To each and all of these the proposition stands opposed.

Following the example of one of the speakers this morning, I would suggest that the plan which has been in operation at the University of Chicago for nearly ten years has seemed to many of us to meet in large measure the demands called for this morning. This plan provides a course of four years and a course of two years. It permits students of exceptional ability to do the work in three years. It makes it possible for those who so desire to prolong the work to five years. It is adapted to the needs of individuals of different classes. The provision of a two-year course meets the need of many who cannot take a longer term of residence and likewise of many who ought not to take a longer course.

The provision of a normal four-year course meets the need of the average man or woman. This plan does not imply that this average man or woman is particularly stupid, nor that a year has been wasted. With the completion of the two-year course a certificate is given, granting the title of Associate in the University. This, for the present, is sufficient in the way of a degree. To students who maintain a standing of the highest grade certain concessions are made.

The details of the plan have been worked out as experience has indicated the need. It is believed, from an experience of ten or more years, that it contains the solution of at least many of the points now under discussion.

V

ANDREW F. WEST, DEAN OF THE GRADUATE SCHOOL, PRINCETON UNIVERSITY, PRINCETON, N. J.

The American college is the vital center of our system of higher education. With all its imperfections, it serves, as probably no other institution can serve, to uphold the standards of the secondary schools and to lift from below the level of professional schools. It occupies an intermediate field of its own, not perfectly defined, but as clearly defined as the fields of our secondary or professional education. It should be allowed and encouraged, as they are, to organize itself completely and efficiently according to the laws of its own life, without curtailment or encroachment. Otherwise we shall be in the absurd and uncivilized position of refusing to try for the best college education, and shall be sacrificing to commercial and utilitarian demands the one educational agency most needed to purify and elevate the too materialistic tone of our American life.

By tradition the length of the college course is four years. This is almost universal. There seems to be no good reason *a priori* why it should have been four, rather than five or three, or even two. But the practical unanimity of the tradition indicates that thus far at least the period of four years has been found to be well suited to our needs. Analyze this as we may, it is a definite result of long and wide experience, and one which should not be discarded without the fullest consideration.

It is argued, however, that conditions are changing and that a shorter time must be allotted, if we would save the American college. This argument rests mainly on the increasing age of the student at entrance to college and the lengthening courses of the professional schools. The fact that college graduates are kept back from entering business life until they are twenty-two need not disturb us on economic grounds, because it is also a fact that the marked increase of college graduates in business life has coincided with the very period in which the age of graduation has been

rising. But for those going into professional life the case is different. Taking eighhteen as the average age of entrance to college, adding four years of college, and three or, as it may soon be, four years of professional study, the young doctor or lawyer is not fledged until he is twenty-six. A year, or even two years, may be saved by reducing the length of the college course.

Let us admit at once that we are facing a serious economic question. The saving of a year or two in time and money will in many cases settle the question as to how extended an education a young man can get. Young men who must get to law or medicine by twenty-four must forego something, if they enter college at eighteen. No device will secure them eight years of educated life in six. The brighter and more mature among them may perhaps save a year by entering college at seventeen. But this does not meet the general difficulty. If by any chance they enter at sixteen, they will be found as a rule too immature mentally for the studies and too immature morally for the life of our larger modern colleges. This solution may therefore be dismissed as insufficient and unwise. If the year, or two years, is to be saved, it must be taken in most instances from the college or from the professional school.

We may as well admit that in such cases the college must suffer the loss, because the intending doctor or lawyer cannot escape the demands of the professional schools. His livelihood is conditioned on completing his professional education, and this settles the matter.

But does it settle the general question of the proper length of the college course for those who have time to take it? What are we to do with the mass of students who can take four years of college? Why must their course be shortened? It is the minority which goes in to law and medicine. Some better reason must be found than the fact that a part of this minority cannot remain four years. If it were true, or if it becomes true, that the majority of young men suitable for college cannot stay thruout the present course, then it may be a shorter course must be established. Otherwise it does not appear that we are doing a wrong to students by holding them four years, unless it can also be shown that a three-year or two-year course is intrinsically better than a four-year course for American young men.

This is to me the one question of real difficulty. I am unable to see that young men generally will be better trained to begin as lawyers at twenty-four than at twenty-five or twenty-six. I am able to see that many cannot afford to wait so long, and must take what they can get in the shorter time. It is clear that some of them cannot take four years in college. It is also clear that giving them the bachelor's degree at the end of two years or three years will not give them an education of four years. It is the time taken, as well as the studies taken, that counts heavily, if a permanent impression is to be made. Extended time in residence given to

unhurried, settled study, and not rapidly formed acquaintance with a series of studies, is what is needed. And when we realize with what imperfect training so many boys come from the schools, it may easily take four years to outflank their deficiencies, correct their methods, and develop even a semblance of liberal culture.

Why, then, if some of them must leave college, should they not leave, as some now do, at the end of two years or three years, taking with them their valuable half-loaf or three-quarters loaf of college life and training? It is worth a great deal to them. They will find most of the professional schools ready to receive them, and some of them ready to give, if not the very best, at least a good professional education. The best of everything in education cannot be had without taking the time needed. In fact, we are exaggerating the situation; for if all professional schools would merely go so far as to exact at least two years of college as prerequisite to entrance, there would be a gain the country over in the quality of professional students. It may perhaps be thought that the three-year course will bring more students to college and more college graduates to professional schools. This is a matter of speculation. But suppose it does. Is it clear that we need more college students with shorter education than they have now? Is it clear that we need proportionally more doctors and lawyers? The desired gain in quality of professional students can be secured without destroying the four-year course, merely by exacting generally three years of college as a minimum entrance requirement. Has any American university gone farther than this in dealing with the students of its own college who enter its own law or medical school?

In the present condition of affairs in our land, viewed in its entirety, the question of entrance to professional schools and the question of the proper length of the college course are two distinct questions. By all means let there be a few leaders among the professional schools exacting a college degree for admission, especially if it be possible to secure this on the basis of a full college course completed in the full time without haste or crowding. The time may come perhaps when all good schools will be able to follow their example. But it has not come yet.

If, therefore, the college course is to be shortened, it should be because the shorter course is intrinsically better for the mass of college students. Is four years of American college education better than three? Few will doubt it is better than two. Three years or four is the real question.

That a change of profound importance has come over our colleges in the last thirty years none will deny. It is a change in tone and spirit. The gains in diversified opportunity and in student self-government have been immense. There have also been losses. In the large older colleges particularly there has been an accession of students who are attracted more by the social and athletic life than by studies. There has been a

relaxing of effort, a disposition to look on college life as a pleasant social episode. The old-fashioned college with its simple program of prescribed studies is gone. The so-called "elective system" has come in to replace it, wholly or partly. To rehabilitate the old stage of things is impossible and undesirable. To endure the disintegration and confusion in intellectual standards which have ensued is also undesirable and, I believe, impossible. The strength of opinion favorable to the four-year course is found to be greatest where a large basis of prescribed studies has been kept. The arguments for a shorter course are most influential where elective freedom prevails most. It is possible to argue with much effect for four years when it can be shown that a fine education is given because of the very definite correlation of studies to one end, namely, the acquainting of young men, not only with the methods of knowledge, but with the substance of things important for all liberally educated men to know—the elemental things which, taken together, represent the stock and staple of our intellectual inheritance as a race. This takes considerable time. Supplement this with a first exploration into the fields, or far better into some definitely mapped field, of elective freedom corresponding to the well-ascertained aptitudes rather than the chance likings of the student, and four years will be found none too much. A natural break between the two lower and two upper years may thus easily be made. At this time, if the hard necessity arises so soon, let men leave who must leave early. The bachelor's degree may then be kept for those who do the full work in the normal time. From this point of view, the four-year course is in every way worth maintaining.

But if the principle is to prevail that, once in college, the student is to find all studies elective, the case is very different. No definite program is completed for the mass of students, so far as concerns the specific substance of what they study. And without this an important common element is subtracted. A certain effect is lost. The common area of liberal culture, in which all educated men should be at home, tends to shrink and vanish. The solidarity of the student community, the intense *esprit de corps* which accompanies movement by college classes, the intimacy of the community in things of common intellectual acquaintance—all these are weakened by dispersion. The students are not traveling near enough in the same direction to be within easy hail and call. Such a condition is anomalous in education. Secondary education below gains its effect from the correlation of prescribed studies, so as to form a general gymnastic of the mind. Professional education above is unattainable without the mastery of correlated subjects prescribed for all. The inner relations of the subjects studied and not the preferences of immature minds, form the basis for an organized course of study, and should have much to do, perhaps most to do, with determining the length of any

course. College education alone, under the plan of free election, is being allowed to wander aimlessly, as tho there were no general and necessary rational relations according to which college studies should be combined as they are in other fields of education. The student's preference, so often determined by inadequate knowledge or an easy-going following of the line of least resistance, is dignified by the name of "election," and the bewildering mass of elective studies offered him is seriously called a "system." "System" it may be to others, but not to him.

How can a definite argument for a discipline and culture of four years, rather than of three years, be erected on such a basis? We need not waste time in exploring the tangle of inner reasons which indicate that the indefiniteness and heterogeneity of a free elective course may be a proper, even an urgent reason for shortening it. The mere fact that the movement for a three-year course is strongest where elective freedom is least restricted is enough indication that a powerful cause operating inside the college course to shorten it is the inability of a purely elective scheme to fill out four years with profit to the mass of students.

If the proposal were made to change a four-year course in elective studies to a three-year course with a large basis of prescribed studies, I confess the three-year course would seem to me a marked improvement. And unless something is done to reduce the tangle to order, the three-year course seems to be inevitable in some places. But if the proposal be to reduce the other type of four-year course to three years, then the loss is not only unnecessary, but is in every way undesirable, because it is the loss of the crowning year in a definitely rounded plan, the consummate college year of intellectual development, privilege, and satisfaction.

On the colleges, therefore, which believe in maintaining a large basis of prescribed studies as the one sure foundation for a rational plan of subsequent elective studies will rest the duty of maintaining a four-year course. They will need to make sure that they work out their program in true accordance with their academic confession of faith, and secure to their students at all hazards the few fundamental studies, well and amply taught. They will need to be resolute in teaching young men that there is no real education without well-directed effort; that it is not doing what a man likes or dislikes to do, but the constant exercise in doing what he ought to do in matters of intellect as well as of conduct, whether he happens to like it or not, that alone issues in lasting satisfaction, and that turns the frank, careless, immature, lovable schoolboy into the strong, well-trained man capable of directing wisely himself and others. If they fail to do this with measurable success, they fail to justify their contention. If they succeed, the American college course of traditional length and largely prescribed content may be trusted to justify itself triumphantly.

DISCUSSION

DANIEL W. HERING, dean of the graduate faculty, New York University, New York city.— In discussing this topic confusion is inevitable, unless some distinction is made between a college course and a course in college. Obviously it is difficult to formulate a college course that would preserve such a distinction, but something might be offered that would receive common acceptance; and then it may be found that the college course will not admit of much alteration in amount, whether it be distributed over many years or few; and it may also be found that some institutions are continuing the college course beyond the undergraduate department, while in other cases secondary schools have included portions of it in their curricula. There never has been a time when it was not expected that the college was to provide something higher than the secondary schools give, or, if it treated the same subjects, to do it better, and it is now conceded that its work should be general rather than special, so that it has been said the college should teach something of everything, leaving it to the university with its professional schools to teach everything of something. The field has become much too broad to carry out the first part of this epigram, but the same end can still be attained and the same distinction can still be maintained by covering in college such ground as to lead to an equivalent intellectual development. It is not easy to see how the time needed for this can be materially altered.

Whatever the undergraduate college is in America, it is pretty generally understood that it is not a school or course of instruction by which a man is specifically fitted to enter upon a learned profession.

The upper limit of a college course is set for many at present by the prolonged work required by professional schools; and if there is a proper distinction between college and university work, the line apparently should be drawn where special work is undertaken with reference to specific results. A subject that is essentially a part of a profession, and that would not be given but for the part it plays, technically, in the practice of the profession, might be regarded as an intruder in the college course.

If a university should feel warranted in discontinuing college work at the end of two years for students going on in a professional school, on the ground that their subsequent work would better be done, or perhaps be done better, in the latter; and if its patrons then should conclude that the work of the first two years in college is useless, on the ground that it would better be done, or would be done better, in the preparatory or high school; that would leave no college work to be done by such students in that particular university, but it would not in the least shorten the college course.

But has not the baccalaureate degree been unduly exalted? Has it not been made to mean too much? Is the purpose of the Harvard authorities to guard strenuously the present standard of the baccalaureate wholly meritorious? Compared with those of twenty years ago, entrance requirements in English are greatly extended; in many instances more advanced preparation in mathematics is required; three languages other than English are demanded, or, failing a third language, then a natural or physical science; with these advances now generally insisted upon, if from this vantage-ground the undergraduate cannot go as far in three years as students formerly went in their four-year course, it must be that he wastes his time, or he is less capable than former college students, or his instructors are not as competent as their predecessors. Probably none of these three things is true; more probably the genuine student is as proficient now at the end of the junior year as he was then at the end of the senior. Why should he be more so for graduation? The necessity is not obvious, and he is not obliged to cease studying at that point if he wishes to continue. If he can continue a fourth year after entering college, would he not better spend it as a graduate student, upon special study, elected with mature judgment? The undergraduate course is now as it has long been

for general culture, and legitimately precedes a professional course in which the necessity for work that is higher and more extended than formerly is obvious. Both the elective system and the group system are recognitions of the fact that one's studies may be more varied than formerly and yet be not less effective in developing intellectual strength.

It seems to me that the principal desiderata, and the conditions upon which their attainment rests, may be summarized as follows: (1) Good, broad culture before entering upon the specialized work of a profession; for this, sufficient time and opportunity must be given in the college or high school. Two years in college is a short time in which to accomplish this. (2) The opportunity to begin a professional course early enough to complete it at an age not unreasonably advanced; for this, the requirements for entering upon it and for the baccalaureate degree must not be too high. Four years in college makes this almost impracticable. (3) The opportunity to acquit oneself creditably in both these courses of study; for this, the work of one should not be mixed with that of the other. Three years in college will meet all these conditions if the distinction called for in the last is observed, namely, if the course in college is devoted to a college course.

These conclusions rest upon the present college-entrance requirements. There may be some who consider four years in college better than three, and for those I would make the course four years by beginning lower.

PRESIDENT G. STANLEY HALL of Clark University thought that three points should be made which had not been touched on in the papers: First, as civilization advances, time of apprenticeship necessarily increases. A man is not mature until the age of twenty-five or twenty-six; he believed, therefore, in a prolongation of "the time of exposure to higher education." Secondly, he did not believe that the best education is that which comes with effort from direct attention and application, but that there is an unconscious education which is much more important, and which is carried on in the penumbral regions of the mind. This "environmental education" needs more time. Thirdly, we do not need uniformity everywhere in higher education. We do need variety. Let different institutions, therefore, follow different models.

DEAN W. H. HADOW of Worcester College, Oxford, England, spoke in favor of the longer course, and protested against hurry and haste, and the disposition to look for immediate results. Such methods would bring the disastrous result "of everybody being able to do everything rather badly." Speaking from twenty-five years' experience at Oxford, he held that the fourth year is of more value in the training of the intellect and of character than the three preceding years put together. He emphasized the importance of the question, in view of the fact that the whole future of national character depended upon it.

REV. G. A. KRATZER, Fitchburg, Mass., argued in favor of studies having a practical value, maintaining that such studies had also a culture value; that culture studies, therefore, should be pursued only up to the age when the student is able to undertake studies of practical value. He favored, therefore, the student beginning his professional course after two years of college study, say at the age of nineteen, and the granting of both the culture and professional degrees at the end of a total period of university study of six years.

PRESIDENT JAMES H. BAKER of the University of Colorado said that, while he had not reached conclusions as to the remedy, he believed the period of general education was too long. In order to foster the higher spiritual elements of our civilization, we must preserve, however, our liberal education. He believed that there should be a national investigation into the time element in education, with reference especially to economy and to the value of culture elements to our civilization.

PRESIDENT ELIOT of Harvard University, being called on to present further the argument for the three-year course, said that the discussion of the morning showed that this is a case where doctors disagree, and that the only way to solve the problem is by experiment. It was a just diagnosis made by Professor West that there is a connection between the elective system and the shortening of the course to three years; and the reason was that under the elective system the student does much more work in a given time than under a prescribed course. Professor West's experiment would be a firm four-year college course mainly of prescribed studies. It would be delightful to have that experiment tried under the most favorable circumstances — say at Princeton. The four-year course, so far as the large universities are concerned, is gone already. It seems comical to hear President Harper maintain the inevitable worth of a four-year curriculum, and then cite as an example the practice of the University of Chicago, where a man can secure a degree in any time that best suits his conveinence. He said he could not quite make out whether President Butler recommended a four-year course or not; he was delighted to hear Dr. Butler say that the bachelor's degree should be required for admission to university professional schools, in spite of the doubt whether it should be a two, three, or four-year degree. The four-year course being gone, there is to be liberty for experiment, and that is desirable. Harvard has chosen its way, Chicago has another; let Columbia and Princeton each pursue its own course. We must get forward in education as in politics by a perpetual contest and a series of compromises. Frank conflict is always welcome. Let us have the conflict of these four experiments, and the result will be the working out of a solution by compromises from year to year, or from decade to decade.

PRESIDENT HYDE of Bowdoin said that a college course aims to do two things: first, to make man master of the tools of knowledge; secondly, to make some great department of knowledge master of the mind of the individual student. With these two things accomplished, we shall have the liberally educated man. How long it will take to do this will depend on whether the first aim is accomplished in the secondary school or not. If the Harvard entrance requirements can be maintained, it will be so accomplished, and three years in the college will probably be sufficient to do the second thing. He did not believe, however, that it is desirable for most of the colleges to maintain so high a standard of entrance requirements. He thought that just now is a poor time to cut down the length of the course when we are entering on the second stage of the elective system, and are insisting that the student's choice shall be intelligent, and the course of study cumulative.

PRESIDENT FAUNCE of Brown University spoke of how President Wayland, of Providence, had outlined many of the things advocated here today, and said that we might see in his career how much it avails a man to see clearly and speak boldly, for even if he is not able to carry out his plans himself, they will be carried out by others. He believed that it was impossible to lay down an absolute time limit for the baccalaureate degree. For the great majority of students, for some time in the future, the time would be four years. For some, on account of ill-health and limited means, the time would be five years. For some, of physical strength and brilliant intellect, the time would be three years. They had made provision at Brown University for the degree to be taken in three years, but for same amount of work to be done as in the four-year course. He believed heartily in Dr. Eliot's suggestion that we enter upon experiments; but we should beware lest we try all the experiments in one institution.

SHALL THE UNIVERSITY CONCERN ITSELF MORE DIRECTLY WITH THE MORALS AND MANNERS OF ITS STUDENTS? IF SO, BY WHAT METHODS AND DEVICES? SHOULD THERE BE IN EVERY COLLEGE AND UNIVERSITY A MEDICAL VISITOR WHO SHALL ALSO BE AN ADVISER FOR STUDENTS ON ALL MATTERS RELATING TO HEALTH AND DISEASE?

I

GEORGE HARRIS, PRESIDENT OF AMHERST COLLEGE, AMHERST, MASS.

Taking the last question first, I dispose of it at once without discussion by answering it emphatically in the affirmative. There should be a physical examination of every student at entrance; there should be a college physician to visit students who are not well; there should be a college infirmary to which students who are ill should be sent for proper care and for seclusion in case of contagious disease; there should be authority to prevent students who are not in good physical condition from engaging in strenuous athletic contests. All this is as necessary to a college as a museum, a library, or professors of economics and philosophy.

The relation of the last question to the first is obvious, since a high moral tone and agreeable manners are affected by bodily health.

The question as to morals and manners is stated comparatively: "Should the university concern itself *more* directly with morals and manners?" I cannot go thru the universities to ascertain the degree of supervision that is exercised in each institution, and so to determine the more or less of direction necessary, but must content myself with indicating the virtues peculiar to students and the mode of promoting those virtues, with incidental reference to manners.

The distinctive, one may almost say the supreme, virtue of the scholar is truthfulness. Knowledge is truth, and the pursuit of knowledge is love of the truth. The modern scientific method promotes intellectual conscientiousness. Facts do not bend to theories and doctrines, but reality is the basis of opinion. The spirit of truthfulness dominates. Love of truth for truth's sake is intellectual virtue. It promotes, it is the basis of, indeed it is, morality. This is the temper of students in all colleges. Some are lazy, taking the line of least resistance; some regard study as a hardship and go about it doggedly; but to a man our students are truth-seekers, indignant toward falsehood and deceit.

A teacher who is ignorant is not respected. It is a fatal verdict: "He does not know his subject." A teacher who evades facts, who is not downright honest in his opinions, is despised.

I said that intellectual conscientiousness promotes morality. It certainly promotes truthfulness in all relations. College men, whatever their

faults and wrong-doing, will not tell lies. A man's word is sacred. A student who lies to a fellow-student might as well leave college. However damaging to himself, he will not put No in place of Yes to a president or a professor. This virtue, which is associated with the English gentleman, has become as distinctively the virtue of the American gentleman and scholar.

You will find that students mean to regard themselves as gentlemen. The ideal of everyone is the ideal of a gentleman — of an honorable, generous, courteous man. There is no place where meanness has so little toleration as in a college. You will search long to discover a student who intentionally hurts the feelings of a fellow-student, or one who does not applaud the success of a comrade. A student must be a gentleman in all relations. Sports must be gentlemanly. If one drinks, one must drink like a gentleman. The most opprobrious epithet, unless it be a liar, is mucker; and I am not sure but that in the students' judgment it is worse to receive that offensive designation than to deviate from the truth. There are queer notions, to be sure, of the manners, the speech, and the dress of a gentleman student; but the ideal in its essential moral quality is there. "Thou shalt be a gentleman," is the first amendment to the Ten Commandments, and on it hang the academic law and prophets.

Another virtue is the democratic spirit. Students constitute a democracy of merit and culture. In a university or college the rich and poor from all sections of the country meet together, and "earth's poor distinctions vanish here." Everyone stands upon his merit, not upon wealth or parentage. There are self-constituted, artificial aristocracies in some universities, but they are sneered at by real worth. The sturdy Kansas scholar is not impressed by, if he has even heard of, the blue book of Boston. Every college likes to boast that it is democratic, and regards the reputation of being aristocratic as a slur. It is a distinct disadvantage to be wealthy. "He's rich, *but* he is a good fellow."

Loyalty is a virtue of students — loyalty to the college or university. One who excels in any respect must run, row, play ball, sing, write, debate, for the glory of the college. A student who will not come out is disloyal. He must make sacrifices for his college, his class, his fraternity. He will be a good citizen by and by, a patriot.

The college is imbued with the idea that the educated man is to render service. The colleges were founded to train men for service to the state and the world, and I doubt whether in any generation the aim has been more distinct than it is today. Success in occupation and profession, indeed, and in specific training for it, yet thru success the promotion of righteousness. Our students intend to be leaders and helpers in the communities in which they will live, in education, citizenship, religion. Especially is the civic conscience awake. In the college is a mighty impulse to service. The university settlement is one expression of it.

Training for intelligent citizenship is another expression. Educated men may be selfish; yet a broad education is always understood to be, not for its own sake, not for personal culture merely, but to make teachers, leaders, ministers in society. The strongest impulse to social, political, philanthropic service has come from the college.

I have suggested the virtues that should be, and in good measure are, the peculiar virtues of students, because in any consideration of methods and devices to promote morals and manners we must perceive the ideal which is almost universally recognized by students, and which is a true ideal.

What, now, militates against morals? What is the immorality of the college?

Some college customs are immoral, but are not so regarded, since custom is sacred and makes law. Physical violence and personal indignity are brutalizing to those who inflict them. To be sure, it is understood by both parties that insults and injury are impersonal; that the student suffers, not because he is William Jones, but because he is a freshman, or because the violence and indignity are initiational mysteries. I cannot but think, however, that such customs are immoral. Happily these impositions are diminishing, till they are little more than amusement for all concerned, altho exposing singular conceptions of the humorous.

The notion that students are a privileged class, that they may be lawless and disorderly, that they may appropriate the property of others, is demoralizing. It can be exploded best by treating them as any citizens are treated — by arrest, fine, and imprisonment. Many students think it a joke not to pay their bills. They contract bills with no expectation of paying them. They laugh together on getting out of town at graduation without having been caught by their creditors.

I will not specify further, nor am I sure that these immoralities are not the exception.

As to manners, which traditionally are inseparable from morals, the standard of students is high. In some colleges rough and negligent dress is affected, but only on college premises. On the whole, students are too much interested in dress. Those who have plenty of money spend lavishly on clothes. The code of manners in their mutual relations is somewhat peculiar. Nicknames are freely applied, but are expressions of regard and even affection rather than of derogation. The give-and-take of conversation is slangy, possibly for the enrichment of the English language, but is recognized as the patois of the tribe, and not for foreign use. The student is polite to ladies and believes that he can move with grace in the best society. He attaches great importance to good form.

The college should concern itself with the morals and manners of students, but not, I think, directly by specific methods and devices. The paternal system of government is outgrown. A large freedom obtains,

and should obtain. The college must make requirements as to studies, and for the rest must trust to influence. Work itself is the best moral power. Stiff requirements of study, week in and week out, daily tasks, constant attainment, steady intellectual progress are mighty moral influences. It is the proper business of the student to study. If the only real requirement is to pass examinations twice a year, if the student crams two weeks and loiters thirty weeks, he is demoralized. What is more demoralizing than to substitute appearance for reality? If the statement is true that 45 per cent. of the students of a great university are loafers, then 45 per cent. undergo weakening of intellectual fiber and disintegration of character. Recovery, after four years of inactivity, is well-nigh impossible. The man is incompetent for success. If the method of lecturing is such that there need be little or no honest, productive work, then the first duty of the university is to change methods of teaching so that something more than bodily presence at lectures, something more than cramming at night and disgorging in the morning, something more than intellectual pretense, is requisite. The best method for the making of sturdy character is, as Lowell says, "work done squarely and unwasted days."

Much is gained by the recovery of the literary and spiritual, as against the merely technical and the materialistic, in all studies. The seventh and eighth decades of the last century—say from 1860 to 1880—were occupied with the scientific theory of evolution, of the origin of man from lower orders, of the physical universe. It is not too much to say that in the ninth and tenth decades—from 1880 to 1900—interest swung back from the universe to its noblest inhabitant, from the natural to the human sciences. The absorbing studies of scholars became and still are anthropology, sociology, economics, æsthetics, literature, ethics, and religion. The humanistic studies take the lead in the colleges. The spiritual and ethical aspect of truth is recognized. Ancient and modern literature are known on this side, and so a liberal culture is promoted. The college is imbued with this spirit, which uplifts character and refines culture.

A potent influence for morals and manners is the president and faculty. A gentleman at the head makes gentlemen of students. Let him exemplify the virtues of honesty and honor; let him respect students; let him exhibit intellectual conscientiousness; let him do thoroly and ably his every piece of work in speech, in service for the college; let him be a man among men, and temper all with the saving sense of humor; and the whole student body will have self-respect, a high moral tone, the democratic spirit, and the ambition to be and to do something of value. The professor who is a real teacher, who is interested in students, sympathetic with all that engrosses them, firm and kind, polite and decently dressed, is a power for morals and manners. We know professors for whom students have unbounded admiration. The man and the manner; not much influence

for manners has the long-haired, slovenly dressed, dirty professor. It is said that a marked change for the better was noticed at Harvard with the advent of a young professor named Longfellow who addressed every student as Mister.

Athletics promote morals. Should football, baseball, field athletics cease, the moral tone of the college would be lowered. Sports rest more and more upon a moral basis. To be sportsmanlike is to play fair.

The society of ladies promotes good morals and fine manners. It is unfortunate if a men's college is so situated as to be a community by itself, with no access to women—as unfortunate as the situation of a women's college remote from the abodes of men. I think the education of women and of men should not be the same, and so have my doubts about coeducation; but I have no doubt as to the value of their social intercourse.

It is not a far cry from the social to the religious. Religion should have a home and should be at home in the university. The college pulpit is a throne of power. The great preachers of the country come gladly to colleges with the message of truth and righteousness. The student responds with all his heart; for the intellectual man is the spiritual man. If you should sit Sunday after Sunday in a college congregation, you would find students listening eagerly to preaching on the real, human Christ and on the service of man to man. Sermons are ethical and spiritual rather than theological. Preachers of the several denominations bring the same message to the college. Voluntary associations of students for religious culture and for Christian service, if rightly conducted, are a great moral power in a college. There is more genuine religion in the colleges today than in any period of our history. Cant and pretense are not tolerated; irrational doctrine is discarded; but faith, hope, love, character are exalted. The university should encourage sane, healthy, trustful, God-loving, and man-serving religion. Keep the flame burning on the altar of piety!

The morals and manners of students are not maintained, then, by particular devices and methods, but by the aim of the college; by requirement of solid attainment; by teaching that presents intellectual, moral, and spiritual values; by faculties of scholars, teachers, and gentlemen; by manly sports; by social intercourse with refined and pure persons; and by religion.

II

WILLIAM J. TUCKER, PRESIDENT OF DARTMOUTH COLLEGE, HANOVER, N. H.

The immoral or even the unmannered student does not enter into the theory of the higher education. It lies in the theory that the college-bred man will be able to pass the tests of good breeding. Practically, however, our colleges and universities do graduate men who are deficient

in morals or in manners, or in both. Opinions vary as to the extent to which this may be said to be true. Judged by the conventional standards, more men are deficient in manners than in morals. But no university would be willing to guarantee as its final product either the absolutely honest man or the perfect gentleman. What shall we do with this variance between the theory, or assumption, or expectation in regard to the morals and manners of the university man and the fact, as it appears, at least in exceptional cases? Shall we accept it as a normal variance, and go our way undisturbed, or shall we make it a matter of direct concern?

There is much to justify the contention that the college or university is a section of the world, and therefore that the more nearly it conforms to the methods which obtain all around it, the more naturally and effectively it will do its work. The world does not have very much to say to a man personally. It is chiefly concerned with him thru his profession or business, or, if he affects society, thru the social conventions. Why not allow the university to deal with a man at the single point of intellectual discipline to the end of culture, or to some end of utility.

I will not attempt in the moments before me to enter broadly into the opposing theory of "direct concern" with the manners and morals of students. I will state at once certain considerations which seem to me to make this the working theory of the American college or university.

1. The American college or university stands for social advancement as well as for intellectual discipline. The university is the gateway thru which democracy passes to the refinement of its strength. Universities in the older countries assume for the most part certain social qualities which are here in the making. It is impossible to ignore the peculiar responsibilities which must be borne by the higher education in a country which is still new. Even in New England there is a greater preponderance, in all our colleges, of those from new families—families that is, which have not been represented before in college training.

2. The waste of material in college or university life is a matter which needs constant attention. There is a loss of at least 25 per cent. in every class which goes thru college. This loss is partly due to lack of scholarship, or to poverty, or in slight degree to ill-health ; but something of it is due to lack of training in those personal qualities which lie in the region of manners and morals. Habits are formed which lead inevitably to the loss of college standing. Very few students are separated from college for immorality, but a good many fall out of college for want of moral fiber.

3. Scholarship is not the first end of the college or even of the university. The common product of each is not the scholar by distinction, but the man who is fitted for the largest uses of society and the state. For every scholar who is to devote his after-life to pure scholarship there are at least ten graduates who are to give themselves to more general

callings. It is not safe to lay too great a burden upon a means thru which a comparatively small proportion will reach the ends of their college life. It is too much to ask of scholarship to do everything for men who are not by first intention scholars.

In view of these considerations it becomes, I believe, a matter of "direct concern" for the college and university to take account of morals and manners, assuming that "direct concern" must never degenerate into paternalism. The note of college and university life, which must not be lowered, is personal freedom.

But having made this statement of the obligation, we find no little difficulty in agreeing upon methods of satisfying it. Manners cannot be taught — not, at least the manners of a gentleman. On the inner side it means the training of the spirit, and on the outer side it means association. Manners come to be more and more manner — the whole bearing of a man. And this result — apart from the ceaseless working of the spirit — is a pure matter of form, and therefore the effect of environment. It is the subtle distinction of manners that they come to us, not by what we do under our own initiative, but from what others are doing around us. Manners good and bad are communicated. "I was a scrubby little boy," said an old graduate of Phillips-Exeter, "and I met Dr. Soule in the street and he touched his hat to me, and it set me to asking how such an unparalleled emergency could be met." Not so with morals. We do not become strong or weak morally by imitation, but by definite acts of which we are entirely conscious. The moral effect of our surroundings is that they determine the sphere of our moral action. A college student does not have the virtues or vices of a cashier or politician open to him while a student, but simply the virtues or vices of a college student. The training, therefore, in morals beyond the Ten Commandments must be the training in college morals, in which the personal element is as decisive as it is in morals anywhere.

What is the essential idea in college morals? What but this, that a man shall take his work and his play seriously — not solemnly, but seriously; that he shall work honestly and "play fair." You cannot inculcate either morals or manners into the mind of the trifler or loafer. The spirit of the trifler or loafer is not strong enough nor fine enough to work upon. Neither one is capable of the so-called refinement of elegant leisure. The best test of seriousness in a college is honest work. You may not restrict it to any one form. I often say that the very best thing about athletics is that no indifferent work is tolerated on the athletic field. The standards there are higher than they are in the class-room. They are as nearly absolute as possible. And this is one source of their attractiveness. If athletic sports were loose, flabby, irresponsible exercises, nobody would care for them. The greatest moral lack in our older colleges and universities is the lack of mental seriousness. It hurts a man

morally to work below his powers. That is what a large minority, if not a majority, of our students are doing—working below their powers, with the inevitable result. I think that here lies the only rational ground for the contention of the past months for shortening the college course. The contention really stands for redeeming the time, not for shortening it. The college has been helped, and is being helped, in this matter of work by the technical school. This has proved to be a good running mate, quickening the pace of college life on its work side. I believe that we must lay great stress, in the interests both of morals and manners, upon the morality of work. Here is the core of the whole system. In my own college there is an old rule, dating back to the very beginning of its life that any student who "speaks diminutively of work" shall do the work of which he speaks diminutively. I wish that it were possible to enforce this rule as applied to brains as well as to hands. For until we can insure in our colleges and universities a profound respect for work, we cannot be sure that the man whom we send out among the toiling masses will take his place honestly among them, or even that he will play the gentleman.

In all our endeavors to inculcate specific college morals, I would insist that we must reach the negative virtues thru the positive. It requires a vast deal of moral enthusiasm to deal in repression. There is no steering power in repression. A college which is under repression will either drift or stop. The positive virtues which ought to thrive in a college—and which do thrive there, I believe, more than anywhere else—are truthfulness, courage, honor, and generosity carried to the point of sacrifice. The negative virtues, which are for the most part associated with college order or personal behavior, must be carried along by these. Nothing is more impotent than the attempt to secure self-control without first securing self-respect; nothing is more impotent than the attempt to secure college order without first awakening true college spirit. There is constant danger from the unquickened man—danger to himself and to others. It is always a question how long he ought to stay in the common body, how long the common body can afford to wait for him. On the other hand, nothing is so inspiriting as to see one coming under the quickening process. It may start from an apparently slight cause. It may not always be associated with a moral issue. But it always results in moral power of some kind. The man is at once transferred from the unmoral, if not immoral, side of the college to its moral side. I do not underestimate the place of the negative virtues in the academic life. It is a great thing for one to be able to make a proper resistance or refusal either in word or by act. But the ability to do this is first made possible by some affirmative action, by some uprising of the moral nature.

I insist, further and very strenuously, that what we ought to expect from students in morals and manners will depend upon what we do for

them in these regards—upon the general tone and quality of the official life of the college or university. The estimate which will be put upon the value of morals and manners will be proportionate to the provision made for their development. Take the quality of reverence, as finding its highest expression in religious services. Reverence has very little opportunity for growth, if the service with which it is associated is crowded and jostled in the midst of exercises which are entirely alien to it. It makes a vast difference whether college prayers are thrown into a medley of college notices, scoldings of the president, snappy addresses of distinguished guests, and the chance hubbub of athletic victories; or whether the service has its own time and place to the exclusion of irrelevant subjects. The whole religious attitude and behavior of a college may be revolutionized by a change of place for worship, or for that matter by a change of time. It was an immense gain to religion when the old-time custom of chapel before breakfast was abolished.

A like correspondence between the business management of a college and the business habits of the students may be expected. A careless administration will develop carelessness in those who live under it. The moral effect of executive ability is far-reaching. Promptness, accuracy, certainty in the "office" will in time make their impression upon the needless student. Probably no academic change within the last ten years has been so great as the change in administration. The dean, tho he may have had a nominal existence before, has suddenly become the center of a system. He may do his business largely in personal ways, or by routine, but he regulates the whole daily movement of a college as surely as it is regulated by the college clock. The machinery of administration, when reduced to its minimum, is still so much in evidence that every precaution must be taken to see that it works efficiently, which means that it must be made to work promptly, steadily, and above all things honestly.

And when we pass to those influences which have the most direct bearing upon manners, I believe that the college authorities must have constant regard to the refining influences of the college environment. Poverty is no excuse for bad architecture. Good architecture costs no more, it costs less, than poor architecture. Poverty is no excuse for unkempt grounds. Neatness is not expensive. Least of all is poverty an excuse for unsanitary conditions. The most expensive thing which can come to a college is sickness. The whole æsthetic life of a college or university rests upon a physical basis. The daily bath is about the first thing in the making of a gentleman. Unfortunately the scholar and the gentleman do not always begin the day alike.

I advocate very strongly proper provision for the social life of the college, the whole college. Nothing has wrought more clearly to this end than the building of college club-houses during the past few years. Fraternity houses are not sufficient. They accomplish in a small way what

the college club-houses should accomplish in a large academic way. The first requisite to a college house is that every man should be made to feel that he has a right in it.

I have no doubt whatever that in the development of morals and manners the college itself must take the initiative. The college or university is permanent. It inherits traditions and is constantly making traditions. Its faculty is a constant force amid the more transient student life. Its trustees determine how the students shall be housed and cared for. The administration of the college is the most powerful factor in the daily life of every student during the years of his residence. I insist, therefore, to the last degree that we ought to expect no more from students than we are disposed and prepared to give them in the common work of securing honest men and gentlemen as the natural product of college and university training.

III

W. F. SLOCUM, PRESIDENT OF COLORADO COLLEGE, COLORADO CITY, COLO.

The answer to this question is found in replying to the larger enquiry: What is, or rather what should be, the predominating motive, or principle of action, in an institution of higher education, as it deals with young persons who have duties to themselves and also to others? It is fair to ask, in view of the seriousness of this problem: Is there any large and comprehensive principle or motive that ought to command the young man in the university who is under obligation to make the most of himself for high ends?

It certainly is true that the radical point of failure in any life, if there be one, is ethical, and that the life of any college graduate cannot be regarded as successful which is a moral failure. Theoretically, at least, all thoughtful people agree that a noble life is better than one possessed of mere intellectual skill and stores of information. The most essential thing in the training of young people is the production of positive morality. Truismatic as this is, it is worth while reminding ourselves of this self-evident proposition at the outset of our discussion.

It may still further be said that the evolution of college life, in all its many details and its varied experiences, should indicate a development in harmony with this larger comprehensive principle. In other words, the deeper moral purpose which ought to dominate the whole life of man should pervade the university plan and ideal for each and every student under its influence. Whether this end is to be secured directly or indirectly, whether by the creation of a right ethical atmosphere and a moral tone which is quietly felt, or whether by more formal expression — all agree that an educational foundation where right living is not the most real product is missing its largest reason for existence. Certainly all the

constantly reiterated expressions about making citizenship by means of university training and life become the most veritable cant, if character is not the highest end in view.

Does it not, then, follow that clear, definite views in regard to right and the practice of morality are essential, not only for the production of character, but also for the creation of individuals who will be of value, ethically, in the life of the nation itself?

Characterless education as well as a characterless man misses the end for which society exists. The university, to fulfill its highest function, ought not, because of anything in its own life, to send out immoral men, or those who are unmoral, but rather those who positively, definitely, wholesomely feel the sense of obligation, and who act in conformity with such sense. It is men who possess what James Martineau called the power of "personal causality" that the nation at large requires from the college and university.

For the production of this positive morality in students it is certainly necessary that they should hold accurate, vigorous views, which easily pass with them into principles of action, upon such ethical matters as personal purity, rights of property, the right of contract, the right to liberty and the pursuit of happiness, the sanctity of marriage, personal integrity—ethical ideals which in the life of the nation today are being put to severe tests, and confusion of views in regard to which has led again and again to bad politics, dangerous economics, and wretched social opinions.

Two things are essential for the production of men with these vigorous, virile ideas on moral questions: First, such clear, rational instruction in regard to ethical matters that lawyers, physicians, clergymen, journalists, publicists, politicians, and business men looking back to their university life will say: "I owe much to the instruction in my university for the views I hold upon public and private moral questions." The second thing that is necessary for the existence of this ethical life in the character and views of university graduates is such a personal influence in the character and the personality of the teacher himself that the inner life of the student will be awakened and the conscience made responsive.

It may not be out of place to remind ourselves just here that the highest effectiveness of intellectual power is never realized if the moral element in the mind is not positively dominant. The ethical principle is the central and radical element in the intellectual nature, and all education which ignores or slights this factor must of necessity be one-sided, inasmuch as a true self-realization of the mind cannot be obtained without the evolution of this moral power.

The development of this moral capacity may in some cases, especially when the home has been true to its duty and privilege, be brought about by the general spirit, the intellectual standards, and the tone of the

ethical atmosphere which pervades the life of a university; but the average student will not acquire in large measure the positive, self-assertive moral habit, if his ethical education is left to the absorbent power of the ordinary young person who frequents institutions for higher education. The diversions, in many cases the false standards of living, that one gains in college, the immaturity of view on public and private questions which too often obtains in university circles, will lead too many students to pass out into the world without that dominating moral ideal which is always essential for ethical leadership, unless there is somewhere in the university course definite, vigorous instruction given upon practical ethical questions. The more conspicuous and commanding the place of the university graduate in the business, social, and political life of the nation, the more essential is it that this moral ideal should predominate in his character. The position of the university graduate is that of the present-day makers of the nation, and the character of the country reflects the moral ideals, the moral assertiveness, and the moral actions of these graduates. It is only fair to expect that college and university training should produce the best, and not merely an ordinary, type of character; and it is fair also to put this question: As one meets the university graduate in business, in professional life, in and about the university club, and more especially in politics, does he find that his views and his actions are more ethical than the views and actions of the same number of business men who have not had the advantages of a college and university education? The world has a right to expect, because of his opportunity for the better training of his mind and because of the life he ought to find in the university, that the graduate is, on the whole, more to be trusted in regard to public and private questions than are those who have not received what is termed "the advantages of a liberal education."

Has this expectation, on the whole, been realized, and in such large measure that the present condition of ethical training in the university and college is entirely satisfactory? Is it too much to say that the advance in the political life of the country, and in fact in the whole ethical life of the nation, awaits the increased moral effectiveness of the graduates of the American college and university? This is what constitutes the seriousness of the question we have been asked to discuss here this morning.

Such leadership which is the outgrowth of positive moral character is greatly facilitated by a healthy body as well as a healthy soul. The student must be made to feel the necessity of giving a well-developed self, his best self in every respect, to his life-work, whatever that work may be, in order that this ideal of ethical leadership may be realized. For this reason there ought to be more general athletic cultivation among the student body, such as one finds at the great English universities, where

every man is expected to engage regularly in some one out-of-door sport which he enjoys for its own sake. In the American university the athletic life and development are given over altogether too much to the teams which too largely merely represent all the other students. There is, in fact, too little sport for its own sake, and too much which finds its incentive in intense and sometimes bitter competition. The athletic life is too largely transferred to a very few whose training takes the place of that of the great mass of students. The result is that some get too much physical exercise and the large majority far too little.

A resident physician, if he is the right sort of a person, can accomplish much, by advice and helpful personal instruction and information, to induce students to take scientific training and out-of-door exercise, and to form such hygienic habits as will produce such normal and vigorous physical conditions as are necessary for the best moral effectiveness. There is much that might be said about the production of good morals growing out of a genuine love of athletic games, and also from a spirit of fair play and good sportsmanship. There is, in fact, a much closer relation between character and good sport than is always recognized.

On the whole, students will do what is right, fair, and honorable, if they clearly see a matter in all its ethical bearing. It is also true, with all that is said about the necessity of maintaining one's honor at the German university, that ideals of character and high thinking are on a better plane among American students than they are at older schools on the continent. Still, it is important that there should be more concrete and rational instruction in regard to good morals in our American universities, especially as one considers the necessity of a higher ethical life in the political, social, and business affairs of the nation.

What has been said about good morals might be repeated in regard to good manners. The spirit of manliness which one finds in and about the American college goes a long way in producing gentlemen, and what the university should send out is manly men and not snobs.

Without being told, the alert student will acquire much information in regard to the forms of good society; but when all this has been said, it is true that many men pass out from our universities so ignorant in regard to some of the conventionalities of life that they are at a disadvantage from the moment they are forced to seek a position, or their unwholesome example bears its fruit in those whom they are influencing by means of some one or other of the positions in which they find themselves. When a man holding a degree from the board of trustees and faculty of a Massachusetts college, who is a graduate student of a distinguished university, a man of rare ability and uprightness of character, does not even answer an invitation to dine in a cultivated home to meet distinguished guests, because he thinks that if he stays away it will not

make any difference with the person who is seeking to extend a courtesy to him, it may be said that it is because of a lack of sense of propriety; but it is also because he does not know any better, when he ought to know better. Whatever the cause, his action, justly or unjustly, reflects upon his home, upon his college, and upon his university. The close relation between boorishness and commonness in moral conception is very marked, and students are often held to higher ethical standards by a sense of what is good form in polite society. The reverse is also in larger measure true—that fineness in morals brings fineness in manners. The capacity and purpose of doing and saying the kindest thing in the kindest way is the essence of good manners, and this is as much a matter of good conduct as it is of good manners.

After all has been said and done, the good mórals and good manners which do or do not pervade the life of an institution of higher education will depend more than all else upon the morals and manners of the corps of instructors. The teacher must first of all be a cultivated gentleman, and a boor should have no place upon the faculty of an institution of liberal education. The quiet air of refinement, the spirit of a cultured mind and heart, the dignity in word and bearing of the scholar, are bound to produce men of moral force and refinement in manners.

Nothing, however, in university, college, or polite society can take the place of the good breeding that comes from a cultured home where habits of speech, thoughtfulness toward others, the giving of dignity to the daily ordering of a household, fairness and justice in mental attitudes toward others, are the bread which feeds a human soul during all the most impressive months and years, and which if a man eat thereof its influence abides forever. When this has been said, it still holds true that very many students come from homes and an environment where such influences do not exist. Many have lived in an atmosphere where selfish self-assertiveness has dominated, rather than the moral self-assertiveness which at heart is altruistic rather than egoistic.

What is the university bringing to pass in the character of such young people? The number of graduates of colleges and universities who lose positions, which they are seeking, and which in some respects they are able to fill, because they do not know how to write a letter or answer in good form a polite note, is much larger than these same young people realize. Modern instruction in English has nearly forced the adverb out from between the parts of the infinitive. It would be a good thing for the university, as well as for the student himself, if it would teach its pupils how to write a letter characterized by courtesy and good form, unless it is true that the art of gracious letter-writing has gone forever with the incoming of the type-writer, and other indications of the mechanical and mercantile age in which we are now living. It is

certainly not altogether out of place to ask whether our departments of English have done their full duty when even western college presidents receive daily letters from the graduates of distinguished eastern universities which instantly condemn their applications to fill important positions, even if there were no other reason for allowing them to remain in their Orient.

IV

RIGHT REV. THOMAS F. GAILOR, BISHOP OF TENNESSEE, MEMPHIS, TENN.

Ladies and Gentlemen of the National Educational Association:

I cannot but be embarrassed by the breadth and richness of the subject upon which we are asked to speak this morning; and what, in all modesty, I shall venture to say will be based rather upon my experience as a teacher than upon the conclusions which I might have reached by an abstract, philosophical study of the theories of education. In the abstract, for example, the university may be held to imply such a maturity and fixedness of intellectual and moral character in its students as would preclude the necessity and even propriety of special discipline. In its large and ideal sense a university would mean an association of educated men and women, who have come together for the purpose of reporting, comparing, and criticising the results of learning and of prosecuting research into the hidden fields of knowledge. Assuming such a definition of a university, our subject, of course, would have to receive a very different treatment from that which existing conditions make possible and even necessary.

For, practically and concretely, a university means to us a college for undergraduate students, surrounded by, and in connection with, post-graduate and professional schools; a place, in other words, where youths of undeveloped character are associated with matured men of ripe experience, feeling the influence, receiving the impressions, and conducting the affairs of an educational institution.

I shall make no comment here upon the wisdom or desirability of such conditions; but, assuming that they exist, I shall gladly say a word in answer to the question whether the university shall concern itself more directly with the morals and manners of its students.

The latter half of the subject proposed—viz., the expediency of a college or university having a medical adviser for the students—will be included in the answer to the first half. Only I may say in passing that I do not see why the question should not have included a religious chaplain as well as a medical adviser, unless we are to assume that the care of the body covers the whole sphere of morals.

I believe, then, that the university should concern itself directly, and even more directly than is commonly the case, with the manners and

morals of its students; for these reasons: first, because the relation of the university to the state is essential and of primary importance—the state in a large sense depends upon the university; and, secondly, because the purpose and end of education are not merely the acquisition of the results and habits of scholarship, but the formation and discipline of character.

Von Humboldt said wisely: "Whatever we wish to see introduced into the life of the nation must be first introduced into the schools;" and this is true *a fortiori* of the universities, because the universities set the ideals for the schools. I believe that it is but waste labor to try to influence humanity from below; and I also believe that the reason why New England is the center of educational enthusiasm in this country is not because its common schools and its private schools are so numerous and well organized, but chiefly because its universities and colleges have believed in an ideal and have wrought unselfishly for the realization of an ideal, which has caught at last and holds the imagination and ambition of the masses of the people. This is a truth which ought to be emphasized. It contains a lesson for those philanthropists who are attempting to uplift the uneducated classes of the country by beginning with the public schools. Our universities, after all, are our truest and surest nurseries of good citizenship; and good citizenship, in its largest sense, implies complete and rounded manhood. So much the more reason, then, for saying that a university which does not concern itself directly and systematically with the morals and manners of its students fails to appreciate or to discharge its duty to the country. What our government needs, to secure its stability and permanence for future generations, is not so much scholars as men; and we have a right to expect the ideal of that manhood to be illustrated, exemplified first of all in the lives of those who go forth from the universities.

Furthermore, in order that this identification of citizenship with manhood, which was Plato's splendid contribution to the science of education, may not foster the mere individualism which proved disastrous to ancient Greek ideals, we must make the freedom and responsibility of American citizenship the preparation for that super-civic and cosmopolitan ministry of service which the Divine Teacher showed and history has demonstrated to be the only safeguard of the individual life and the true foundation of patriotism.

A university, then, is not only a depository of learning, but a training place for the highest citizenship; i. e., for complete manhood; and that training necessarily includes morals. When we come to consider more specifically what that moral development includes, I should say that the three virtues of honesty, purity, and reverence are the virtues that need most to be cultivated; because they are foundations of character, and because they are not altogether encouraged by the conditions of modern life.

Under "honesty" I would include truthfulness and the love of truth —genuineness, sincerity—and that quality we call *honor*, which despises the profit that comes from sharp practice and deceit, and which will not take unfair advantage, nor cheat, nor steal, nor gamble; which will say with Brutus

> I had rather coin my heart,
> And drop my blood for drachmas, than to wring
> From the hard hands of peasants their vile trash
> By any indirection.

In our time, when gambling has become the strenuous occupation of so many leading citizens; when baseball and football matches, and the amusements of ladies' drawing-rooms, are the daily opportunties for the gamester, this kind of honor is imperiled; and yet its preservation is the only sure defense of government. Nay more: business methods are condoned, if not respected, in our high places, which the subtlest casuistry can distinguish only by a hair line from plain dishonesty—a dishonesty which is breeding wrong and cruelty, and would protect itself by corrupting both legislation and religion. The cultivation of a fine and delicate sense of honor among all our leaders in the commercial world would greatly help to solve and settle the social and political problems of the day. And this is the quality for which above all others our university men have been supposed to stand, and, I believe, do stand. But have the universities themselves fully realized the responsibility? To be sure, no university would knowingly encourage or tolerate the sin of dishonesty or the vice of gambling among its students; but I do not think that we have done all we ought to do to make these things infamous.

The second virtue we need to emphasize is personal purity. I have been told by experienced educators, and that quite recently, that they have found an alarming and unaccountable increase of indifference to the virtue of personal purity among boys and young men at school and college. I do not know about this. My own experience is against any such conclusion. And yet there are signs of the times that startle us, when we study them. There is a growing disregard of the marriage relation and of the integrity of the family life in some sections of the country that is no less than appalling. There are sins, nay crimes, of the very meaning of which the boys of our day were ignorant, which are said to be of more and more common occurrence, and that among the upper classes of society. May God save us from the evils of an overdone civilization, where wealth breeds luxury, and luxury begets vice, and the revival of the old gospel of lubricity corrupts and destroys society, as it did that of the Greeks and Romans! Certainly the universities would do well to concern themselves more directly with the suppression of these sins, which endanger the very safety of the republic.

Finally we must cultivate reverence in the students of our universities.

This means respect for others, respect for institutions, respect for themselves. It means civilization and good manners. It means courtesy, gentleness, serious-mindedness. It means the dignity of life and the thought of God. The only commandment in the decalogue given with promise is the command to reverence; and it is given to secure the dignity and honor of the family — of that institution which we Americans are in danger of dishonoring today, but upon the sacredness and integrity of which depends the future of our country.

These three virtues, then, upon which I might speak at greater length if time permitted, constitute, it seems to me, the more essential elements in that moral education for which the universities and colleges must be held especially responsible. Without them all our learning and exact scholarship are wasted time. We must have men, and not monks; and there is many a monk who would scorn the confinement of an ecclesiastical cloister, but who has smothered his life in a class-room, or a library, or a laboratory, and has imagined himself wise above his fellows. For —

> Men have oft grown old among their books,
> To die, case-hardened in their ignorance.

In order to make *men* our universities will be obliged to consider moral training and moral discipline as of first importance.

But what are the methods and devices by which such moral training may be consistently and successfully conducted? Have the doctrines of expediency and the warnings of a paid physician ever rescued young men from the hell of unrestricted self-indulgence? Did policy ever make men honest, and did Aristotle's exhortations to wisdom ever redeem men from sin? Was there ever on earth but one true and adequate inspiration to goodness of life and thought? Was there ever but one sufficient pledge and promise of help and strength to the soul that is fighting for its life? I know only one. There is no other. I know One who said: "He that abideth in me and I in him, the same bringeth forth much fruit: for without me ye can do nothing." And the history of mankind, for nineteen centuries is a demonstration of that truth. Interpreting this saying of Jesus, it was a Christian apostle who said: "Add to your faith virtue and to virtue, knowledge." That solves all problems. The finest moral life is built up on faith in God; and true culture is founded on the moral life. The surest way to enlighten men is to make them better.

But if the Christian gospel is the only sufficient basis and inspiration of moral training, how are the universities to inculcate it? By compulsory chapel? Well, such discipline is reasonable and right for boys; but I do not believe in compelling men to pretend to pray. And the modern system of calling chapel attendance compulsory, and then of excusing men from chapel as a privilege granted to upper classes, does about as much harm as good.

The best results of all education are due to contact with personalities

and the influence of environment, rather than to the observance of any routine duty.

It does seem that our present system of education in America is imperfectly organized. We need intermediate institutions between the grammar school and the university; and it would be better if the university would limit itself to M.A. and post-graduate work. It is confusing and embarrassing, especially in dealing with the moral aspects of education, to have boys fresh from a grammar school associated with older men in the life of a great center of learning. Even the English system, which prolongs the grammar-school course and is supposed to keep the first-year university men under a strict tutelage, does not solve the problem and is not possible in this country.

If the universities would absolutely exclude all under-graduates—i. e., all students who are candidates for bachelor's degrees—and encourage the organization and work of small colleges, where students from fifteen to eighteen years of age could be kept under stricter discipline and more thoro moral and spiritual direction, our problem would be greatly simplified. The German system strikes me as far ahead of ours, and some day we may adopt its salient features. For my part I believe in the work of the smaller colleges, so called; and my hope is that their number may increase and not diminish.

Meanwhile I believe that the presidents and faculties of our universities should address themselves with renewed earnestness to the task of creating and encouraging a deep and serious sense of the value and importance of religion in the minds and hearts of their students; for true religion is the foundation and safeguard of true morality. The interest of the ablest preachers in the country should be enlisted in the cause, and students should be obliged to hear them. The work of societies like the Young Men's Christian Association and the Brotherhood of St. Andrew should be fostered and helped on by the university authorities. Professors should enter the athletic associations, and encourage an enthusiasm for clean and honest and manly sport, which is always a discipline in morals. The consideration of a man's moral stature, as well as of his intellectual ability, ought to enter into the determination of his fitness for the place of tutor or professor. And above all else it should be made plain that a university is not a theater for the exploitation of eccentricities and paradoxes and irreverencies; but a sacred place, where the holiest memories of the great past consecrate all present purpose and thought and work, with confidence in the greater future for ourselves and for our country. Therefore the moral and spiritual power of an institution of learning will go forth from its teachers. Surer than that of any system or method is the influence of a noble soul. Beyond all devices of rules and regulations for the discipline of character is the living contact and loving service of men who realize their high responsibility as teachers in the fear of God. They

create the environment. They represent and exemplify the ideals. They set the standard of manhood. And for them is the promise which the Hebrew prophet wrote: "They that be *teachers* shall shine as the brightness of the firmament, and they that turn many to righteousness as the stars, for ever and ever."

DISCUSSION

PRESIDENT JAMES H. BAKER of the University of Colorado said that the aim in education must be, not individual, but social. We must urge education, not because of the personal advantage, but because of the increased power of the scholar to aid the state and society. Culture for culture's sake, unless it is given some kind of useful expression, means nothing for the individual nor for society. Culture aiming at service becomes the ally and leader of democracy, and thereby attains its own highest realization.

PROFESSOR WILLIAM ABER, of the University of Montana, said that at the twenty-fifth anniversary of his college class he found that some men who had been triflers in college had accomplished the greatest things in the world. The explanation was that they were men of marked individuality and strength who had no respect for requirements as requirements, but only for things which seemed to them to have value. He would take exception, therefore, with President Harris as to the hopelessness of idlers, and would insist that colleges and universities strive to present opportunities which would appeal to strong men.

PRESIDENT SWAIN of Swarthmore College said that, in his opinion, they had listened this morning to one of the most inspiring set of papers to which the department had had the pleasure of listening for several years. He was impressed by the unity of sentiment shown by men speaking on the subject from different standpoints. He noticed that they had not suggested devices by which the best young men or women could be made, but had laid emphasis on character and had insisted that we must begin first with the faculty, seeking not only scholars, but men and women with such characters as we wish our students to have. He believed that we must strive further to secure the right public spirit in the student body, and that this could not be done by a parental system, but must be developed in liberty. He believed that coeducation gave an atmosphere of refinement which could be secured in no other way. The morals and manners of the student are to be improved, not by rules and regulations, but by the influence of the instructor and by making use of some particular student in a quiet way to help the man whom we are seeking to influence. He had found it a desirable plan, when something had been done which ought not to have been done, to call the students together and ask suggestions from the students themselves as to how the problem should be solved. He had never failed to meet response in such a case.

PROFESSOR G. M. P. KING, of the Virginia Union University, Richmond, Va., said that we could not give to our pupils what we have not in possession ourselves, and that the only way in which the teacher could meet the heavy responsibilities that confronted him was by the aid of divine inspiration.

PRESIDENT GEORGE C. CHASE of Bates College expressed his gratification that the subject of the morning had been presented under its Christian aspects. All our morals must have their inspiration from a true Christianity. Many of our doubts and troubles in morals have resulted from our obscuring this truth to ourselves. Our earlier colleges were founded as Christian institutions. Thru the growth of the spirit of tolerance and catholicity we have come to put too little emphasis on Christianity. He failed to see why institutions should not announce themselves as Christian institutions, and why the student should not be made to feel their Christian influence and impress thruout his course.

Representing the first college on the Atlantic seaboard that made a liberal education possible to women on the same platform with men, he wished to say that coeducation had triumphed and shown its power to make more manly men and more womanly women.

PRESIDENT G. STANLEY HALL argued that modification of the current mode of teaching ethics was needed; that the ethics which rests solely on theological tenets or on metaphysics has not much moral effect. He agreed with Aristotle that ethics begins with body-keeping, and we should give first instruction as to bodily regimen. The Bible is the greatest text-book of psychology as well as of ethics. It pictures the development of the human soul. We must recognize the fact that the child repeats the history of the race, and that even Mohammedanism and Confucianism can teach important truths to children at certain ages. We must conserve the good in the ethnic religions and must broaden our training especially for men who are to engage in the foreign missionary work. It does not work in the interests of morality when in our college courses in philosophy we infect a man with a sense of the unreality of the world, leaving the man to doubt; a man's soul thus becomes seared; what a man believes is important, not what he does. He would plead, therefore, for a philosophy which is positive, and which teaches faith, not doubt.

CHARLES C. RAMSEY, of Boston, said that he had been disappointed in observing the influence exerted by college men in their respective communities. He had known college clubs to put themselves on the wrong side of public questions, or to be utterly indifferent to such matters; and there was evidently some connection between these facts and the training received in college. He thought that the college was infected with the too prevalent worship of cleverness and success, as the world measures success. We should revive the idea that there is such a thing as worldliness, and that there is such a thing as spiritual life.

JOHN LEE BROOKS, of Columbia University, said that the time had come to differentiate sharply the university from the college, and that thus and only thus would each institution be able to adapt its moral training to the needs of its students. It was important that the university should be permeated thruout with the deepest religious and moral spirit. At Columbia University, while the library was well stocked in other departments, few modern works on theology were to be found, and few courses were given along these lines. It was true, however, that the university had entered into certain relations of affiliation with various theological schools. At the university itself they were trying to meet the religious need by the Y. M. C. A. work which centered in Earl Hall, and in the social settlement work conducted in connection with the Speyer School. He was convinced that the best way to cultivate the religious spirit was by giving it an outlet in social service.

DEPARTMENT OF NORMAL SCHOOLS

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 7, 1903

The sessions of the Department of Normal Schools were opened at 9:30 A. M. in Arlington Street Church, Livingston C. Lord, president of the Eastern Illinois Normal School, Charleston, Ill., in the chair.

The first paper, "The City Normal School of the Future," was presented by Francis Burke Brandt, professor of pedagogy in the Central High School, Philadelphia, Pa.

The paper was discussed by Superintendent C. F. Carroll, Worcester, Mass.

The second paper, "Does the Teacher's Knowledge of a Subject Differ from the Scholar's Knowledge," by W. W. Parsons, president of the State Normal School, Terre Haute, Ind., was read by John W. Cook, president of the Northern Illinois Normal school, De Kalb, Ill. A second paper on the same subject was presented by David Eugene Smith, professsor of mathematics, Teachers College, New York city.

The subject was discussed by Superintendent F. Louis Soldan, St. Louis, Mo.; President John M. Cook, De Kalb, Ill.; Frank McMurry, of the Teachers College of Columbia University, New York city; Francis J. Cheney, president of the State Normal School, Cortland, N. Y.; Charles A. McMurry, De Kalb, Ill.; Professor Henry Johnson, Charleston, Ill.; and Professor Grant Karr, Oswego, N. Y.

The chair appointed President Z. R. Snyder, of Colorado, President C. H. Cooper, of Minnesota, and John Hall, of New York, as a committee on nomination of officers for the department.

The session then adjourned.

SECOND SESSION.—WEDNESDAY, JULY 8

The meeting was called to order at 9:30 A. M. in Arlington Street Church, President Lord in the chair.

The first paper, "Conditions for Admisson to Normal Schools," was presented by Walter P. Beckwith, principal of the State Normal School, Salem, Mass.

A second paper on the same subject was read by R. H. Halsey, president of the State Normal School, Oshkosh, Wis.

The papers were discussed by C. T. McFarlane, principal of the State Normal School, Brockport, N. Y., Superintendent E. L. Hendricks, Delphi, Ind., and Albert Salisbury, president of the State Normal School, Whitewater, Wis.

The next subject, "The Academic Side of Normal-School Work," was presented in a paper by Henry Johnson, teacher of history in the Eastern Illinois Normal School, Charleston, Ill.

The next paper, "To What Extent and in What Manner Can the Normal School Increase its Scholarship: (*a*) Without Diminishing its Output; (*b*) Without Increasing its Cost Too Greatly; (*c*) Without Infringing upon the Legitimate Liberal Arts Course of the College?" was presented by James M. Green, principal of the State Normal School, Trenton, N. J.

The paper was discussed by Henry G. Williams, dean of the State Normal College, Ohio University, Athens, Ohio; Charles DeGarmo, professor of the science and art of

education, Cornell University; L. D. Bonebrake, state school commissioner of Ohio; John R. Kirk, president of the State Normal School, Kirksville, Mo.; W. S. Dearmont, president of the State Normal School, Cape Girardeau, Mo.; E. B. Craighead, president of the State Normal School, Warrensbury, Mo.; E. Oram Lyte, principal of the State Normal School, Millersville, Pa.; and Principal James M. Green.

The Committee on Nominations reported as follows:

For *President*—L. H. Jones, president of the State Normal College, Ypsilanti, Mich.

For *Vice-President*—Grant Karr, superintendent of Training School, State Normal School, Oswego, N. Y.

For *Secretary*—Mrs. Grace Sproull, professor of English, State Normal School, Greeley, Colo.

The persons nominated were unanimously elected officers of the department for the ensuing year.

The department then adjourned.

EDGAR L. HEWETT, *Secretary*.

PAPERS AND DISCUSSIONS

THE CITY NORMAL SCHOOL OF THE FUTURE

FRANCIS BURKE BRANDT, HEAD OF THE DEPARTMENT OF PEDAGOGY, CENTRAL HIGH SCHOOL, PHILADELPHIA

The time has come, I believe, when the eyes of American educators should be directed to the city normal school and its future development. If any justification were needed for emphasizing the importance of city normal schools, it could be found, I think, in the extensive service which these schools render in the leading twenty cities of the United States alone. Beginning with New York, with its more than three million people, and ending with Providence, with its 175,000, we have a circle of twenty American cities—including Chicago, Philadelphia, St. Louis, Boston, Baltimore, Cleveland, Buffalo, San Francisco, Cincinnati, Pittsburg, New Orleans, Detroit, Milwaukee, Washington, Newark, Jersey City, Louisville, and Minneapolis—embracing altogether a populution of 11,971,000 persons. Upon the normal schools of these twenty cities alone, therefore, is imposed the responsibility of providing for the educational needs, so far as elementary teachers are concerned, of nearly one-sixth of the whole population of the United States. What concerns the future of these cities concerns the future of the nation.

I wish to observe at the outset that the city normal school of the future will be more thoroly alive to the educational situation in American life which it is called upon to meet. The state of public education in our large American cities might well be made a matter of national concern. National indifference to public education, state evasion of responsibility, and municipal mismanagement have combined to bring to pass an educational situation which is not altogether creditable to the American nation. The public schools are not reaching the people as

they should. I have compiled a table for the twenty most populous cities already mentioned, showing the school-census age, the number of children of school-census age, and the number of pupils enrolled in schools public and private. Excluding six cities whose returns are either incomplete or exceptional, of the 2,679,697 children of school-census age in the remaining fourteen cities but 1,925,329 are enrolled in schools public and private. Making all allowance for divergences, the figures make it seem highly probable that in the foremost twenty cities of the United States fully one million boys and girls are being robbed of the right of childhood and are growing up outside the influence of the school at an age when only the school can give them the training and experiences which will safely fit them for a life of effective social service and make possible for them the highest degree of personal development.

But this is the least part of it. The aborted character of the American public school is more particularly revealed by the statistics which show the comparative enrollment in the different parts of the system. Of the 15,710,394 pupils registered in the whole public-school system of the United States in 1901, there were enrolled in elementary schools 15,061,721, as against 558,740 in institutions of high-school grade, and 89,933 only in all phases of higher education. Startling as are these figures for the country at large, they are no less startling for the chief cities of the country. New York, with its population of 3,437,000 souls, has 16,548 students in public high schools; Philadelphia, a city of 1,293,000 persons, has altogether 5,195 pupils in its higher schools; and yet New York has 543,370 pupils in elementary schools, and Philadelphia has 182,638. And the same figures hold relatively for the foremost twenty cities of the country. A great city like Pittsburg, with a population of over 300,000, can boast of 711 pupils in its high school; and New Orleans, with nearly an equal population, has few more — 991.

There is something fundamentally wrong, either in our American life or in our American school system, when it is possible to find in the twenty leading cities of the country 1,734,664 pupils enrolled in elementary schools, and in the high schools of the same cities a grand total of 71,902 persons, boys and girls. The great mass of the American people are not sharing even in that degree of higher education which is represented by the American high school. The vast majority of American boys and girls are either being clogged somewhere in the school system or are going out into life at fourteen years of age to become petrified personalities. Undoubtedly this situation is the outcome of complex social conditions — imperfect family life, inherent inability in the individual, defective industrial conditions, withheld religious sanctions, and ignorant and venial political administration; but so far as it arises from the imperfect character of our teachers and their training, the normal school of the future must recognize this and remedy it.

Let me say first, then, that the city normal school of the future will take advantage of its opportunities to organize itself into a teachers' college. What are these opportunities? In the twenty most populous cities of the United States there is a high-school course four years in length. In all of these cities graduation from the high school is a condition of admission to the training course for teachers. In most, if not all, of these same cities the training course for teachers lasts two years. The chosen or imposed work of these training schools or departments is primarily the preparation of teachers for the local elementary schools. The problem for these schools, therefore, is not complicated as it frequently is for the state normal schools. There is no attempt, as there should not be, to train teachers for secondary schools; there is no need, as there should not be, to do academic work of high-school grade. The city normal school thus in the first reception of its students has an advantage equal with that of the best colleges. The same courses that prepare for admission to college prepare for admission to the city normal school. In New York city, for example, the examinations conducted by the College Entrance Examination Board have been adopted as the test of proficiency for graduating from the New York high schools. Most important in this connection, however, for the future development of the city normal school is the general recognition that the best high schools of the country with four-year courses overlap the college course by fully a year. In New York city, the City College, which takes its pupils directly from the grammar schools, has a three-year high-school course preparatory to its collegiate years. In Philadelphia, students from the manual-training high schools, with three-year courses only, are admitted directly into the collegiate department of certain universities. In a number of western and other cities either students are leaving the high school at the end of the third year to enter the freshman class of a college, or after taking a four-year course are admitted to advanced standing in the college. The wide election of advanced subjects offered in the fourth year of our leading city high schools is added indication that instruction of collegiate grade has fully begun in the last year of the American high school with a four-year course. When the adjustment which is now going on between the high school and the college, and the high school and the elementary school, is made complete, students who go to college from high schools will go at the end of the third year; consequently, those students who enter upon the work of the normal school will and should begin this work one year earlier. The possible consequences of such adjustment must be obvious. Without adding a single year to the present normal-school course, the city normal school of the future will have at its disposal three years and students fitted to carry on a collegiate grade of work.

In the next place, the city normal school of the future in becoming a

teachers' college will lay greater emphasis on purely scholastic courses, and will devote itself more to the liberal culture and perfection of the scholarship of its students. When the demand is made that the course of study in a normal school shall be strictly professional in character, we shall be enlightened enough to recognize that the mastering of a subject is as fit a professional occupation as any in which an intending teacher could find himself. Scholastic courses are as truly professional courses for the intending teacher as courses in psychology, methods, or even practice-teaching. There is a big difference in normal schools which attempt scholastic work to make up the deficiencies in scholarship represented by the actual lack of a high-school education, and those which attempt scholastic work on the basis of a high-school training, with a view to extending and deepening the scholarship of the student. And by this latter scholastic training I mean something different from that advanced scholastic work which many normal schools attempt in the form of a review of the elementary branches in the light of more advanced studies. I agree with Dr. Harris that experience shows this kind of work to be of great value, but I entirely disagree with him so far as he implies that advanced studies may be dispensed with rather than this work be displaced. It is worse than useless, however, to discuss the relative value of two absolutely necessary and possible things. I would not exclude a proportionate amount of scholastic review work from the professional training of teachers; but just as no work that is done in the secondary school — that is to say, in the high school or academy — is an equivalent for the normal-school work done in the same studies, as Dr. Harris himself declares, so no academic work done in the normal schools in the shape of a review of elementary branches is an equivalent of the enriching and enlarging training of advanced scholastic courses collegiate in scope, spirit, and method. "The higher the standard of preparation in the pupils who enter the normal school," says Dr. Harris, "the more profitable is this work of reviewing the lower branches in the light of the higher, and thus studying them constructively." The standard of preparation necessary to take up the normal review work will never be high enough until it is as high as that represented by a liberal or collegiate training. The city normal school of the future will give up the plan of conducting all its lessons with special attention to method. It will curtail considerably the work of methods as it is carried on today, and will make room for three years of scholastic training of collegiate grade with an easy conscience as to such work being "strictly professional." If it is asked here, "Wherein, then, would a teachers' college differ from any other college?" I answer: Chiefly in the scope, content, and special aim of its curriculum.

Further, with the possibility of its development into a teachers' college realized, the city normal school of the future will give up its policy

of preparing its graduates all on the same pattern, and especially with reference only to the earlier years of the elementary school. Even when the normal school confines its work to the training of teachers below the high school, it must recognize the real differentiations which exist in elementary education. The kindergarten, the elementary school, the high school, the college, and the university have come to be recognized as five fundamental differentiations of the school system, each with a scope and method peculiarly its own. But it is obvious, from the discussions and the adjustments which are going on in American education today, that the precise line of demarkation between these several divisions has not been made out. Particularly is this true in elementary education. The distinction between the primary school and the grammar school is a marked and a real one, and to many it is unfortunate that the grammar schools should be classed with elementary rather than with secondary education. At any rate, it is not creditable to our intelligence or our management that we furnish, on the one hand, a special training for kindergartners and, on the other, a special training for high-school instructors, each covering four years or less of service, and yet expect one and the same training to equip teachers adequately for the eight years of the elementary schools. The weakest spot in the public schools today is the grammar school, and the reason is not far to seek. For years we have turned into the elementary schools teachers of meager scholarship equipped chiefly with methods applicable for teaching only the youngest children. The chief qualification for advancement to the upper grammar grades has been long years of "experience." This will be changed. The normal school of the future, recognizing that the teacher as an artist is an artist in some one phase of the school system, will provide opportunity in the training course for some degree of specialization in the practical part of schoolroom work; which means that it will differentiate the practical training of the kindergartner, the primary-school teacher, and the grammar master. The whole matter of management and methods it will relegate to a fourth year, which will be much the same as the year of hospital practice of the medical student. But the chief weakness in our grammar schools today comes not so much from lack of knowledge of special methods as from lack of special scholarship and the spirit of inspiration that goes with it. We are exacting too much from prospective grammar-school teachers when we attempt to fit them to teach mathematics, natural science, language and literature, history, and all the various forms of school arts. The normal schools today are giving a two-years' training in omniscience. The normal school of the future will give up its plan of preparing all its graduates to give instruction in all the studies included in the course of the elementary schools. It will prefer its teachers to go forth with Socratic wisdom, and even those teachers who must administer the whole of the course of study in primary grades will be allowed to specialize in some one or two subjects of the curriculum.

Finally and briefly, the city normal school of the future will train more men teachers. In the normal course of the twenty most populous cities of the United States I count 256 young men training to be teachers, as against 3,453 women. In the whole public-school systems of these cities there are 37,468 teachers, and of this number 34,912 are women. In a word, in the school systems ministering to the educational needs of nearly 12,000,000 American people are found but 2,556 men! These are facts over which both educators and the American nation may well ponder.

I have tried to indicate the educational situation which suggests that the American school, as it exists today, is not fulfilling its full function in the life of the American people; and I have pointed out what seems to me must take place in the development of the normal school of the future, if that situation is to be properly met. The time has come when we must see these problems in their relation to our larger national life. Liberty, we have come to learn, is in essence freedom, and freedom, we are slowly learning, means more than we have been wont to understand by it. America today stands for more than political freedom, it stands for more than religious freedom, it stands for more than social freedom, it stands for more than industrial freedom; it stands above all for intellectual freedom. Only with the intellectual emancipation of the individual will American democracy be complete; and intellectual emancipation can never come with the training now possible for the immature minds of boys and girls. The democracy that sets adrift its boys and girls on the complex sea of modern life at thirteen and fourteen years of age with only an elementary school education cannot fulfill its mission. To the right of free worship, the right of free suffrage, the right of free birth, and the right of free contract and combination, we must add the right of free culture, if we would have the whole meaning of freedom. This America will some day secure for every one of its sons and daughters; and in that important work the city normal school of the future will have a large part.

DISCUSSION

SUPERINTENDENT C. F. CARROLL, Rochester, N. Y.—Until within ten or fifteen years, normal schools have differed very much in their plan of organization. At the present time most of the well-established normal schools present well-defined common characteristics. I shall refer briefly to a number of these.

Generally thru New England and in some other states the applicant for admission to a normal school is expected to present a high-school diploma or an equivalent. In addition, it is assumed that the applicant must have attained a reasonable scholarship standard. Graduation from a high school may not imply scholarship. A person may graduate upon a very low standard or may be several years in completing a high-school course. This suggests that the recommendation of the principal should go along with a diploma. At least one normal-school principal of my acquaintance declines to admit a high-school graduate, even with a good scholarship rating, who does not present some evidence of general intelligence. To put it more directly, this principal declines to admit

a person, either on a high-school diploma or on a successful scholarship examination, who is evidently crude and unacquainted with ordinary social and industrial relations.

The normal school of the future will be strictly professional. In the early stage of normal-school development we frequently find a so-called academic or classical department in the normal school. Some of the New England normal schools still furnish a complete high-school training. This is no less than a high-school education at state expense. In normal schools farther west the academic department completely overshadows the professional, and frequently there is but a fractional part of a school of several hundred actually taking the training course. The normal schools of Connecticut are all strictly professional, as is also the normal school at Worcester, Mass. *Training* schools everywhere are on the professional plan.

As a rule, the organization of normal schools now varies but little. There is usually a force of expert teachers, competent to give instruction in the history of education, psychology, school administration, school management, and principles of teaching. As a rule, these teachers are strong and competent. There is an added force of expert teachers known as critics and teachers of methods. The work of teachers of both these classes varies in detail, but it is assumed that in each case they are to furnish leadership based upon their own larger information and experience. Just how much value should be attached to the history of education, to psychology, or to the theory of school administration and school management; just how much influence a so-called expert teacher shall have in decreeing the method and suggesting the matter for the pupil-teacher, must be decided by the traditions and present theories of each training school. It is certain that much has been attempted that has fallen short of its purpose, especially in theoretic work. Expert teachers or critics have sometimes overburdened the timid learner with suggestion and criticism. The selection of these teachers is by far the most important business of normal-school authorities.

The model school and the school of practice have come to be regarded as of the very highest importance. Oswego years ago illustrated the value of the school of practice. The normal school at New Britain, Conn., was the first, so far as I know, to establish on a large scale both the school of practice and the model school. The Teachers College of New York city has perhaps the most complete equipment for both model-school and training-school work that can be found in this country.

It is important that there should be possible in every normal school a process of elimination. I do not mean by this merely a survival of the fittest. When it is clear to a faculty that a person is unfitted to teach, or has not the natural qualifications to teach successfully, such a person should not be carried along in the hope that she may finally attain mediocrity.

Finally, normal-school work, like any other work, should be subject to intelligent and authoritative supervision. Whenever a school of any grade is successful in the best sense of the word, supervision in such a school is not a hindrance or a burden. Whenever a normal school attains a degree of excellence that is marked and generally recognized, the supervisor finds his duty a pleasant one, and the supervised enters heartily into any intelligent suggestion that is likely to be offered.

But normal schools, above all others, tend to be individual. To an extent, this tendency has its advantages, but certainly there are excellent features recognized as fundamental and essential in the training of teachers and in normal-school practice. There is no reason why the plea for individuality should go so far as to produce exclusiveness. No normal school should be so self-satisfied as to fail to seek the best things from other schools of its class.

I need not add that politics should have no place in the normal school. In so far as a normal school resists or escapes supervision, there is evidence that politics or indifference affects unfavorably its condition.

While the work of the *training* school varies somewhat from that of the normal

school, yet there appears to be in the organization of training schools, as a class, an honest attempt to give to the learner the benefits of experience and skill. The supervision of these schools has usually been reasonably thoro, and there has been active in them a spirit of competition in the best sense of the word. The normal school, on the other hand, has often been afflicted with localism that has prevented its being closely articulated with the school system, and has also prevented it from anything resembling a close association with other schools of its class. Both of these objects are of the highest consequence, and the normal school of the future will break away from such limitations.

To summarize: The normal school of the future will represent scholarship, will be strictly professional, will have in its force experts of great resources who will attempt only a reasonable amount with the learner, and will lead the apprentice into the art of teaching both from the fullness of knowledge and from the fullness of training or experience. There will be a model school and a school of practice in the normal school, the latter ample enough to furnish a minimum amount of experience. No person will be graduated who cannot be recommended with some confidence. The normal school will be under supervision, and every normal school and every state will be expected to aim at some common excellencies. There will be no local visitor who will practically control any given normal school. The normal school will have in its service college men and women, and normal students will, in goodly numbers, also be college graduates. College graduates who are normal-school graduates will be in demand, and will receive far higher salaries than are at present paid to elementary teachers. Such teachers could command the field today if they were obtainable. While the day is far distant when the normal-school graduate will generally be a college graduate, yet this proposition implies but a logical course of events, and suggests that, at the earliest moment, we put a premium on the service and resources of the highly trained man or woman, both in teaching in the normal school and in teaching children in every department of the elementary and secondary schools.

DOES THE TEACHER'S KNOWLEDGE OF A SUBJECT DIFFER FROM THE SCHOLAR'S KNOWLEDGE?

I

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What constitutes a teacher's knowledge of a subject of instruction? Is there some peculiar view of the subject that may be termed the teacher's knowledge? If so, what principles belonging to the subject inherently, or what relations of these, come distinctively within the teacher's view?

Here are two students pursuing the subject of physiology. One is in the college, with no decision as to his life-vocation, devoted only to the general cultivation of his powers; the other, having resolved to enter the medical profession, is studying physiology in a medical school. Are the fields of study in these two cases identical?

In the first case, the subject is studied simply as a means of self-culture; in the second, that the knowledge acquired may be turned to account in a field of practical activity. The medical student investigates every fact brought to his notice in the light of a great ruling thought. He

considers it in relation to the art to which he is preparing to devote his life-energies. Chemistry, botany, even psychology, he would consider at every step in their bearing upon the intelligent practice of his chosen profession. It is not enough to say that he must acquire a more extended and exhaustive knowledge of these subjects than the general student, that this alone constitutes a physician's mastery of them. That he has need of this more thoro and detailed acquaintance with the subjects will be admitted, but has not the medical student enlarged the field of investigation by adding a vital relation of the physiological facts? The physician studies the eye, the heart, the stomach, the lungs, not simply in general, but ever in the thought that they are liable to derangement and thus to become subjects of his healing art. Further, is it not clear that the general student of physiology, who pursues the subject in the general school and for general ends of self-education only, would require a thoro restudy of the whole field of subject-matter, and need to consider it most carefully in this new relation before engaging in the delicate and responsible work of ministering to disease?

Now, there is no contention that the academic knowledge of physiology is useless, nor that the time thus given to the subject is unwisely spent. Nor is it denied that this general study of the subject in its academic phases is the logical and necessary groundwork of any true consideration of it from a professional point of view. Again, it is not denied that this should precede in the order of preparation a detailed and critical study of it from the technical standpoint of the physician. The simple claim is that a thoro study of physiology, chemistry, or botany, when these are pursued solely as instruments of self-education, does not of itself result in that professional view of them which, in part at least, underlies the scientific practice of medicine.

In education there are two standpoints from which any subject of instruction may be studied. One may pursue the subject simply for the purpose of educating himself, having no intention of teaching it; or he may study as a teacher, thinking of himself at every step as one who is to direct others in acquiring knowledge of the same subject. In the first case the mental attitude of the learner toward the subject would be indicated by the question: "How can I study this subject so that it shall be to me the most efficient instrument of self-education?" In the second case there would be this added question: "How can I acquire such mastery of this subject as will enable me to employ it most efficiently as a means of educating others?" This latter is the teacher's mental attitude toward every subject of instruction. Again, let it be said that this is not a substitute for general education; but it is something added to this, which is peculiarly the teacher's view of the subject. What special insight into the subject this attitude gives him, what things receive his attention that are omitted from the field of study in the case of the general student,

will be considered later. In general, it may be held that the dominant end one holds before his mind while pursuing a subject would not be without strong influence in determining what knowledge of it would be necessary to teach a subject, and would naturally dispose the mind to see and dwell on the more obvious educational aspects of the subject. Questions of method, of comparative worth of given subject-matter, of disciplinary and ethical value — all of the highest importance to the teacher — will naturally come within the view of one who is considering the subject-matter from the standpoint of the teacher. So, it is held that the simple fact that one considers a subject as a teacher and for teaching ends gives him, to some extent, a peculiar and distinctive view of it.

A subject of study consists of two things: (1) a large number of facts lying in a common field; (2) the organization of these under the essential relations which inhere in the subject-matter. The facts may be termed the original materials or phenomena of the subject. Thought applied to these materials brings them before the mind as distinct objects of attention, and discovers their essential relations of co-ordination and dependence. Let it be noted that relations discovered are essential, existing relations, and not merely arbitrary products of mind. The study of these facts leads to the forming of general ideas, to the discovery of forces and laws, and to all those processes which result in the organization of the materials into scientific or systematic form. To think the subject, then, is to form true conceptions of these facts in their inherent relations. Geography, for example, consists of certain geographical phenomena or data so considered by the mind that it knows, first, the facts themselves as facts; secondly, the essential relations among these; thirdly, the facts as classes of phenomena; and, fourthly, at least the common body of general truths or generalizations which the facts fully warrant. The original materials of the subject are facts or phenomena, existing relations, forces, processes, and laws. These, discovered and built together into orderly, coherent form, give us the subject proper or the science of geography. Here, then, are two things which are logically separable: first, the matter or materials of geography; secondly, the organization of these. One is the fact phase of the subject; the other the organization.

These constitute the entire field of study when the subject is considered in its academic phases only. And whether one's purpose is to educate himself by studying geography or to prepare to teach geography, he must master the subject both as to its materials and as to the organization of these. It is no distinctive characteristic of a teacher's mastery of a subject that he has been led to reflect closely upon its organization. The teacher may have somewhat greater need for emphasizing this, but thoro study for any true educational end will lead to reflective consideration of this element thruout.

The person who is pursuing the subject solely as a means of self-

education has little or no motive for going beyond these two things. He may reflect in a general way upon the mental acts which he puts forth in mastering the subject, and on its value as an educational instrument, but this is quite incidental to his main object. At least, there is not the necessity for the close and detailed study of these points that exists in the case of the person who studies the subject that he may qualify himself to teach it.

And here we find the teacher's special view of the subject. He must know the subject in its professional phases. In addition to mastering the materials of the subject in their true organization, in common with the general student, he is to study, in connection with these, two great relations of these materials: first, the processes of mind by which they are known; and secondly, the educational value of the materials thus organized. Attention may now be directed briefly to each of these elements as constituting a professional knowledge for the teacher.

And, first, the general contention is that the student who is preparing to teach must think his thinking of the subject of instruction. He must know not only geography, but geography as a product of mind. The object of attention is enlarged by the addition of the processes of thinking the materials of the subject in their order of dependence and co-ordination. With the general student the object consists of these materials in their organization. The teacher adds the mental activity necessary to think these materials into this orderly whole. The position is not taken that the teacher is here to acquire a systematic, comprehensive, and technical knowledge of psychology, as such, by directing his attention to the activities of mind which are involved in the study of the various branches of learning. It is meant only that in studying any subject to acquire a teacher's knowledge of it a necessary element of the process is to see, by careful introspection, the nature and conditions of the mental activities engaged in it.

The psychology of a subject, in the sense described, is the only reasonable basis for a scientific procedure in teaching it. Moreover, a study of general psychology, especially in its purely scientific aspects, can hardly give the psychology of the special academic subject. To teach is to stimulate the highest mental activity in the pupil that he is capable of performing without permitting any waste of energy. The subject as a whole, every division and general topic — indeed, the minutest fact which it comprehends — is to be seized by a mental activity appropriate to it. The more fully, therefore, one has considered these activities, especially as performed by himself, in connection with the given field of subject-matter, the better prepared one is to guide the thinking activity of another who seeks to acquire in the most educative way the same knowledge. What we call the method of teaching a subject is the psychology of that subject — the mind's necessary way of thinking it.

Effort is here made to direct attention to the fact that the most helpful psychology of any subject is to be acquired by the teacher in the mastery of the subject itself. The psychology of the subject is not something brought to it from without and superimposed upon it. The teacher who will patiently take up the materials of any subject he is required to teach, and think closely and long upon the nature and conditions of the mental acts which he himself must perform in thinking these materials, will find, not only that the subject has new educational significance to him, and that he occupies as a teacher a high vantage-ground not hitherto known, but that he possesses new insights and new faculties of mind.

Let us try to make clear by an illustration what is here urged as one element of the professional mastery of a subject. A teacher of English grammar wishes to present to a class the idea of the sentence. His first inquiry is: What is the natural procedure of mind in coming into possession of this idea? Appeal is made to his own thinking of the subject. He reflects that the visible or audible words constitute a sentence because they express a judgment, and he sees that to make the idea "sentence" something more than a formal definition, the nature of the judgment must be considered. His own idea of a judgment is general, deduced from a study of many particulars. He thus sees that his problem is to lead the mind of another in the construction of a general conception which has its verification to every mind in a multitude of particulars. He now knows, as he can never know in any other way, what the essential and necessary nature of this general conception is, and how it alone can have reality and true validity to the learner. The method he verifies on the safest psychological grounds—his own conscious thinking of that which he would teach. The immeasurable superiority of this procedure over that of simply committing to verbal memory a formal definition of the sentence must be obvious.

Two students, A and B, are studying a human eye by dissection and actual inspection of a real eye. A has no other object than to educate himself by this study; B wishes to be a teacher. A's only concern is that he shall so study the eye that he himself will best acquire a knowledge of it and derive the most efficient mental discipline from his work. B has equal reason to educate himself thoroly by studying this subject, but adds something which A has little or no reason to consider. He reflects upon the very processes by which he acquires the knowledge of this organ. He verifies or sets aside on psychological grounds the procedure followed. He sees, if the process is valid, that no other procedure in the case would result in a clear, real, and vivid knowledge of the structure and functions of the eye. He thus sees the necessary process in general and why it is necessary. Not only this, but he takes the necessary steps in this actual examination of the eye in its different parts, and sees that he does take them and why he takes them. A acquires an aca-

demic knowledge of the eye; B adds to this one very essential relation of the subject-matter which only the teacher needs to consider.

A teacher's knowledge of a subject of instruction, then, involves, in addition to a thoro mastery of the subject academically considered, a comprehensive and clear understanding of the mental activities which a knowledge of the subject presupposes, acquired mainly by a direct or introspective study of the mind's own working.

A second characteristic of a teacher's knowledge of a subject has already been mentioned. Whoever is to teach a subject so that it may be most thoroly educative to the student must not only know the subject-matter in its true organization and the processes in the mastery of this subject-matter, but he must understand the educational value of the subject and its place in a course of instruction. To employ a subject most wisely as an instrument of education requires that the teacher shall have clear views of the fitness of the subject to promote certain clearly defined educational ends. If a course instruction is a reasonable thing, every subject therein must make its contribution in some way to the general ends sought by the course. The teacher can have the best hold on a particular subject only when he sees its value as an educational means and its relation to other subjects which with it are to promote the general object. Certain elementary objects are usually considered fundamental because they are adapted to the inherent needs of the growing mind, and because they are presupposed by other subjects of study which follow them in their course. Surely, whoever is to employ a subject as an educational instrument for the accomplishment of a certain end must understand both end and instrument in their mutual relations.

Subjects of school education have value as educational instruments for many reasons, three of which may be set forth briefly:

1. As conferring useful information. This is not given as the principal function of any study, tho probably many subjects have greater value from this point of view than is usually attributed to them. In any view, this enters more or less fully into most, if not all, subjects of instruction. Useful knowledge, in the sense here understood, is information that can be turned to immediate account in the world of affairs. Most subjects dealing with natural objects have phases which bear more or less directly on the utilitarian activities of life. One reason for employing these subjects in education — not the main reason — is that the knowledge acquired by studying them is useful knowledge. So far as this does enter as one of the ends for which the subject is studied, it must be recognized and given its due weight in instruction. From this point of view, also, the question of what is essential and what relatively unimportant in the subject will to some extent be necessary. A teacher's knowledge of a subject must include an understanding of this subject from the point of view of its value as information-giving.

2. Subjects have educational value because of their disciplinary effects. But to say that a subject is disciplinary is to say very little about it until its disciplinary value is shown, qualitatively and quantitatively. A subject may have such nature, in respect both to its subject-matter and to its organization, as to be strongly disciplinary of one or of several mental functions. Arithmetic, algebra, and geometry, for example, seem to have special advantages for strengthening the power of abstract judgment and close deductive thinking; history and geography, the practical judgment or judgment of affairs; English grammar, general reflection and introspection; music, drawing, and literature, the capacity for æsthetic appreciation and creation. While it is true that subjects of instruction vary, both as to quality and quantity of discipline to be gained by studying them, it probably remains that the disciplinary effect depends more on the mode of pursuing the subject than on the specific nature of the subject-matter considered. A teacher who understands the logic of a subject, and is skilled in presenting it so as to exercise the learner in the most systematic way, would probably make a subject, least valuable in itself considered, worth more than any other could be in unthinking and untrained hands. Whoever would most fully educate another by means of any subject of study must take careful account of the strictly disciplinary character of the instrumentality.

3. But at least one other consideration may give a study educational value. Perhaps the most significant term for this element is the word "ethical." Some subjects are fitted to give more or less fully that rational insight into the world of humanity, and indeed into the permanent spiritual order of the world, which the individual most needs for life-guidance. In the hands of wise teachers, possessed of deep ethical insight, many of the subjects of common-school education offer the opportunity for the most valuable and permanent form of ethical culture. Not that they abound in moral maxims or the distinct enunciation of principles of human conduct, but that they furnish glimpses at least of the great abiding truth that the world-order is an intelligent, reasonable, stable thing, and that to this the individual as a rational being must adapt his life. Every subject of nature well comprehended will reveal more and more fully the order, system, and coherence of the natural world. Physics, chemistry, biology, geology, and astronomy could not fail under intelligent direction to enlarge one's whole view of the significance of life. All branches of mathematics reveal the world in its established mathematical order, which does not for a moment respect the caprice of the individual. History, geography, and sociology reveal the world of humanity as really constituting an organic social whole, and they ought to show the individual the necessity of reinforcing the social order by every word and deed of his life. English grammar, logic, and philosophy are introspective in their character, and they fail of one of

their greatest educational possibilities if they do not impress the student with the substantial and valid character of the world of spirit. No teacher can be fitted to wield these subjects of study most efficiently as instruments to these high ends who has not patiently and profoundly considered them in relation thereto.

The doctrine set forth may be gathered together in one sentence: A teacher's knowledge of a subject of instruction includes, in addition to a thoro, comprehensive understanding of its subject-matter — its materials — in their true organization, first, a clear view of the mental processes involved in thinking the subject; and, secondly, a profound consideration of the entire subject as an educational agency, this latter including its value as information-giving, as conferring discipline, and as revealing more or less fully, and in some phase or phases, the abiding, reasonable order of the world.

To prevent any possible misunderstanding, let it be added that the professional knowledge herein urged is not supposed in any way to take the place of scholarly attainments. Method cannot be, is not offered as, a substitute for scholarship. The doctrine asserted is that scholarship alone does not qualify for the work of the schoolroom, that a professional knowledge of subjects is a valid and necessary addition to this, and that it consists, fundamentally, in the two phases of study outlined.

II

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1. *The historical origin of the question.*— Before considering the question at issue, it will clarify the situation if we consider briefly its origin. There was for a long time a tradition among those who ranked themselves as scholars that the guild of teachers burned incense before some fetich called Method, without worshiping at the altar of true knowledge; that its members bowed before form without content, shadow without substance. Meanwhile an equally unwarranted tradition obtained among those who ranked themselves as teachers that the scholar kept himself cloistered in his cell, wearing out his days oblivious of the life, the beauty, the infinite soul about him.

In the early days of normal schools there may have been some justification for the first charge, just as in mediæval times there may have been some for the second one. But with the rise of the standard normal school of today, with at least two years beyond a four-years' high-school course, combining advanced academic work with the professional, and with the growth of special training in other professions, the tradition has lost its earlier dogmatic form. Two generations ago physicians often asserted

that the knowledge required for their fraternity was best obtained in the office of a good practitioner, but today we require not only graduation from a good medical college, but even postgraduate work. The lawyer, the preacher, the nurse, the bookkeeper, and the teacher as well, all demand knowledge, and knowledge of their subjects, peculiar to their several professions, and in advance of that of their immediate predecessors.

The question which this paper considers, therefore, had its origin in the larger question as to the best training for a teacher, and was born of the old tradition that the teacher had no knowledge which the scholar did not have, but, on the contrary, that his knowledge was generally neither as extensive nor as exact. The opposition to the professional training of the teacher has passed away, at least as to elementary education, but the question as to the nature of this training, and as to the nature of the teacher's knowledge, still has place.

2. *Necessity for definition.*—Thus far the terms "teacher," "scholar," and "knowledge of a subject" have been loosely used. It is, however, one of the first principles of debate to make clear the issue by defining the terms employed.

For our purposes I take "teacher" to mean one who imparts or draws out information in a school. This is not a broad use of the term, for "every man I meet is my master in some point, and in that I learn of him." It is, however, the meaning intended in this question, excluding those who teach thru books, from the pulpit, by the medium of the daily press, or by friendly discourse at home.

I take "scholar" to mean a mere learned man, one who ranks as erudite on leaving the university, one who may be contributing in some degree to the world's stock of knowledge. He may be a teacher, but in thought, at least, I wish to separate him from any profession, as we might separate theologian from preacher, or physician from nurse.

It would be easy to answer the question if we could now define "knowledge of a subject" to refer to the academic knowledge of the isolated subject of the teacher's work; not to its history, not to its relation to other subjects, and not to its relation to mind. This interpretation, however, is absolutely untenable. It leads at once to such an absurd study of isolated infinitesimals that ordinary common-sense at once dictates a much broader understanding of the expression. If it were possible to narrow our discussion to some single thing taught, the knowledge of the teacher would not differ at all, as to that thing, from the knowledge of the scholar. The infinitesimal bits of knowledge must be known equally well. This, however, is no real answer to the question, for it supposes a case which does not exist. Just as modern psychology does not permit us to isolate the faculties, so common-sense declines to allow us to cut out bits of knowledge and to isolate each from the others or from the

rest of the infinite domain. Knowledge is not a honeycomb of unrelated cells; the relation of facts is a great part of knowledge; and here it is that the knowledge of the teacher will be found to differ greatly from that of the scholar. It is, therefore, reasonable to define "knowledge of a subject" to include the relation of that subject to other subjects.

For example, take the knowledge of simple arithmetic. The scholar knows the processes of numbers, and their elementary theory, and their conventional applications, quite as well as the teacher. He also knows certain relations of these facts to one another, forming their logical sequence. But the teacher must not only know all this, but the relation of these facts to a child's mind—the psychological sequence—and also their relation to human life. It is the influence of the mere scholar which has kept the science so long stagnant and stupid in the schoolroom; it is the influence of the teacher which today is bringing it into touch with child mind and with world-life, as we are now living it.

As another illustration, consider the story of Bunker Hill. The scholar knows it quite as well as the teacher, as an isolated fact; indeed, he probably knows it better if his field is the history of the revolutionary period. But the teacher must know it as it bears upon present life, if it is to have any lesson. He must make the boy, and the girl as well, feel that inward stirring of patriotism which means fighting for right today, even as their ancestors fought for right then, altho the battle may now be one of fearless speech and honest ballot, instead of one with saber and with shot.

To take a case from the more advanced grades: Professor Mommsen knows so much more of Roman history than Dr. Arnold did, that the latter does not, in comparison, rank as a historian at all. But Dr. Arnold could systematically handle a class, could psychologically present the subject, could develop it logically month after month, could bring from each chapter a lesson for the boys of Rugby, and could arouse an interest in the subject, far beyond Professor Mommsen's powers; so that, by comparison, the latter would not rank as a teacher at all. And yet the knowledge of these two men with respect to any isolated fact was the same; it is the knowledge of a topic, of the relation of the fact to other facts, that is radically different.

Recognizing perfectly that reasoning by fanciful analogies is both easy and dangerous, I hesitate to enter this field even for purposes of illustration. And yet I cannot refrain from taking this means to make the discussion clearer. A diamond is a diamond whether rough, or broken, or polished and set. If we wish size alone, it should be left in the rough; if we wish it for cutting glass, it is better broken; if we wish it for decoration, it is better polished and set. How does the carbon of one differ from that of the others? Not in the least. The scholar is the rough diamond; he has more crystallized carbon than the cut diamond. The

teacher is the cut stone; he has less carbon, but he lets his light shine better; or, to put it more truly, he reflects light better. Or, to take another illustration, the teacher is a circle, the extent varying with the individual; while the scholar is a secant thru its center, the length also varying. The two have infinitely many points in common, on the line. The scholar may call out from some distant point, "You have not progressed;" and the teacher, from some point within the circle, may retort, "You are narrow." Each is, in some small sense, right; the teacher has not progressed as far on the line, in the groove, of this particular scholarship; the scholar is narrow, and he may be said, relatively, to see a point on one side only, and not from all sides, as the teacher may be said to see it.

Of course, these are mere fanciful analogies, but in a homely way they bring out the quality of mind of the two classes, if classes we must make. In a broader sense, of course, every true scholar, even tho dumb in the schoolroom, is a teacher, and every teacher worthy the name, even tho master of a single tongue and not learned in the lore of the past, is a scholar in his field. The circle of scholars must always intersect the circle of teachers. Some individuals will always lie in both circles, and all individuals of either will always lie in the fringe of the other.

3. *The question answered.*—Taking, therefore, the phrase "knowledge of the subject" to have its common-sense meaning of knowledge of a subject in its relations to other subjects, the following propositions would seem to be reasonable:

a) The scholar must know a little of the general field, and much of some special field, and he must be sympathetic at least with the effort to cultivate the latter. Such men are not difficult to find. Our scientific journals are made possible by them. Their contributions are the increments, usually infinitesimal, by which knowledge grows. Most of them are mediocre scholars, just as most of us are mediocre teachers.

b) The teacher must also know a little of the general field and much of some special field; but instead of being primarily interested in contributing to the world's stock of knowledge, his interests are rather in bringing the accumulated stock to the view of his pupils and in stimulating them to activity.

c) The teacher's knowledge of the subject differs from that of the scholar in that he must appreciate, much more clearly than the latter, the relation of fact to fact outside of the narrow groove. The necessity for dealing with a diversity of minds requires him to mass a greater line of data for induction. For him, too, there must be a much fuller relation of the subject to life; he must know, not merely the subject itself, but its applications. The scholar requires merely a logical arrangement of his matter; the teacher, whether or not he knows the psychology of book or of laboratory, must have a psychological arrangement. And

with all of this cross-arrangement, and increased data, and application to the life about him, comes a scholarship with respect to the topic in hand that the mere scholar misses; for everyone who has had the experience knows that the best test of scholarship in any subject is the preparation of a plan for teaching it.

4. *The training of the teacher vs. that of the scholar.*— If, now, the knowledge of the teacher is identical with that of the scholar as to some hypothetical and isolated element, but if it differs in the relation of that knowledge to other subjects, to life in general, and to the mental life of the learner in particular, and if the immediate aims of the two are distinct, this very practical question suggests itself to us who are interested in training teachers: Exactly what knowledge of the subject do your professional courses propose to give that the ordinary college course does not give?

This is not at all the question as to the general professional training of the teacher, for that question is altogether too extensive for a mere paragraph of this kind. Neither does it consider the possibility of making a teacher out of hopeless material; for everyone recognizes that professional courses rarely turn out a great teacher, just as academic courses rarely turn out a great scholar. It considers simply the question as to the distinctive kind of knowledge to be imparted to a teacher, but not to a mere scholar.

It will surely be pardoned me if I take an illustration with which I am most familiar—the preparation of a teacher of mathematics, say for the high school. What knowledge should such a teacher possess, particularly as to mathematics, and of such knowledge what may the mere scholar omit? No students should be admitted to the professional courses preparing for such work until they have completed the ordinary courses in elementary mathematics, which are now defined to include the calculus. My own students always take more or less work in higher mathematics, including projective geometry, theory of equations, and advanced courses in the calculus and analytics, often with theory of functions, differential equations, theory of substitutions, and the more modern special theories. Thus far, the knowledge of teacher and scholar is the same. Each must know more than his own field of work in order to get his bearings. But, in addition to this work, what further knowledge of the subject must the teacher have? First, he should have at least one year of work in the history of mathematics, and preferably two years. He may be a scholar in the narrow field of geometry without this, but he is a far better teacher with it. Secondly, he should know, as the scholar need not, the relation of this subject to the human mind as seen in the history of teaching it. Not to know this is to challenge a waste of time in useless or criminal experiment. Thirdly, he must know the reason

for allowing the subject place in the curriculum, and in particular the world's present demands. Fourthly, he must know the further relation of the subject to the pupil's mind today as it appears in the best-known ways of presenting it; and this, as we have seen, is no small part of "knowledge of the subject." Fifthly, in spite of the abuses of the word "correlation," the teacher must know, as the mere scholar need not, the relation of each part of a subject to the other parts, so that education is given more as a unit than was formerly the case. And, furthermore, he must know the correlation of the subject to other subjects and with life—with life before the presentation (the apperceptive phase), and with life then and thereafter (the social bearing of the subject).

Finally, the teacher's knowledge of a subject differs from that of a student in the selection made from the great body of knowledge. For example, a university student of botany may survey the general field of biology, then the special field of botany, and then may study intently the life of any plant or group. The teacher, however, must guard his selection, studying preferably that plant or group which touches in some way human life and interests. Many a man takes his doctor's degree in Latin and begins teaching well acquainted with the best French, German, and Italian authorities bearing upon Horace or Terence, and familiar with the manuscripts by which these writers are known to us, but absolutely ignorant of the wealth of literature bearing upon those authors whose works he will teach. The proposition is wholly untenable that the mere habit of investigation is all that is essential in advanced courses for teachers; the material of the investigation, the nature of the selection, is of vital importance—an importance altogether too little considered in our university courses.

I have endeavored not only to show that there exists a real difference in the knowledge of the subject possessed by the teacher and the mere scholar, but also to call attention to the following natural corollaries to this proposition:

1. A considerable amount of knowledge of a subject is necessary on the part of a teacher, in addition to that required by the mere scholar, and in addition to the so-called professional courses.

2. It is impossible wholly to divorce professional from academic courses.

3. A considerable amount of so-called academic work, not duplicating high-school or college courses, is necessary in any professional school.

4. Much more attention should be given in the selecting of courses by those undertaking doctorate work with the expectation of teaching. I know of no matter demanding more careful attention on the part of those having to do with the higher education of teachers than this.

DISCUSSION

F. LOUIS SOLDAN, superintendent of public schools, St. Louis, Mo. — The modern scholar has narrowed his field and deepened it at the same time. The immensity of scientific discovery has made limitation necessary, and every scholar has specialized in some particularly narrow field; but within the limits of this field his work is deep and exhaustive. The modern scholar is a specialist. While he ought to be, and usually is, a man of general culture, there is one subject which he must know well and fully.

The modern university teacher, or the college teacher, is a specialist, and his knowledge must be of scholarly character. It differs from the knowledge of the scholar who is not a teacher in one important respect. The teacher's primary aim is the training of his students. The subject, which is an end in itself with the scholar, is merely a means in the hands of the teacher which must serve some other greater end — the cultivation of the student. The primary teacher's knowledge of the subject differs from the scholar's knowledge, in the first place, by being at once more comprehensive and less intensive. The teacher must know a greater number of subjects, since he instructs classes in history, geography, mathematics, etc., and he must possess in each of these subjects a scholarly knowledge, but he cannot be a specialist in each; hence, while he must be well versed in a number of subjects, his knowledge in each will be less intensive than that of the specialist who has made mathematics or history exclusively his life-work.

There is, however, a vital difference between the scholar's knowledge of a subject and the teacher's knowledge of a subject. While the teacher's knowledge should be scholarly as far as it goes, his knowledge of the subject-matter is subordinated to the educational training which he makes this subject-matter yield for the benefit of the youths whom he instructs. He is a specialist in one department; his main study and the center of his scholastic excellence must be a knowledge of child-nature and of the processes of teaching by which the child may grow into manhood thru the influence of instruction. The teacher must know how to present knowledge so that it educates. He must discern, in the presentation of matter, the difficulties which the child-mind will encounter in mastering it. He must be able to subordinate the data of the various studies to the thought which they are to convey. In short, his specialty is the education of the young thru the proper presentation of knowledge. This is the special domain of the teacher of all grades; and his scholarship, while it should be liberal in all the studies which he teaches, should be that of the master of education.

JOHN W. COOK, president of Northern Illinois Normal School. — The discussion of the theme seems to me to be very satisfactory. In what I shall say it is probable that I shall traverse lines already followed.

The subject under consideration lies within the field of method, and should have a candid and exhaustive treatment. I assume that normal-school men generally hold that the student of education finds that his acquaintance with the various subjects of the school curriculum must be extended as soon as he attempts to use them in the most fruitful way as educative material in elementary grades. It seems to me that this is more especially true in elementary grades than elsewhere, since the more advanced pupil is better qualified to supply deficiencies of instruction thru his independent activity. I do not yield the proposition that the principle holds in all grades. I believe that the quality of teaching in secondary schools and in the higher institutions can be immensely improved by a frank abandonment of the unfortunate attitude held by so many respecting an art of teaching, and by a careful study of what has been learned in the field of method. The lofty attitude of many scholars in regard to this matter is out of harmony with their other relations to the general problem of education. Their illiberality and philistinism respecting phases of the problem with which they are not familiar are all the more irritating because of their catholicity and humility everywhere else.

Rosenkranz declares that "the logical presupposition of instruction is the order in which the subject-matter develops for the consciousness. The subject, the consciousness of the pupil, and the activity of the instructor interpenetrate each other in instruction, and constitute in actuality one whole." To the examination of a subject which the scholar who is intent upon its mastery as a body of related ideas would give, there must be added in the case of the teacher an accenting of certain elements and a slighting of others, because he must consider the subject with regard to its adaptation to the consciousness of the pupil. The familiar principle of apperception suggests the idea that any content will be seized by dominating notions and converted into their terms and sorted out among their relations. The familiar illustration of the different views which a half-dozen men get of Niagara Falls, because of their prepossessions, is a case in point. I do not see why the student who has no pedagogical consciousness should have any such fringes to his field of thought as the teacher must of necessity find in the greater part of his intellectual experience. As to the engineer every running stream suggests the possibility of utilizing unused power, so to the teacher every subject solicits an analysis of the order of its ideas with respect to their economic communicability, resistance value for the development of mental energy, knowledge value for the enrichment of the stock of ideas, æsthetic value to the emotional nature, and ethical value in the cultivation of the moral will.

A few illustrations may serve my purposes better than a more abstract discussion. I suspect that many of the normal-school people are on the lookout for a psychology text that has special adaptability to the needs of the normal-school pupils. There are certain phases of the subject that are more intimately related to the work of the teacher than others. Indeed, psychology as a science is not necessarily of special value to the teacher. We have all seen the psychological expert in the class-room with continents between him and his class. It is for this reason, I suspect, that we are hearing so much of late about educational psychology.

Presumably attention is the topic of greatest service to teachers. It has been defined as the will acting upon the intellect, and consequently that mental capacity which makes education a possibility. It is the office of the teacher to get certain things within the range of the pupil's vision and to induce him to adopt them as his extreme solicitude. To effect this supreme purpose he seeks assistance from the science of mind with regard to the secret springs of the soul and the manner of their release. It is the psychology of the developing, rather than of the mature mind that interests him. How does the miracle of knowledge come to pass? Where in the mind's activity is the vanishing point of education? Where does the image become an obstacle to mental growth? Which of the pupil's acts are chosen with reference to the good, and in consequence deserve to be classed as essentially moral? What is the relation of interest to the formation of the ethical character? What motives belong under the category of "soft pedagogy"? Where is the truth in the doctrine of "effort"? At every turn the teacher is seeking light upon the question: "How can I present the subjects of instruction to the minds of the young so that they will awaken the most fruitful effort and consequently eventuate in the best educative result?"

As this is the determining conception in pursuing such subjects as psychology, so ethics will be solicited to lend its aid in fixing the technique of the process by which the forming mind attains moral freedom. Not the speculative, but the practical, aspects of the subject attract the teacher. He is endeavoring to acquire skill in the practice of an art, and estimates his subject with that criterion as a guide.

The ordinary student has no such selective interest at work, sorting out one phase and slighting another. It is probable that everyone has his predilections, but they are not determined ordinarily by practical considerations in subjects of this character. Something of the same predetermination may be observed in the attitude of the clergyman; indeed, I should say that his case will be fully as strongly marked as the teacher's, since his function is to make certain ideas assume control in the conduct of life.

It may be said that psychology, ethics, logic, sociology, possibly anthropology and phenomenology, as Rosenkranz suggests, are essential presuppositions of a science of education, and, in consequence, are exceptional in their relation to the teacher's work. What shall we say of such subjects as grammar, geography, arithmetic, and the rest? English grammar is ordinarily regarded as related to the art of correct speech, and is studied for the purpose of securing that result. But of late there has been a radical change in the treatment of this subject, and the institution in the charge of the leader of this discussion is chiefly responsible for that change. It is an effort to make the learner conscious of the mental processes that generate the different forms of speech. Such a treatment of the subject betrays its origin. It is a product of the normal school. I am not attempting to pass judgment on the wisdom of the scheme for the ordinary purposes of language study. For the use of the teacher it seems quite indispensable. I have seen the old-fashioned grammar in all of its glory, and Solomon is not to be referred to in that connection. I have also seen psychological grammar in elementary grades with the same sense of wonder (it is possible that a more internal habit would lead me to say, "I also have seen," or, "I have seen also"). But I repeat that I am not reviewing any recent texts on language. One can talk well and sing well, and yet know nothing of vocal chords. One may speak beautifully and write as well, and yet be unconscious of the mind's process of limiting itself by the self-imposition of the ideas for which adverbs and adjectives stand.

But the teacher will lack any discriminating criterion to save him from pure formalism, on one side, and pure skepticism respecting the value of formal grammar, on the other, if this aspect of language should be entirely neglected. I well remember Bronson Alcott's admonition to a group of us who were sitting awestruck at his feet waiting for him to say something that we could understand. He warned us against grammar, for Louise had never studied it. One must not be too introspective when writing or speaking, but when observing the speech of our pupils we are always striving to push back to their mental states; and language as the sign of mental states that need careful study is quite different from language which is examined simply to arrive at its meaning.

This is only another way of saying that I believe in psychological grammar for teachers.

What of geography? Is there geography, and then is there geography? That the facts and principles are the same for all no one can doubt. There are not trade winds and ocean currents for the scholar, and other and different trade winds and ocean currents for the teacher. The subject must always have an inherent independence and individuality which even a teacher must hold sacred. Again, the subject must be analyzed with reference to its apperception by minds with extremely simple ideas and with the larger parts of those in haphazard and absurd relations. What aspects of the subject will awaken the mental weaver and urge him to his task — the construction of the web of thought in the wonderful loom of life?

Again, to recur to an idea already overworked here perhaps, the subject always is to be regarded with reference to the mental equipment of the learner. As the fish is not alone the structure that lies on the table of the biological laboratory, but is also the element in which alone he can live and grow, so geography is not alone the body of knowledge about the earth, from the teacher's point of view, but is also the consciousness that is to live and grow in it. This again implies an organization of the content of the science with reference to its nutritive adaptability to various grades of development. This requirement may necessitate a disturbance of what the scholar would regard as a logical unfolding of the science. Hence the teacher is a geographer who knows his subject, but who regards it as no impiety to desecrate its logical sacredness or sacred logic by a readjustment of sequences in the interests of the child. This readjustment will be influenced in no small degree by the geographical environment. If near a stream, its

modification of its banks, its service as a drainage agent, its relation to plant and animal societies, and, in general, its transforming power, are all so obtrusive and concrete that it would seem the height of folly to fail to give them special accent. It is thus seen to be impossible to make a detailed scheme for all geographical localities.

I must not use more of your time in these repetitions; for what is true of the subjects considered is true in varying degrees of all of the others.

PROFESSOR FRANK M. MCMURRY, Teachers College, New York city.—The scholar is interested in fact as fact, while the teacher is interested in fact as related to life, as bearing on human interests, There is, therefore, one marked difference between the two. The latter adds a very important element to the other's knowledge. This difference is well illustrated in the advance made in nature study in recent years. Much of the subject-matter in this field some years ago consisted of facts unrelated to present time, to actual interests; it was scientific fact and nothing more. Now, while many of the topics remain the same, their bearings on life have been added—often a large addition, indeed, requiring a whole recitation or more for a single subject—and so we speak of agricultural nature study specifically. The present arithmetic illustrates the scholar's point of view admirably. Inasmuch as it consists solely of a study of processes, it is as dry, dead fact as any study one can imagine. To satisfy the teacher, however, bearings on life must be made abundant. So we may, in the near future, be studying the quantitative side of the farmer's life, of railroading, banking, etc., thus adding a large element beyond that required by the mere scholar.

In literature we can teach the narrative carefully, thoroly, and then stop. Or we can take cognizance of the moral contained in a poem and discuss its bearings at length on the lives of pupils. So every study has a fact content and another series of ideas touching human interests; and the scholar's knowledge includes only the first of these, while the teacher should possess both.

A second point: We have apparently assumed in this discussion that each branch of knowledge is very definitely limited in content. But, so far as I can see, there is no fixed body of topics in any study, nor is there a fixed emphasis for any of them. What is ordinarily done in any normal school or college is to choose some topics for extensive study, and others for more intensive treatment. Many of the possible themes are omitted entirely. Selection and elimination are necessary, therefore. Now, the aim one has in mind is the main factor in any selection of means. It would seem natural, then, that the teacher would choose quite a different body of facts from the mere scholar, since the former is preparing for the definite work of instructing children.

For example, the student of literature in college may well, perhaps, attempt to acquaint himself with some of the best poetry, novels, essays, and speeches. And this suggests the common plan followed in such work. But the teacher should certainly make a careful study of fairy-tales and fables, of *Hiawatha*, the *Iliad* and *Odyssey*, and *Pilgrim's Progress*. It is remarkable that so many people intending to teach should pursue literature from the former, adult point of view, and then go out to supervise or instruct children in children's classics, of which they know almost nothing. It is this defect in the teacher's knowledge of the subject that is causing many teachers to be failures who might otherwise prove very successful. The teacher likewise needs a different knowledge of history from that of the scholar. The latter often specializes in European history, or it may be in any phase of American history that happens particularly to interest him. But the teacher of history in the grades should be well acquainted with pioneer history and throw special emphasis on the Revolutionary War.

Thus the teacher's knowledge of a subject should be radically different from that of the mere scholar in two respects:

1. The teacher should add to mere acquaintance with fact the bearings of such fact on life—a large addition.

2. Much of the subject-matter that receives his attention should be that which is expected to be presented to children, and not solely the literature that is selected from the adult point of view.

FRANCIS J. CHENEY, principal of the State Normal School, Cortland, N. Y.—I wish to express my endorsement of the remarks of the last speaker. The answer to the question under discussion will depend largely upon whether the purpose of acquiring knowledge is the same in the case of the teacher as in the case of the scholar. The scholar may have various reasons for acquiring knowledge. He may acquire it just for the personal pleasure that it gives him intellectually; he may acquire it just for the satisfaction that comes from knowing things; he may acquire it for the sake of self-discipline; or he may acquire it for the sake, in part at least, of conveying it to others thru the medium of the written or printed page.

The teacher, however, has a far different purpose. This purpose is understood when we come to know what teaching really means. To my mind the best general definition of teaching which I have run across in my studies is the one given by Mr. Gordy in his excellent little book on psychology: "Teaching is the art of getting one to do something which he would not do apart from the teacher, in order that he may become something which he would not become apart from the teacher." The purpose of teaching is to make men and women in the highest sense of the word. This is the defense of the public schools. Their proper function is to send out into the world useful members of society, who will do their part toward making the communities in which they live more orderly and moral; who will make kindly neighbors and law-abiding citizens. This is the reason the state gives for taking money from one man's pocket to educate another man's child.

This being the aim, then, of the teacher in acquiring knowledge, he will put himself in possession of those facts which will enable him the most surely to attain the end he has in view. We can readily see that it will make a difference what kind of facts he has in possession, with which to arouse the activities of his pupil; what his pupil becomes will depend largely upon the nature of the ideas transmitted. He is to make of his pupil a man of keen perceptive power, strong memory, well-developed constructive imagination, a close thinker; but if he stop here, he will not have done all for his pupil that he should have done, for a man can have all of these powers highly developed and still be a fit subject for prison. He must arouse the most healthy emotions; he must appeal to the will, and thus enter the domain of morals. In this way he will help to develop a man that is worth while. This is his aim, and to do this he has in view a far higher purpose in obtaining knowledge than has the mere book-worm of a scholar. His knowledge should differ in many respects from that of the mere scholar; for he must impart those ideas that will arouse the highest motives for action.

HENRY L. JOHNSON, teacher of history in Eastern Illinois Normal School.—In drawing the distinction between the scholar and the teacher, one point seems to have been overlooked this morning, and that is that the scholar has before him the problem of how to communicate his learning. His interest does not always stop with the *fact*, as has been suggested. Dr. Mommsen, for example, the great historian of Rome, who has been contrasted with Dr. Arnold by one of the speakers, had before him so consciously the circle of readers whom he wished to reach thru his history that a French critic has accused him of sacrificing his scholarship to his public. Surely, here is a phase of the problem of which so much has been made in seeking to differentiate the teacher's knowledge of a subject from a scholar's knowledge.

PROFESSOR GRANT KARR, State Normal School, Oswego, N. Y.—In all of this discussion there seems to be one essentially wrong assumption which has received very little attention, viz., that mind, facts, and their organization may be looked upon as unrelated, as entirely isolated from each other. From the general trend of the discussion one might

be led to believe that there is such a thing as a fact *per se*, apart from any mind, which the mind reaches out and apprehends much as an animal takes in food.

In this way great emphasis has been placed upon the distinction between certain facts according as they are known by the child, the teacher, or the scholar. Doubtless ideas differ greatly according to the nature and culture of their possessors, but still their similarity is as great as or greater than their difference. This phase of the subject has been mentioned incidentally, but its importance would seem to warrant its receiving greater emphasis.

In the first place, there is no such thing as a fact entirely separate from a mind which can be taken hold of and drawn into the mind. A fact is a thing made, and its maker is a process of thought, and this process of thought is a functioning mind. The fact is that in which the whole mind reveals itself. There are no dead facts, but only thinking minds revealing themselves in facts.

Facts differ according to the difference in the experience and culture of persons, but they are alike and of the same nature in so far as all minds are alike in their nature and cumulative processes.

Mr. Parsons says, "Relations are a part of knowledge," and, "The general is the only abiding knowledge." In a child's facts of geography or history there must be certain characteristics which are general and abiding, else the facts would not be geography or history. These general characteristics must be known also by the teacher and scholar, if they know their subject, because they are permanent and abiding. The teacher and scholar must take into account the facts known by the child, because they are a part of their own equipment, of their own summarized experiences; and while distinctions and differences between the facts known by pupils, teachers, and scholars are great and important, they should not be unduly emphasized at the expense of unity, the general, the permanent and abiding in these phases of educational work.

This is, indeed, idealism, but it is an idealism which constitutes true realism. It is the idealism of Herbart, Froebel, and Dewey.

PRESIDENT JOHN W. COOK.—If I may be permitted, I should like to add another word. It is interesting to reflect upon the reasons for this discussion. For many years the normal schools were attacked for what was called their academic work. Naturally they endeavored to free themselves from the odium of being simply academies when they desired to be considered professional schools. No sooner, however, did they attempt to become professional than they were attacked from another side. It was then declared that the great lack of the normal school was anything approaching genuine scholarship. It is evident that the topic which we have just been discussing was put upon the program for the purpose of defending the normal schools for what has improperly been called their academic work. Those of us who are engaged in the professional education of teachers believe most thoroly that a large part of our professional work lies entirely on the side of the subject-matter of instruction. When we use the word "method," consequently, our friends must understand that we are not talking of the tricks and devices, which are indeed valuable, but of a proper treatment of the subjects of instruction. If they will simply understand this department of normal-school work, method will have a richer significance in their vocabularies.

It is most interesting to watch people of university training who are genuinely in earnest in their effort to acquire a technique of instruction in elementary grades. I may be pardoned for introducing a personal experience. Two years ago I needed a teacher of literature. I learned of a woman who was said to be amply endowed by nature, and furnished with liberal culture by her long studies in the university. Upon meeting her I discovered, or I thought that I discovered, the added graces of genuine love for teaching, an enthusiasm for literature, and a fine sincerity in all the relations of life. Consequently I employed her and took great pains in assigning her work to make her regular duties in

the normal department very light, in order that she might devote herself to the instruction of children in elementary grades. I shall never forget her self-consciousness, even amounting to shame, as she earnestly struggled to interest herself in the simple literature of childhood, and to take with the children, in a genuinely sympathetic way, their shortened step. The phenomenon was an extremely interesting one. A good half-year had gone before the sense of the trivial had disappeared and she could enter with a genuine enthusiasm into the lives of the children as they joined with her in the studies of the fairy-tale and folk-lore.

This transforming process is always intensely interesting, and it must take place in the experience of the university-man or woman who enters upon the instruction of childhood in any fashion that means genuine success.

CONDITIONS OF ADMISSION TO NORMAL SCHOOLS

I

WALTER P. BECKWITH, PRINCIPAL OF STATE NORMAL SCHOOL, SALEM, MASS.

There are certain fundamental requisites, such as sound bodily health and a good moral character, which should always be considered as indispensable in candidates for admission to any normal school. Beyond this, the admission of candidates is a matter to be determined chiefly by local conditions. It resembles the tariff question, as that was viewed in a well-remembered political campaign by a certain candidate for the presidency. Even in the same state, uniformity in all respects is not possible except at the expense of general usefulness, and it is, therefore, not desirable. In Massachusetts this fact has been recognized and the logical consequences accepted. While the requirements for admission are uniform thruout the state, and while the questions prepared for the examinations are identical, each school is left to determine for itself the results of the tests, and there is necessarily a variety of results. An equal degree of liberty is given to the nine individual schools in working out their special problems of greatest service. A normal school is in a measure conditioned by its capacity, by its number of applicants for admission, and by its market.

If these statements are true of the schools in a single state, they will be true, in an even larger degree, of the schools in different states. A large element of this discussion must consequently consist of the presentation of the varying conditions and of the means by which, in various places, the attempt is made to meet them.

Since 1896 admission to Massachusetts normal-school examinations has been restricted to graduates of high schools and to other persons having an equivalent education. The conditions have been enforced with a gradually increasing degree of strictness. They are now understood to include only graduates of four-year courses. The vast majority of the candidates come from the public high schools. My own school is probably

a fair type of the Massachusetts schools in this respect. In 1902 there were 111 candidates admitted to the regular course. Of these, 103 were graduates of four-year courses in public high schools, five were from academies doing work equal to that of the public high schools, and the remaining three were from country academies who either had had experience in teaching or showed more than average promise.

The Massachusetts schools also offer a special course of one year, but the privilege of taking it is restricted to college graduates, graduates of normal schools, and other persons of maturity who have had considerable experience in teaching. The number of such students is not large, rarely reaching 10 per cent. of the membership of the school, and each school probably rejects every year more applications for the privilege than it grants, because the applicants are not regarded as coming within the conditions prescribed.

Something, perhaps, should be said of the manner in which admission is determined. Written examinations are not the only element considered. Certain general credentials of character are required. The schools now conduct the physical examinations for themselves, instead of accepting formal certificates from physicians. Candidates are invited to present their high-school records, and any statements they can furnish regarding their personal characteristics and attainments from former instructors. All practicable opportunity is improved for oral communication with them by the normal-school examiners, and they are required to read aloud suitable selections. All these things are considered in determining the question of admission. The results, therefore, do not depend upon any arbitrary dead-line of percentages. It must be remembered that the Massachusetts schools, in point of numbers, are small, as compared with those found in many sections of the country, the largest normal school in this state having less than three hundred students. Especial emphasis is placed upon the opinions of the teachers who have known the candidates during their high-school courses, and such utterances, when known to be those of persons who are discriminating, frank, and fearless, not infrequently turn the scale. It is also generally true, while many candidates are annually rejected — the percentage of rejections at some schools has sometimes been as high as 20 — that the schools all prefer, so far as their accommodations permit, to be rather liberal in admissions, and to apply their stricter tests to the work done and the promise shown by the students after admission.

The results, with the conditions prevailing here, have justified the important change made seven years ago. The number of admissions has increased about 80 per cent., when compared with the average of the previous ten years. This increase is in part accounted for by the opening of four new schools — one in 1895, and three others in 1896 and 1897; but less than half of it can properly be so reckoned. The percentage of

normal graduates employed in the public schools of the state has arisen from 36 to nearly 50, and is annually increasing. The average wages of teachers, during the same period, have increased more than 10 per cent.

These results have been attained in the face of a constantly increasing college influence, and along with the wonderful growth of Smith, Mount Holyoke, Wellesley, and Radcliffe — not to mention the coeducational institutions like Tufts and Boston University. The attendance of Massachusetts women at all these colleges has vastly increased and today more than one-tenth of the membership of Vassar College consists of Massachusetts residents. All these institutions draw their students chiefly from our public high schools.

The explanation, if one is needed, is to be found in the fact that the normal schools, by raising their standards of admission, were thus placed in an entirely different relation to the public-school system. Instead of being on a level with high schools, as formerly, they are now distinctly above them. Hence the increasing respect in which they are held by the public, by the teachers themselves, and by the high schools. The change in the normal schools has naturally been followed by a marked change in the attitude of the high schools toward them. Many of our best high schools now have courses of study meeting directly and specifically the normal-school requirements for admission. Formerly the only recourse for a young woman graduate of the high school was to the college; different tastes and needs are now met by the normal-school course, and its advantages to those intending to teach are much more often than formerly given due consideration by high-school principals in advising their pupils.

Along with these changes has gone the requirement that such towns as are not obliged to maintain high schools shall provide free tuition in other towns for those residents who are properly prepared.

Massachusetts is, relatively speaking, a thickly settled state, and this fact, of course, is a material factor in her educational problem. It makes possible here requirements which it is not feasible to adopt in other states where the population is less dense; but the change was not made any too early here. States are more likely to be too timid than too rash in facing the problem of establishing a reasonable standard of preparation for their teachers. When the teaching force is to be recruited, we are dependent upon volunteers, and due account must be taken of all rational means by which the ambition of would-be teachers can be aroused. The change did not command universal approval in this state when it was made, and some intelligent and well-disposed persons thought they saw in it the certain destruction of the normal schools. But experience has shown that their fears were groundless, and the normal schools have shared the general results which have followed the action of other prominent insti-

tutions of learning when corresponding steps have been taken. No college or professional school in New England has ever raised its standard of admission without finding that students were attracted, rather than repelled, by the action. For a year or two the contrary result may appear, but the loss in such cases is only temporary, and it is soon more than made good.

Finally, something should be said regarding the teachers in the rural schools. Many of these are young women without professional training —ambitious girls who have mastered the requisite subject-matter after a fashion and teach a few terms before marriage; many are young normal-school graduates; and there are others of various kinds. From their ranks comes no small number of really successful teachers, tho the usefulness of a large proportion of them might be greatly hastened and increased by even a little work in a normal school. To furnish teachers for these schools no specially organized effort is made in this state. They have to take their chances, and what with low salaries and surroundings and appliances still far from ideal, some of their lots are not happy ones. In the normal schools, as now existing, the work is done upon the hypothesis that all schools should have teachers of practically equivalent training. Large numbers of normal graduates begin their teaching in country schools; the best ones are quickly discovered and promoted to positions in village and city schools. The experience is exceedingly valuable for them, and supplements most admirably their normal-school courses.

Whether the beneficence of the state, more and more manifested with almost every year toward the smaller and poorer communities, could find a useful expression in some form of normal-school work may be an interesting question; the limits set for this paper do not encourage any attempt at a discussion of it; but, since the present aim has been to set forth truthfully the conditions that now exist here, it seems necessary to make a brief reference to this phase of the problem.

II

R. H. HALSEY, PRESIDENT OF STATE NORMAL SCHOOL, OSHKOSH, WIS.

That we may enter upon our discussion without loss of time, let us take it for granted that, however widely we may differ in theory and practice as to the function of normal schools, we recognize as their main object the training of teachers for the common schools. Let us understand, further, that this term "common schools" includes both rural and city schools. Let us leave out of consideration the training of teachers for secondary schools, tho many excellent teachers in strong high schools have doubtless gained their training in state normal schools.

It would be well if all applicants for admission to normal schools were required to furnish evidence of good moral character in something more than the perfunctory manner in which persons desiring to become naturalized furnish evidence of good moral character — by showing that they have never been convicted of an indictable offense. Positive testimony to the possession of such character, as we feel should be the foundation upon which should be reared the superstructure of professional qualifications, should be demanded not only from the teacher, but from other persons in the community having knowledge of the applicant for admission to the normal school.

Again, every person seeking to enter the teaching profession thru the gateway of the normal school should present evidence of good health. It is true that in some of our larger cities this requirement is rigidly enforced, so that many persons whose general health is such as to unfit them for the nerve-trying work of teaching are excluded from the teachers' training classes. But tho the greater number of normal schools have a nominal requirement for their entering students of a physician's certificate of good health, my observation leads me to conclude that this is a "paper" requirement only. It needs no argument to show that the normal school is established, not only to prepare those fitted by nature and education for service as teachers, but also to keep out of the profession those physically, temperamentally, or educationally lacking. The state could much better afford to pension its invalid teachers or to maintain in idleness those who desire to enter the profession, but are physically unfit for it, than to allow the children to suffer under the nervous strain that such teaching produces.

It is my belief that more candidates for admission to normal schools are deficient in a good working knowledge of the common branches than in any other one particular. This statement applies to high-school graduates as well as to those entering more elementary courses. The complaint of normal-school instructors because of the faulty preparation of their students in English is as universal as was the wail a few years ago over the Harvard examinations in English. If the normal school could but take for granted thoro preparation in arithmetic, geography, United States history, grammar, and composition, leaving the time of the class free for the consideration of the professional aspect of these branches, much time could be saved for our students. Occasionally students come to us as high-school graduates who have had no work along these lines, with the possible exception of composition, since their days in the grammar school, and it is not surprising that the entrance examination reveals no foundation for professional work in these branches. Our request of the high school should be for more emphasis to be placed upon this work with such of their students as are planning to enter the normal school. In my judgment such work in the high school would not by any means be amiss for those students who are planning to enter college, and cer-

tainly it would be beneficial for those to whom the high school is the finishing school. The community into which the normal-school graduate goes to teach may not be able to appreciate his accurate knowledge of the sciences or of a foreign language, his professional understanding of the methods of teaching reading or nature study, his familiarity with the history of education; but let him show a weakness in his grasp of the common branches, and they are quick enough to detect it and often unreasonably harsh in the judgment they pass upon him because of his weakness. It is in view of this fact that the normal schools of Wisconsin, while accepting the diploma from a four-year-course high school as a qualification for admission to the junior class of the school, nevertheless require the holder of such diploma to pass an examination in arithmetic, grammar, and geography before he may be admitted to a class studying the professional phases of those subjects.

We have heard it often repeated during the past few years that the time is near at hand when graduation from a four-year-course high school will be absolutely necessary for admission to any normal school. It seems quite evident that if we are trying to outline the qualifications for a teacher in an ideal system of schools, we shall insist that the requirement ought to include a normal-school course of at least two years subsequent to a four-years' high-school course. But we must face the conditions actually existing before we commit ourselves to the proposition that we have now reached a time when we can demand high-school graduation for all students entering the normal school.

I take Wisconsin as a typical state of the north central section, and because a long residence there has made me familiar with its public-school system. The state superintendent's report for the school year 1901–2 shows that there were 13,403 teachers employed in the public schools of the state for that year, 3,099 of whom were employed in cities having superintendents of schools. The average professional life of a city teacher with us is not more than seven years, and probably less than that length of time. That would necessitate about 450 new teachers each year, to supply the places of those dropping out of the city schools. The average professional life of the rural-school teacher is probably not more than three years. That would call for about 3,500 new teachers annually for these schools. To meet these demands for new teachers the seven normal schools of the state, enrolling 2,600 students during the school year 1901–2, graduated 395 from the advanced course and 146 from the elementary course. It will be seen that the graduates from the advanced course do not suffice to furnish the cities of the state with the number of new teachers needed, and the elementary course furnishes only about 4 per cent. of the number needed for the rural schools.

Under such circumstances it would be worse than folly for us to consider seriously at this time in the educational development of the state

the feasibility of limiting attendance upon the normal schools to those who are high-school graduates. One-half of the number of students enrolled are first- or second-year students—that is, are pursuing with their professional work studies of high-school rank. At a time when those completing the course in the normal schools especially designed for rural-school teachers are only one twenty-fifth of the number actually needed, does it seem wise to advocate the abolition of the so-called elementary course and exclude one-half of the students now in attendance upon the schools? Not to paint the picture in colors darker than is justifiable, I ought to say that the situation is somewhat relieved by the employment in the rural schools of more than fifteen hundred undergraduates of the normal schools as teachers.

The evolution that is going on in this matter of securing professionally trained teachers for the common schools is shown by the fact that the four schools situated in the southern half of the state—the older portion—have 37 per cent. of their students in the elementary course, while the three schools in the northern part—the more recently settled portion of the state—have 70 per cent. of their students in this same course. Realizing the fact that its normal schools are not satisfying the demand for teachers for rural schools, the state has provided for the establishment of a number of county training schools for teachers, to which are admitted those who have secured a common-school diploma. It is probable that many of the students who have spent their year in these county training schools will, after an interval of teaching, enroll in the normal schools and so further prepare themselves for service in the public schools of the state.

I do not believe it is the wise thing, however, for the normal schools to withdraw entirely from the field of preparing teachers for the rural schools. If for no other reason than a matter of policy, it seems to me that the normal schools must keep in close touch with the country schools, especially in these states where the majority of the population is found in those portions which God is said to have made—the country. Furthermore, I believe it is desirable for every person intending to enter upon the work of teaching in the public schools to have at least a year's experience in teaching in a rural school, so that he may gain the self-reliance that such work naturally develops. If there is any inherent virtue in the American system of town government, anything that helps to develop a democratic spirit, then it is well for our intending teachers to gain the discipline that may come from teaching in a school most closely associated with that form of government. To keep in touch with the country schools it seems to me absolutely necessary that we should continue the elementary course in our normal schools. We cannot expect that the prospect of permanent employment in such schools will prove sufficiently alluring to induce our high-school graduates to take two years in the

normal school to prepare for this work. It is a poor financial investment for them.

An examination of the catalogs of the state normal schools in the north central section of states will satisfy any one that the data given with regard to Wisconsin represent the condition of affairs in most of the normal schools of that section—that about one-half of the students enrolled are in the two-years' course of the normal school, the academic work of which would correspond more nearly to the last two years of a four-years' course in a high school. That about the same ratio exists in the New York state normal schools may be inferred from the fact that during the year 1900–1901, when there were 4,523 students in attendance upon the twelve schools, there were only 1,089 graduates—approximately one graduate to four students enrolled. During the same year there were 43,372 students enrolled in the public normal schools of the United States and 8,753 graduates—or one graduate to every five students enrolling. In so far as my knowledge goes, it is not a correct statement of facts to say that students are admitted to high schools and to state normal schools upon the same standard of scholastic attainment. Not only is a much higher standard of maturity demanded of the entering student in the normal school, but a higher standard of scholarship is also required. I am led to make this denial because of the repetition of this statement in discussions that have occurred in various departments of this Association, as reported in the published proceedings.

That what is true of the insufficiency of the normal-school product in the north central states to supply the teachers needed for the schools in that section is true in other parts of the United States may be seen from the following statistics, taken from the report of the state superintendent of public instruction of New York for 1902: The total number of graduates from the normal schools for the year 1901 was 1,089. The total number of licensed teachers employed in the state for the same year was 32,453. If we allow six years as the length of the professional service of the average teacher, there would be needed 5,400 new teachers each year. It will be seen that the normal-school output would supply just about one-fifth of that number. Commissioner Harris says in his article on "Elementary Education" in the volume *Education in the United States:* "It may be assumed, therefore, that less than one-eighth of the supply of new teachers comes from the training schools especially designed to educate teachers." President Schurman's statement is that only 15 per cent. of the teachers in the United States have passed thru normal schools.

In view of these facts, should we be taking a step forward or backward if we were to reduce the number of students attending normal schools by admitting none but high-school graduates? It would seem as if this were a new application of the old homeopathic principle of high

potencies—the higher the potency of your drug, the more efficacious its remedial agency.

The consideration that enters more largely into this matter than any other one is probably the compensation that awaits the intending teacher. When one learns that the average salary paid to teachers in the cities of the United States is $687, he will at once admit the reasonableness of demanding high-school graduation as a condition for admission to the normal school in the preparation of teachers of this class. And yet this question cannot be settled purely by a determination of average salary. We have here an illustation of the old Hindoo proverb that "the ox was drowned in the stream whose average depth was only sufficient to cover the hoof." While we might be entirely willing to recommend even college graduation as a prerequisite for professional training for teachers in the cities of New York state, whose average salary is $928, yet we should be inclined to think that, considered as a matter of financial investment, the expense of a high-school course, supplemented by two years in a normal school, would not be warranted by the average annual salary of teachers in the cities of West Virginia, $413. When we take into account the salaries paid to country-school teachers, we shall see how hopeless is the case of those demanding high-school graduation plus normal-school training as a qualification for all teachers. The average monthly salary for women teachers outside of cities in Wisconsin for the school year 1901–2 was $33.19. We cannot expect that young women will enter upon a prolonged course of training in high school and normal school with no prospect of greater financial return than this. Are we not beginning at the wrong end of this problem? Should we not rather set ourselves to the task of securing a respectable compensation for teachers of rural schools, being assured that the demands for higher qualifications will always be a little in advance of the increase in salary; I do not wish to be understood as pleading for the continuance of a low standard of entrance to normal schools. I believe that these schools should always keep in advance of popular demand for progress in educational matters; but they must not be so far in advance as to get out of sight of the taxpayer. They must remember the responsibility that rests upon them to educate the public as they advance. No advanced position can be maintained unless they hasten to bring the people to this position, so that educational orthodoxy shall always be crowding upon the heels of radicalism. I have no doubt that there will be a continued gradual progress in the standard of admission to normal schools, so that states that now admit upon the presentation of a third-grade teacher's certificate, or its equivalent, shall soon require the candidate to present the second-grade certificate; those requiring the second-grade certificate will demand a first-grade certificate; those demanding the first-grade certificate will ask that the intending student will present a certificate of the

completion of a three-year course in a high school, or its equivalent. Eventually, as salaries slowly advance in response to this gradually increasing demand for professionally trained teachers, with no corresponding increase in the supply of such teachers, we shall reach a position where we may ask that the teacher shall have had her normal-school training subsequent to a high-school course; and this, I hope, even for the teacher of the rural school. I am glad that Massachusetts has already reached that advanced position, and I shall be more than pleased when Wisconsin shall have gained the same point of progress. But I hope that we may never be compelled to purchase that advancement at the cost of a separation in normal schools of those who are preparing for teaching in rural districts, on the one hand, and those who will render service as teachers in city schools, on the other. Each class needs the influence of the other.

DISCUSSION

E. L. HENDRICKS, superintendent of schools, Delphi, Ind.— In a consideration of the standard of admission to normal schools, I believe that some things may be insisted upon with uniformity.

Good health and a sound body should certainly be required of all who would be teachers. The dyspeptic and the deformed should not stand before the young.

Common-sense and native ability should be prime requisites to admission. No amount of professional training can take their place. The teacher must be able to see the general fitness of things.

If moral character-building is the highest aim in education, high types of manhood and womanhood should be expected of those who engage in the finest of the fine arts.

These characteristics are fundamental and should be demanded everywhere. They may not always be discernible when the student seeks admission; but, if found wanting, the would-be teacher should be advised to withdraw from a prospect of so grave responsibility.

Scholastic requirements for admission may not be insisted upon with the same degree of uniformity. The conditions of admission to any school should be determined, in large measure, by the needs of the educational field which supports the school. With state normal schools this field is the state. We may regret the provincialism, but it remains the duty of the school to supply the needs of the state. As long as there is a difference in the educational needs of our states, the scholastic requirements for admission to our normal schools cannot be uniform.

We rejoice with Massachusetts, who has led the way before, that she can require graduates of first-class high schools. Indiana would do as well, or better, but at present it would be impossible to maintain so high a standard. During the school year just closed only 15 per cent. of Indiana's teachers were normal-school graduates; only 8 per cent. were graduates of state normal schools. At our last meeting of city superintendents repeated calls were made for trained teachers and there was no answer. Nor is this dearth of trained teachers peculiar to Indiana—which, by the way, is not as old as some Massachusetts teachers now living. The Report of the Committee on Normal Schools informs us that 75 per cent. of teachers in this country are without any special training for their work. We must not increase this percentage of untrained teachers for the sake of a higher standard of scholarship.

City superintendents know the value of trained teachers, and we want more of them. For this reason no phase of educational work is more favored than the training school. But we know, too, that few high-school graduates, with additional training, are content to teach in the elementary schools. They secure positions in high schools, thus making our normal schools a place of training for one class of teachers alone; or, in the present prosperous commercial condition of the country, they enter the more lucrative business world. From 25 to 30 per cent. of our teachers drop out annually. Larger inducements must be offered the high-school graduate before he can afford a normal-school training in order that he may teach in the elementary school.

I believe that the standard of scholarship for admission to normal schools should vary with the character of work to be done. We are perhaps agreed that teachers in secondary schools should be college or university graduates with normal-school training. We hope more of them will take the professional work. It would not injure some college professors to take a course in the training school. We are perhaps agreed, also, that teachers in elementary schools should be high-school graduates with normal-school training. I believe the student body of the normal school of the future will be made up largely of these classes of students. And it is well to keep such qualifications for admission in mind. They serve well as an ideal toward which we may work. But it will be some time before such standards can be maintained thruout the states. We now have many teachers of mature years and successful experience, but without academic scholarship. We must keep them. Our normal schools must, for the present, continue to train those who have finished the elementary-school course and satisfied the state in regard to scholarship.

I believe the business of the normal school is to meet a condition as well as to exploit a theory. The standard of admission should be high, but never beyond the common needs of the great mass of the people.

PRESIDENT ALBERT SALISBURY, State Normal School, Whitewater, Wis.—I wish to lay a little more emphasis on two points that have been raised:

First, with regard to the physical requirements for admission to normal schools. At present they are only nominal; they ought to be made more real and stringent. Consumptives, dyspeptics, and the deformed are being trained at state expense to enter the severe labor of the schoolroom. Those who are physically unfit for any other calling think that they may legitimately turn to teaching; and our sympathies prevent us from excluding them. It is the children of the land who are entitled to our sympathies and our protection. But we shall never accomplish our duty in this matter without official medical inspection. The family physician will certify to anything that is asked of him by his patrons. Many students who enter the normal schools plead physical inability to take the gymnastic exercises of the school, and bring a physician's certificate of disability. Why should such defectives be helped by the state to inflict themselves upon the school children of the state thru neglect of proper tests for securing what we all assume to be just and needful?

My other point concerns the scholastic requirements. All seem to be practically agreed that we should work toward the standard of high-school graduation as a condition for admission to normal-school courses. But this ought not to be asked on the old grounds, viz., that we may thus be left free to give a "purely professional" course of two years in the normal school. I trust the day may never come when we shall do that, or when we shall exclude the common branches from the normal school. A higher standard for admission should be sought in order that we may have more time to devote to the common branches from the pedagogical point of view, the consideration of the mental processes which they severally involve, and their relations to life. And we should not be unduly alarmed about any waste of time thru overlapping of courses. The only sure way of learning things is by "overlapping," by frequent return to the same ideas or facts in relations that are practical and vital.

THE ACADEMIC SIDE OF NORMAL SCHOOL WORK

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In one form or another normal schools are from time to time admonished that their business is to teach teachers how to teach and not how to acquire knowledge. No one understands this to mean, of course, that general scholarship should not be a factor in the equipment of teachers. What *is* implied is that the necessary foundations of scholarship should be laid before entrance to the normal school. The fact that normal schools themselves undertake to lay such foundations is, according to common tradition, only a confession of the existence of a necessary evil, which is to be eliminated whenever and wherever circumstances may permit. Two considerations seem to lie at the root of this attitude. In the first place, it is assumed that academic work in normal schools must, sooner or later, resolve itself into mere duplication of work offered in other institutions. It is then to be regarded as unnecessary. In the second place, it is urged that a general education forms no proper part of the program of a professional school. It has been excluded from schools of law and medicine. By the same token it ought to be excluded from normal schools.

The possibility of duplicating instruction may be readily granted. It is, however, a possibility not peculiar to normal schools. There is a duplication of grade work in the high school, of high-school work in the college, and of high-school and college work in the graduate departments of the university. The evil, if such it be, is seen most clearly in the case of normal schools, not because it is there exhibited in the highest degree, but because normal schools, owing to the circumstances of their evolution, have developed the greatest amount of sensitiveness to it. Observant taxpayers and other critics of educational waste, who would bar from normal schools instruction available in other institutions, have seized upon a principle of wider application than seems to be generally recognized. Whether the normal school, in view of possible duplication, is justified in maintaining, as a part of its curriculum, courses along conventional academic lines is a question that cannot be examined fairly in isolation. There are other pertinent queries. Is the high school justified in teaching arithmetic and grammar? Is the college justified in offering French and German to beginners? Is the university justified in maintaining elementary courses in history? Is the law school justified in presenting constitutional law? Is the medical school justified in supporting a chair of anatomy? The student of history not infrequently goes to the university to sit at the feet of a great man who has written a small book for high-school use, only to find the great man slavishly following the very manual which the student conned in the high school. But such a possibility

seems neither to call for apology on the part of the university for duplicating instruction, nor to suggest the desirability of dropping "History 1449" from the list of graduate courses. One need not seek far for similar illustrations from schools of law and medicine. In such instances the accepted principle seems to be that an educational institution may offer the work adapted to its special needs and ends without much dread of previously established boundaries. Cases of palpable overlapping are freely disposed of, not by running new lines, but simply by "allowing credit." So far as mere duplication of instruction is concerned, normal schools may, then, assume responsibility for general scholarship without apology to other educational institutions. May they assume such responsibility without apology to their own "professional" character?

Among the Delphic utterances of modern pedagogy there is, perhaps, none more familiar than that which informs us of the existence of the child in the presence of subject-matter, with a teacher between them to attend to the ceremony of introduction. In recognition of the special problems created by this situation, normal schools are established and maintained. The function to be performed is vaguely described as "professional." Its main concern is to define the aims of education and to arouse conciousness of the processes by which those aims may be realized. Such a function must obviously take account both of the child and of the subject-matter of instruction. But, in their anxiety to be clearly differentiated from institutions for general culture, normal schools have usually felt the necessity of acknowledging, in theory, a self-denying ordinance with reference to the subject-matter. The "strictly professional," as ordinarily conceived, is held to exclude the "purely academic" and to furnish the sole excuse for being which it is legitimate for normal schools to offer. It is common, in this connection, to cite the case of schools of law and medicine. The comparison is often quite misleading. In the latter, provision is made for a knowledge of the actual subject-matter of law and medicine to be used in winning and saving, or in losing, cases. The corresponding subject-matter for the teacher lies within the field of general education. The branches actually to be taught constitute for him what law and medicine constitute for the lawyer and physician. Those branches in the normal school for which the label "strictly professional" is claimed correspond, not to the complete curricula of schools of law and medicine, but rather to certain minor courses and parts of courses that treat of the principles and methods of court procedure and of medical practice. The analogy of schools of law and medicine, if it proves anything for the normal school, proves more than is usually intended.

It is professional to know the child. It is also professional to know the subject-matter of instruction. Both are involved in the solution of educational problems. For the normal school to surrender the academic part of its domain is to invite at least a loss of balance. There is a zeal

inspired by pedagogy which regards the subject-matter of instruction as something to be determined wholly by principles derived from sources outside of the subject-matter itself.

> "It was two by the village clock,
> When he came to the bridge in Concord town."

"This," says pedagogy to the child, "is history." "But," protests some big, dull book, "he was stopped on the road by British soldiers and ——." "Objection overruled," retorts pedagogy; "the educational value of the story does not depend upon its literal accuracy." Last February, it may be remembered, the course of study in history for the grades was under discussion at Cincinnati. After one of the meetings it was mildly suggested to a well-known normal-school man that certain material which he had been exploiting did not seem to fit any known historian's conception of history. The suggestion did not disturb him. With a gesture of contempt he declared his complete indifference to historians. What he proposed was good for the child, and that was sufficient for his purpose. And yet he insisted upon calling the material "history."

Such a point of view is not difficult to understand. In adapting history to the schoolroom — and here apology may as well be offered once for all for drawing illustrations almost exclusively from one's own line of work — there are obviously three factors to be considered: the aim of the study, the historic sense of the pupil, and the nature of history. Professional interest usually begins with a definition of aims. It has much to say of entertainment, inspiration, ethical ideals, patriotism. The next step is to test the historic sense of the pupil. That seems to lead with great regularity into a realm peopled by creatures that breathe most freely and act most consistently in an atmosphere of legend and romance. The aim of the study being thus determined by professional considerations, and the nature of the materials being determined by the child, there remains small need of special inquiry into the nature of history. When, later, the subject is investigated, professional zeal habitually looks for light on the nature of history to philosophers, poets, critics, and schoolmasters, many of whom have never really studied the subject.

This is a method of procedure applied by pedagogy in various fields. Professional interest naturally finds the child of greater importance than the integrity of any particular subject in the curriculum. It naturally looks to the child as the center and inspiration of school effort. When, therefore, a subject begins to "decline to live peaceably" with predetermined pedagogical theories, those charged with the administration of the theories are likely to exercise a large liberty in transforming the subject. Numerous acts are thus inspired which, from the point of view of the subject, can be characterized only as a species of pedagogical vandalism. The extent to which such acts are supposed to command respect and

sympathy in normal schools may help, not only to explain, but to justify, the suspicion with which the world of scholarship regards the normal school. The latter cannot divide responsibility in the manner so often proposed and still hope to retain toward the academic a scholar's attitude. Strictly professional studies may, it is true, be pursued in an academic spirit, and thus be made to yield the fruits of scholarship. The history of education, for example, may be so presented as to illustrate the general principles of historical method. It is not likely to be so presented. But even if it should be, that would not be sufficient for the present contention. The flavor of scholarship must extend to the general branches — arithmetic, geography, and the rest; and it must be strong enough to be detected by scholars. That this is a condition yet to be realized is quite evident. Take a single illustration. We normal-school men and women are frequently approached by publishers of gilded historical rubbish with requests for testimonials, the result of which is that we find ourselves quoted with bankers, clergymen, members of Congress, and other equally discriminating *ex officio* historical critics, for the benefit of a public that may be conservatively described as indulgent. But how many of us were invited to contribute to Larned's *Literature of American History?*

The normal school cannot, of course, undertake the task of training historical scholars in the technical sense. There can be no difference of opinion on this point. What may reasonably be expected on the academic side is a training that shall prepare normal-school graduates to use with intelligence the works of historical scholars, or, to speak more generally, of historians. What does this involve?

Here is a man, let us say, who has given the best years of his life to the collection of materials for a *History of the City Coopville.* He has accumulated a large stock of oral traditions by talking with hundreds of persons now living. He has delved in letters, diaries, and official papers. He has examined the records of the various social, industrial, and religious organizations. He has read the files of all the newspapers. He has plowed his way thru the proceedings of the city council. In a thousand ways he has come into touch with the past life of the city. He organizes his material, constructs his narrative, gives to the world his learning in four forbidding quartos, and goes to his reward poorer in pocket and not much richer in fame. By and by some hack writer in search of a theme stumbles upon the quartos, and in a few months the newspapers are organizing clubs to sell a remarkable *History of Coopville* in two volumes, prepared by the greatest scholar of his time, a master of English, a philosopher, and an artist. Publishers, newspapers, agents, writer, reap their golden harvest, but not from the multitude. The work is still too bulky, the price is too high. So in due time another hand takes the two volumes and compiles from them an easy, gossipy little book of perhaps two hundred pages, and at last we have a *History of*

Coopville suitable for the general public and for schools. Substitute for Coopville the United States, increase the number of years of preparation and the number of quartos, multiply the compilations and extend them to the *n*th degree, and we have an actual condition without the offense of calling names.

Now, what is the demand of scholarship? At the very least that the student shall be able to recognize the difference between the work of the man who writes the quartos and the work of the man who merely compiles from the quartos, or the work of the man who merely compiles from a compilation of the quartos. A student who for the first time firmly grasps this one distinction may find all of his thinking about history revolutionized. Certainly he cannot hope without it to use intelligently the works of historical scholars.

Again, the student should be trained in the use of indexes, tables of contents, card catalogs, bibliographical aids. This is the mechanical side of historical research. It is drudgery, but drudgery that illuminates. More general familiarity with its details would often render erudition less imposing and, perhaps for that very reason, more convincing. For erudition, to the uninitiated, at times becomes so wonderful that it assumes an air of unreality. Somebody once asked Freeman if any of the books which he had used in writing *The Norman Conquest* were printed. It is scarcely conceivable that such a person should read with intelligence *The Norman Conquest.*

Yet again, the student should be trained to solve representative types of historical problems. Historical compilations in general, including the ordinary text-books, do not present the subject-matter of history in the light of its problems. They are made up, as a rule, almost wholly of mere answers to problems. When the student has learned these answers and has acquired some skill in "organizing" them, he is often credited in the circles of the unthinking with the possession of historical scholarship. In reality nine-tenths of his answers may be wrong and he powerless to discover how or why, as if he had mastered arithmetic by learning the contents of a book of answers to arithmetical problems. The student should work out for himself some simple problem involving the interpretation of a document, say the boundaries of Pennsylvania according to the charter of 1681. He should examine the credibility of some source, say the famous Pocahontas story as told in the *General History of Virginia*, edition of 1624. He should touch some issue complicated by long association with political or religious controversies not yet laid to rest, say the reasons for the banishment of Roger Williams from Massachusetts. After such a canvass of original materials as shall justify conclusions of his own, he should read, say, Hinsdale's account of the boundary disputes that grew out of the Pennsylvania charter, Fiske's vigorous defense of John Smith, Eggleston's championship of the "Prophet of Religious Freedom." The

significance of historical authority now becomes apparent. The inadequacy of a single author's treatment of historical questions is illustrated. The need of discrimination in the selection of books is emphasized. If the doctrine of the infallibility of text-books shall in consequence pass away, its place will be taken by an intelligent appreciation of some of the things that history is, and of some of the things that history is not.

Finally, the student should be trained to habits of accuracy in dealing with historical facts. Such habits imply something more than acts of memory. They imply discrimination in the use of data. Scholarship cannot proceed from the premise that one thing in history is just as true as another. Neither can it accept as a sufficient justification for historical inaccuracy the plea, so often made, that, if a thing is not so, it might have been so. It must regard history strictly as a record of what was, and not of what might have been. Even historians must use sparingly the argument from the "spirit of the times." Others are likely to make it ridiculous. One mission of history in school is to bring facts into better repute. This mission is to be accomplished by establishing more definite relations between history in school and history in histories. Such a view of the subject must still take account of educational values. It must still adapt materials to the historic sense of the pupil. But its point of departure is sought in the nature and aims of history itself as revealed in historical literature. Its foundation is laid in and for an intelligent use of histories.

Such academic requirements as have been indicated are to be urged mainly for the sake of the professional spirit itself. They are not in conflict with it. They are simply a basis for professional work. They develop an abiding interest in the subject itself, and thus relieve pedagogical anxiety of a large part of its burden. They adapt themselves to the noblest professional purposes. But, all other considerations being waived, the strictly professional still needs the salt of academic savor to preserve it from its own vagaries and needs it in the normal-school curriculum itself.

TO WHAT EXTENT AND IN WHAT MANNER CAN THE NORMAL SCHOOL INCREASE ITS SCHOLARSHIP: (A) WITHOUT DIMINISHING ITS OUTPUT; (B) WITHOUT INCREASING ITS COST TOO GREATLY; (C) WITHOUT INFRINGING UPON THE LEGITIMATE LIBERAL ARTS COURSE OF THE COLLEGE?

JAMES M. GREEN, PRINCIPAL, STATE NORMAL SCHOOL, TRENTON, N. J.

The state is raising and applying annually large sums of money for the instruction of its children in what are termed the common branches of learning. The extent of the common-school curriculum is variable,

depending upon times and conditions, but the branches included in what are usually termed the elementary and secondary courses are so generally accepted that they may be regarded as standard. If the state assumes to appropriate large sums of money for public instruction, it follows as a natural consequent that this expenditure, for purposes of economy as well as for an intelligent interpretation of the state's standard, must be in the hands of those who are skilled; that is, must be in the hands of trained teachers. Unless there are available institutions for training these teachers by private enterprise, it becomes necessary that the state establish such institutions. This has been done in many instances, and these institutions are known as state normal schools.

This account of the origin and purpose of these schools will serve to indicate somewhat the scope of their work. They are to prepare teachers for the primary, grammar, and, to some extent, for the high-school grades. The great mass of children are in the elementary grades, and for these grades few private institutions definitely prepare teachers; hence the duty of the state within this range of work is clear. There are many institutions of learning, such as colleges, technical schools, etc., that claim to prepare teachers for the secondary schools. To what extent this claim is justified is not fully determined, but certain it is that the state is very much relieved from pressure at this point. It cannot, however, fail to give in its normal schools a sufficient training in the high-school branches to enable the graduates to teach these branches, at least in the smaller high schools, and clearly to understand their educational values.

What constitutes preparation to teach in certain branches is a question pertinent to the inquiries in our topic. There are those who seem to confuse the desirable personal culture of the teacher with the knowledge that is essential to teaching certain branches or parts of branches to pupils. These persons would have all teachers from the kindergarten up be graduates of colleges and possessed of accuracy as well as refinement in all their learning. These same persons make such statements as: "The kindergarten teacher should be the best-informed teacher on the corps;" "No one other than college graduates should teach the secondary branches;" "The most important part of education is the beginning. If the foundation is not correctly laid, the superstructure will be defective;" etc. They fail to distinguish between inanimate brick and mortar, and the crude or refined states of vital energy. Whatever may be the value of such opinions as ideals, certain it is they are not practical. The number of teachers desired and the salaries paid them, in comparison with the number of highly educated people and the income they can command, will, for many years, banish the vision of only highly educated people engaged as teachers.

One who is to teach must know thoroly the subject-matter he is to

teach. He must also know the relations of this subject-matter to that which immediately precedes it and that which immediately follows it. For instance, the teacher of solid geometry should understand trigonometry and plane geometry. To state this same point in another way: the teacher should understand that which leads up to his subject, as well as that which immediately follows it, and for which it is a definite preparation.

If we will contrast this kind of a preparation in a subject on the part of the teacher with a preparation that a few years ago was quite familiar to most of us, and is yet too common — viz., a preparation so meager that the teacher was not independent of the text-book — we shall realize that our proposed requirement is not so simple as it might at first thought seem. Apply this gauge to all the subjects falling within the school curriculum, and we have what may be termed a minimum standard of preparation to teach in academic matter. The features of pedagogical training — viz., the selection of the most appropriate matter to teach a given class, the best adaptation of that matter to the conditions of the class, the observation of child growth and development, the resultants of certain systems, practices, etc., forming the natural field of normal-school work — depend upon the thoroness in the academic knowledge to such an extent that, if it is not possessed by the students entering the normal school, it must be secured within such school.

Before following the above statements with an application to our subject, I wish to say that I am not among those who are willing to risk general and indiscriminate criticisms concerning normal schools. This office should be left to certain of our magazine writers, college presidents, and professors, who do it so well. I fully realize that a personal knowledge of the conditions in a particular school is necessary to reliable criticism on that school, and that this personal knowledge can be secured only thru visitation and study, rather than thru printed matter; hence, in the very nature of things, the field of observation of any one critic is limited. I am of the opinion, however, from the observation I have had, that certain criticisms will apply to a great deal of the normal-school work.

To come directly to the answer of the questions of our subject: I think we may improve the work in our normal schools:

First, by greater care and definiteness in the selection of the subject-matter upon which we work. To illustrate: Assuming the student comes to the normal school well equipped in the common-school curriculum, it remains for him to take each branch of this curriculum and examine it carefully as to its psychological and logical development, and its applications to the problems of life. It is in these latter particulars that I am inclined to think the normal schools may most improve their scholarship. Recently a number of questions, such as: "Of what use to the mechanic

is drawing, and what drawing is of use to the mechanic?" "Of what use to the real-estate agent is manual training, and what phases of manual training are of most use to him?" "Of what use to the mining engineer are geometry and physics, and what of these subjects is of most use to him?" brought answers that seemed to indicate that these subjects had been regarded from a mere academic point of view, rather than from the point of view of their part in the real and definite conditions of life. Even in literature and history it would seem that more regard had been given to a knowledge of authors and periods, dates and events, than to the power of correct and thoughtful expression, and a conception of the institutional forces that are shaping the conditions under which we live.

If questions such as the above are well answered, they will furnish, together with the correlative pedagogical questions of school organization, sufficient occupation for the two-year normal-school course for graduates of high schools; and if they are well answered in each subject, the scholarship of the average normal school will be greatly improved, not so much by the extent of work as by the manner and kind of work.

Secondly, there are many students in our normal schools who cannot take a long course after leaving the normal school—such a course as the colleges require—and who yet wish a more extended equipment in certain branches than that of the regular course—such an equipment as will enable them to teach those branches even in the high schools of the stronger class. Provision may be made for such students by establishing an additional or postgraduate year, in which a large number of electives is offered, the student being permitted to take a sufficiently small number of these electives to enable him within a year to do in them a large amount of work and to relate this work to the preceding part of his course. For instance, a person who has had one year in physics and has been able in that subject to take certain of the most common and simple problems or topics and apply them to the common-school curriculum may in this additional year be able to take enough more topics, with their applications, to put him sufficiently in advance of the ordinary high-school class in that subject, both in knowledge of work and in maturity, to teach such a class in an acceptable manner in that subject. A person who has had the forms of literature—the epic, the drama, the lyric, the novel—may add the study of a single period in the history of English literature—for example, the period of the French Revolution—and may examine the lives and works of the leading writers of the time in the light of historical conditions; or, he may make an intensive study of a single literary form. Such additional study in this subject would enable him to teach acceptably in many high-school classes, and would compare favorably with the requirements in this subject in most of the regular college courses. The offering of these elective units in addition to the regular two-year course would not be attended with very greatly increased expense either to the

school or to the pupil, and would be of great service to the class of pupils referred to and to the state as well.

The last inquiry of our subject is practically answered in the boundaries set for the normal-school course. Those who would command our respect in school organization must give to each particular class of institutions its legitimate work. There has been a marked tendency to extend the course of study in the normal schools so that the time consumed was equal to that required for the B.A. degree in the college. It seems to me that such an extension of the course is unwarrantable for several reasons: If so much time is taken, the pedagogical part of the work is apt to be spread out too thin, and the academic work is not sufficient to meet successfully the demand of the stronger high-school positions, principalships, and superintendencies. If four years are to be spent, it would seem better that two of them be taken for the usual normal-school course and two for purely advanced academic work in some good college or university, preferably one that would recognize what had been done in the normal school; or else that the person should go thru a college having a pedagogical department rather than attend a normal school at all.

The normal schools have done a magnificent work in improving elementary, and at least the lower forms of secondary, instruction; and if they continue to apply themselves to this field of education, they will yet do a more magnificent work than they have done in the past; but if they seek to become degree-granting institutions, and to rival in time and expense the colleges and universities, they will impair their strength in a field they might cover most efficiently, and become weak substitutes for other institutions that are much better equipped than they to cover the scope of the B.A. course.

DISCUSSION

HENRY G. WILLIAMS, dean of State Normal College, Ohio University, Athens, O.—The specific function of the normal school is to provide such instruction and training as will best qualify teachers for their duties. If we can determine these duties, the qualifications necessary in the teacher are plainly outlined. Having determined what the teacher should know and do and be, we must next determine the means and methods necessary in giving the prospective teacher instruction and training in each process in teaching, in management, and in administration.

The normal school is to provide this instruction and training, or at least such portions of these as are specifically and directly related to the work of the teacher. If teaching is ever to become a profession in the true sense, none must be admitted to its ranks except those who have attained special scholastic fitness, both professional and cultural; but we are still a long way from this standard. The graduate of the elementary school is certainly not a lawyer, nor a physician, nor a dentist, nor a pharmacist, nor a veterinary surgeon; yet the laws of many of our states may recognize him as a teacher, for, without any more fitness than graduation from the elementary school, or the completion of a curriculum no higher, the boy or girl of seventeen may be recognized by law as one who is competent to train children in the arts and sciences of citizenship and correct living. We

are hardly so unreasonable when we seek a man to prescribe medicine for the sick, or to prosecute a trifling litigation, or to extract a tooth, or to cure a horse of the spavin — no, all these must know more than the three R's and the rudiments of an elementary education. Not even a high-school graduate should be any nearer the threshold of teaching than the profession of law or medicine. What makes a high-school graduate a lawyer instead of a teacher? Evidently it is not his high-school training, for both were taught the same subjects in the same classes. It is the special collegiate and professional training beyond the high-school curriculum that makes him a lawyer.

The form in which our topic is put is virtually an acknowledgment of the need of a better scholarship standard for our normal schools. We are all familiar with the many criticisms so frequently offered touching the standard of scholarship of the normal school. These criticisms attempt to show that the scholarship represented by the courses of study in the many normal schools is not sufficient to fortify the teacher and entitle teaching to professional recognition. When a normal-school graduate is asked to name the institution from which he graduated, he is often noticed to apologize for his statement — many times, however, not because he feels that he is inferior to his questioner, but because of a prejudice that has seized the public mind. How shall we remove this prejudice and allay this fear? In the first place, it does not follow that the normal-school graduate should be a college graduate. No one can doubt the cultural value of an A.B. course, but elementary teachers can hardly be expected to spend the time and means necessary in working out a four-year college course only to compete with those who have had, it may be, eight years less of training. Then, the average compensation of the elementary teacher is less than the average wage paid unskilled laborers. In my own state (Ohio) the average paid elementary teachers is $34 a month for thirty-one weeks, or $263.50 a year. Counting living expenses at $4 a week, we find that the teacher would have about $55 left each year with which to clothe herself and indulge in other extravagances.

Laying aside the elements of time and expense in securing a college education, let us ask ourselves if such a course best prepares the elementary teacher for her work. Does she not need other knowledge and training not included in such a course? Are there not other subjects than those found in our average college course whose *disciplinary* value is equal to that of the dead languages and mathematics? Besides, may not a true *cultural* value be found in many subjects not included in the college course? Our question naturally resolves itself into a discussion of the courses of study for normal schools.

The normal schools find their greatest responsibility in the training of teachers for the elementary schools. Statistics show that fifteen out of every sixteen of the teachers required for the public schools of this country are elementary teachers. In Ohio the ratio is thirteen to one. Nearly one-half of the elementary teachers are in the multi-graded or country schools where the tenure of service is least secure. It is safe to say that the state needs twenty times as many elementary teachers each year as high-school teachers. Shall the normal-school courses be shaped to meet the needs of the twenty elementary teachers or the one high-school teacher? The proposition needs no argument. Both classes need special training, but the teacher who is only college-trained will be more likely to succeed as a secondary teacher than as an elementary teacher. In a total enrollment of nearly five hundred students during the first year of the State Normal College of Ohio University, at Athens, we find that about thirty are doing work designed for secondary teachers, or one in seventeen. It would seem that we are in no danger of unduly emphasizing training for the elementary schools.

All these things must be borne in mind when we attempt to analyze the courses of study for the normal school. Let us not lose sight of its function. I believe that one of the greatest needs in American schools today is the well-trained elementary teacher — educated and trained especially in those subjects she is called upon to teach. A teacher may be an excellent Latin scholar, and fail in teaching the simplest lesson in elementary English. She may be well grounded in higher mathematics, and not know the first prin-

ciples involved in teaching a lesson in numbers. It is one thing to know calculus and another thing to know how the *child thinks number relations* and how to present these to his mind. We must give our teachers a broad, thoro, and scientific training in the subjects they are required to teach, and then we must clarify, simplify, and unify that knowledge by reinforcing it with instruction and training in the purely pedagogical phases of the subjects taught and the underlying principles governing the teaching process.

One of the greatest weaknesses of elementary-school training is the superficial knowledge of the teacher touching the subjects taught. To teach geography well, the teacher needs to have a wide range of knowledge of geographical subjects. She must study geography scientifically, not superficially. She must familiarize herself with all the social, economic, industrial, and commercial phases of geographic knowledge. She must know how to select and adapt, never losing sight of the ultimate end of the instruction. It is the function of the normal school to give her this knowledge and provide adequate training in the method of presenting the subject to the child's mind. A knowledge of subject-matter alone will not insure success in the teacher. She must know the child and the relation she bears to the child, and that of the child to the state. To teach a child as it ought to be taught requires more skill than to wield the painter's brush or the surgeon's scalpel. The latter deal with material things controlled by fixed, unchanging laws, but the teacher deals with the growing mind, whose very growth and individuality render a chart of the teaching process an impossibility.

The normal-school course must recognize the importance of the aim of education. The scientific knowledge of subject-matter finds its intelligent interpretation in a knowledge of the thing the school must attempt to do. This demand upon the teacher makes it necessary for the normal school to provide adequate instruction and practice in method. Closely related to the course in methods comes the history of education, in which the student is taught to profit by the experiences of the past. From these three fundamental needs of the trained teacher grow the several courses in professional subjects which the normal school must provide, such as courses in methods, child study, psychology, principle of education, history of education, school administration, and others. If these subjects are so essential, why should they not be placed upon an equal footing with Latin, Greek, higher mathematics, etc., in measuring scholarship? Why has Greek any more value than psychology in measuring a teacher's scholarship? Which will serve her supreme purpose best? Are we not requiring a high standard of scholarship in the normal-school course when we insist that every subject in the normal-school course be taught thoroly and scientifically? Is not a truly scientific study of geography as much a unit in scholarship as the study of geology or biology?

It seems to me that one of the best solutions of the normal-school problem is to combine the purely professional training of the normal school with the regular academic work of the college or university. This is the plan adopted by the two state normal schools of Ohio opened in September, 1902. For graduates of first-grade high schools we have a two-year course of collegiate grade for elementary teachers, and a four-year course in secondary education. In the two-year course the purely pedagogical subjects constitute two-fifths of the course, and in the four-year course one-fourth of the work is professional. The standard of scholarship is kept up to college grade at every point, as the normal student is ranked and taught in classes with students pursuing other regular college courses. There can be no lowering of the standards. The two-year course, wholly of college grade, while not identical with the first two years of the four-year course, comprises one-half of the four-year course and is designed to meet the needs of those preparing to teach in elementary schools; and the four-year course prepares the student for teaching in secondary schools. The first course leads to a normal-school diploma, and the second leads to a college diploma and the bachelor's degree. For those who have not enjoyed the advantages of a high-school course a five-year course in elementary education is provided, the first three years being of secondary grade, including

one-sixth of pedagogical subjects, and the last two years of collegiate grade, including one fourth of pedagogical subjects. This five-year course also leads to the normal-school diploma.

CHARLES DEGARMO, professor of the science and art of education, Cornell University. — In the discussion of this question I intend to revert briefly to the current ideals of scholarship in the normal school, and then to state what I conceive to be the real problem.

The subject of scholarship in the normal school has not yet been subjected to the patient analysis that has been given to some of its other problems. We have simply assumed that scholarship is scholarship, and that the traditional ideals of the college are the only ones to be considered. With most people who talk on this topic, scholarship means proficiency in languages and advanced mathematics. These and similar branches of knowledge are grouped together under the head of "academic work." Normal schools seem to divide into two groups on this question. Some say: "We will do no academic work at all; we will confine ourselves solely to professional work." Others say: "Finding the scholarship of our students inadequate, we must perforce devote not a little time to it. This we regret, but the fault is not ours, it lies at the door of the secondary schools." According to my analysis of the situation, both these attitudes, tho defensible in the past, are now wrong.

Another doctrine deeply ingrained in the normal-school procedure is the theory that the chief work of these schools should consist in the re-examination of the common branches in the light of the higher. This doctrine, tho excellent when held within proper bounds, is probably responsible for most of the defects for which the normal school is being chided. It has, as President Butler says, made the vestibule larger than the house, for it has focused the attention of professors, training teachers, and students alike upon the letter that kills. One must magnify one's office, and if one is confined to the most elementary aspects of a subject, either as a body of knowledge to be imparted to students, or as a study whose methodology is to be minutely examined, it is inevitable that over-refinement of exposition and undue emphasis upon things elementary but not fundamental will ensue. The force exerted is too large for the result effected. The midget is crushed with a sledge. The mole hill becomes the mountain, and the art of teaching, which like all arts is best when most individual and plastic, has its spontaneity seriously impaired. Too close an adherence to this doctrine that the normal school should confine its attention to a review of the common branches compels it to do much of its large business with small change.

If, then, the traditional college ideals of scholarship, and the equally traditional ideal of the proper academic work of the normal school as confined to the common branches, are to be rejected, the one as erroneous and the other as inadequate, what is the true scope of scholarship for these institutions? The answer to this question is to be found in the conception of the normal school as a place for the professional training of teachers. The term "professional training" is, indeed, to be heard on every tongue, but the thing itself exists only in part, for genuine scholarship of the right sort has not yet been wholly provided for in the normal-school curriculum.

We shall, I think, most easily picture to ourselves the scholarship naturally belonging to the well-prepared elementary teacher by calling up the analogy of other professional schools. Each of them selects such bodies of knowledge as pertain to its purposes, and organizes this knowledge in such ways as to make it most useful in effecting the end in view. Medicine, for example, has extended courses in anatomy, physiology, histology, bacteriology, chemistry, and medicines, all selected and arranged according to the purposes of the medical school. This procedure is followed by schools of law, theology, engineering, agriculture, forestry, and by every other professional institution except the normal school. When this becomes truly professional, it will likewise select from the

great bodies of knowledge subjects and topics that are significant for elementary education, and it will weave them together so as best to reach the ends set before the elementary teacher. Chemistry may be taught, but it will differ from that of medicine just as the chemistry of poisons differs from that of iron. The selection, the organization, and the presentation of this subject-matter would all be determined by the purpose of the normal school. This purpose is professional, not general, as is the case in colleges; hence the scholarship of the former could never trench on that of the latter. The college pursues study mostly for subjective or personal ends; i. e. for culture; the normal school should create scholarship chiefly for objective or professional ends. Both institutions may in part study the same things, as do schools of medicine and of engineering, but they study for different ends. Yet many college subjects are manifestly inappropriate in normal schools. Among these foreign languages, higher mathematics, and advanced pure science are prominent. Tho no knowledge is, abstractly speaking, useless, much of it is relatively so. The history of philosophy would in a sense be useful to physicians, but it would not compare favorably even with psychology. The elementary-school teacher, as such, has small use for foreign languages, higher mathematics, or pure science; hence these subjects may properly be omitted from the normal-school curriculum. The branches particularly needful for developing the higher type of elementary-school teacher are as follows: the English language and literature, and world-literature in English; geography, commercial, physical, and political; history, civics, economics, and the simpler aspects of sociology; mathematics thru algebra and geometry; representative physical and evolutionary sciences, especially in their nature-study aspects; psychology and philosophy of education, motor training, including music, art, manual training, and domestic science. This is not the time to enter upon a detailed description of what should be attempted in these subjects; but it may be pertinent to suggest that much of the time given to special methods, and some of that given to detailed criticism, might appropriately be devoted to advanced study in these subjects.

This kind of a curriculum, it will be seen, trenches but little upon college subjects and not at all upon college ideals of scholarship. The size of the output and the length of time of a normal-school course, tho they may be of local importance here and there, are not matters of principle, and should have no weight in the attempt to determine what ideal standards of scholarship the normal school should seek to establish.

JOHN R. KIRK, president of the State Normal School, Kirksville, Mo.—The tone of normal-school men seems too apologetic, their attitude too submissive. The university men are after the normal schools with a paring knife. As incipient monopolies the universities apparently seek to form an educational trust for the absorption or control of all educational instrumentalities. They are inclined to become arrogant and domineering.

A university professor comes here to tell us that normal schools should omit foreign languages from their academic courses and leave out all of mathematics above plane geometry. At least I so understand the gentleman. The manifest object is to devitalize normal-school instruction by depriving it of the incisiveness, accuracy, and virility which characterize good instruction in the languages, sciences, and mathematics. The gentleman would confine the normal-school curriculum to the dogmatism and indefiniteness of those subjects not yet reduced to pedagogical form. Men of his school and type desire the normal school to withdraw itself within the narrow sphere of preparing teachers for elementary schools and for no others.

It is asserted here that we may safely turn over the high-school instruction to university graduates. Against this propagandism reason and common-sense protest. Already the high schools of several states are seriously damaged by being made the practice schools for inexperienced and undirected university graduates who are

inexcusably ignorant of school government, discipline, class management, and the direction of student work, and who from long isolation in specialized study have become unconscious of all practical avenues to the souls of ordinary pupils.

We should hesitate a long time before building a caste system which would deliver and surrender to the untrained, unskilled, high-strung, unsympathetic university graduate our public-school children in the critical age of adolescence, when the girls and boys are passing thru the most uncertain stage of existence, the period of storm and stress, of exaltation and gloom; when they are neither children or adults; when they most need the kindly directing care of teachers capable of deep personal interest, with enlarged sympathies and the utmost sanity in utilizing all agencies which may help to guide aright the varying energies of exuberant young life.

In the drift of opinion which seeks to establish a caste system in education some things are overlooked. First of all, the university faculty is an investigating body and not a teaching body. As a rule, its teaching is badly done. The typical university professor is not worrying at all about the mental reaction of the students. Consciously or unconsciously, he encourages little more than reproduction thru the "note-book," the "quiz," and the "exam." The worst teaching to be found in America is in our universities. Of this fact no well-informed man has any doubt.

It is evident, therefore, that the student who has lived several years among the profound scholars and splendid men in the university has not only had his mind withdrawn from all ideas of practical school management or tactics, but he has grown accustomed to those forms of instruction that are least adapted to elementary and secondary schools. He is not a safe person to be intrusted with elementary or secondary instruction until he has been overhauled in some school which will recast his ideas of teaching and compel him to acquire reasonable skill in teaching by virtue of some well-directed practice.

But what is the legitimate and exclusive field of the college which cannot be infringed upon? Who granted the college or the university, or any school, an exclusive portion of the educational field? Surely, our horizon is not growing so narrow. We live in America, where people are accustomed to rational freedom. There is no exclusive field belonging to any college or any university. Several American universities are already too large to do efficient service. In one not far from Boston, we are told, the president does not know half of the members of his senior class. He is merely the managing agent of a vast commercial enterprise involving the investment of millions. He is a great business man. His energies are lost in vast manipulations. He knows the value of buildings, grounds, and securities. He is neither a teacher nor a judge of teachers. He is not specially concerned about the teaching skill of the faculty over which he presides. Since the universities are becoming abnormally large and so many colleges are already as large as they ought to be, there is no reason why any other institution which chooses to cover a part or all of the college course should not do so. Indeed, this course is a necessity in order to divide the vast aggregations or masses of students, and bring them into contact with mature men who are teachers as well as investigators.

The proposed caste system is bad. It can never be justified on American soil. It is indefensible. It would collect the most capable and ambitious students in one class of institutions and drive the mediocres into another class.

In Missouri, at least, the normal schools were created by law to prepare teachers for all public schools of the state. They have better buildings, better libraries, better laboratories, better general equipments, and better instructors than typical colleges of the Mississippi valley have. They are covering most of the academic courses given in colleges, and doing it better than most colleges can do. They will continue this policy, because it is right and the people believe in it. They infringe upon no one's territory, because there is no exclusive territory legitimately belonging to any one class of schools,

at least in America. The normal schools of our country have nothing to apologize for. They should abandon defensive tactics and vigorously assume the aggressive. Great issues are at stake. We should rise up and meet them, and settle them as they ought to be settled.

E. ORAM LYTE, president of the State Normal School, Millersville, Pa.— I am impressed with the thought that each locality has problems of its own to solve. Several of the questions that perplex the brethren of other states have been solved in Pennsylvania, while the normal schools of Pennsylvania have many problems that do not appear to vex other normal schools. The colleges of Pennsylvania do not and cannot train teachers, and in most cases do not attempt to do so. The normal schools of Pennsylvania aim to train teachers for public schools of all grades.

W. S. DEARMONT, president of the State Normal School, Cape Girardeau, Mo.— I listened with great pleasure to Professor Johnson's admirable paper. In showing so clearly as to leave beyond question the need of scholarship on the part of the teacher of history, I feel that he has made clear the need of scholarly training in the normal schools. The fact is that the teacher of history in the rural school, as in the lower grades of the graded school, should have the same scholarship truly to teach history as the teacher in the high school. Without that discriminating scholarship described by Professor Johnson, the teacher is unfit to teach history at all.

What is true of teaching history is true of teaching any other branch of knowledge. The teacher of agriculture in the rural schools, for instance, must have some breadth of scientific knowledge. He must have had good scientific training such as is given in the best college courses.

Now, if this thoro scholarship is needed as a preparation for teaching, it is clear that the normal schools must have strong academic courses. It is useless to expect teachers to get their scholastic training in one institution and their pedagogical training in another. It has been repeatedly suggested that teachers should take their college course and then enter the normal school to receive their pedagogical training. But the attempt to bring this about has always failed. Either the teacher will enter the profession without the proper scholastic training, or, having got this in college, he will enter the profession without the pedagogical training. The only way to give the teacher both scholarship and professional training is to give both in the normal school. Therefore, the normal schools must have scholastic training, or training in subject-matter, equal to the training in subject-matter in the colleges. The question of how the normal schools are to give such training without encroaching upon the legitimate field of the college implies what is not true. It is not true that the normal school is encroaching upon the legitimate field of any other institution when it undertakes to do that for which it was created. The normal schools are established to educate teachers for the public schools; not for the kindergartens, not for the primary grades, not for the grammar grades, not for the high schools, but for the whole public school system. Now, whatever education teachers should have to prepare them for their work, *that* normal schools should give; that belongs to the field of normal-school work. If some other schools must occupy the same field in order to fulfill their mission, it should not be considered that the normal schools are encroaching upon the field of these other schools. The normal school must do the work for which it was created, regardless of whether its work at any point overlaps the work of other schools.

It has been suggested that out of twenty teachers one is a high-school teacher and nineteen belong to the lower grades, and that the normal schools may well give their attention exclusively to the education of the nineteen and leave the education of the twentieth to the colleges. This should not be done for many reasons. In the first place, the suggestion carries with it the implication that knowledge of subject is not needed by the teachers of the lower grades. This position is entirely wrong, as I have shown. It

may be and will be true that many teachers in the lower grades will not do much work in the study of advanced courses in subject-matter; but it is also true that, if these advanced courses are offered in normal schools, many teachers, who would not otherwise do so, will pursue them. It is certainly desirable to offer them every inducement to do so.

Again, your twentieth man will not only be the high-school teacher, but he will become the principal and superintendent. Now, President Kirk has shown the folly of putting high-school boys and girls at a critical age under college graduates who have had no pedagogical training. But if this is bad, what must we say of having principals and superintendents without pedagogical training?

As has been suggested by President Kirk, teachers of all grades should be educated together in the same school. The contact of the future kindergarten teacher with the future high-school teacher and the future principal and superintendent is beneficial to all.

The whole logic of the situation demands that the normal schools shall give full college courses in subject-matter along with the most thoro courses in pedagogical training. Any other position is indefensible from any point of view. The normal school must always explain and excuse and seek a reason for its existence until it fulfills its mission of preparing teachers of all grades for their work, both in subject-matter and in pedagogy.

DEPARTMENT OF MANUAL TRAINING

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 7, 1903

The department met in the Old South Church at 9:30 A. M., and was called to order by President Charles F. Warner, of the Mechanic Arts High School, Springfield, Mass.

After a brief address of welcome, the president introduced Mr. Milton P. Higgins, president of the Norton Emery Wheel Co., Worcester, Mass., who presented a paper on "The Demand for Trade Schools: From the Manufacturer's Point of View."

Arthur H. Chamberlain, principal of the Normal School of the Throop Polytechnic Institute, Pasadena, Cal., followed with a paper on the same subject, "From the Educator's Point of View."

Discussion of the papers was made by L. D. Burlingame, chief draftsman for the Brown & Sharpe Manufacturing Co., Providence, R. I.

"The Organization of Trade Schools" was discussed by Thomas M. Balliet, superintendent of schools, Springfield, Mass., "From the Point of View of the School Superintendent," and by Arthur L. Williston, of Pratt Institute, Brooklyn, N. Y., "From the Point of View of the Director of a Trade School."

"Discussions and Suggestions from Experience" were given by Charles A. Bennett, of Bradley Polytechnic Institute, Peoria, Ill., and Arthur H. Hamerschlag, consulting engineer, New York Trade School, New York city.

William H. Sayward, secretary of the National Association of Builders, Boston, Mass., read a paper on "Trade Schools and Workingmen's Organizations."

The discussion was led by Frank Keyes Foster, editor of the *Liberator*, Boston, who was followed by Samuel F. Hubbard, superintendent of North End Union, Boston.

The chair then appointed the following as nominating committee of officers for the ensuing year:

Charles W. Parmenter, of Massachusetts. Charles R. Richards, of New York.
Samuel F. Hubbard, of Massachusetts. C. M. Woodward, of Missouri.
W. H. Sayward, of Massachusetts.

Professor Calvin M. Woodward, St. Louis, Mo., was introduced as the "father of manual training," and spoke briefly.

The Committee on Nominations presented the following report:

For *President* — Arthur H. Chamberlain, Pasadena, Cal.
For *Vice-President* — Charles L. Kirschner, New Haven, Conn.
For *Secretary* — Frank M. Leavitt, Boston, Mass.

Upon motion of Charles R. Richard, the secretary was instructed to cast the ballot of the department for the nominees. The ballot was so cast, and the president formally announced the candidates elected.

The department adjourned to Wednesday morning, July 8.

SECOND SESSION.—WEDNESDAY, JULY 8

The department met in the Old South Church in joint session with the Art and Elementary Departments. On the platform with President Warner were Miss Clara A. Wilson, Davenport, Ia., president of the Department of Art Education, and Miss M. Adelaide Holton, Minneapolis, Minn., president of the Department of Elementary Education. The meeting was called to order by President Warner at 9:35 A.M. The following program was presented:

Topic: "The Relation of Art Teaching to Manual Training and Industrial Training."

1. "Craftsmanship in Education," by Leslie W. Miller, principal of the School of Industrial Art of the Pennsylvania Museum, Philadelphia, Pa.

Discussion by Laurin H. Martin, instructor in applied design, Massachusetts Normal Art School, Boston, Mass.; Robert D. Andrews, architect, Boston, Mass.; Walter S. Goodnough, director of art and manual training, public schools, Brooklyn, N. Y.

2. "Art Instruction as Related to Manual Work," by Alfred Vance Churchill, director of Department of Fine Arts, Teachers College, Columbia University, New York city.

Discussion: (*a*) with relation to elementary schools, by James Frederick Hopkins, director of drawing, public schools, Boston, Mass.; (*b*) with relation to the high school, by Fred H. Daniels, supervisor of drawing, Springfield, Mass.; (*c*) from the point of view of the manual-training teacher, by Luther W. Turner, instructor in manual training, Hill School, Pottstown, Pa.

3. "Indian Basketry: Its Poetry and Symbolism," illustrated by historic baskets from the speaker's private collection, by George Wharton James, Pasadena, Cal.

The department then adjourned to Thursday morning, July 9.

THIRD SESSION.—THURSDAY, JULY 9

The department met in the Old South Church in joint session with the Indian and Elementary Departments. The meeting was called to order at 9:45 A.M. by President Warner.

The program for the morning was as follows:

Topic: "Practical Suggestions on a Wide Application of the Manual-Training Principles."

1. "Some Reasons Why Elementary Schools Should Include Manual Training in Their Courses of Instruction," by Elizabeth Euphrosyne Langley, assistant in manual training, School of Education, University of Chicago, Chicago, Ill.

2. "The Boy and His Handicraft," by George H. Bryant, president of the Eastern Manual Training Association, Newport, R. I.

General discussion by Frank M. Leavitt, supervisor of manual training, Boston, Mass., and Carroll G. Pearse, superintendent of schools, Omaha, Neb.

3. "Hand-Work for High-School Girls," by Miss Abby L. Marlatt, instructor in domestic science, Manual Training High School, Providence, R. I., chairman of the Lake Placid Conference on Home Economics.

Discussion by Miss Lillie Collamore Smith, instructor in domestic science, High School, Brookline, Mass.

4. "Manual Training *versus* the Manual Arts," by James Parton Haney, M.D., director of manual training, New York city.

Discussion by Calvin N. Kendall, superintendent of schools, Indianapolis, Ind.

Under the order of business Professor C. R. Mann, of the University of Chicago, presented the following, which on motion was adopted:

To the Council of the National Educational Association:

WHEREAS, The reports of the National Commissioner of Education show that over 95 per cent. of the people of this country receive all the education they have in the public grade schools, and that about 70 per cent. of these people do not pass entirely thru these schools; and

WHEREAS, These people compose the classes who work with their hands in the production of the wealth of the country; and

WHEREAS, About one million of these people are annually registered in correspondence schools endeavoring to learn late in life, at their own expense and in an indirect and unsatisfactory way, things which the state should teach them in the public schools; and

WHEREAS, The educators and governments of other nations are fast developing systems of industrial and technical education for the working classes, so that this nation, if it desires to retain its commercial supremacy, cannot afford longer to ignore this serious condition of affairs; therefore be it

Resolved, That we, the members of the Department of Manual Training of the National Educational Association, in meeting assembled, do hereby petition the Council of the said Association to appoint a committee of ten to prepare and submit a report upon the following points:

1. What are the present and the possible future educational needs of the working classes in this country?
2. What are the provisions now made by the state and otherwise for meeting those needs?
3. What is being done by other nations for the technical and industrial education of the working classes?
4. What steps, if any, should be taken in this country toward providing adequate technical and industrial education for the working classes?

There being no further business, the department adjourned *sine die*.

CHARLES L. KIRSCHNER, *Secretary*.

PAPERS AND DISCUSSIONS

EDUCATION FOR THE TRADES: FROM THE STANDPOINT OF THE MANUFACTURER

MILTON P. HIGGINS, PRESIDENT OF THE NORTON EMERY WHEEL CO., WORCESTER, MASS.

Among the many troubles and anxieties of the manufacturer not the least is the need of "effective skill" in his factory. It is now pretty generally agreed that we must look to the schools for our future skilled workmen. The apprenticeship system can never return, and if it could return in its best form, it would be entirely inadequate to meet our present demands. The modern intensified system of production is unfavorable to any system of training for the trades in our shops.

In recent years the requirements upon the workman have greatly advanced, contrary to the opinion hastily formed by some. The introduction of modern methods of manufacture, duplicate and interchangeable parts, automatic machinery, division of labor, piece work, etc., have not lowered the demand for the skill of the mechanic, but have raised it. Never before was the machinist called upon to make so many quick, accurate computations, to use such exact knowledge of the nature of materials, or to fit metal parts with such extreme exactness of form and size as now. He must needs have superior training to enable him to make decisions quickly and accurately.

Perhaps the wonderful development of American industry, approaching industrial supremacy, has been possible thru the peculiar natural dexterity of American skilled workmen; but it is estimated that already over 50 per cent. of all our skilled mechanics are born and trained in foreign countries, and this proportion will rapidly increase unless some means is adopted to educate American boys for the trades. While we do not object to this removal of our high-grade mechanical work from the hands of American young men to foreign hands on account of any prejudice against the foreigner, yet a real objection is this: The require-

ments are so high and so exacting for skilled mechanics that nothing but the very best special natural ability will meet the requirements. And it is quite possible to prove that the American boy is by far superior in ability and fitness for mechanical employment. Another reason for getting mechanical industry and skill into the hands of American boys is the great value of so promising a field for our sons. Our young men are likely to overlook this grandest opportunity and turn their attention to a less promising calling.

The specific needs regarding the education and qualifications of workmen are as follows: first, last, and always, we are looking for *effective, productive, profitable skill.* The manufacturer will employ the skillful man at good pay, even if he be untidy, coarse, ignorant, profane, and drunk on Sundays. I make this extreme statement to show at the start that any trade-school system, any education for the trades, in order to meet the reasonable needs and demands of the manufacturer must make *skill* the central part of the enterprise. The educational system must start from the shop, and all other elements of the school must radiate from the shop, because the power and success of the pupil's life are to depend upon his shop knowledge and dexterity. The engineering college, the university, and the technical school may, for obvious reasons, be a school with a shop attachment, but not so with the future trade school. That must be a shop with a school attachment. The system of education for the trades, ever to meet the needs of the manufacturer, must make *skill first.* With this order of things positively in mind, it becomes very easy to review all the American attempts to educate for the industries, and determine just why and in what degree success or failure has resulted in various directions.

In order to understand our needs clearly, let me review briefly the various types of American schools and educational institutions, which to some extent have attempted to educate young men for mechanical industries.

1. The kindergarten and manual training in the public schools.

2. The type of institutes of which the Pratt Institute, the Drexel Institute, and the Armour Institute are representatives.

3. The practice departments in engineering colleges, universities, and technical schools, which, with their different methods, are represented by such schools as the Massachusetts Institute of Technology and the Worcester Polytechnic Institute.

4. Those schools that aim more directly at teaching trades, making skill and dexterity the primal and central motive, such as the New York Trade School and the Williamson Free School of Mechanical Trades near Philadelphia, Pa. With these also may be classed the textile schools.

From each and all of these institutions the manufacturer had hopes for aid with varying degrees of confidence.

Regarding manual training in the public schools, we find that we really never had any good grounds for our expectations. We find that

all this outlay for shops and equipment is not intended to make workmen, or fit boys for the industries, or to develop useful skill, but simply to lay a "broad foundation for a better manhood," and possibly to help the boy who has not succeeded in the regular school "to find himself." But these schools make no pretensions at helping the boy to do something with himself after he has found himself; and, furthermore, it is found that manual training in the public schools does not lead any greater number of boys to follow or seek a life of mechanical industry.

From the type of institutions represented so well by the Pratt Institute, the Armour Institute, and many others, there are great grounds for the manufacturer's hope in this direction, and we are able to fill, with the greatest satisfaction, many positions from the graduates of this type of school. Still, for our greatest need, and for the place of our greatest anxiety, we look in vain for help in this direction. The best sort of skilled workmen are not likely to come from these institutions until the methods of teaching skill are made more effective by making the mechanical practice a larger proportion of the course, the course somewhat lengthened, and the shop practice more real and thoro.

Regarding the mechanical skill taught at the engineering colleges, such as the Massachusetts Institute of Technology and the Worcester Polytechnic Institute, there is a wide difference in the method and character of shop practice. But, putting all the good of both and of all similar institutions together and taking the average resultant, it is certain that the manufacturer, after he has filled with entire satisfaction all the important positions with engineering graduates, still finds his unmet need for skilled workmen as great as ever, and he cannot expect any relief from the technical schools which confer engineering degrees. These schools are doing a higher work, but a work not one whit more important.

The schools represented by the New York Trade School and the Williamson Trade School are a forcible demonstration or indication of what is possible in education for the trades. At the New York Trade School the aim is intensely direct toward the attainment of working skill in the shortest possible course, and there is no attempt made for general education outside of lectures and the directions pertaining to the work in hand, and to a statement of those special principles directly underlying the skill which is being taught. The Williamson Free School of Mechanical Trades is not open to this objection, for the time in a four-year course is generously divided (about half and half) between work and study.

From a manufacturer's point of view, the organization of this school is nearly ideal, with one exception, and the results are, indeed, all that could be expected. The exception is the unreal character of the shop work. A thoughtful person visiting this school is most forcibly impressed with the enormous loss to the students and the financial loss to the institution when two hundred strong, energetic, interested young men are

required to work metal and other good materials into excellent parts of useful machines simply as practice, and to see the results of their painstaking, skilful labor either put into glass show-cases or thrown into the scrap-heap. So long as the endowment meets the financial loss, the school goes on, but it cannot be enlarged by funds that might otherwise be utilized. However, the financial loss is not so serious, but the loss to the student, as compared with working upon real machinery and so getting the experience of four years, as well as better skill, is certainly very great; and this is a loss that I am confident can be remedied.

Probably there is no line of manufacturing where the trade school has been more thoroly organized for teaching the practical skill required than the textile schools, such as those at Philadelphia and at Lowell; and I think no attempt has yet been made where the results are more satisfactory to the manufacturer. This is largely because, owing to the nature of the industry, these schools have been conducted under conditions as real and almost exactly the same as the pupils will meet upon leaving school. We can offer but one objection to the general plan adopted by the textile schools, and this is the same as applies to such schools as the New York Trade School, inaugurated by Colonel Auchmuty, viz.: the education is extremely special and direct, consequently it must be narrow, and it is generally given to young men after they have received all the schooling they expect to receive. There will be great economy when the trade-teaching can begin in a boy's life as early as the beginning of the high school. The class of boys who are to be mechanics cannot wait till the high-school period is completed.

This brings us to the consideration of education that will, if possible, meet the requirements of the manufacturer—a system which shall retain the excellent features of the various schools referred to and shall give an earnest boy, who has completed the grammar grades, a good, liberal education, and at the same time a thoro training for a trade, from which he can immediately upon graduation earn a good living at journeymen's pay, say, $2 per day.

The proposition is to take one hundred boys, selected for their natural fitness, to become skilled, educated mechanics. At the age at which they would enter the high school they are to begin to learn a trade. During the high-school period of four years they are working in a shop one-half of their time under the most favorable conditions, spending the other half of their time in the department of the high school somewhat modified to meet their needs; and thus the boys will obtain an education which may not be of less value in the life they are to follow than that which a regular high-school course now gives.

Tho I have said that the manufacturer cares but little or not at all for anything in the workman aside from his skill to produce, we have come to understand that we cannot have the skill of the order and grade we

demand unless science and general discipline are the basis of the skill and the accompaniment of the skill.

The system for this training must consist of two parts. The first is the shop. It seems that the manufacturer has every reason to be satisfied with the work of the public schools so long as they adhere to teaching such science and such knowledge as are properly taught from books and otherwise in our schoolrooms. We do not wish to duplicate this schooling at personal cost, so long as we pay to support it at such great expense and with such excellent results, especially so long as our school boards and educators are willing to change, and, in fact, are constantly changing, the courses to meet the needs of various classes of citizens.

We have good high-school courses for those who fit for college, for those who wish a business training without much foreign language or literature; and we have courses for pupils who must work during the day and are willing to study in the evening. There are many other attempts to meet the needs of the industrial portions of our communities. Is it asking too much, then, of the school board to make a half-time course, where one-half of class can be in the schoolroom one-half of the hours in a week while the other half of the class is at work in a shop? If this is reasonable, it will be granted; and if it is granted, we have secured the book-schooling and the science-teaching without additional cost to anyone, and with less cost for teachers and for room, because a room will accommodate twice as many pupils coming one-half of the time as it can if they come the whole of the time.

Now, to provide for the shop instruction constituting the other half of this proposed half-and-half school. Since we give the highest credit to teachers and educators for the great work they accomplish in the high calling of teaching school, and for giving mental training in all that pertains to the schoolroom, I assume that when an enterprise of a compound nature is to be undertaken jointly, consisting of one part book work and one part shop work, we do the school-teacher no dishonor when we propose to delegate the different parts to specialists. The mechanic or manufacturer cannot assume to teach school, while he may assume to be quite able to teach shop work and the highest skill of mechanical trades.

Herein lies the promise of sure success in education for the trades. It will come thru division of labor, followed by co-operation. Do not let us ask a school-teacher to teach trades or a mechanic to teach school. If we do, both will continue to fail. Even if we could find a *combination man* —a good mechanic and a good school-teacher—he will fail because he cannot teach trades—such as the machinist's trade—in a schoolroom, any more than he can grow ship timber in a flower-pot or raise a cedar forest in a greenhouse. You may play at it, and you can do something at it, but you cannot make a business of it.

In order to provide for successful shop instruction we must have a real

shop. Do not be frightened at this! A real shop in the hands of shopmen — of manufacturers — is not difficult or impossible, but in the hands of teachers it is a burden and something to be feared. We want schools organized and conducted with a four-year course that will give us thoroly skilled men, with minds somewhat trained and disciplined. We cannot teach trades in our factories, no matter how good material you may give us for apprentices.

The shop for instructing the half-time school pupils must at present be owned and conducted as a private enterprise, incorporated as an educational institution, with the avowed purpose of teaching certain trades in a real, productive, commercial shop, where mechanics of known skill and ability for imparting skill and understanding regarding shop work are employed to make salable products, with the aid of the students, and with the sole purpose and aim of producing a class of mechanics of the highest skill pertaining to the mechanic arts.

THE DEMAND FOR TRADE SCHOOLS: FROM THE EDUCATOR'S POINT OF VIEW

ARTHUR HENRY CHAMBERLAIN, PRINCIPAL OF NORMAL SCHOOL, THROOP POLYTECHNIC INSTITUTE, PASADENA, CAL.

A decade past it would have been impossible to have assembled a "corporal's guard" at the National Educational Association to take part in such a discussion as we are having today. Is the increased interest a general one, or are we for the most part following the lead of the few? Is the movement due to a more intensive belief in trade schools as such, and to a closer study of their methods and the results for which they are responsible, or is there something more back of it all — something deeper and fundamental in its nature, which calls for a readjustment of present-day conditions, thru changed practice, to fit more exactly the demands of society, and which looks to a wiser and more rational application of problems and knowledge to the facts and forces of everyday life?

One has but to follow the line of the present tendencies in education, in any particular field whatsoever, to be made aware of a great change that has been taking place within the past few years. Perhaps it is not too much to say that we are now at the very threshold of an educational renaissance, and indications seem to point in the direction of an overthrow of much that has been held dear to the heart of the educator. This fact has peculiar significance in the field of industrialism and trade-teaching. What are some of these changes, and what their bearing upon our present topic? "New times" do at least "demand new measures."

I have suggested that the thought of the value, purpose, and methods of the trade schools is changing. It has by most of us been considered

almost heretical to think of trade-teaching as existing side by side with so-called educational work, and many of those present today would undoubtedly take the ground that the elements going to make up educational practice cannot have a place in trade instruction. This leads us at once to the distinction between the two methods — trade-teaching on the one hand, and educational training upon the other.

The education we have had in mind, unconsciously perhaps, is such as for the most part has had no real, vital, or intrinsic connection with life, or has played little or no part in the future of the individual. Those of us who have stood for educational training — and this has probably been shown more clearly in the field of manual training than elsewhere in school work — seem almost to believe it a crime to prepare boys to earn their bread and butter. Education has somehow seemed distinct from living, and work having a direct bearing upon the industrial life in its many phases has been kept well away from the boy. * * * *

The work of the trade school, on the other hand, we have classed as being possessed of a narrowing influence. The pupil of public-school age is of necessity unable to determine his fitness or capacity for special work. He must first get that broadening which comes from a general training, and upon this foundation he may later specialize.

There is, to be sure, much justice in the distinction as drawn, especially when we consider the work of the trade school of the past as contrasted with what it promises to become. What I shall say, then, as to the value and demand for trade schools will not be so much from the standpoint of such schools as now exist, but I shall have in mind a somewhat new type of institution, that would, in my judgment, prove an energizing element in the industrial and social life of the day. * * * *

The trade school is, to my mind, essential, and its numbers should increase; but just as we must, if you please, *industrialize* hand-work in schools, so must we *educationalize* the trade school. What I mean to say is this: The demand for trade schools carries with it the demand for a certain content in curricula for such schools, brought about, in part, by our intricate and intensive industrial system, specialized and organized as it now is. The work must be educationalized by injecting into it the thought element to a greater extent than has formerly been the case. As, in dealing with traditional subjects, thought without action brings partial results only, so in the trade school, action, mechanical work, dissociated from thought, is uneducational, and in that sense not the best trade teaching. In a trade-school graduate is demanded more and more not only one who can perform his particular service, but one who can plan and initiate as well; who can see reason in action, and who can, thru wise leadership, guide others successfully to perform allotted tasks. * * * *

In the manual-training school we are finding scores of boys who, by training or by nature, are fitted to enter one or another of the industrial arts

and to engage in some gainful occupation demanding mechanical knowledge and skill. The grammar or high-school work has not given such boys, nor can it do so, the necessary mechanical ability demanded in their work; such, for example, as was gained under the old apprenticeship system. What it has given them is a point of view, a perspective; or it has perhaps merely suggested to them certain lines along which they might successfully specialize. But what shall be done with boys of this class who are financially unable to pursue a three- or four-year high-school course, that they may then enter a technical or engineering school, or that they may have opened to them a drafting room, a machine or pattern shop, or a testing laboratory?

The manual-training high school, or polytechnic institution of secondary grade, creditable tho its technique be, will not properly fit these boys for their future work, even should they be financed during their school residence. It is also a question as to how far it is desirable to carry forward the general education of a boy of this character after he has shown peculiar adaptability along certain specific lines. At present but two courses seem open to such boys: they must either drop out of school before finishing the grades (as happens in the large majority of cases), and take up some line of work for which they may not be at all fitted; or they may, perhaps, find an opportunity to enter some shop or factory, or some commercial pursuit, and learn, finally, the practice of only a particular phase of handicraft. They have thus failed utterly to get at that richer purpose of life which underlies the purely mechanical side of industrialism, and which makes it meaningfull, interesting, and uplifting. In many cases, to be sure, financial gain may result, but our standards of success are certainly not to be confined wholly to this field. Besides, it is needless to suggest that the individual made alive to both the theory and practice of his vocation is more likely to succeed than is his neighbor schooled in the latter only.

I have passed over entirely that vast army of boys who, failing to find in the common schools that which is satisfying, or at least not in sufficient quantity or intensity to hold them, and finding no school of trade or mechanical practice open to them, turn to the street. Here at once is the interest caught by industrial life in its many manifestations. The rivers and wharves, with their bustling activity, the loading and unloading of ships and cars, engines and machines in their various services, street work, building construction, and manufacturing—all are engaging at first; but the immature mind, without guidance or suggestion, soon turns to other things. And so are kept full the ranks of the improvident and unemployed—enemies to themselves and a menace to society.

Manufacturers and tradesmen will tell you that it is well-nigh impossible to find those who are competent to occupy positions of prominence and responsibility in their establishments. Such men are no longer

willing to take boys as apprentices, and coach them thru several years; and those who now come to them are, for the most part, only partially capable of following the explicit directions laid down for them. The manual-training school graduate, on the other hand, while possessed of less skill than the boy of the trade, has back of his knowledge of practical things something of the theory underlying it all, and can more readily modify his work to meet present requirements. He can also lay out, suggest, create, initiate, new lines of action, which is the crying need of the time. Neither of these two classes of youth, however, seems to fit exactly the conditions as they are found to exist, or to fulfill the demands made upon them. They are too often misfits.

May not Germany offer us a suggestion as to a possible line of improvement? I have in mind the *Fortbildungsschulen*, or continuation schools, which are proving one of the most important educational elements in Germany today. There, as in America, it is the favored few only who pass from the elementary into the secondary school. Many boys must of necessity earn their own living at an early age, and are thus forced to enter some gainful pursuit. Time cannot be spared them to further carry on academic education as such, nor is it always possible or desirable to enter a trade school proper. Then, again, many boys, and even men of mature years, already in the trade, avail themselves of both scholastic and practical phases as offered by the continuation school. Permit me to quote Mr. H. Bertram, of Berlin, who writes in December, 1899, as follows:

> Amid the developments of civilization among the nations, the idea of the continuation school is making its way with increasing strength. Urgently required by the conditions of social organization, and in its turn acting on them, the new institution appears in many forms. It claims its place side by side with the church and the school.
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> Among the great number of those who enter early on the practical business of life, to whom the primary school has given only a meager education, there awakens, sooner or later, the desire to share in the stores of knowledge which human intelligence has won, in the insight into the working of the forces of nature which it has acquired and applied to industry, in the arts which ennoble and support human action; in short, to participate in the spiritual treasures which are, as it were, the birthright of those born under a luckier star. This desire, which opens to the diligent the way to material prosperity and inner contentment, seems for society as a whole an important incentive to industrial progress, and turns the discontent of the slaves of machinery into the happiness of men conscious of their own success. The more the old order changes, which held the work-people in the narrow bonds of tradition, the more is customary prescription replaced by education and independent judgment, by insight into existing conditions, by special excellence within a particular sphere. For this reason, the elementary school, however efficient and methodically correct its action may be, cannot suffice for the happiness of the masses, nor for the preservation of society. The instruction must come into close contact with the life of the future citizen, and must be at the command of anyone desirous to learn, as long as he seeks it. But the seeker, born amid such conditions as these, needs guidance. Public libraries, newspapers, magazines, help him the more he pushes forward; but without expert assistance he hardly finds the beginning of the path.
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> Such is the object of the continuation school.

Exact definition of these schools is difficult. Courses of various kinds are offered, the work being carried on during the weekday evenings and on Sunday mornings. They are in reality supplementary schools. * * * *

While the work of these schools, then, is of a somewhat general character, and for the most part of a theoretical nature, drawing, and, in some instances, shop courses are carried on. When a certain industry predominates in a locality supporting a continuation school, it is only fair to suppose that the work done, general tho it may be, will be colored, to some extent at least, by the demands of such industry. In some instances the classes are arranged according to the various trades followed, as bookbinders, printers, lithographers, bakers, metal workers, workers in wood and stone. * * * *

The newly opened Manhattan Trade School for Girls, to which reference has already been made, also offers a suggestion as to what is demanded in the future trade school. It began in November, 1902, with a half-hundred girls in attendance. Today, after eight months' successful work, the attendance has more than doubled, the school being crowded to its utmost capacity, and scores of deserving girls clamoring for admittance are upon the waiting list. Not only is the training of these girls entirely free, but scholarships are also given to help maintain the pupil, and the family perhaps, while the education of the former is going forward; for in many instances such girls are the sole support of one or more members of a family.

Already this school has shown what can be done thru thoro, scientific trade-teaching. The trade is sympathetic and enthusiastic. Girls who before entering the school were receiving three dollars or less per week, with little or no opportunity for advancement, have from time to time been sent out on probation. In all such instances the employers of these girls ask to be allowed to retain them at salaries ranging from four to five and six dollars per week. The earning power of the girls has thus been increased 100 per cent. in six months, and in many cases advancement is certain. * * * * With increased skill in technique and increased capacity on the quantitative side there comes also the ability to plan and carry forward new lines of work. Nor is this all. The view is broadened; the work becomes less of a burden, and loses its aspects of drudgery; and the individual is led to see her place in, and necessity to, the great social whole. Existence becomes life.

It is not necessary to dwell upon the work of any particular institution of the trade class offering training to boys, for with these we are all more or less familiar. * * * * I would in closing, however, repeat, for the sake of emphasis, my hearty belief in the value of the trade school, as we today have it. Those who are guiding and directing such schools are pointing out numbers of their graduates who are occupying positions of prominence and trust, and who are helping, in their own way, to work out

the problems being thrust upon them. Some of these men rise superior to their surroundings, and despite a lack, in some cases, of a liberal education, make names and places for themselves. Let us, I say, have more of such schools. In addition to these schools I am pleading for a school, call it what you will, that shall be broad in its tendencies and thoro in the instruction offered; a school that shall have as its dominant idea such training in the industries as shall fit the boy to accomplish in the least time the maximum of work; a school that projects into its instruction thought and reason; a school that shall lead the boy to a more complete knowledge of the industries and of that for which they stand, and that shall help him to appreciate the lives, words, and deeds of his fellows, that they may serve as a stimulus in the enrichment of his own life.

I believe it is practicable and that the time is upon us when the educational trade school is to come and contribute toward the working out of our educational problem; and that this school, while teaching a trade to those who so desire, will at the same time place within the boy's grasp an appreciation of, and ability to deal with, the most important and essential elements with which life has to do. I believe further that it will help many to become self-supporting, self-respecting citizens, able to rise financially and advance industrially, and to take their places as contributing elements in the great social order.

DISCUSSION

L. D. BURLINGAME, chief draftsman, Brown & Sharpe Manufacturing Co., Providence, R. I.—In the papers to which we have just listened we have had two phases of the trade-school question presented. Mr. Chamberlain shows the need of trade schools for those already employed at a trade. He emphasizes the importance of "continuation schools" to give further instruction to those at work during the day. Mr. Higgins, in a well-thought-out plan, aims to train boys that have not been employed so that they will acquire sufficient skill to work at a trade. Each need is real. Mr. Higgins asserts that the present manual training and trade schools are inadequate to produce skilled workmen. My experience leads me to agree with this view, at least as applied to machinists and draftsmen. I believe, however, that our present schools, when properly conducted, give a training that aids a boy to start later in practical work, even tho the start be at the bottom, and to make more rapid progress and progress to a higher point than would otherwise be possible.

When work is specialized as it is today, when the experience of the shopman is often limited to the running of a single machine, the evening trade school can give him needed auxiliary training, without his giving up his employment. Such a school in its day classes can help the man that, reaching a point in his work where he realizes his deficiences, finds means to go back to school. A school for both classes of men should approach problems from the shop side rather than from the technical standpoint, even when dealing with the academic branches; it should adapt its teaching to those that either never have learned or have forgotten school methods. The "continuation school," as outlined by Mr. Chamberlain, can give such instruction to meet the needs of this class of men.

The two ends sought, that a boy obtain a higher education and yet be able to earn a

living at an earlier age, while opposing, are both desirable, and I heartily agree with Mr. Higgins in the spirit of his plan to attain both these ends. It is, however, no simple task to carry thru such a plan to success. Pointing out difficulties does not condemn. It is by looking difficulties in the face that we can be sure of success.

Large school shops would be required to give satisfactory shop practice, necessitating large financial investments. The product must be such that there would be a ready market. Other trades aside from that of machinist would have equal claims for attention, and each of these must have its own experts as instructors, who must keep up to the latest practice.

The free labor of the students would come into competition with the paid labor of the shop. Harmonious working would be required between the two divisions of the school.

Mr. Higgins looks for no help from the apprenticeship system, which he regards as obsolete; one reason given being that shop work is to so great an extent specialized at the present day. This objection to an apprenticeship cannot, however, be greater than in the past. We should go away from this convention with a mistaken idea, if we go thinking the apprenticeship system is dead.

Two impartial investigations to learn the facts regarding this matter have been made within a few years: one by the editor of the *American Machinist*,[1] and one last year by Mr. E. H. Parks for *Cassier's Magazine*.[2] These included reports from several hundred machine-tool, engine, and electrical machinery builders in this country, and show from 70 to 80 per cent. employing apprentices, about 50 per cent. of these being regularly indentured by a written agreement. In connection with the investigations, leading manufacturers expressed themselves as strongly in favor of and dependent upon such a system.

Mr. Parks says, in his investigation just referred to, speaking of the technical and trade schools, that "they have in a measure attempted to supply the lack of skilled workmen; but the results, while excellent, in many ways do not bring out a class of men with the training and experience needed, so that at the present time it seems as if there were but one way to fill this want, and that by returning to the old apprenticeship system as nearly as it can be done in a large factory." This statement by Mr. Parks will, no doubt, appeal to Mr. Higgins as an additional argument for the adoption of his plan.

At the works of the Brown & Sharpe Manufacturing Co., even tho the work is specialized to a great extent, the boys have a varied experience in the four years of their apprenticeship, which includes lathe work, drilling, milling, assembling, screw-cutting, scraping, planing, and general work. A large number of these boys study evenings, devoting the time to drawing and mathematics. The drafting-room apprentices at the same works have six months of real shop work included in their time of service; that is, in cases where they have not already had shop practice.

The conclusion we must draw from these facts is that the apprenticeship system is alive today and must be reckoned with in any discussion of the trade-school question.

An objection to many graduates of our schools is that they have a mistaken idea of their value. Many of them make good men after they have had experience, but they handicap themselves when, on leaving school, they are unwilling to start at the foundation, thinking that in school they have already climbed high on the ladder of experience. The responsibility for this misconception may lie sometimes at the door of the teacher. It is perhaps natural that he should magnify the importance of his work. In fact, it may often seem to him necessary to do so in order to inspire the student to do his work well.

In conclusion, I would say that the function of the trade school should be to extend the work of the manual-training school by a training in the skillful use of tools and in the operating of machines, teaching the underlying principles in such a manner as to fit the student to advance as a skilled workman; or to fill the position of foreman or

[1] *American Machinist*, December 24, 1896. [2] "Machine Shop Number," November, 1902.

designer, if his natural abilities be in either of these directions. Its office should be to give a preliminary and auxiliary training, shortening the time and increasing the value of an apprenticeship; also to help those that have missed early opportunities, or that have the ambition and determination to excel.

There is certainly a demand for the extension of schools of the Pratt Institute type, to do work along the lines of the "continuation schools" recommended by Mr. Chamberlain. There is also a field for schools of the type proposed by Mr. Higgins, to impart trade skill to a boy as a part of his school training. The carrying out of both plans, however, should be with due regard for the apprenticeship system as it now exists.

THE ORGANIZATION OF TRADE SCHOOLS: FROM THE POINT OF VIEW OF A SCHOOL SUPERINTENDENT

THOMAS M. BALLIET, SUPERINTENDENT OF SCHOOLS, SPRINGFIELD, MASS.

[AN ABSTRACT]

Over thirty thousand students are enrolled today in the evening classes of the Y. M. C. A., and several hundred thousand in correspondence schools, receiving instruction in technical subjects. These facts, together with others like them which might be cited, emphasize strongly the great need of trade schools and of technical schools of a lower grade than engineering schools. We must not be prejudiced against trade schools as a part of the public-school system because they emphasize the utilitarian element in education. Our forefathers who founded the public-school system were altogether utilitarian. Their motive for establishing high schools was to fit young men for colleges which would prepare them for the ministry. They established elementary schools for the children of the masses to teach them "to read, write, and cast accounts." Their aim thruout was utilitarian. If, in their day, there had existed the need for trade schools which exists at the present time, their first thought would have been to provide for such schools and to give children an education which would prepare them to earn their living after leaving school. We must revise our ideas of educational values. The educational value of any subject must be determined, not only by what it does for the pupil while in school, but also by what it contributes to his future development all his life. A study may have high educational value while it is being pursued, but if it is completely dropped when school days are over, and does not connect very directly with anything in practical life, it may have less educational value than the learning of a trade which is pursued thru life. The school ought to begin a development which is afterward continued by the environments in order that the process of education may be a continuous one. To teach a man a trade by which he may earn all his life a dollar or two dollars a day more than he otherwise might have earned is to put his whole life and that of his family on a higher plane than it would otherwise have been. It means more of the

amenities of life for his family; it means pictures, and music, and education, as well as social opportunity and social position.

How may trade schools be organized under the industrial conditions existing in this country?

1. Our manual-training high schools should be converted into technical high schools. We have enough technical schools of college rank for present needs, whose function is to train engineers. There is great need, however, of technical schools of high-school grade, whose function should be to train foremen and superintendents of shops; and, in short, that whole group of men who come between the engineer and the mechanic, and whose duty it is to direct the work of the latter under the general superintendence of the former. Such men must virtually know the trade of the men whom they are to supervise, and they cannot receive the shop training necessary to make them sufficiently expert, in a school of technology of college rank. Furthermore, these technical high schools should have one four-year course in manual training, solely for educational purposes. Possibly students might also be allowed to specialize in certain lines of shop work to enable them to learn the principles of the machinist's trade and become experts in one of its branches. This latter is a question of which no one can as yet speak dogmatically, and it may ultimately be found inadvisable to teach the trade requiring the highest skill in a manual-training high school. The future must decide this question.

2. There ought to be organized in the shops of every well-equipped manual-training high school evening classes in trades, consisting largely of men already engaged at their trade, either as apprentices or as journeymen. The function of such evening schools should be, in the main, to make men more efficient who already know their trade in part, and to broaden their mechanical training. Such schools would meet with the approval of manufacturers, because they would train their men to do a higher quality of work; they would be approved by the workmen, because they would enable them to get promotions and increased wages; they would, furthermore, be approved by the labor unions, because they would accomplish all this without adding materially to the supply of labor in the labor market.

3. Our evening drafting classes should be reorganized. At present there is usually only one such school in a city, and the class is taught by a professional teacher of drafting, or by a draftsman employed in the daytime in some manufacturing establishment. The result is that, while he is able to teach the elements of mechanical drawing very successfully, he is not competent to teach its applications to the various trades. What is needed is an organization of the evening drawing classes in such a way; (*a*) that all students may take a common course in the elements of mechanical drawing to lay the foundation for specialization; (*b*) that for

specialized instruction men may be grouped in classes, according to their trades; (*c*) that they may be given a teacher of drafting who knows the trade and can show the application of drawing to the details of the trade. This is the plan on which the so-called trade classes and trade schools of Germany are organized. There is very little shop work in these schools that requires machinery. There is shop work in the schools for sadlers, tailors, etc., but only in rare cases in those for mechanics. Men work at their trade in the daytime and receive technical instruction in drawing and other subjects in the evening classes. We could double the attendance in our evening drafting schools, I feel sure, by organizing them on this plan.

4. We ought to organize evening classes in mathematics for men engaged in the mechanical trades, grouping them in classes according to their trades, and giving each class a teacher who not only knows mathematics, but also knows the trade of the men whom he is instructing and can apply his instruction to that trade. Such classes can easily be organized in any of our evening high schools, and it is entirely feasible to organize them in connection with evening trade schools conducted in the shops of manual-training high schools.

5. We ought to organize, in like manner, evening classes in applied physics, grouping the men again in such a way that those of the same trade, or closely related trades, are put together in classes by themselves and are taught by a teacher who can teach, not only physics, but also its applications to the trade.

6. We ought to organize similar classes in chemistry, in which, besides the rudiments of chemistry as a basis for specialized instruction, its various applications to the manufacturing industries should be taught.

7. We ought to organize classes in electricity, where students may receive, not only theoretical instruction, but also have an opportunity to do laboratory work and fit themselves for practical work as electricians.

8. There is a great need of a trade school for boys fourteen years old and over, who are not prepared to enter a high school, and are obliged to learn a trade, or to leave school and engage in some gainful occupation. Statistics show that a large majority of men engaged in the wood-working and iron-working trades have never attended a high school. Quite a fair percentage of them have never completed a grammar-school course. These statistics show that there is need of a trade school of lower rank than a high school. Such a school ought to take boys at the end of the sixth or seventh year of the elementary-school course, after they have reached the age of fourteen, and keep them three or four years, as may be necessary, requiring them to do as much academic work, both of grammar and of high-school grade, as they can carry. No trade school for boys of this age should ever be established which does not require academic work.

All the instruction of mature men who are already engaged at their trade should be specialized, for in this way alone can it be made to appeal strongly to their interest. Such men come to an evening school for the purpose of gaining the ability to do something which will have commercial value, and not, as a rule, for instruction which will only broaden in a general way their education. They may be able to run one or two machines in a shop in which they are engaged and come to the trade school to learn how to run another; but they come to learn to run this other machine with sufficient skill to do work with it which shall have a commercial value. In order to secure attendance and interest at an evening school of any kind, where attendance is not compulsory, it is necessary to teach the student that particular thing which brought him to the school.

While in the case of men already engaged at their trade a high degree of specialization must be allowed, the reverse is true of a trade school in which young boys are to learn a trade. Such boys ought to be given, in the first place, a broad course in manual training, making them familiar with mechanical principles and with mechanical processes of various kinds; in short, with the underlying principles and processes of a number of specific trades. They should be required to study mechanics, physics, and mathematics, and their applications to the mechanical trades, with all the thoroness of which they are capable. In other words, before they are allowed to specialize minutely, they should be given the broadest training possible in their case. The one thing which the American mechanic needs, and fortunately possesses, is versatility. With the rapid changes in trades, and the rapid displacement of one piece of machinery and one process of manufacturing by another, the ability to adapt himself readily to these changes is absolutely necessary to the mechanic.

THE ORGANIZATION OF TRADE SCHOOLS: FROM THE POINT OF VIEW OF A TRADE-SCHOOL DIRECTOR

ARTHUR L. WILLISTON, DIRECTOR OF DEPARTMENT OF SCIENCE AND TECHNOLOGY, PRATT INSTITUTE, BROOKLYN, N. Y.

I think that all persons will agree that public education should, in a general way, reflect the spirit of the age and the life of the people. There never has been a time when industrial activity and the application of scientific and mechanical principles to the arts have so pervaded every community as at present. More than one-fourth of the entire population of the United States having any regular employment now finds it in the building trades, in manufacturing, and in similar mechanical pursuits. In Massachusetts and the north Atlantic states the proportion of those thus

employed is much larger even than in the country at large, being 46.9 and 34.5 per cent. respectively; and the requirements, too, for skill and intelligence on the part of the workers are becoming correspondingly more exacting. Yet, even here, where the school system is best organized and developed, it has not yet expanded to meet their needs, even though the demand for this is more than a quarter of a century old and has been growing more urgent every day.

As a nation we have a long-cherished idea of having every boy and girl in the land receive at least a complete elementary-school training. I wonder how many appreciate how far we actually come from realizing even this modest ideal. Less than one-third of all the children who enter the schools in the United States ever graduate from the grammar school or its equivalent. On an average, American boys and girls now receive only a trifle over five years of school training, and three-fourths of them all start their life-work with almost no education—with nothing but the most meager knowledge of reading, writing, and arithmetic.

In at least two important particulars—in their failure so to expand as to reflect the mechanical and scientific spirit of our times, and in their failure to educate and train the whole people—the common schools of the United States have failed in what the nation has expected of them. I do not wish to underestimate the value of what has been accomplished, but my work for the last ten years has brought me in contact with a class of individuals for whom the existing schools are able to do little, and I have come to see and feel their needs more keenly as I have realized what it was possible to do for them. I believe that it is worth while asking whether our plan of popular education cannot be so extended as to aid further this vast horde of individuals that does not know its advantages beyond the most elementary grades.

There are many causes that combine to make the pupils leave the public schools in such large numbers so early in their courses, but in the majority of cases two causes stand out clearly. A few leave because of absolute necessity, but a much larger number, I am convinced, leave because they do not believe that another year or two of school will be of enough practical benefit to them, in the fierce competition for a livelihood that they will have to meet, to pay them for the sacrifice. They prefer an early start. It is not wholly poverty that causes, even in prosperous years, over 85 per cent. of all American children to be withdrawn from school upon the completion of the preparatory-school course. It is quite as much, I believe, the conviction that education of the kind that they can get will not increase their efficiency in their life-work. When the American people pass this judgment against our schools by such an overwhelming majority, it is, to my thinking, time that we seriously consider what may be done to make our system of popular education in reality a system of education for the whole people.

The remedy, it seems to me, is most apparent. We need not alter our existing schools, but rather to supplement them with others that will meet the needs of those who are at present unprovided for as squarely as the present high schools meet the needs of those preparing to enter college, or as the professional schools do those of the doctor, the lawyer, or the engineer. The idea is not new in this country. The Lowell Textile School, the Williamson Free Trade School near Philadelphia, the New York Trade School, the Pratt Institute of Brooklyn are examples. Some of these have been in existence for fifteen or twenty years—all of them long enough to prove beyond question their value from every point of view. In Germany the idea is older; or, if not older, at least it has received more general adoption. In Berlin, for example, in 1901, 55 per cent. of all of the boys in the city between the ages of fourteen and eighteen years were enrolled in evening schools of this practical character, in addition to all those who were enrolled in the trade and elementary technical schools during the day.

To have our system of popular education in the United States effectively reach the great mass of wage-earners, we need to organize at least four types of schools to supplement the existing schools, or a single school to embody the four distinct types of courses of education.

1. *Day trade schools* of a very practical character, where young men, to whom another year or perhaps two of school is possible, can acquire a technical skill and efficiency in any one of a very large variety of trades, which will give them immediate help in securing profitable employment, and so ground them in the principles underlying their work that they may hope soon to become intelligent and skilled mechanics.

Such schools may not aim to graduate finished mechanics, but they can turn out advanced apprentices, trained in method, understanding the relation between cause and effect, and the simple principles of science as applied to their work, full of ambition, and skilled enough to make them sought by employers. In the short time available, what type of education could hope to do more?

2. *Elementary day technical schools*, for those who can devote the necessary two or three years, after completing the elementary schools, for teaching the applications of science and art to all manner of industries.

The Lowell Textile School is an example of this type of school. It is well known that the truths and methods of modern science are immensely helpful to the leaders in the industrial world, but it has also been demonstrated that, if taught rightly, they are no less helpful to the men in the ranks. These two types of schools will have a very large enrollment from those who otherwise would receive no further educational advantages.

3. *Evening trade schools*, to give those for whom further education during the day is out of the question—and the number of these will always remain very large—the practical skill necessary to enable them to become skilled mechanics and intelligent workers in the large number of trades in which they are employed during the day.

The course of instruction in these schools should embrace even a wider group of trades than the day trade schools. They should include, not only the usual building and manufacturing trades, but also such trades as that of the upholsterer, the tailor, the lithographer, the engraver, the watch-repairer, and many others besides.

4. *Evening technical school,* for young men of greater intellectual capacity than those included in the evening trade schools, who are employed as skilled workmen, draftsmen, clerks, and the like, and who wish opportunity to study these technical subjects which will help to broaden them in their various lines of work and give them instruction in those branches of applied science or art which are directly related to their several callings.

The course of study here should include, among others, such subjects as practical mathematics, technical chemistry, physics, applied mechanics, applied electricity, machine and architectural drawing, and applied design related to many crafts and industries.

In these schools, as I have hastily outlined them, I have referred only to the needs of men employed in mechanical occupations, but it is my thought that they should also provide courses of instruction leading to every well-defined vocation in which there are a sufficient number of either men or women employed to make their establishment sought. I believe, too, that all four of the classes of schools which I have described should be highly specialized, differing in the courses of instruction that they offer in different places, according to local industries and the principle occupations of the people.

The practical advantage that would be derived from having trade and technical schools, with day and evening classes, generally established thruout the land would be almost beyond calculation, but their educational benefit in the development of intelligence, manhood, and good citizenship would, in my judgment, be still greater. The demand for such schools is unquestionable, and at present in most places the only way in which this demand can be satisfied is thru correspondence schools, which today enroll more students than all the colleges and professional normal schools in the United States combined. The large majority of these students are mechanics and laborers, and to me it is a sad reflection of our national system of education that the earnest pleading for knowledge on the part of the wage-earners of the land has become a profitable field for business enterprise.

In describing what may be accomplished thru these schools I am not speaking without knowledge. I am speaking from experience of over ten years in this field of education, where I have seen young men under my charge grow and develop intellectually in a way that would surprise most teachers. I have seen evening classes in elementary mechanical drawing, with but six hours per week for twenty-four weeks, do work that I would willingly compare — that of every member of the class — in quantity and quality with that of any college in this country, in thirty-six weeks of the

same number of hours per week; or with almost any high school in twice that length of time. I have seen evening classes in technical chemistry, with fewer hours per week, surpass day students who had much better preparation and training. I have seen young apprentices, with instruction equivalent in hours to only three weeks' work at their trade, do things that journeymen mechanics, with four or five years of experience, cannot equal. And these things are not unusual or exceptional. They make one have faith in what patience and perseverence and determination can accomplish. They have taught me to believe in the young men who come to the trade and the technical school for help; and if every one of you present here today had had the same opportunity to see them and to know them, you would believe in them too. In theory, we all of us agree that it is from the great class of the people who work with their hands that the flower of the nation comes, when given half a chance; but, in the present state of our social development, the means for them to rise have been largely cut off, and today they are sadly in need of the stepping-stone which the trade and technical schools will afford them.

Some persons fear the attitude of organized labor toward these schools, but my experience leads me to have confidence in its support. All unions of skilled labor desire to restrict admission to their ranks. And they are wise and right in wishing to make this restriction as rigid as they can. Every professional organization does the same. No lawyer can practice in this state until he has passed a difficult examination at the bar, and no engineer can obtain any business until he has finished a severe course of training or completed an apprenticeship of practical experience even more difficult. The members of the unions realize that their power and their safety come from having the gap between skilled labor and the unskilled just as wide as possible; and any agency that will help to widen this gap by making skilled labor more effective and efficient they will welcome, for they understand that with them, just as much as with the doctors or lawyers or engineers, the only lasting and effective restriction is that of education and ability. They will oppose any school that seeks to turn out large numbers of half-trained men, who will tend to lower their standard of average ability and capacity—and rightly; but I think we can safely trust the good judgment of the American workman to see in the schools, such as I have described, that help to lift and uphold the standard of his trade, the most potent aid and ally that has been offered him.

If, however, these schools are to realize their possibilities, those who organize and direct them must appreciate the fact that they can succeed only by supplying the needs of the people who are taught, and set aside giving them something else which is believed to be just as good or perhaps better for them. The teaching of the industrial classes is not difficult, if it is commenced at the right end by going down among the

workers and finding out what they actually need to make them more efficient. The methods of teaching must be adapted to the people taught; conventional methods will not answer. The teachers must be men who know those whom they would teach, who are chosen because of their enthusiastic belief in their work, who have unusual skill and proficiency in their particular calling, and who are such masters of their craft as to command respect from all who are competent to judge.

The equipment, too, in all practical lines of work must be modern and the equal of that found in the best plants of the same character; for the students will judge the standard of instruction largely by the standard of the things that they can see and are familiar with. But the greatest essential of all is *directness* and *singleness of purpose* in all the work. If the object is to help a certain group of individuals in a practical way, they should be told so frankly, and then all energies should be devoted to the accomplishment of that one aim. To deviate from the object for which a course is planned will decrease confidence in the sincerity of the school, and everything which is not in the direct line of giving the students the exact kind of practical help which they seek in the courses of instruction they enter will be found to be detrimental. It may sometimes seem as tho more good could be accomplished in the direction of general culture and good citizenship if something specific were introduced into the course for the accomplishment of this end, but I think that it has been demonstrated beyond a doubt that by helping young people to help themselves in a practical way, thru such practical means as I have here tried to describe, more is actually accomplished in the way of character building and the development of citizenship than could be done in any other way. The time is too short to accomplish more than one thing well, but it is not too short to give these earnest workers just the help that they need, and, in giving it, to show them a goal worthy of their best ambition, which they can reach if they will continue to apply thru life the same scientific spirit that they have used in their school work: first, the belief that there is more truth and a better way than they have ever found which is worth their striving for; and, secondly, faith that, if they apply all their knowledge and experience toward finding it, they will succeed. It is this spirit that gives enjoyment to toil; and what greater blessing could a nation bestow upon the multitude of people who must spend the greater part of the waking hours of their lives in working with their hands, than an opportunity to learn to do their work in this spirit?

DISCUSSION

CHARLES A. BENNETT, Bradley Polytechnic Institute, Peoria, Ill.—When considering so great a proposition as the one before us this morning, it is well to look at the obstacles in the way as well as the end to be attained. There is unquestionably a

demand for trade schools, but who is to furnish them? Will the manufacturers? Will the trade unions? Shall they all be maintained by private endowment, or shall they become a part of the public-school system?

A few have been established already by private endowment. If the demand grows more urgent, I believe the manufacturers are likely to combine for the maintenance of such schools. In my estimation the trade unions are making a great mistake in not coming forward and establishing trade schools. A few trade organizations already do something in this direction. I am expecting there will soon arise some far-sighted leader among the unionists who will point out the great advantage of union control of such schools, and will start a widespread, but carefully regulated, movement for trade instruction of the immediately practical sort. I now refer to training in trade processes and methods, not to work in applied science and mathematics such as is given in continuation schools. But the most vital question before this body is: Shall the public schools of our cities and towns furnish this trade instruction? What are the obstacles in the way of such a plan?

1. Trade instruction of the kind in question seems to be opposed to the traditions of our American free-school system. It has been the aim of our public schools to give the general education needed by every man, and, with rare exceptions, no subject has been allowed in the curriculum unless it furnished a contribution to the general education of every boy and girl; in other words, each subject must have in it a large proportion of educative elements substantially as valuable to one person as to another. On the other hand, the highly specialized knowledge, or the "tricks," of any trade have not been considered a reasonable part of public instruction.

2. It is contrary to the spirit of our public schools to allow a high degree of specialization at an early period in school life. In the words of another: "Every boy's education must remain open at the top." He must ever be in line for something higher in education. I can conceive that it would be possible to retain this feature in such a trade school as has been proposed, but it does not exist in some of the trade schools of the present day. Each pupil in an American public school should have the opportunity, so far as the school can control that opportunity, to receive the highest general education the public schools can give. No impassable barriers shall be thrown in his way.

3. Trade schools, if established at public expense, might produce a surplus of workmen in one line of activity at the expense of another. This is what the trade unions fear. They fear that such schools would not be regulated to fit their ideas of adjusting supply to demand. In a given locality the demand for tradesmen fluctuates more or less. It would be difficult to keep the output of the school in harmony with the demand. The public school, as now constituted, does not have to consider this question.

Miss Jane Addams, of Hull House, when investigating the condition of the poor on the West Side in Chicago a few years ago, found that in a large majority of cases it was the skilled and highly specialized tradesmen who were out of work, not the handy men who could turn themselves to any one of the several lines of work.

4. There is danger of favoring one class in the community at the expense of another. The manufacturer of machinery wants a school for the machine trades. If this is established, the builders will want a similar school for building trades. Then the clay workers, and the textile industries, and the jewelers, and the barbers, and all the rest will want a school, or will have a "bone to pick" with their neighbors who have a school. Mr. Burlingame has recognized this fact in his paper. The wire-pulling in school boards at the present time is not to be compared with what might take place if a half-dozen trades were clamoring for their rights and privileges.

5. The cost of such schools would be an important factor and would render it impossible to have a school for many different trades in a city of moderate size.

All these obstacles I see in the way of establishing municipal trade schools supported by public funds. I do not say that it is impossible to overcome these obstacles, but

I do say they are serious obstacles that must be considered. Many of these would be more easily removed, tho not different in principle, if the trade schools were to be maintained at the expense of the state and distributed thru the state where most needed.

I come from an institution where a pure trade school is flourishing. At Bradley Polytechnic Institute, in Peoria, Ill., we have a school of horology that is well equipped and is doing good work. Here we train watchmakers, jewelers, engravers, and opticians, who are in demand all over the country. It is particularly significant, it seems to me, that this school practically pays all its expenses out of the income from tuitions. The demand for skill in the jewelry business is so great that young men in large numbers find it profitable to come to us and pay a high rate of tuition for instruction. Many students cannot afford to follow the course thru continuously, and so they come for a few months, which gives them a start in their trade; later they return to take up a special branch, as engraving or optics, devoting their entire time to one or two subjects. Often they return a third time, each time going away with increased skill of the most practical kind; which means, in turn, increased salary.

I recognize the need of trade instruction, but I believe that, as a rule, it should not be supplied by our public schools. In this connection I wish to express my belief in the ability of the manual-training work to do all in this direction that should be expected of the public schools. Manual-training schools are doing much more to relieve the pressure for trade schools than many persons are willing to admit. Most gratifying testimonies have come from leading manufacturers. The manual-training schools are doing this without departing from the fundamental principles of our public-school system. Let such schools be multiplied, and let them get into closer and closer touch with local industries, and I believe they will meet the legitimate demand for industrial training, so far as the public schools are concerned.

ARTHUR A. HAMERSCHLAG, consulting engineer, New York Trade School.—A brief history of trades education in the United States would be very largely a history of the development of the New York Trade School. Founded in 1881 by Colonel Richard Auchmuty, it marked the first distinct movement along educational lines to provide a substitute for the declining apprenticeship system, to which system both Europe and America have for many decades depended for their skilled mechanics.

After careful study and investigation of the numerous European systems of manual training, and technical and trade instruction, Colonel Auchmuty arrived at the conclusion that none of these systems were applicable or practical to handle this most important problem in this country, and with fortunate foresight designed the so-called "Auchmuty system of instruction," which has produced such remarkable results. This system of instruction has become, during the past twenty or more years, the recognized American standard, and at the recent world's fair at Paris it was awarded the grand prize, in competition with all the schools of a similar character in Europe and America.

Before entering into a detailed explanation of the courses of instruction at the New York Trade School, it should be clearly understood that the aim and purpose of this instruction are quite distinct from the manual-training and technical institutions, and that what may be applicable to them from an educational standpoint may be both obsolete and impracticable to the trade school. In order to understand and define its organization, the length and breadth of its courses, and the manner of imparting information, due consideration must be given to the economic problems to be solved and the result to be attained. The marked deficiency in the number and capacity of American trained skilled mechanics, and the continuous and hazardous importation of European workmen, must likewise be given careful thought.

The absolute and irretrievable extinction of the apprenticeship system, brought about by the changed methods of doing work, the coming of labor-saving machinery, and the harsh and unjust attitude of the labor unions dominated by ignorant and misinformed agitators, are serious problems that must be met by institutions of this character.

An educational system embodying the best features of the old apprenticeship system, adapted to more modern conditions, is a vital necessity. To train the American youth along specialized lines, leading to a gainful occupation, is a duty that must not be shirked or belittled by the educator.

The New York Trade School is not unmindful of the welfare of the journeyman mechanic, and has its courses of instruction for journeymen well developed and in operation, with five years of experience along this phase of trade education to guide it in its future growth.

The records of its more than six thousand graduates, whose homes are in every state of the Union, and who are occupying positions of trust and responsibility, are sufficient evidence of the widespread demand and the urgent need for a concerted movement on the part of the educational fraternity in support of trade education.

THE ATTITUDE OF TRADE UNIONS TOWARD TRADE SCHOOLS

WILLIAM H. SAYWARD, SECRETARY OF THE NATIONAL ASSOCIATION OF BUILDERS, BOSTON, MASS.

Trade unions, as a rule, are opposed to the trade-school idea, and a summing up of their reasons for this attitude may be expressed as fear of the creation of too large a supply of workmen thru the operation of such schools. Many other reasons, more or less superficial, are given, but the real underlying objection is that unrestricted training in the trades will flood the market, which, it is claimed, is already overcrowded.

While this, as a general statement of the expressed attitude of trade unions, seems to me wholly correct, it is likely to be misleading unless qualified by a statement of certain conditions which examination of the field will show.

In the older communities—notably Austria, Belgium, Germany, Switzerland, and France, and even in Great Britain—the attitude of unions has been materially modified within recent years, and a tendency is manifested to encourage the trade school where its operation is restricted to training only those who have taken up some trade as a positive vocation. In these countries, as well as in some other parts of Europe, the "continuation schools," or schools for extending the knowledge of the actual workman or apprentice into the theory and technique of his trade, are not only looked upon with favor by unions, but are often established and maintained by them, and in some cases even by workingmen's clubs and friendly societies of workingmen whose membership is general rather than specific.

While, therefore, speaking in broad terms, unions do not look with favor upon the trade school *per se*, one cannot fail to notice evidences of great and increasing interest among workmen at large, as well as in their organizations, in that application of the trade-school idea which gives opportunity for development in their chosen trade to those who have

thrown in their lot with the actual workers and propose to earn a living in their company.

Next to the fundamental objection which I have cited, the most clearly expressed opposition to unrestricted trade-school training is that it has a tendency to produce insufficiently trained mechanics, who go from the school into the community, proffering themselves and being received and employed as full-fledged workmen, thus proving not only competitors of the "underpaid and generally handicapped mechanic," as the unions almost universally claim them to be, but also undesirable for those who employ them, inasmuch as they cannot deliver the skilled service which they profess to be able to supply. Associated with this second expressed objection is the claim that the attempt to teach trades in their entirety in a school is futile; that, therefore, schools which endeavor to do so are of little, if any, real value as far as furnishing mechanics fitted to undertake practical work is concerned.

Another reason given why trade schools are not a benefit is that "employers no longer desire the thoroly trained, all-around man, but want only the specialist," and that therefore a trade school which can at best teach a young man to perform the general operations or manipulations of a trade only fairly well is of little real value to him, since he is not fitted to compete with the specialist in any department of that trade.

In some of the minor trades, such as cigar-making, the objection to trade schools is most strenuous on the ground that the training in such schools has a tendency to increase child-labor.

Then there is always the jealousy, which I think unions unconsciously foster, which expresses itself in the belief that trade and technical schools are designed to help the rich and not the poor—to provide opportunity for young men of means, who intend to go into manufacturing or to conduct some business, to secure a technical training in and command of the elemental movements of a trade; rather than to help young men who intend to become real workmen.

Many other specific "grievances," to use a common union idiom, could be stated, but they are all closely related to the main causes of objection which I have cited.

It is to be noted that all of these attitudes of objection are at the present moment more pronounced in the United States than in older countries. Consideration of trade-school conditions as existing in the United States, and also in Great Britain, France, Belgium, Germany, and Switzerland, will be helpful in demonstrating where diminishment of friction begins.

It is necessary at this point to emphasize the fact that this discussion does not relate to the technical or manual-training school in any respect, but to the trade school proper—the school which purposes so to *teach* a trade that the student will be fitted to use it *industrially*.

There are many schools of combined academic and practical character known as manual-training and technical schools in this country, both private and public, and to these there is no expressed objection by unions; but there are few trade schools pure and simple, and to these, unions as a rule are at present strenuously opposed. The idea and purpose in these schools is to turn out finished mechanics, as far as knowledge of the science and practice of the trades is concerned, it being usually frankly admitted that the graduates will not be commercially equal to skilled workmen in point of speed of execution or adaptability until they have had sufficient experience with real work to give them these qualities, and therefore should not obtain full wages until they have had this experience. In practice, however, it turns out that the graduates of these schools have attained enough science and enough practice to enable them to pass current as skilled workmen, particularly when there is great demand, and that they therefore seek and obtain the going rate of wages as readily as men who have worked for years at the trade. In these schools of ours there is no attempt, I believe, to restrict the opportunity to those who have chosen a special trade as their vocation.

The industrial- or trade-school system in foreign countries, whether of semi-private or of public character, seems to be founded on the presumption that the young man has determined pretty definitely the career into which he expects to enter, and will shape his education accordingly; therefore the trade school addresses itself to those who have either already begun as apprentices or are about to do so, or to workmen who desire to make themselves more proficient in one or another department of a trade. It is this generally prevailing attitude in Europe which has disarmed the unions there of their opposition and presents the distinction to which I wish to draw attention.

The demonstration is narrowed down to this; when trade schools limit themselves to improving the theoretical, technical, and practical knowledge and skill of those who are already entered upon a trade, unions seem to approve, and in many cases to participate in conducting them. Here, then, seems to be very clearly marked the point at which friction begins to diminish. The next step should be to determine whether this point is well taken by the unions, and therefore whether they should be supported in it.

It will be readily admitted that any school for the higher vocations, or professions, which pretends to turn out at graduation the completely qualified practitioner assumes too much; and, whether or not there be any organized opposition to this assumption or any concerted disclaimer set up, it still remains true that the graduate is not so received by the public, and he is practically compelled to pass thru quite an extended season of severe experience before he is accepted at full value—"going rate of

wages"—by the community in which he attempts to practice. It apparently needs no union to produce this effect.

When, however, we consider the mechanical planes of occupation, commonly classed as laborious, we find that the public fails, either instinctively or with definite purpose, to set up any such test; and therefore organizations in these vocations have addressed themselves to the protection of their class from indiscriminate competition.

These organizations have very good ground for their assertion that trade schools tend to demoralize the trades when managed on the "wide-open plan"—that is, free to anyone who wishes to attend, regardless of whether he is committed to a trade or not, and with no control or supervision set up, within or without, to prevent him from passing himself off as a full-fledged practitioner. This possibility, which, as I have already indicated, has in practice developed almost into a certainty, is surely not to be looked upon with complacency, even by the intelligent tho unaffected observer, and therefore it is not to be wondered at that those most affected should demur and somewhat strenuously criticise the source from which the possibility springs. They may well claim that if the learned professions, such as the medical and legal, and sometimes others, are safeguarded with greatest care, in the skilled trades there should be some method of control which will at least guarantee that insufficiently trained workmen shall not be given full standing and full wages simply because they have passed thru, or perhaps only partly thru, the courses of a school.

While this attitude is natural and perhaps defensible, it is not at all reasonable or wise to condemn the trade school itself; for I think it can be conclusively shown that upon schools of this character the trades, as such, must depend for their own preservation. The effort should be, not to destroy the trade school, or blindly to oppose it, but to modify its methods and then utilize it as a means to regulate and control the output of workmen—which is really the point at issue, as far as trade unions are concerned—and to protect the community as well against the untrained and inexperienced. Under existing conditions—for some of which the trade unions themselves are to a considerable extent responsible—the public is in some danger of losing altogether the all-around artisan, the mechanic skilled and interested in his calling.

I have said that the preservation of the trades themselves depends upon the proper development of the trade-school idea. This is evident for two reasons: one, the passing of the old method of apprenticeship, and the other, specialization in the trades.

There is no probability that the old method will be re-established. Strenuous efforts, it is true, are being made in Germany to preserve the apprenticeship system in those trades for which it is adapted, much legislation having been enacted in this direction, in recent years; but, while it is possible, under a government as paternal and positive as that of Ger-

many, to reinstate even the old guilds with all their power and influence, it is hardly conceivable that under freer forms of government employers can be commanded in such matters to the extent that they apparently are in some of the European monarchies—Germany in particular.

Specialization has sought out almost all the trades, even those connected with building, where it has seemed least likely to get a foothold.

That these two movements, which may both be classed as commercial movements, threaten the trades, as trades, is beyond question, and under the commercial demand it seems to be inevitable that the trades will be split up endlessly, so that no one workman will eventually be capable of doing more than a fragmentary portion of a trade. The trade school furnishes the one measure of protection by and thru which these separate portions may be kept in one consistent whole, and the relation of the parts be so taught, and the capacity to combine the parts be so developed, that all-around men, capable of understanding and executing a whole trade, will not entirely pass out of existence.

It behooves the unions, as custodians of the interests of the workmen in the trades, to look more deeply into the function of the trade schools, and to consider more carefully how much the interests they have in charge depend upon the existence and operation of these schools; and it behooves employers to concern themselves more effectively, to the end that they may reap the benefit which will surely come thru their wise administration.

It is evident that there are some weaknesses in trade schools as at present developed. I am inclined to think that one of these is indicated in the somewhat crude objections made by unions. I am convinced that a comprehensive and effective system should be established, utilizing the trade-school idea, which shall prevent floating upon the market an unfinished product which, if it ever becomes finished, becomes so in spite of conditions, rather than by virtue of or purpose in them.

I do not believe for a moment that our privately established trade schools were ever intended or expected by their founders to produce too large a supply of mechanics and thus flood the market, or to incite young men to half perfect themselves and then deceive the public; but the function and purpose of the schools were distinctly expressed to be "to furnish as systematic and favorable a method of instruction and training as possible," to fill a void created by the decay of an old system which, while sufficient in its day and generation, had vanished, never to return. This function and purpose, to my mind, are more emphatically evidenced year by year, and as this instruction and training can best proceed in conjunction with practice in real work in which employer and workmen are engaged, I believe that the most complete method of operating that function and realizing that purpose lies, as I conceive it does in all matters affecting labor, in a more complete co-operation between organizations of employers and organizations of workmen.

The policy of this co-operation should be to create good workmen—the best, the most skillful, the most complete—and then to have the unions composed of these and these only. By carrying out a policy of this nature, which could be carried out only by a joining of hands of employers and workmen in the management and direction of trade schools with this end in view, the unions would be relieved of the most telling criticism now used against them, and their reason for being would be more clearly evident. By this measure the unions would be strengthened by "recognition" in the best sense, inasmuch as they would become the gauge and standard of excellence; and instead of coercion being necessary, as now, to keep the organizations up to that efficiency which numbers are felt to indicate, membership would be eagerly sought because desired as a sign of selection, and as a safeguard against being herded together, as now, in one mass of good, bad, and indifferent. The "non-union" man would then be the inefficient, the unreliable, the dishonest, the quarrelsome, the disturber, the dissolute, and the generally unworthy; and non-union he would have to remain until he should so reform as to make himself desirable. Then would there be the true line of demarkation between union and non-union—a natural and proper one, not the artificial and dangerous one which now exists. Unions would then become clearing-houses for workmen, as a sure source of supply of trustworthy, efficient, and skilled workmen; and not, as now, an aggregation of anything and everything that will simply swell an army, the leaders of which assert that "labor is a force militant," and that "as such its victories are to be achieved." Until this dispensation, labor has been supposed to be of the essence of peace and not of war; and it has not been until the forces of labor, as demonstrated thru cheaply conceived, unrestrained, or poorly administered organizations, have been diverted from their true channel, that the world has witnessed the commission of acts, under the impulse of this force, which have been unworthy of humanity, and which have roused the self-respecting in all our communities to most determined resistance.

It is my belief that the trade school, properly utilized as suggested, supplemented by further intelligent co-operation of real employers and real workmen in all affairs of mutual concern, may be one of the greatest conservators of safety. But these agencies for good must not be left to dilettante exploitation, nor to the equal danger of too general usage. Let employers and workmen engage in this service with the glad seriousness of conviction, and hope will succeed despair in all these relations.

In conclusion I would state that in my opinion the trade school does not offer a privilege which anyone should be permitted to enjoy without judicious supervision and control. It is an opportunity which should be chiefly available for those who determine upon a trade as their life-work and have a reasonable degree of fitness for it. In other words, the trade

school should be considered a training field for actual workers, and its operation should be reasonably restricted and controlled to the end that its graduates may have definite standing and the community, as a whole, be protected against partially perfected workmen.

DISCUSSION

FRANK KEYES FOSTER, editor of the *Liberator*, Boston, Mass.—Before one undertakes the possibly somewhat hazardous task of presenting to this audience what has been called, for the sake of argument, the negative side of the trade-school question, from the trade-union point of view, it appears only fair to insist upon a precise definition as to what constitutes a trade school.

It is not assuming too much to assert that the idealized trade school so highly commended in the very interesting paper of the secretary of the Master Builders' Association is not antagonized by thoughtful trade-unionists. The organizations of labor have to do with the actual and present condition of affairs. The trade-union conception of trade schools is in the concrete rather than in the abstract form. When, therefore, Mr. Sayward advances as his general premise the statement that "trade unions as a rule are opposed to the trade-school *idea*," I am inclined to believe that the assumption is not warranted by the facts in the case. Opposed, with good reason, to certain specific incidentals of trade-school management and practice, they unquestionably are, but the records of the trade-union movement of America may be thoroly searched in vain for any declaration of opposition to the trade-school idea.

The purpose of the trade-unionist is to maintain the American standard of living for wage-earners, and to elevate this standard wherever possible. The general diffusion of education has developed in the American wage-earner a standard of wants, desires, and aspirations beyond that of workmen in any other country, while our superior natural resources and free institutions have furnished him with larger resources with which to resist the bearing-down pressure on the wage-rate.

The trade-unionist is not so blind as to fail to realize that knowledge is power. His contention is not against the man who knows or the institution which teaches greater knowledge; it is solely against the individual who thru gross ignorance or selfish malice, lends himself to the breaking down of that defense, erected laboriously and painfully, by associated labor against the forces in the industrial world which make for the lower levels of living. If we are expected to welcome in free competition those who enter the artisan world by the short way, may we not fairly insist that these newcomers shall not lower the standard of craftsmanship or of recompense of craftsmen? As has been accurately noted by Mr. Sayward, the professions are jealously guarded against the influx of those who would enter them except thru the accredited paths and with the passport of approved competency.

The present attitude of trade-unionists as to trade schools has an analogy in their attitude toward the introduction of labor-saving machinery, once so bitterly opposed by them. Now no up-to-date labor organization attempts to prevent the extension of machine work. Its endeavor—as in the case of my own trade, the typographical—is directed toward securing for the machine workman a portion, at least, of the benefits accruing from the cheaper processes of production, and in this it is in a degree successful. The union recognizes the inevitable. It knows that the introduction of a machine which performs the work of several hand craftsmen causes distress for a time, during the transition period, the period of industrial adjustment, to many individuals who have had their trade capital abolished by new methods.

In like manner, the trade union is willing to make the most of trade instruction, when

the instruction is honest and competent, and not a mere recruiting station for the forces which tend to neutralize the uplifting work of the union. Hence the desirability of the definition insisted upon at the opening of the address.

SAMUEL F. HUBBARD, superintendent of North End Union, Boston, Mass.—Mr. Sayward's statement of the attitude of trade unions toward trade schools is, I think, eminently fair and impartial. The situation, briefly stated, appears to be this: We, who are outside of the trades, believe that workmen require the training of trade schools to fit them properly for their vocations. To me, the attitude of trade unions toward trade schools is one of hope, rather than one of discouragement. The mere fact that trade schools are opposed by those whom they are designed to benefit is no new experience. Most reforms, whether of theology, education, politics, or what not, have had their strenuous opponents; but when once their adoption became general, the marvel is that there was ever any opposition to them.

Trade schools, like the Williamson School of Pennsylvania, or the Lick School of San Francisco, that have a four-year course of day work, that give thoro instruction in the theory and practice of a trade as well as instruction in academic branches, and whose graduates are received into the trades as junior workmen to get the necessary practical insight, do not need to place the same limitations upon their applicants as do the evening trade schools. I am of the opinion that all evening trade schools should be limited to those already engaged in the trades. My reasons are: (1) There should be no doubt in the mind of the boy that the trade chosen is the one he intends to follow thru life; the best assurance of such decision is that he is already in that trade. (2) The boy, so committed, has an eye singly to the purpose in view, and he will work to achieve it. (3) He has a chance, during the day, to observe in actual practice, and possibly to apply, the principles taught in the school, and, being in the atmosphere of his trade all day, he more readily comprehends the work of the school. (4) Being in the trade, he does not have to look for a job on leaving school, which otherwise he would be obliged to do, with most discouraging results. The work of the schools should be in keeping with the best practices of the trade. To insure this, each trade taught should have its board of supervisors, composed of the best men in the trade, both of employers and workmen.

The trade schools thus far established in the United States have, with few exceptions, been started and are maintained by private means. In all probability not one of those who have contributed the money for them, or have been instrumental in promoting them, will ever be benefited, directly or indirectly, by the instruction given. These men are not to be charged with an unwarrantable interference by doing that which of a right properly belongs to others, or with meddling with things which are none of their business.

These experimental stations will continue to do their work of developing and refining the processes of trade-training, until such time as organizations of employers and of workmen shall realize their value, shall reach out the glad hand to possess them, and shall say: "This is our work; henceforth we will do it." When that day shall come, the National Educational Association will not be discussing "The Attitude of Trade Unions toward Trade Schools."

CRAFTSMANSHIP IN EDUCATION

LESLIE W. MILLER, PRINCIPAL OF SCHOOL OF INDUSTRIAL ART, PHILADELPHIA.

Of all the tasks which have been set for the school-teacher since the beginning of recorded time, probably none would have sounded more strangely to him a couple of generations ago than the statement that he

was expected to make it a prominent part of his duty to teach his pupils to do the very thing the necessity for which had for ages furnished the principal, if not the only, reason for keeping them out of school; or, in other words, that he should be told that the children were to come to school in order that they be kept at work. The very combination of words would have been unintelligible. They would constitute in themselves a contradiction of terms. And yet we have changed all that so far as to feel sure now that by far the most important step in the advancement of educational ideals that has been taken in the last quarter of a century has been the recognition of manual work as a proper subject of instruction in schools and colleges alike, and we have come to regard the attendant agitation in favor of such education and its corollaries as the chief means of promoting industrial efficiency and maintaining industrial equilibrium in the state itself.

It has come to be fairly well accepted that no education for either boys or girls of any class or condition can henceforth be regarded as satisfactory and complete that does not include a certain amount of contact with those fundamental manual processes which underlie all production; that this contact ought to take place in the schoolroom itself, and be made an essential and organic feature of the instruction imparted there; and that such work deserves to be treated on quite as high a plane of dignity and culture as anything that can possibly be learned from books, or that concerns itself with mental processes alone; that bench-work, for example, ought to have as equitable a rating and be accorded just as honorable a place among the requirements for entrance to college as Greek, or algebra, or anything else.

Furthermore, it is evident that the public duty in regard to professional education is coming to be interpreted in much more liberal terms than was formerly the case. Among the qualifications for citizenship which the state recognizes as essential, and for which in mere self-defense it is inclined to assume a larger share of responsibility each year, industrial efficiency is looming up as something of tremendous importance, whose claims no state can afford to ignore.

To some of us—and among them are to be reckoned a good many of the most earnest and enthusiastic members of the teachers' profession—the new movement means, first, perhaps mainly, the rehabilitation, as far as the school is concerned, of certain simple, but fundamental, forms of handicraft, such as weaving, basketry, and pottery-making before the invention of the wheel, as they are practiced by the more primitive races, until they disappear as the inevitable result of contact with what we cannot very well help regarding as an advancing civilization, whose infinitely cheaper productions quickly replace the results of the earlier and cruder efforts.

The promotion of craftsmanship by means of systematic instruction

in the schools is, however, hardly to be regarded as to any great extent an effort to rehabilitate the industrial methods of a century ago. Silas Marner with his single loom in the little cottage out there in the fields, and the peripatetic shoemaker who went from house to house and made shoes for one family after another in our grandfathers' days, are, at this distance, picturesque and interesting figures; but we are not seriously regretting their passing, or attempting to bring them back to life; and the true sources of our interest in handicraft must be sought somewhere else. They are to be found, as it seems to me, in the fact that all good work depends for its interest on the intimacy of the relation which it represents between the mind which conceives it and the methods by which it is executed; good work is interesting to the consumer in just about the same degree that it is interesting to the producer, and it interests him to just the extent that it enlists his thought. As the natural and direct means of expression of thought in terms of material is the hand, it is apparent that hand-work must of necessity remain the basis of all industrial endeavor and the source of all industrial power.

The keynote of the new movement is, then, to be found, not to any great extent in the kindly disposition which leads us to want to play with our little Indian brothers, altho this is entirely right and proper as a childish instinct; nor in an affectionate communing with the ghosts of our grandmothers, altho this, too, is perfectly permissible and praiseworthy in its way; but in the determination to make a better use of existing opportunities and to accomplish more with existing agencies than the results with which we are familiar and of which, in so many cases, we are so much ashamed. No, the fault, such as there is, is not so much in the modern tendencies toward mechanical invention or industrial and commercial organization, after all, but mainly in the failure of our growth in spiritual things to keep pace with the progress which we have made in material directions on a lower plane. The changes which the years have wrought are, on the whole, beneficent, in spite of all that has failed of accomplishment, and in spite of the inevitable sacrifices with which all progress is attended; and whatever other expedients are resorted to for still further improvement, the forward movement is certainly not to be hastened by turning back the clock. If we cannot make as satisfactory goods with aniline dyes and power-looms as our grandmothers made with indigo and by hand, we must know the reason, and must see to it that the faults are corrected and the necessary improvement made. First of all, we must be sure of our reasons for preferring the old work. When this point is settled, we shall be well on the way toward doing better things ourselves. If the indigo and the hand-loom are found to be indispensable to excellent production, we shall certainly retain them and find an entirely honorable place for them in our new scheme; there need be no uneasiness about that; only we must know what we are about, and not

throw away any real advantages already gained in our eagerness to recover the charm that has been temporarily lost.

We have got to rewrite our definitions of art and restate the principles on which its significance depends. When we speak of the unity of the arts, the expression must really mean something to us which it cannot mean if we hamper and restrict it as we have been rather fond of doing. Read into the term the meaning that Emerson insisted upon, that all "conscious utterance of thought to a definite end" is art, and you simplify the whole problem immensely. It is not the play of fancy or sentiment alone; it is not the æsthetic charm or the stimulus of emotion that is the essential thing. It is the constructive effort, the conscious utterance to some purpose, that is the real thing. If we can make art mean that, then multiply art schools, and industrial education will take care of itself; but as long as it is the main business of the art school to magnify the office of the designer at the expense of the dignity of the workman, something else will be necessary.

As a matter of fact, the whole theory that regards good design as something that emanates from the studio and is imposed upon the workman from without, instead of being developed from within, out of his own experience as a craftsman, is fundamentally wrong, and the mistake of holding it is itself enough to account for most of the errors into which we have fallen.

Art education — yes certainly, properly understood and applied, it is the solution of the whole problem; but this means acceptance of the truth that craftsmanship is itself the very foundation of art, and that familiarity with it in one or more forms must of necessity constitute no inconsiderable part of the experience which leads to knowledge and appreciation of the things on which its significance depends.

What we want to do in the schools, then, is to treat our crafts as arts and to regard our craftsmen as artists. This means that each pupil should assume toward work of any kind that first-hand kind of attitude which I do not know how to describe more exactly than in this way; for I think we all feel that, whatever else he is or is not, the true artist is less hampered by precedents and less overawed by conventionalities than almost anyone else, and has a way of getting at the essentials of things about as directly as anyone.

I hope I can make myself understood about this attitude toward work of any kind which I designate as artistic, and which I regard as of so much importance. In some respects it is just the opposite of the scholarly attitude, and is therefore a little hard to understand for most of those who approach the subject from the scholar's point of view; but it is just because of this difference that the matter is so important. Education has always had the scholar; it needs the artist as well, and is finding a place for him; each supplements the other, and both are necessary. Moreover, we are

revising our conception of learning itself, as well as taking note of the things which it alone cannot accomplish.

The wisdom of the world is by no means monopolized by those who write the books or deliver the lectures, and the masters of craftsmanship in any form, even that of speaking or writing, have, as often as not, been men who have owed least to scholastic influences. This is not intended as in any sense a disparagement of the schools, but only as a reminder of how much ground they have hitherto failed to cover, and to which it is the very first duty of the new movement to direct attention.

In a recent address President Eliot characterized architecture as perhaps the most learned of the professions. He was quite right, as he usually is. Probably no one else has to know so much about so many things as the architect; but let us not forget, on the one hand, how much of his knowledge has come thru channels other than those which are associated with the discipline of the schools, and, on the other, how conspicuous an example he is of the inadequacy of the scholastic method alone to develop the qualities which are most worth having in any profession which is first of all an art. In no profession is there greater danger that respect for precedent and authority will stifle inspiration, and that vivid and ingenious expression will be sacrificed to rule, than in architecture. The architecture whose charm outlasts the centuries and which we make voyages to see is not that which owes its character to respect for the traditions of the schools. Judged by the standards set by the academies, the façade of St. Marks is the play of riotous infancy, but yet it remains the most delightful structure in the world, outweighing instantly, with any mind that is sensitive to beauty, all the cold correctness that was attained by the Renaissance after its living current had begun to crystallize into schools. Of the vigor and splendor of the early Renaissance I have already spoken, but that is another story.

I have nothing to say against learning. It is, and must always remain, the greatest conservative influence in the world, and the principle means by which the mind is kept from wild and unprofitable undertakings; but art alone keeps the original sources of interest open and supplies at first hand the elements which constitute enduring charm. The foundations of taste are laid in respect for material and in appreciation of function; style is the dignity with which genuineness carries itself. It must be inherent in things as part of their very structure; it cannot be assumed like a mark, or stuck on like a veneer. Abiding interest in things, then, is not to any great extent a matter of superficial ornamentation; and one of the worst mistakes which we have made in our efforts to make art instruction universal has been the exaggerated importance which has sometimes been given to purely decorative design considered as surface ornament alone, and as something, therefore, which might be effectively studied

without reference either to the object to which it was to be applied, or to the methods or materials in which it was to be expressed.

It is putting the cart before the horse to make designs in that way. Nor is good ornament to any appreciable extent a matter of abstract principles, such as are embodied in the formulas about rhythm and symmetry and balance, in which the academic mind has so often claimed that it had been imprisoned. Ornament, like anything else, is good if it means something, if it expresses something that is worth expressing. Rhythm and balance are well enough, of course, and are very often present, altho in numberless cases they are not present at all; but if they are, they come of themselves for the most part thru the mere necessity of repetition which is the first condition of so large a part of manufacture. They are not by any means essential elements in the interest of the pattern. The real interest lies a good deal deeper than that, and is inseparable from the associations and meanings which all these rudimentary abstractions completely ignore. No, it is not the surface, it is the thing itself that we want to get at; and we want to make it ourselves; we want to learn to think in terms of material, of wood and leather and cloth and iron and clay. We want to know and appreciate and enjoy the qualities which are characteristic of each, and we want the things which we make out of them and the ornament which we apply to them to express this appreciation and to celebrate the interest we feel in them and the pleasure they give us.

There is no longer any serious question regarding the admission of the craftsmanship principle into the general educational scheme. What remains is to decide how far the idea is to be carried, and what methods are to be adopted to make it effective. For one thing, I feel pretty sure of this, that we have no right to expect results at all commensurate with the importance of the movement until we have at least a few central schools providing thoro professional instruction of the most advanced character in the more important forms of craftsmanship, especially those in which the artistic possibilities are most pronounced, whose influence and example shall react everywhere on the more elementary instruction, and set the standards by which the aims of the lower schools may be informed and directed.

I prefer the expression "professional schools" rather than "trade schools," because the term seems not only to be more comprehensive, but to leave open, in a sense that the other name does not, some rather important questions of immediate function and ultimate aim.

Take the case of textiles. When Colbert bought out the old Gobelin establishment in 1662 and set the best men to be found in France, or anywhere else, to making tapestries, upholstery, and all sorts of fabrics, not as cheap, but as beautiful, as it was possible to make them, he set the standard by which public promotion of industrial interests will be tried forevermore. The fabrics that have been produced there have shown the

world how perfect such things can be, and have given France a reputation which the rest of the world acknowledges as supreme; but far above and beyond that in importance is the fact that their production has meant the training of a set of men who have carried with them, when they left the establishment, a kind of attainment that has set high standards and made excellence possible wherever they went.

We are learning the lesson — may we learn it speedily! — that something besides cheapness is worth striving for when work is to be done and wants supplied; that the whole duty of statesmanship is not included in the discussion of protective tariffs; and that the teacher has not done his duty while industrial inefficiency remains the heritage, as it is today, of by far the larger part of the generation that is under his care.

DISCUSSION

LAURIN H. MARTIN, instructor of applied design, Massachusetts Normal Art School. — Principal Miller says in his address that "the foundations of taste are laid in respect for material," and also that "we want to learn and think in the terms of material."

All of those who have looked into the subject will fully appreciate how true this is; for the character of a design depends upon the material employed. Therefore it is of the greatest importance that a designer should think in the terms of material. It is my opinion that no designer can think with any great degree of intelligence, unless he has had actual work with different materials as a part of his training. If he has done work, it will enable him to take advantage of what different materials have to offer, and teach him to respect their limitation. It will also teach him construction, and his design will be planned with this in view, and will be a complete working drawing which can be easily carried out.

I quite agree with Mr. Miller in saying that "nothing could be more harmful in its influence than the distinction between the designer and the workman." This is where the whole trouble lies at the present time. If more designers would carry out their designs, the greatest improvement would be noticeable. A design on paper at the best is only a suggestion, and, if given to another to work out, many things would not be understood, and a deterioration would consequently follow. These points, I am sure, will be accepted by all.

I think that there is only one remedy for the present conditions. This remedy is to increase technical work in the schools. Let pupils have an opportunity to carry out their designs. We shall then have designers in the full sense of the word, and we shall see fewer designs which are studies without reference to the object to which they are to be applied or to the methods or materials in which they are to be expressed. Our designers would have a respect for materials, and would not make a design for cast iron to imitate wrought iron, which under the present conditions is apt to be the case.

Hand-work, of course, has much greater artistic qualities than machine-work; but at the same time the machine is indispensable, altho I do think that our machine-made objects might be made much more beautiful. I think that, if more hand-work were done in our art institutions, our industrial arts would soon be in a healthier condition.

WALTER S. GOODNOUGH, director of drawing and manual training in public schools, Borough of Brooklyn, City of New York.— The idea of craftsmanship in education, at least in public elementary education, is comparatively new. It can be justified, I believe, on educational, sociological, and, above all, industrial grounds.

The craftsman of old was one who not only thought out the whole thing, but carried his thought into execution. The impress of individual mind, of creative and loving effort, was everywhere apparent in his work. The craftsman was an artist; and the artist was most frequently a craftsman. The citizens of former times believed that certain benefits arose from the cultivation of beauty; that the pleasures of private life and the dignity of public life were increased materially by the aid of the arts. One cannot roam thru the mediæval towns and the museums of industrial art of Europe without feeling strongly the art spirit which pervaded the old work, and which, thru modern machinism and commercialism, but more largely thru lack of trained public taste, is so frequently absent from modern work.

Art has been too often divorced from production and construction, and in the minds of people has come to be associated almost entirely with the product on canvas, in marble, or in bronze. Instead of the craftsman, we have had the mechanic or operative, working in his specialized, often limited, sphere. The condition has reacted upon the individual. He has not the right interest in his work; he has become more of a machine.

After four hundred years or more, the craftsman is again to take his place among artists; and art is to permeate industry and the daily life and surroundings of the people. To this all must agree who have watched the trend of events.

The need of the hour is for the art teacher and the teacher of manual training to get together.

Art teaching, particularly in the matter of design, should require more general application to definite purpose in material or construction.

Manual training should be characterized by less formalism in plan and method. There should be less of the directed or imitative, and more of creative effort, under wise guidance. As I have studied the subject of manual training in different sections of this country and in Europe, attention has been given largely, until quite recently, to the matter of exact reproduction, from direction or copy or drawing, of set exercises or models. The art element, so far as the pupils' initiative is concerned, has been absent or at a minimum, with a few notable exceptions. I refer more particularly to the manual training with tools in the upper grammar and high-school grades.

Let the art teacher, the shop-work teacher, and the sewing teacher work in harmony, making the work of each aid the others. This is the true craftsman spirit.

The particular work done in the elementary schools should be such as will appeal as largely as possible to the pupils' interests, and at the same time provide proper advancement in process and difficulty. Under certain general limitations that will not hamper, and with such guidance and suggestion as will insure proper ideals and standards, pupils should design the form and decoration, and, when sufficiently advanced, determine the mode of construction or kind of material best suited to the purpose. All instruction should lead to individual or creative endeavor, to proper regard for material and its right use, to proper construction, and to appreciation of beauty of line, proportion, relation, and color.

In the high-school grades handicrafts and machine-work should be introduced, as here both the art and the science elements should have place; and we must remember that the craftsman of today has both steam and electricity as his aids, and various fruits of science as well. Indeed, tho handicrafts and household arts may appear in our courses as giving more free, personal, and artistic results, the great problem for us today is so to train the individual as to make beautiful and perfect the product of the machine.

The problem of what should be done in manual or industrial work is more readily solved in the case of the manual-training high school, then in the usual high school, with its classical, literary, and commercial courses. In the first-named case the course can well become more special and technical, and be adapted more particularly to industrial requirements. In the latter schools we have our drawing rooms, free-hand and

mechanical, our laboratories for science, our gymnasiums. In the near future we shall require our crafts rooms; for in such schools, incidental to or as a part of the art instruction, I believe we can well introduce certain forms of handicraft that will give proper means of application of the art instruction in a material form, and at the same time supplement the teaching of the elementary schools, without being of quite the special or scientific nature of the course of manual-training high schools. Only in this way will the full fruit of the elementary course be gathered. The whole burden cannot be placed upon the normal and training schools, as would happen if there were a gap of four years during the course of the regular high school in which there was no adequate form of applied or industrial art or handicraft.

In closing I will quote Bishop Ireland:

> He who fails to appreciate the beautiful remains a mere piece of matter; he has never put on the wings of the soul and soared upward. Religion, I think, can do nothing for him who lives on such a sordid plane; religion requires a fertile, prepared soil. Without the sense of the beautiful the soul is lost to the region of the purest ethics. Beauty is needed everywhere—in the homes of the poor as well as of the rich. As the beautiful in great works of painting and the masterpieces of sculpture cannot be in the homes of the poor, let it be there in the humble furniture, in the utensils, in the textiles, in the dress. See that the sunshine of beauty comes into the home of the poor. We are doing religious work if through art we lift men up and make the world happier. The beauty of this world is linked with the beauty of the next.

ART INSTRUCTION AS RELATED TO MANUAL WORK

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The time has come when art and manual training must join their forces. You have heard it said that these two are one and the same thing, and there are several senses in which the saying is true. Both are concerned with the expression of thought thru form and color; both rest on practically the same basis, as educative subjects; while in their technical processes the line of demarkation is in some cases hardly recognizable. Clay-modeling is manual training and original construction is design. The two subjects may be said to occupy adjacent territories whose boundaries are not clearly marked and tend to overlap. Some of you have been eyewitnesses of battles waged over rights of discovery and possession of disputed frontiers.

It is worth while to spend a few minutes in examining three of the bonds which bind the two subjects together, for art and hand-work were brothers long before they began to go to school, knit by ties more close and vital than the twins of Siam.

The art of man, in the broad sense, embraces all his expression—the expression of his bodily needs and the needs of his spirit, his emotions, his thoughts, his aspirations. It therefore includes spoken language—the language of his tongue—and painting, music, and architecture, which are the languages of his hands. Art would seem to include, potentially at least, every expression of man's mind, from the least to the greatest. It is superfluous to try to decide which form of expression is the more

important. The human hand has had its use in providing for the physical necessities of life; and it has proved not less useful nor less glorious than the tongue in the higher spiritual expressions of our race.

For there are whole systems of ideas, as definite as those expressed in language, which cannot be expressed in word symbols at all. The symphony, the color scheme, the architectural monument are examples, but not the only examples, of such. The manual-trainiug project is as much an expression of thought as the spoken sentence, and so is the drawing of the biologist, or the physiographer, or the landscape painter. The powerful traditions of mediæval education have led us to overemphasize the comparative value of verbal thought. The bookish character of school, college, and university training fosters this error. I believe that a time will come when art and music will be required for college entrance;[1] because men will one day perceive that reality of culture is the reality of art in life. And that unknown art which we have ignorantly worshiped is the art of life. Vital art means the beautiful expression of beautiful living. It is not to be achieved merely by reading, in a wonderful old tongue, about a certain ancient people who once were wise enough to place a proper value on the expression of *their* lives in marble and poetry and music.

We turn to a second aspect of our theme, one of not less profound importance. The teaching of genetic psychology has revealed to us the processes by which the child learns to know the world. Tactile and visual percepts are the basis of ideas. Therefore the child must have actual bodily experiences. Making and doing provide means of acquiring true and adequate notions of things.

In close connection with this important generalization, and partially in consequence of it, we find that we have in manual activity a key to the child's interests, for manual expression gives play to those instinctive tendencies of child-life — motor activity, imitation, the desire to construct and decorate, the instinct for personal ownership, pride in overcoming physical difficulties, and the like; to say nothing of the very real opportunities it offers for social effort, "doing things together" and "doing things for others." Perhaps it is stretching the word, in the case of some children at least, to call altruism an "instinct" or instinctive tendency.

With the appreciation of these large truths of education and of life, art instruction and manual training are again seen to have a common ground, and are slowly beginning to take their true place in the curriculum.

There is another deeply rooted instinct in this race of ours. It is the instinct for harmony, beauty; pitiably crushed and chilled, perhaps, but living in hope like a flower beneath the winter snows; and everywhere in

[1] After this sentence was penned, my attention was called to the fact that in President Eliot's latest report music had been added to the list of electives in Harvard's admission requirements.

our national life — in the home, the mart, the schoolroom — it is beginning to show itself, crude as most of its manifestations may seem. I call especial attention to the fact that desire for beauty in all the products of the child's hands is knitting the third natural bond between art instruction and manual training.

It is also the introduction of the factor of beauty which makes the teaching of the new manual training a matter of such immense difficulty, and which leads to that puzzled look which one frequently sees on the faces of men who were, a few years ago, confident of their powers. When manual training meant little more than the copying of a series of the old inartistic and colorless models for purposes of "discipline," the problem of teaching was simple.

Even now, when the idea, at least in the minds of advanced educators, has broadened and involves the entire cycle of the child's interests, it may seem to some that intelligence and sympathy, and a technique somewhat extended to include the rudiments of basketry and weaving, of metal and leather work, would be a sufficient equipment.

It is not immediately perceived by the majority that, in undertaking these things in a way which demands individual, creative effort, the teacher of manual training has made his entry into the field of art production. The teacher who attempts these subjects without sufficient preparation in drawing and principles of design has caught a Tartar (or any metaphor you may see fit to employ in this connection).

On the other hand, the special teacher of art has often found the greatest difficulty in teaching handicraft, even after familiarizing himself with the technique. As a matter of fact, the view of the average art student is about as surprisingly narrow as it can be. He seems to think art a sort of synonym for oil paintings, and if he ever heard of any principles of composition in the studio, he does not remember them clearly, or at least is unable to translate them to new conditions. For the making of the "simple" basket or the "simple" bracket, as they are called, the instant it leaves the beaten track of copying the model becomes a creative effort, involving all the elements of the problem of art, all its magnificent possibilities for success or catastrophe. To name such a problem "simple" is the purest irony, as no one knows better than he who has tried to give beautiful form and color to even the most insignificant object. It may almost be said with truth that the simpler the problem, the more grievous the difficulty. Ask the dressmaker whether it is easier to make a "simple" gown or one with plenty of trimming and fancy work. You will get an illuminating answer. I have heard teachers of manual training complain that no problem was so hopeless as that which involves proportion only, the bare relation of mass to mass. It is astonishing how the æsthetic aspect of the subject gets left out of all sorts of discussions. And is it not strange that no prominent educator of the time has failed to

acknowledge the importance of the branches under discussion, and that no one has studied them faithfully and treated them adequately?

These facts have led, in my estimation, to a very critical state of affairs. Thruout the entire country a mass of work is being turned out which is calculated to give little ease to the eye of the man who has learned to see. From the beginning of the experiments in school crafts, we have had to contend against the fact that teachers and educators have had little or no training in form and color.

It is not enough to give play to motor activity and other tendencies of the child. The instinct for harmonious and beautiful forms is every whit as important. It is more important in the school than almost any of them, because the child is going to get a lot of motor education, without any of our help, thru the means that nature supplies. He is going to learn to know the world by running up against it and by tumbling down upon it, and feeling of it, and listening to it, and smelling and tasting of it. But the seed of beauty, without proper assistance, will have little chance to grow. That population of 85 per cent. of children who leave the public schools before they have completed the eighth grade, who are practically to constitute this nation fifteen years from now, and who ought to be occupying most of our thought as teachers—those children are going to have exercise enough for their motor instincts and too much, Heaven knows, for their imitative instincts, long before they are middle-aged. But if they do not get started in the appreciation of beauty in form and color and sound, to say nothing of conduct, while they are children, they shall never attain unto it. "Blessed is he," says Goethe, "who has learned *in his youth* what art is."

We are told that "technique must be held subordinate; self-activity and creativeness are the all-important things." I am not speaking of technique. Please do not let that word interfere with our thought. Not skillful nor exact execution, but the manifestation of the spirit of beauty, is, as I believe, the most important, the highest, the most irreplaceable part of the education in hand-work. If I am right, then the danger most to be feared is the "zealous ignorance," to quote Goethe again, of those who try to teach beauty without understanding—those who work at expression thru form and color, without comprehension of the essentials of the subject. It is to this we must devote our attention with heartfelt enthusiasm and endless study, if we are to bring this matter to a successful issue. That we shall be successful is not to be doubted for a moment—or at least not more than a few minutes at a time. And this brings me to the consideration of the difficulties which stand in our way.

First among them is the fact that our subject alone, of all the common subjects of human thought, has been unformulated. It has had no body of conscious knowledge, such as is possessed by even the least tangible of the other arts—music or language, for example. In this

regard our subject is unique in its misfortune; there is none other in the curriculum — most fortunately for the cause of education — that has had such a gaping abyss in its path. You may read thru whole books expressly written on design and composition, and not find the statement of a single principle that you can use in teaching proportion. You may read all the books that have ever been written on color, so far as I have been able to read them, and fail to find some of the most elementary principles of harmony in tone and color. Our heartfelt gratitude to any man who gives his time and his thought to original investigation in these lines! The scientific investigator, the biologist, and the psychologist have their honor and rewards. The research worker in this field may depend upon it that he will gain little honor, and thanks from but a few. Those who are successful producers in form and color are generally working on a purely subconscious basis of unformulated knowledge, known as "artistic feeling." This indispensable requisite of the creative artist is but a broken reed to the teacher of children, unless supported by a body of conscious, formulated knowledge. You can't get up and teach your feelings.

The situation is further complicated by error in regard to the nature of art. There are men of high character in the teaching profession who seem to think that art is a matter of good sense and conscientious workmanship. The disciple of "honest work" is sure of his ground. "There is something better than beauty," says he, "and that is character." If a chair be useful, structural, not pretending to what it is not, it is an "honest chair."

I decline to be lead into a discussion of moral and æsthetic values. The point that character is more important than beauty is well taken. But admitting the point, beauty still remains to be appraised, and beauty is highly important. As for that honest chair, I believe that, morally, it is a beautiful chair, but it may still be bad in color, bad in proportion, bad in its curves, just as an honest woman may be ugly in shape and may use vulgar forms and colors in her dress and vulgar English when she speaks. Our forefathers whose work we so much admire and love, the producers of the beautiful colonial furniture, were either mere workmanlike imitators — in which case they were perpetuating an art, but not creating one — or else they were endued with a love of beauty and knowledge of it to a degree which we are too slow to acknowledge.

A parallel error is committed by those who suppose that because beauty is a subjective sensation it is useless to reason about it. A few weeks ago I heard a prominent representative of manual training address an audience to this effect. The constructive design problem in his opinion had two distinct phases. The first was intellectual, being the consideration of structure in its relation to material and function. "Here," said he, "we have something tangible, something that can be

reasoned out and presented clearly." The second phase was that which deals with the æsthetic aspect of the work. "In this," said he, "we have only feeling to guide us. Beauty is purely a subjective matter. It is useless to reason about it."

The confusion and error here arise thru the failure to perceive that, even tho our feelings are subjective, the qualities which produce them are objective. It *is* possible to reason about them. And just as in English we can analyze the structure of the paragraph, and teach the student to make a beginning, a middle, and an end, with subordination and climax, consistency and unity, so we can analyze and teach the principles of formal beauty in the language of the hand. That some of the most precious æsthetic qualities are too subtle to analyze I, for one, should never think of denying. The personal elements which the student puts into the work are presumably of this character. And the individual must be left free to put his personality into the work. Class results must be strictly individual; otherwise the teaching of principles would be worse than useless; it would be fatal. We do not want rules and recipes for making beauty. What we want is to perceive that beauty means order in its highest sense. What we must understand is the large principles which control in the organization of shapes and colors, wherever beauty appears; in the transient glory of man's art, and in the infinite manifestations of order in nature, which are the revelation of the divine.

Manual training and art instruction have approached a common problem from widely different standpoints. Co-operation is seen to be a necessity. Before we can co-operate intelligently, the art teacher must, for his part, understand the typical ideas of structure and material; he must know how things are made and put together. A few months' work in the shop will teach him more about function and material than talking the rest of one's life. At the same time, I feel that there is a crying need for competent exposition, from the teacher's standpoint, in this field. Its literature is very deficient.

On the other hand, the teacher of manual training must understand that there are certain definite qualities which invariably appear in anything which has formal beauty; that these qualities rest on a basis of principles which can be taught; and that, until they are taught, the work will continue to affect the trained observer like an ungrammatical sentence. Here again is a crying need for competent exposition. Those who could write on this subject have a duty to perform to their fellow-teachers. The principles are simple enough in themselves, but broad and difficult in their application.

Such a unification of the two subjects as that which I have briefly suggested can take place but slowly. We have a wonderful city to build, and the city must have foundations. It cannot be done suddenly, as Rome could not be built in a day.

DISCUSSION

FRED H. DANIELS, supervisor of drawing, Springfield, Mass.—A visitor to the manual-training high school is shown the free-hand drawing-room where the students are drawing from life, making decorative designs for carpets or wall papers, or experimenting with landscape composition. He then goes to the wood-working shop and finds the same students making joints and patterns in wood for iron castings; next to the forge shop, to find bolt-heads and bars and rings and other hammerable products of no conceivable immediate use to the maker, but which will in due time, it is hoped, enable him to make something of actual material value. The visitor wonders at the number of useless things produced in the drawing and shop departments of this school. In real life, drawings are a means to an end, not an end, nor a "make-believe" end, in themselves. In real life, people do not make a lot of useless things in order eventually to make one article of real value. In real life the drawing and shop departments of an institution are vitally related.

"Art is the expression of joy in work," is an old proverb; but how many of us really comprehend its significance? A class deficient in geography, music, drawing, or manual training means that it takes but little pleasure in that subject, which condition can usually be traced to the teacher's inability to make the lessons interesting. To obtain excellence in any subject—and excellent expression is art—the lessons must be a source of pleasure to pupil and teacher. All persons express themselves best at play. Work has been defined as the doing of something for an end which is to the evident advantage of the worker. Drudgery consists in doing something of no value to the doer. School life should consist in work and play, and it will sometime, when we know how to make it. That subject which is finished with a sigh of relief was unsuited to the temperament of the pupil or was poorly taught. The creative artist in any trade, profession, or art thanks God that he has another day in which to work, and this is the ideal life in school or out. This is the true work. Viewed in this light, designing and drawing—art—becomes an integral part of a manual-training course.

We are familiar with the objections raised in regard to this plan. Here they are: (1) it cannot be done; (2) the boys must have a series of exercises in the use of tools; (3) manual-training teachers do not have time, nor could they, as a rule, teach constructive design, while designs made under the supervision of the drawing teacher are not practical from the manual-training standpoint; (4) lack of time; (5) the boys might make objects designed by the previous year's class. In reply we would say: (1) It has been done, not with all shop-work, but one or two objects each year have been designed and made by the boys in the several classes. (2) Employ the exercises in making useful objects. (3) The drawing teacher must learn by actual shop practice the manual part of the problem, or the manual-training teacher must study the art side. (4) Instead of unrelated free-hand work, or infinite problems in projection and theory, substitute an occasional problem in constructive design, carrying it thru the preliminary study and sketches, completed design, perspective rendering and finished object. This is the only full teaching of constructive design. (5) Failure in constructive design is often evident only in the process of making or in the completed object itself; hence the necessity of the individual working out in material form his own design. Far less pleasure and interest are noted in making designs for an object not to be made, or in making an object designed by another, than in the problem entirely completed by one pupil.

As for the method. First: The teachers in the drawing and shop departments should work in harmony, each desiring to aid the other by receiving and giving honest criticism and by working in the other departments. At present a rare teacher is he who understands artistic constructive design and can carry out the design in wood or metal to the satisfaction of art and manual-training critics.

Second: Pupils apparently dislike to do original constructive-design thinking. The real difficulty is that thru inexperience they have no definite constructive design concepts. The necessity for illustrative material in teaching the subject is as great as for data in preparing an essay. These illustrations should include (1) a stereopticon with lantern slides showing (*a*) constructive design in nature and its relation to the art of man, (*b*) good arts and crafts products of ancient and modern times; (2) objects, good in design (rarely obtainable in any considerable number); (3) printed illustrations selected from magazines, catalogs, etc.

Third: There may be definite teaching of the principles of constructive design: (1) Teach the abstract principles underlying all art by means of problems to be worked out on paper. (2) Give definite, practical talks, fully illustrated with objects or lantern slides — that all may have clear seeing — especially selected to show the application in material form of the principles studied; also have criticisms of good and bad designs by the same means. (3) Class criticisms should be held of designs made by pupils, the criticisms to be based upon such principles as fitness to purpose, harmony, rhythm, balance, stability, variety, contrast, etc.

James F. Hopkins, Boston, Mass.— I feel that there should be deeper enrichment in every direction with definite, thoughtful co-operation between art and manual-training teachers. They have for a long time had similar aims. Indeed, the two branches tend to embrace each other. Art study no longer means mere drawing; in fact, it never did, save in the narrowest sense. Manual training is no longer content without creation and beauty. In the coming together of the art teachers and the manual-training teachers there must be a mastery of construction and material on the part of the first, and an understanding of principles of design on the part of the manual trainer.

Mr. Hopkins closed his talk by giving an outline of the unique organization of this subject brought about by Boston principals with the result that under the well-known department system specially well-trained teachers are assigned to teach these subjects.

Luther Weston Turner, instructor in manual training, Hill School, Pottstown, Pa.— When I was a schoolboy, the only method of teaching drawing was from a book. This book contained drawings of objects grading in difficulty from the simple to the complex, and we worked from the book. There was no chance for original thought or expression. We simply copied as near as we could what was in the book. When the teacher was not looking, we often drew pictures of her in characteristic attitudes, and many of these drawings contained more real merit than the book drawings. Why? Simply because we drew what we saw, not what another had seen and put on paper for us to copy. The copy work was dead. It lacked the one essential thing, vitality.

What a glowing tribute to the value of self-expression properly directed in its beginnings is the present status of drawing, as it is taught here in Massachusetts, and as it is gaining ground in other parts of this country! It is beginning to be educational, and we are doing what Dr. G. Stanley Hall has so long been advocating, namely, "getting back to nature." One who has no insight into the beauty of nature should have no place as a teacher of drawing; and I hold the same to be true of the teacher of manual training. Too little care is given to the teaching of it as an art. When manual training has as its basis of teaching the combined principles of art and mechanical process, then, and then only, shall we have a more universally sane manual training.

At present things are chaotic. Some correlate with this, and others with that. There is not enough original work; but, for all that, we are slowly progressing.

As a rule, we lack the principles of good constructive design more than we lack mechanical ideas and processes. Good constructive design should be the basis of any course in manual training. Hegel in his *Philosophy of Fine Art* says: "Fine art is the free and adequate embodiment of the idea in a form peculiarly appropriate to the idea itself." How do your models stand the test? Had you any idea when you made them?

Are they appropriate in form for the use to which you put them? The teacher should get ideas from the pupils as far as possible, and when the pupils' ideas give out, or if one is found who has none, then it is the teacher's duty to supply them. These ideas, once understood in all their relations, will determine largely what must be the plan of the models, their medium of construction, and their detail.

Methods of construction and sequence of tool-work should be taught at first, and after that determined by the reflection and common-sense of the pupil. Originality is what is wanted. Subordinate self, and watch the pupil as an individual, only correcting him when something radically wrong is about to be done. In every way let the pupil express himself. Don't try to impress him with your own ability. If you have any, it will gradually dawn upon him without its being put forward. We make a great mistake when we try to impress pupils. Let all school work be the expression of minds which have been led to think independently. Let the pupil be himself. Cultivate proper taste for manual training by surrounding him with good examples of applied art excellent in workmanship.

Do not misunderstand me about applied art. I do not in any sense mean decoration. There is at present too much decoration added to that which would otherwise fulfill its purpose better. The oldest rule of structural design is still potent: "Ornament construction; do not construct ornament."

All ornament must be appropriate to the material used, the character of whatever is made, and the use to which it is put. Sometimes the essential elements of a piece of work may be admirably used as ornamental features. The Germans and the Swiss make good use of round-headed nails, both as medium of construction and of artistic enrichment, and but little skill with the file is required to change a common square nut into a distinctive piece of artistic ornament; such treatment being frequently given by the old Delft workers in iron.

It is a general truth that many times the secret of effective ornamentation lies already hidden within the material to be used. Take notice of the grains of wood and colors of metals, and embody all into harmonious pieces of applied art. While this is true, it is also true that the limits of ornamentation lie either within the object itself, the form it must necessarily take, or the material used in its construction.

All about us are seen the products of the mechanics' arts. Do the majority fiulfill the use for which they were intended, and that use only? Do they please the eye without one's knowing quite why they do? Are they structurally sound and made of proper material to stand the wear and tear of everyday use?

Our duty as teachers of manual training is to try to create a sentiment in favor of less of that which is superfluous and inartistic in the home. The duty is with the rising generation. We cannot educate the masses except thru the children. Get hold of the child and give him all the means of self-expression which are possible. It is as much the duty of the supervisors of drawing and of manual training to work together toward material expression as it is for reading and grammar to be taught together for the gaining of correct oral expression.

The principles underlying all educational work are, after all, but few, and have been used in every generation. All of our boasted improvements are but improvements in method, and not improvements upon the vital principles which are perpetual.

We are coming to recognize the fact that in all our progress we seem to be putting more and more importance upon the human element in all our work. Teachers are being sifted finer.

In the final analysis, the victory is always gained by the men behind the movement, just as the value of any product is determined by the men behind the machinery. Personality counts. One should never be carried along in the wave of any movement. Be a motive power! Look well to the nature, environment, and moral tendency of the pupil. Assist each individual one. Study the ideas which the pupils put forward, and let the

finished products, whether constructed of one material or another, be the embodiment of those ideas in a form which is appropriate. Look within any model or finished piece for its proper ornament, and have such ornament subordinate. Hold fast to that which is true. Remember the words of the great Master, and be a servant of all who need your peculiar ability: "Give and it shall be given unto you."

INDIAN BASKETRY—ITS POETRY AND SYMBOLISM

GEORGE WHARTON JAMES, PASADENA, CAL.

[AN ABSTRACT]

As a teacher, nature has been too long neglected. The greatest artists, poets, statesmen, and philosophers have all gained high, if not their highest, inspirations from nature. The Indian woman has no art books, no treatises on æsthetics, and yet she produces in her baskets works of art as perfect in shape, weave, design, and finish, without the aid of tools, as anything the white man has ever yet produced. She has been an inventor and adapter, availing herself of what nature has offered.

Until recently it was scarcely believed that the Indian woman had any other thought in incorporating designs into her baskets than merely to please the eye. Many years of close and personal contact with the Indians have revealed to me that in most cases designs have a distinct and definite meaning. Into them are incorporated the æsthetic desires, poetic aspirations, religious, legendary, and mythological lore, together with the ceremonial suggestions uppermost in the weaver's mind at the time of the making of the basket.

The "superior race" has its poems, paintings, sculptures, palaces, castles, and cathedrals, into which it has woven all the sentiment and religion of its varied life. The Indian has none of these things, and the basket has had to serve for the enshrinement of all these higher faculties of the soul. He who deems the Indians the dull, stolid, unemotional, unpoetic beings they have been so long thought to be will find a study of Indian basketry a complete revelation. Behind a rough and uncouth exterior, they often hide as beautiful and noble a character as any depicted in fiction. Fenimore Cooper knew the Indian and characterized him aright. It is bad enough that we steal from these helpless people their homes, without slandering and abusing them and endeavoring to give them a bad reputation.

A careful study of Indian basketry reveals the Indian in a new light. As we look at these baskets and listen to the aboriginal weaver's own interpretations of the designs, we find much of the keenest interest. Here are represented objects in nature which she imitated—the rainbow, the flowing water, the zigzag lightning, the flowers, the trees, the animals, the birds, etc. This law of imitation is the prime law in all aboriginal art.

It is followed by conventionalization. Here is the conventional diamond of the rattlesnake; below are the conventionalized steps of a mountain, with flowing water, by the side of which are quail. This basket was used as an invitation to a valley tribe to come to a thanksgiving dance in the mountains, and the symbols mean that water and quail will be found in abundance.

This St. Andrew's cross is a conventional splitting in half of the diamond of the rattlesnake.

Here is a conventional representation of the water flowing from below and the water flowing from above (springs and rain). These meet and form the Greek fiet and the swastika. The Indian weaver reproducing these symbols creates by that simplest of all art laws, imitation, these designs, which are supposed to have an esoteric eastern meaning.

Then, too, the weaver puts into her basket her emotions, her longings, her aspirations, her prayers.

From the speaker's private collection of historic baskets these various points were fully illustrated, one design being a Havasupai woman's prayer that the tornado be kept from devastating her home, another that the flying bats do not "suck away her breath;" and still another the longing for rest of Ramona up among the stars.

MANUAL TRAINING IN THE ELEMENTARY SCHOOL

ELIZABETH EUPHROSYNE LANGLEY, ASSOCIATE IN MANUAL TRAINING, SCHOOL OF EDUCATION, UNIVERSITY OF CHICAGO

The topic announced for my paper is "Manual Training in the Elementary School," but I desire to limit what I have to say to hand-work in wood, and to put my chief emphasis on the work below the sixth grade. I choose this phase of the general theme because I can find few schools where elementary wood-work is given fair trial. It is either not put in until after the fifth grade, or it is given to each grade but once in two weeks, or it is made an isolated subject, or the classes are too large to handle, or the equipment is entirely inadequate. Those who plan courses of study have yet to realize that if elementary manual training is to bring in large returns in the development of the child, it must be rightly equipped and managed. And may I be allowed to make the prefatory statement that whatever I have to say about manual training applies as well to girls as to boys? I have yet to find the place, from the first to the eighth grade, where the kind of work or the kind of interest would justify the separation of the sexes.

The problems that confront the elementary manual-training teacher have to do with the choice of articles to be made and the methods to be

employed. Both of these are conditioned by the ideal toward which the teacher works. Back of all problems, and determining their solution, is the idea that manual training should not be an isolated subject, not merely "something different," the chief purpose of which is to relieve the strain of other work, but that it should be closely interknit with the general school life, a part of the method of self-expression. The conception of manual training as thus bound up with the life of the school must largely determine the answer of the manual-training teacher to all important questions.

The question that meets the teacher at the outset is: What articles shall the children be allowed to make? Our answer is that each child should, with certain limitations, be allowed to make that which he wishes to make; that is, the child, in so far as he is able and eager, suggests what he wishes to make. This choice is, if possible, accepted, and the plan is worked out in conference with his teacher. But if, considering the child's age, strength, and skill, the choice is an unsuitable one, and must be rejected, the rejection is not autocratic. That, too, is the result of conference with the child, so that, while working under guidance, he has yet the consciousness of working along lines of his own choice. The first grade in the School of Education chose, for instance, this year to make playhouses. The second grade made bird-houses, seed-boxes, and flower-boxes. The third grade co-operated in the making of a large chicken-house; while the fourth grade made as its co-operative work a train of freight cars with roadbed and ties. Both of these grades have done individual work of many sorts, including such articles as fern-stands, tabourets, footstools, picture-frames, bookcases, and small tables. The fifth and sixth grades have made furniture of the colonial type, including corner cupboards with glass doors, bookshelves, etc. They are also making other individual articles, such as an eight-foot scow for use on the lagoons, a child's chair, wall cabinets, etc. These grades are also doing simple relief carving. The seventh grade is making boats — not large boats for actual use, but miniature models to represent the boats of various countries and of various periods, such as a Viking boat, a Chinese boat of state, a Venetian gondola, and various sorts of American boats from the raft to the houseboat and yacht. The eighth-grade children have made oak folding screens, oak bookcases, an oak couch, tabourets in cherry and mahogany, and other similar articles, while their community work is an eighty-foot arbor for the school garden.

From this rapid illustrative summary of articles actually made it is at once apparent that we have paid no attention to a logical sequence of models, as in the sloyd system, according to which all children make the same articles in the same order. No one trained under Herr Salamon can fail to see the value and beauty of that system, with its definite and orderly progression of difficulties, and its comprehensive and clever intro-

duction of wood-working tools; and I would advise any teacher to take it — especially if he wishes to depart from it in the interest of correlation or of the child's individuality. But experience convinces me that with young children the idea of "logical sequence," as that phrase is ordinarily interpreted, must be thrown to the winds. The more definite and orderly and comprehensive the knowledge of the teacher, the better; for such knowledge gives him a point of view, gives backbone to his work, saves him from irrational adaptations; but the child must be left free to find himself and to express himself. As Colonel Parker says: "It is only when we get into the child's own motive that we have the true, logical scheme." In other words, logical sequence based on subject-matter should give way to the natural, and therefore truly logical, development of the individual.

The governing principle in the choice of articles to be made must be, then, the interests of the child, but much of the work done centers naturally about the general work of the grade at the time. The playhouses of the first grade grew directly out of the fact that all the work of the grade centered about domestic life. Eskimo huts in clay and Indian wigwams in raffia and twigs led the way naturally to the more elaborate life of civilized man as expressed by the wooden house. The interest in the house and the life it represents has really come to dominate the hand-work of the grade. The work in weaving has resolved itself into the making of rugs for the floors, the art work has contributed wall-papers designed and painted by the children, while the study of color has been given a great impetus by the painting of the outsides of the houses and portions of the interior, and some ambitious children have even levied on the clay-modeling department for chimneys and fireplaces. The latest work of the grade is in the making of simple wooden furniture for the houses. The henhouse of the third grade was the apparently imperative outcome of the decision of the grade to adopt a hen. The cars of the fourth grade and the boats of the seventh grade were the natural expressions of an interest aroused by a study of transportation. The colonial furniture was a choice of the fifth and sixth grades after they had become interested in the life of the colonial period, and after visits to large furniture shops where they were able to compare furniture of different periods and styles. The choice of individual articles is made for personal reasons. It will be seen that in these cases — and they are but typical — the controlling principle of choice is the interest of the child, but guided and developed by the work of the grade.

One result of allowing the work to follow the desires of the child has been that a surprisingly large number of the articles made have not been for individual ownership. For instance, the third grade made paper knives enough for the first and second grades and sent them as valentines; the cup-racks, knife-boxes, and plate-racks needed by the grades for the lunches are often made by one grade and presented to another.

What is true of the first grade in matters of interest and observation holds thru all the grades. This arises not merely from the work in the manual-training room, but it is the outgrowth of all the influences brought to bear on the child. His interest in his boat, or house, or car is intensified by what he learns in the grade room about transportation and domestic life, and his hand-work in turn vivifies and makes real the study he has done. Much emphasis is put on correctness and fullness of observation in connection with any of the articles to be made. The manual-training department, in carrying out the work of the grades, insists on keeping as close as possible to real conditions. The fourth grade, for example, before making its cars, spent a day in visiting car shops, so that the cars when made were not mere toys, but were real cars in miniature. One sort of observation comes especially from the manual-training work, and that is a child's knowledge of wood and his feeling for it. He has already studied trees and painted trees perhaps, but in the manual-training room he learns to know the tree under its new form as lumber. There is much incidental talk on forestry, and there are many pictures shown illustrative of the processes of lumbering. A special point is made of having the stock delivered as it comes from the mill. The lumber is not cut up into lengths, but the children saw from long boards the pieces they need. They learn about the seasoning of wood, the difficulties in working up certain sorts of wood, possibilities in the way of beauty and finish, differences in expense, and the appropriateness of making certain articles out of certain woods. And the children have a real, unaffected love for wood, a genuine appreciation for its grain, or texture, or color. In stores and cars and houses they are not only able to identify woods, but have a positive joy in coming upon an especially fine piece.

The attitude of the teacher of elementary training toward technique is one of fundamental importance. The child must be allowed to express himself freely. Must he express himself also accurately? What should the teacher demand of the child in the way of workmanship? In the first place, the actual work on any article should be done by the child. The function of the teacher is to put her knowledge at the service of the child's idea. She must meet each child open-mindedly, and help him to work out the thing he has in his mind. She must show him how to stand, how to use the appropriate tools. She must point out principles of construction, and warn him of possible difficulties or mistakes. She must go in advance of his plan, showing him how to work it out most economically and effectively; but the plan must be his and the work must be his.

But a certain amount of actual assistance, as well as constant guidance and instruction, is necessary with beginners. Let me illustrate by the work of the first grade. Naturally more help is given by the teacher here than in any succeeding grade. For instance this, year the size of the

house and the shape were determined upon by the teacher, tho in close consultation with the class; then dressed half-inch pine was cut for the children into the proper lengths, and the pointed pieces of board for the gables (on which they had insisted) were also cut for them. From this point on, the children did all the actual work themselves. They planed the edges of the boards; they sawed from long quarter-inch stock the boards for their partitions, and from half-inch stock the boards for their floors; they nailed the houses together; they nailed and put up the stairs; they put in the partitions; they cut windows and doorways; they painted and papered the interior of the house, and they painted the exterior. From the first grade on, the work, however crude the outcome, should be entirely the child's own. If it is his best effort, it is for him perfect work, and should be so considered.

If the children do the work themselves, they learn of necessity the use of tools. In the construction of their houses the children of the first grade made intelligent use of a ruler, a try-square, a plane, a hammer, a cross-cut saw, a keyhole saw, and an auger; and tho they did not know the meaning of the word "construction," they nevertheless had gained an honest scorn for a house that "wiggled" and an honest respect for a house firm enough for them to sit on. The children had also made rough drawings for these houses, and tho the uncertain, apparently haphazard, strokes on the paper might convey no idea to an outsider, to the child it was unquestionably the picture of what he had in mind. He would point to parts of it and say: "See, my house must be so." His drawing was a valuable part of his self-expression, however chaotic and unmeaning to another.

By the fifth grade the children know theoretically and practically all the common wood-working tools, and they have learned simple, mechanical drawing. Thru the three later grades the advance is that which comes from constant practice. More complex constructions are attempted; there is growing attention to detail and finish, and harder woods are used. Rough designs for outline and proportion are made, and from these, mechanical drawings for all articles. Some emphasis is placed on original designs to be used in wood-carving, but on the whole few new tools or principles are brought in after the fifth grade. The work consists in the practice and application of what is already known.

In the matter of technical skill the advance from the simple use of the simplest tools in the first grade to the really excellent work of the eighth grade has been a long step, but the point to be insisted upon here is the way in which this ability to do difficult and even elaborate work has been gained. There has been no prescribed progression of tools to be used; no prescribed order of difficulties to be met; there has been no emphasis on technical skill as such, and no work done merely for the sake of acquiring such skill. And yet it has come to pass that the most ingenious

and orderly system devised by the manual-training teacher for the sake of securing technique has been outdone in its own field by the unclassified, unlabeled, and apparently unordered process of development achieved by the child in the pursuit of his own plans. How does this come about? He achieves technique, not because he seeks technique or realizes its value even, but because of his eagerness to express in the best fashion the ideas he has in his mind. His enthusiasm for anything he has to make begets patience, perseverance, carefulness, and attention to instruction; and these qualities in turn beget technique. He has never sawed to a line for the sake of sawing; he has never planed for the sake of planing; he has never chiseled joints for the sake of chiseling joints; but he has performed all these operations in making his chosen articles. He has gained technique incidentally, as it were. He has co-ordinated hand and brain; he has bent his muscle to the service of his will; but almost unconsciously and in the interest of the article he has made.

The emphasis put by instructors in secondary schools on the educative value of the process *per se* may be the only sound principle for manual training in secondary schools, but in the elementary schools such emphasis would be fatal. Formal routine and discipline in manual training cannot be advantageously applied to young children. With regard to the attitude of the elementary manual-training teacher toward technique I have, then, two settled articles of belief: first, elementary manual training can never be approached from the point of view of technique, and can never be based on the value of processes as such; but, secondly, the elementary manual training approached from the point of view of individual interest can, and indeed will, result in a technique of surprising excellence. The work is not in any sense forced or unnatural. The excellence of technique comes thru the joyous energy of the children, their gay competition, their affection for the work, and their pride in doing it well.

May I say a word as to the equipment of the manual-training room and of the manual-training teacher? That tools and benches should be of the best quality; that floors should be of wood, not of cement; that racks for lumber should be safe and convenient; that locker space should be ample; that the room should be dry and light—all this perhaps goes without saying. There should be also small movable platforms that fit under the benches, and of varying heights, so that the benches may be properly adjusted to the height of the pupils. The room should not be small and mussy and shop-like, but should be made inspiring and beautiful in various inexpensive ways. There should be floor space enough to keep on hand various suggestive completed articles. There should be wall space enough for samples of wood, finished and unfinished, and for pictures of trees. The room should, indeed, be both workshop and studio, with a happy combination of the artisan and art elements.

In regard to the manual-training teacher, I object to the grade teacher minus technical skill, and even more to the artisan minus culture. It has often been said that all sorts of hand-work should theoretically be taught by each grade teacher to her own grade, in order that the relation of the subjects may be kept more perfectly in mind. But her hands are already full. Probably the idea of perfect fusion of the different parts of a child's work can be more effectively accomplished by having the special teachers identify themselves with the interests of each grade. The mere artisan, the easily available, inexpensive man, clever with his hands, but ignorant of the other work of the school, incapable as teacher or guide or companion of the children, outside of his specialty, is absolutely out of his place in the manual-training room. He could be justified only on the unjustifiable basis that the proper aim of manual training is to teach a trade. But if the true conception of manual training does not put the emphasis on "manual," but on "training," then it is clear that the manual-training teacher should have an admirable equipment of culture and scholarship as well as technical knowledge in his own line.

To sum up, I have tried to say that manual training should be put into the elementary grades; that it should be thoroly co-ordinated with the other work of the grades; that it should be carried on with a flexibility of system which would allow the child's individuality free play; that technique should be attained, but that technique and finished products should not be the ultimate objects of the work; and that the best results can be obtained only when schools have adequate equipment, full time, and competent teachers.

Now, I recognize that I have been presenting the possibilities of the work when done under advantageous conditions, and I know that I shall be met with the criticism that what I advocate is not practicable in public schools. I admit this, and I know that any teacher in public schools would be compelled to modify what I have said according to his restricted conditions. But if manual-training teachers have ideals, and refuse to accept present conditions as final, we may hope that the opportunities now offered in only a few private schools may be more nearly reached in all schools.

THE BOY AND HIS HANDICRAFT AT HOME

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[AN ABSTRACT]

The obstacles to spontaneous home activities are met in the condensed and restricted home life of the city, rather than in the freer life of the country. Therefore it is in the city that the influence of the school

manual training is likely to be most beneficial in stimulating home activities. The chief problem at the outset is how to offer some counter-attractions to those of the street, which shall combine a useful occupation with a healthful recreation.

The need of some form of hand-work is often manifested in various forms of fancy work, such as jig-sawing and pyrography, in which the chief motive is show, rather than use or hand-training. Such work sometimes is useful as art, but it often lacks the two essential qualities, construction and utility. A gain is made if the boy can be made to see that it is the useful things, rather than the purely ornamental, that are within his capacity.

With boys of ten and twelve years much work is undertaken without incentive or aim, and is consequently abandoned before it is completed. Boys of another class are overambitious in their projects, and fail in producing results from lack of appreciation of the technical or constructive difficulties, or from a lack of perseverance.

One chief incentive to continuous and intelligent effort is the making of something of use for self or others. The boy should be induced to undertake the simpler things first, but to do them as carefully as he is taught in his school work. The manual-training school should help to supply the constructive ideas and direct the aim. The influence of the school manual training is shown in the desire to work in the school shops out of school hours, in the greater use of any tools to which he may have access at home, in the more definite character of construction pieces undertaken, and in the use of the school models in the home.

The correlation of home and school may be developed by more systematic reporting of home work and consulting with the teacher at school; certain lines of home work, such as chair-caning, basketry, rug- and hammock-weaving, may be undertaken as extra or busy work at school; suggestions may be made by the teacher by means of lists of seasonable pieces, with sketches, which are within the constructive abilities of the boys and the capacities of the home outfits.

The most important thing is the disposition in the boy to use his hands. It is the office of the teacher to guide that disposition into constructive rather than destructive channels.

DISCUSSION

FRANK M. LEAVITT, supervisor of manual training, Boston, Mass.—When I first noted the general topic for this morning's meeting, I expected that we should have outlined for us some plan for employing manual-training methods in what is commonly called the regular school work, and showing that the constructive principle is applicable in the teaching of language and literature, arithmetic, geometry, and physics. Instead we have had an excellent illustration of how the entire school curriculum,

unified by the child's natural interests, may be made the basis of the manual-training work, determining to a large extent the form and content of its course of study. By the adoption of either scheme there would result a correlation which is not only desirable, but is fundamentally necessary for the realization of the highest ideals of manual training.

It is probably fair to assume that the work outlined by Miss Langley is not entirely, or immediately, possible under the average conditions now obtaining in our large cities. Here is, however, abundant food for reflection for both the regular and the special teacher. There is also a wide field for both teachers in the work of inspiring the pupil to useful and constructive activity outside of school. It is, in fact, one of the best proofs of the real benefit of manual training that it possesses this dynamic power — that by its compelling interest the boy is driven to give up his leisure, often his play, and occasionally, it must be confessed, the study of some lesson, that he may gain time to devote to some constructive problem in hand either inside the manual-training room or at home. Bryant's paper clearly shows that manual training does possess this dynamic power.

Manual training has had many advocates, and many widely diversified objects of manual training have been advanced. Whether our application of the manual-training principle is to be broad or narrow will depend far more on our conception of what manual training stands for than it will on the conditions under which we work. Let us assume, for example, that we believe the object of manual training to be the development of the creative instinct. Our work will then be broader than it will if we deem its object to be the development of care and accuracy, of orderly thinking, of the logical doing which comes from working by plan, important as all this may be. With the creative instinct as an end, manual training will concern itself with the process of materializing ideas, with the hope that not only will the process itself be of value to the pupil, but that in some way consciousness may enter the heart and mind, even if only vaguely, that every material thing must first have existed as an idea and that any idea capable of expression in material may possibly be materialized by him. Other objects manual training undoubtedly has, but the paramount importance of this object must be evident to every teacher who has had the opportunity of observing very young children, and also those of fourteen years and upward.

In computing the value of the various agencies that assist in the development of any of the human faculties, it would be well-nigh impossible to estimate too highly the potency of the imagination. We well know the power of the imagination in the formation of character. "As a man thinketh so he is." The artist is not he who can accurately copy, even if his model be the most beautiful work of nature, but he who can build a picture or a cathedral after the pattern which he has seen in the mount of his imagination.

But is it not possible that we have laid too great stress on the process, as Miss Langley has said — on the training of the hand, on the development of a high degree of proficiency; and have we not even dwelt too fondly on that theory of the training thru the hand — that theory, accepted by all, which has its basis in physiological psychology? Is it not possible that we have neglected our opportunity of encouraging the individual initiative of our pupils?

I confidently believe that here is to be found the most promising opportunity for the immediate improvement of our work, without throwing absolutely to the winds that which we have again and again seen to produce excellent educational results. I mean the carefully planned course of study.

It seems to me that Miss Langley's paper is best summed up in her own statement, "responsibility educates." Let us see to it that we as teachers do not take all the responsibility, and consequently receive all the education.

The one thing most necessary, I had almost said the only thing necessary, to enable a teacher to carry out Mr. Bryant's suggestions is that he shall secure to the pupil a sense of personal achievement. The rest is mere detail. President Eliot said recently: "That is the best motive in all education — the joy in achievement." I have seen class work which made me wonder how the teacher could achieve such results. But let us not forget that it is the pupil who must achieve — not the teacher.

With the thoughts contained in the two papers, and represented by the two words "responsibility" and "achievement," clearly in mind, we cannot fail to widen our horizon and to secure for our pupils a larger development.

CARROLL G. PEARSE, superintendent of schools, Omaha, Neb.— Manual-training men are all emphasizing the importance of manual training for the city boy. They contrast the life of the city boy with that of the country boy and try to show that the latter has a decided advantage over the former, in the rural manner of life he is living. Now, I want to put in a plea for the boy living in the small town, village, or country. This boy is *not* receiving the hand-training that he is generally accredited with. He has not the opportunities today of developing those traits of resourcefulness and ingenuity that his father gained on the farm. Hence I plead for manual training for the village and country boy, and pray that he be given the same chance as the city boy.

The discussion has been a most instructive one. Mr. Bryant's paper on manual-training employments in the home was comprehensive and suggestive. He is right that outside certain rural communities there is little to employ the child's energies when he is not in school. There are Bohemian or French-Canadian villages or settlements in larger towns in which in this respect the children are far better off than most children of native-born parents. He has told us of all sorts of work the boys may do. It is not quite true that anything will answer for these boys to do; but it is, after all, true that it is most important for them to do — to feel the impulse to do — something.

Miss Langley has given a charming account of the results in the University of Chicago school — that school where the creative instinct is developed, under the most skillful and expensive teachers. The class of children, too, is picked. They are by no means ordinary clay. If children were to be educated in the public schools, in manual training or in anything else, at anywhere near the price per pupil that it costs to educate them in the school described by Miss Langley, we public-school people would be promptly read out of the public employment. I suspect that for many years we shall have to use, in the public schools, some systematic series of exercises or undertakings for children's work in manual training. I do not know what these exercises will be; I do not think anyone knows yet just what they will be. Many plans and many different sorts of work are being tried the country over, and many different sequences experimented upon. Out of this experimenting, after a while, we shall evolve at least a good and fairly satisfactory manual-training course.

Mr. Leavitt has gone into the profounder phases of the subject and has philosophized for us. We shall all, I think, agree with him as to the value of cultivating the creative instinct. I am inclined to think, however, that most of us are yet to be shown that this cannot be had in connection with a carefully arranged and graded series or sequence of exercises or pieces of work to be taken in order, with, added to this, stimulation of the child's initiative, either thru freedom or thru encouragement, that, as fast as skill is acquired, will suggest the undertaking, decided upon by the child if practicable, into which he shall put his best thought and most painstaking handiwork.

In other words, the element of interest is to be preserved and the child's initiative to be encouraged and strengthened.

HAND-WORK FOR HIGH-SCHOOL GIRLS

MISS ABBY L. MARLATT, INSTRUCTOR IN DOMESTIC SCIENCE, MANUAL TRAINING HIGH SCHOOL, PROVIDENCE, R. I.

[AN ABSTRACT]

Dr. Harris would divide all education into two kinds: (1) "education by means of memory—by authority" and (2) "individual or scientific education—insight as opposed to authority." That there is danger from excessive use of either system is pointed out. Again quoting: "Silence, punctuality, regularity, and industry are fundamental parts of a substantial education, as much as the critical study of mathematics, literature, science, and history is a part of the education of insight. These two kinds of education, that of authority and that of self-activity, should be made complementary."

The secondary school of the past has put the emphasis upon the "substantial," the "memory" education, to the exclusion of the scientific or individual education, as the only means of fitting the pupil to pass the required examinations for entrance to college. That this point of view is now felt to be erroneous is evident when the courses of study in secondary schools are examined. Gradually the self-activities of the child are being utilized thru the introduction of fuller courses in the sciences of chemistry, physics, botany, biology. That even with this addition there is room for improvement is granted. The methods used in instruction are not those involving much laboratory work in which pupils gain knowledge thru personal experience. This is in some cases due to a desire to fit pupils to answer a set of test questions when the time allotted for the subject is too short or the equipment is not adequate. More often it is due to the lack of teaching ability, which finds it more easy to pour in than to draw out, which causes the use of the college lecture method without regard to the mental development of the pupil.

The "learning by doing" may be carried to an extreme, just as a desire to correlate may produce a mental nausea on the part of the victim; but in both cases it is an undue use of a right principle of education. No problem in either laboratory or workshop should be done by the pupil if it does not call into activity the higher intellectual powers, and does not make its demand on reason tracing back to causes and forward to results. Hand-work should be carried only to the point where the higher nerve centers are involved. As soon as skill becomes a factor, it means that the manual processes have become "spinal reflexes," and therefore there is no further gain in will power.

The desire to work for others—the spirit of altruism—must be cultivated during the period of secondary education. If thru lack of its right introduction the hand-work fails to foster in the child the altruistic emotion, it has failed of its highest good.

Unless the hand-work is first of all artistic—that is, good in color, form, and design—it cannot have its reflex effect upon our industrial activity. And as a nation we are not artistic. The fault lies in not realizing the economic law that what we demand we get; that the product is what the majority like, not what is best. The remedy must lie in training the æsthetic taste thru study of the beautiful and in more general creation of the beautiful during the formative period of adolescence.

For girls in our high schools the value of hand-work may not lie in economic gain, but in keeping the right balance between memory education and scientific education, to develop the reason and judgment, and thus fit them to grapple with the complex problems of modern life and to master them. Home industries have become relegated to shop and factory, with the result of loss of dignity for the home as a productive center, which means a loss to the girl of any personal experience in the kind of labor that made home work in the past so inspiring, because the results were so varied and so lasting. The study in the school of the industries which have been removed from the home will help to an appreciation of the social problems in modern industrial life, and of the conditions which threaten the home life of the future.

Sewing, millinery, dressmaking, may teach the girl the value of such labor and make her an intelligent consumer—an enemy to sweat-shop labor. Study of textiles and practical knowledge of designing and weaving will, again, aid industrial evolution, directly, by creating a demand for more artistic products; indirectly, by creating a demand for better financial and social conditions for the workers. The modeling in clay, the working with woods and metal, may develop artistic power which will be felt in our furniture, pottery, and jewelry industries, and individually broaden the worker thru gain in breadth of view and mental power.

The respect for labor, the realization of the value of time, the greater interest in the æsthetic value of our industrial products, the broadened judgment, the sympathetic insight gained thru hand-labor in our high-school courses for girls, are arguments enough, even if they were not the economic side which demands that the woman of today be an intelligent producer as well as a wise consumer.

Textiles, wood, clay, and metal may be the group of materials selected for the basis of the hand-work. This omits the work with food materials, which, tho in part manual, is not applied art so much as applied science, under which head it is classed.

In teaching principles the interest of the pupil is more easily held, and far better work is done, when each principle and set of principles is embodied in some complete, artistic product which has a definite use. By "artistic" is meant that the proportion, line, color, and design are suited to their purpose and conform to the laws of beauty as understood by the best workers.

The following is a suggested course in hand-work for girls in all our high schools:

Work in Textiles.

Sewing — 75 hours.
- Hand- and machine-made articles which illustrate principles.
- Aprons used in laboratory work; design as applied to wash dresses (suggestions).

Weaving — 50 hours.
- Raffia used in making a hat from original design.
- On hand-loom to illustrate different weaves (dish or face cloth).
- Raffia into basket from sketch of original design, showing use of color in decoration.

Millinery — 50 hours.
- Trim raffia hat.
- Winter hat from original design.
- Make a sewed straw hat and trim.

Dressmaking — 100 hours.
- Make sketch for gown.
- Cut, fit, and finish a lined dress.

Leather Work — 50 hours.
- Book covers in tooled and stained leather work.
- Bookbinding.

Clay — 100 hours.

Clay-modeling:
- Simple form and ornament.
- Simple pottery (design).
- Simple pottery ornamented with original design.

Wood — 100 hours.
- Simple joinery applied in making articles which may later be decorated in wood-carving.
- Wood-carving.
- Advanced wood-work — furniture construction and wood finishes.

Metal-work — 100 hours.
- Hammered copper in simple forms — bowls, boxes, buckles.
- Enamel applied as decoration.

Such a course would lead the pupil from simple creative work in easily manipulated material by gradual stages, as he grows in power mentally and physically, to creditable design worked out in durable material.

DISCUSSION

Miss Lillie Collamore Smith, instructor in domestic science, High School, Brookline, Mass.— I have been much interested in the paper on hand-work for high-school girls. Without reference to the proposed course of study, I shall take up some points in the main body of the paper.

Education should fit the pupil for life and should give a fuller understanding of the meaning of life. It should give an all-around training and attain the ethical end. A study of present conditions shows a definite and positive need of a larger opportunity for girls, more especially along the lines of manual training.

This year the Committee on Elementary and Secondary Schools of the Lake Placid

Conference is investigating hand-work for high-school girls, particularly with reference to home industries. The results show an increasing interest in this kind of training. Clay-modeling, sloyd, mechanical drawing, joinery, and wood-turning are already, to some extent, taught to girls. Recent investigations show that no less than nineteen high schools have courses in domestic science and twelve in needle-work.

As has been pointed out, food-work is largely an application of science, as are sanitation and hygiene. Accuracy, skill, and dexterity are acquired in food laboratories as well as in those for physics and chemistry. Food-work possesses as much educational value as other science work, and is of great importance from a practical and an ethical standpoint. Domestic science is a practical combination of physics, chemistry, economics, biology, and elementary mathematics, and should be treated as such.

Manual training recommends itself to us for these reasons: (1) thru such training the pupil learns to overcome difficulties and so gains in balance and power; (2) the girl develops into a better home-maker, with a realizing sense of the values of time, strength, and material; (3) by aiding in the formation of a clear general concept, it prepares for an intelligent and comprehensive view of affairs; (4) Thru the sympathetic understanding of what manual labor really is, justice is rendered more sure; (5) by increasing respect for work which must be done, it dignifies and ennobles life itself.

MANUAL TRAINING VERSUS THE MANUAL ARTS

JAMES PARTON HANEY, DIRECTOR OF MANUAL TRAINING, NEW YORK CITY

Those who examine closely into the development of the elementary curriculum in this country can scarce but come to the conclusion that the primary force in the introduction of motor education was an economic one. The strongest supporters of drawing—the first of the motor branches to secure recognition—offered it as hand- and eye-training invaluable to the artisan, while construction, at its introduction, was advocated as a form of preparation also necessary for the future craftsman. It is true that the disciplinary value of both was urged, but such plea was secondary to the plea for skill—for work which should prepare the child for manual labor and should rouse his respect for it and for the laborer. The direct outcome of the industrial plea was the establishment of a number of so-called "manual-labor schools," equipped to give certain elements of industrial training.

Both the drawing and the shop schools date back a generation. Introduced to the school system from without, they naturally could experience no quiet and uneventful development. As adventitious elements their existence was bound to be questioned and combated. The drawing languished, and the manual-labor schools themselves died in the fierce flame of educational criticism against the introduction of industrial aims in elementary teaching.

Before, however, the intermediate grades had experienced the full force of these perturbing charges, other factors had appeared in the problem. Froebel, with keen insight into the phases of child-growth, had in the kindergarten made a system in which symbolism centered about motor

processes, while the technical institute, with strictly utilitarian ends in view, had risen to supply the demand for the trained artificer, and had made haste to adopt a scheme of instruction aimed to give direct knowledge of constructive methods thru formal exercises. This scheme powerfully affected the constructive work of the elementary school.

In the grades the constant iteration of the plea for hand- and eye-training served in time to secure for certain of the forms of motor work a modest foothold, but one so precarious that every flurry of financial stringency or curriculum reform served to make its advocates tremble with apprehension. The new subjects, with their contributions of skill and artistry, stood alone in a course of study dominated by the R's. In this curriculum each study was pursued for its own sake, and each was highly specialized. Under the circumstances it was not surprising that the manual branches were formalized from the start, and that so root-bound they soon showed signs of arrested development. The methods of the technical school resembled much more closely those of the grades than did the free practice of the kindergarten; the manual work, therefore, instead of ramifying upward from the earliest years along the lines of child-growth, grew from above downward along other lines designed for the training of the young mechanic or engineer.

Manual-training ideals thus took their color from technical ideals. The practice exercise was early made the rule, and the work in construction was looked upon by its teachers as done for construction's sake. Drawing and design were similarly developed. Examining the older methods, one finds thruout the same formality and the same effort to employ in the lower grades processes suitable only to students of mature years. Everywhere practice exercises appear separated from their applications; squares and triangles are drawn—the dry chips of geometric procedure; and side by side prim designs are made, but for no specific purpose. Insular and apart, such work in the training of hand and eye failed to make evident its developmental and culture value. It lacked vital interest in all its forms. Its disciplinary elements were employed to the exclusion of its human elements. Technical knowledge was given without conscious power to direct it to useful ends.

Almost within the last decade an entire change has taken place in the educational situation. The philosophy of elementary education has seen some of its chapters revised and some rewritten. Motor training has received recognition in such form as to establish the subjects which represent it on a very different footing before the educational tribunal.

Such change of ideas in regard to the function of the elementary school has already markedly affected the curriculum and the mutual relations of the subjects in it. In the language of Dr. Dewey, "the center of gravity has been shifted from the curriculum to the child." Upon the child's instincts the course must be founded, and about his interests it must revolve.

Motor education must clearly become a part of general education, and preparation and realization in school studies be brought close together. This is in measure but a restatement of the philosophy of the kindergarten. The very present, indeed, is witnessing in motor training a reversal of that process of downward development from the technical school to an upward development from the kindergarten. Manual-training ideals have necessarily been much affected by these changes. The necessity of greater unity and vitality in the related branches has become urgent. The past has seen the different motor branches separated and unrelated, with the emphasis in each upon technique. The present demands a greater variety of materials and far more intimate relations between the drawing, construction, and design, which are seen to be but means to a common end.

Manual training in the past has been construed too literally. It has meant just what it says—hand-training, sensory training, the practice of some form of constructive work designed to give muscular co-ordination. For the great majority of teachers and for the public at large it has meant but shop-work—the handling of certain tools and the making of certain prescribed exercises. Too often the special teachers by their attitude have served to strengthen this view. They have aided to segregate their subject, whatever form it took, by their emphasis upon its technique. Their aim has been the perfect model, and the thing made, whether useful article or mere practice exercise, has appeared as a requirement, with the child's relation to it formal—a model produced at command and not by virtue of a real need; a model, the product of the child's hand, not of his brain.

We are now thinking ourselves away from this view of manual training as a schooling in any special practice, toward one which conceives it as a "principle," or what might almost be termed a "mode," of education; one which looks to see the child given, thru his desires, an opportunity to express himself constructively and to develop clear notions of his relations to his surroundings.

The term "manual training" has, however, been so long identified with formal practice that as a term it cannot now be divorced from such interpretation. It has meant constructive work alone, has meant special training rather than general training, has disregarded the æsthetic side, and has aimed to give schooling in processes rather than to respond to the child's first instincts to build and decorate. As a term "manual training" is narrow and insufficient. In default of a better, each who employs it, recognizing its restrictions, feels it necessary to assert that it does not mean what it says, "hand-training," but something far broader. For the rewritten creed there should be a new name. "Motor training" would, indeed, be a better term; but better still would be one which includes all possible practice in the arts—one which recognizes require-

ments æsthetic as well as constructive. Manual training must become training in the manual arts.

As a broad title the manual arts should include all forms of drawing, construction, and design which may be taught. The term recognizes the intimate relationship which exists between the subjects named and sees them as definite educational means working toward the common educational end. Defining in a general way the different branches, it at once emphasizes both the motor and artistic elements in their performance.

Drawing the arts regard not as a special training, schooling the hand and eye to dexterity in reproduction: over and above its manual value it stands as a medium of expression in the illustrative work of the little child and in the nature sketch or the plan of his older brother. To the younger pupil it is a form of language—a picture writing, a cursive script, in which he clearly mirrors back the ideas he has gained in the form in which such ideas have been pictured in his mind.

To the older pupils such drawing should be made of constant service. The illustrations in science lessons must not be made for illustration's sake, but because they are facts of form and proportion to be remembered; the plans not made as mere exercises with the T-square and ruler, but because such plans are needed for the constructed model which is to follow. And the model itself must stand as the definite center around which the dozen lessons in planning, construction, and decoration must revolve.

What shall the nature of the model be and what its material? Such questions can be answered only in the light of the conditions which prevail in any given locality. It is to be made plain that the manual arts do not contemplate any uniform series of models to be repeated in a dozen different cities, or even in a dozen different schools of the same city. The form to be made in each case should be one which rises out of the real need of that particular class-room. The associated lessons in free-hand drawing, in mechanical drawing, in color, and in constructive and applied design, will then have direct points of application. To the teacher with the constructive point of view the range of such models is extensive. Furnishings for the school may be made, pieces of apparatus, and scores of that host of lighter appurtenances—note-books, covers, portfolios, and the like—which every class-room must have. Other forms may serve to make clear the historical development of industries which the child reviews in his study of the rise of the race from the forest dwellers to the people of great cities, or may serve as useful household articles to introduce the child to the fruitful field of home industries and to the minor crafts. The teacher impressed with the value of the arts will thruout her daily work seek for opportunities for motor expression, and will feel no satisfaction for any lesson which may be so emphasized until it has been made a constructive as well as a mental memory.

The materials in the arts should be varied. The child should learn his power of control over many plastic and pliable things, over many things which may be cut and shaped—string, yarn, clay, raffia, paper, leather, wood, and thin metal. The occupations offered should be typical. Given the occasion for any form, it should if possible be made then, that it may lend its aid in giving to the child the constructive point of view. "Every good occupation," says Dr. Hall "should be curricularized." Every model should show to the child the relation of plan and design to finished form, and as his power of appreciation grows, every form should reveal to him the possibilities of its refinement in obedience to the laws of taste. The search for beauty in the arts is one of the roads whereby they lead to culture.

Taught thus with a common purpose and without undue emphasis upon technical ends, the arts act and react to mutual advantage. Ability to draw and to plan is seen to lie at the basis of construction, while the laws of beauty speak in every well-planned form about us. The arts regard the desire for beauty as instinctive—a passion to adorn. Thru such instinct they would lead the child to learn the laws of fitness of form and decoration, and to see such laws as they appear in the fine painting or in the lowly form of daily use. The arts should be conceived as representing but varying phases of one idea. They are not to be dissociated, not to be betrayed from their position as indispensable mediating agents between the child, his studies, and the social life about him. As co-ordinate and co-ordinating forces their value may be stated in definite terms for pupil, teacher, curriculum, and school.

For the pupil they are primarily "developmental" in that they offer to him from his earliest years most valuable media for self-expression—media so adaptable that, at each change in his point of view from infancy to adulthood, they stand ready to respond to his desires to investigate, to fashion, and to adorn; media so potent that at each higher level which he reaches in consciousness they reveal to him broader knowledge of his own powers and keener insight into the activities of the world about him. The arts present in the forms made elements of direct use and permanency; they practically acquaint the child with the laws of beauty as they enter into the structure and decoration of things for use; they offer activities which school him to habits of neatness, independence, and mental and manual discipline; they present instruments thru which he may be given knowledge and stimulus which cannot be conveyed in any other way. As vehicles they serve to convey him on the road from social endeavor to the domain of social experience. They seek to create in him, with a varied ability, a power to see constructively—to realize, that is—the agents, the tools, the plans, and the processes which have built and are building the world about him. They place him as a worker in the world, not as a spectator. They quicken his sympathy and his interests. They aid to make the school less school and more life.

For the teacher the arts, when comprehended, act as a liberating agent. She gains the power to shape the details of the course of study. With personal initiative for the child comes the possibility of personal initiative for herself, in the adaptation of the drawing, construction, and design to the development of her class work in a dozen different subjects. To the teacher the arts give a direct method of approach to the child; they offer a disciplinary agent controlled by interest and of unrivaled power. In regenerative work—in reclaiming the dull, the backward, the truant irked with learning without doing—the arts have no peer in the studies of the class-room. In their practice the child becomes a willing co-operator who may be called upon for suggestion both for problems and for their solutions. Mutual interests breed sympathy. The arts become a bond between the teacher and the taught. Such sympathy is gained in no other way. They cause the teacher who realizes their value to seek constantly for relations between learning and doing; or better, for opportunities to teach thru doing. Insensibly, unconsciously, the teacher who has grasped this vitalizing principle becomes broad and yet broader in her point of view. She sees her work from without as well as from within. Self-activity on her part becomes as necessary as on the part of the child. She becomes much more truly a student of the child and of his education.

In the elementary curriculum the arts stand as a center and starting-point, from which the child can proceed by way of his immediate interests to his immediate surroundings. Relating themselves as well to work in number, language, or nature study, they serve as a flux to weld the primary curriculum into one common whole. The educational philosophy which preaches the arts preaches the child as the motive force in the curriculum. It offers, in place of an imperfect system of correlation, a definite scheme of work based on the pupil's mental processes and on the development of his mental powers—a distinct and comprehensive scheme in which the different subjects jointly aid in giving to the pupil that composite view of the world which he is at the moment prepared to receive. The arts would introduce the direct, the objective, methods of science-teaching to the pupil; would make the schoolroom itself a laboratory where plans would be thought out and experiments tried; would cultivate the child's active, not passive, attitude; and would transform the class-room from a place of listening and rigidity to a place of doing and activity. Thruout childhood and adolescence they would seek in every way to be identified with the child's life; only when thus identified can their peculiar functions be made of highest service.

Two broad and general deductions may be drawn from the foregoing: the first, that the successful development of the arts depends upon their natural growth in the curriculum; the second, that they must not be confined to the schoolroom, but must become part of the life and activities of the child—must, in other words, pass over into the home.

In thus passing from the school into the home, the arts will help to bridge the inevitable gulf between the two. In our modern city life the school would seek to usurp many functions of the home. It would not only train the child to labor, but would now also essay to train him to play. The play spirit like the work spirit grows best in an atmosphere of freedom. The arts respond to the play spirit—they represent pleasure in labor. The best freedom of the school is restricted when compared with the more perfect freedom of the home. Keener individuality is to be developed in the latter—a fuller realization of independence and self-help. The arts in the home become more closely identified with the inner life of the child—the life the teacher can see as but thru a glass, darkly. The home suggests a hundred problems scarce visible in the atmosphere of the schoolroom. To the child each of these is of vivid interest. The arts taken over into the home serve to link the school life to the family life; the class-room stands them for no drill-room, but for a place wherein desired knowledge of plan and process is to be gained. Taken over into the home, the arts lend distinct aid in making education in school and out one continuous process.

DEPARTMENT OF ART EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 8, 1903

The first meeting of the department was held Wednesday morning, July 8, at 9:30 o'clock, in joint session with the Manual Training and Elementary Departments, Mr. Charles F. Warner, president of the Manual Training Department, presiding.

The topic for the morning was "The Relation of Art Teaching to Manual Training and Industrial Training."

For the full program and minutes of the joint session see minutes of the Department of Manual Training.

At the close of the joint session Miss Clara A. Wilson, president of the Department of Art Education, announced the following committees:

COMMITTEE ON NOMINATIONS

Miss Bonnie E. Snow, of Minnesota. Miss Alice Hipp, of Nebraska.
Walter S. Goodnough, of New York.

COMMITTEE ON RESOLUTIONS

Miss Josephine Littig, of New York. Mrs. M. E. Riley, of Missouri.
Charles M. Carter, of Colorado.

SECOND SESSION.—FRIDAY, JULY 10

The second meeting of the department was held in the New Old South Church and was called to order at 9:30 A. M., President Clara A. Wilson, of Davenport, Ia., presiding.

After the opening remarks by the president, Denman Waldo Ross, lecturer on the theory of design, Harvard University, Cambridge, Mass., read a paper on "The Teaching of Art." The reading of the paper was followed by questions and discussions.

Miss Bonnie E. Snow, supervisor of drawing, Minneapolis, Minn., read a paper on "Considerations for a Practical Study of Drawing in Public Schools," which was discussed by Charles M. Carter, director of art, city schools, Denver, Colo.; Solon P. Davis, director of art, city schools, Hartford, Conn.; and William A. Mason, director of art, city schools, Philadelphia, Pa.

Under the order of business, the report of the Committee on Nominations was presented as follows:

For *President* — James Frederick Hopkins, director of art instruction, public schools, Boston, Mass.

For *Vice-President* — Charles M. Carter, director of art instruction, public schools, Denver, Colo.

For *Secretary* — Miss Lillian Cushman, instructor in art, School of Education, University of Chicago, Chicago, Ill.

For *Member of the Executive Committee* for term expiring July, 1906 — Miss Clara A Wilson, supervisor of drawing, Davenport, Ia.

The report of the committee was accepted, and the secretary instructed to cast the ballot of the department in favor of the persons nominated. The ballot was so cast, and the officers were declared elected.

President-elect Hopkins, being called upon, responded in a graceful speech, cordially accepting the office to which he had been elected.

The report of the Committee on Resolutions, thanking those participating in the program as well as the various bodies that had assisted in the proceedings, was read and, on motion, adopted.

The following resolution was then offered by President James Frederick Hopkins:

Resolved, That the Board of Directors of the National Educational Association be respectfully petitioned to confirm the appointment and provide appropriations for the Committee of Five to be appointed by the president of the Art Department of the National Educational Association to investigate and report upon the following fields:

1. To investigate, tabulate results, and report upon the courses of study of the art schools offering applied art training (*a*) in Europe, (*b*) in this country.

2. To investigate, tabulate results, and report upon the centers of art-industrial production (*a*) in Europe, (*b*) in this country.

3. To offer such suggestions as to schools, courses of study, national direction, and annual exhibitions as shall serve to arouse public interest and provide remunerative fields in art industries for the youth of America.

The resolution was adopted by a unanimous vote.

There being no other business, the president, Miss Clara A. Wilson, declared the meeting adjourned.

WILLIAM H. VOGEL, *Secretary*.

PAPERS AND DISCUSSIONS[1]

THE TEACHING OF ART

DENMAN WALDO ROSS, LECTURER ON THE THEORY OF DESIGN, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

I am here, as a teacher, to talk to you about teaching—the teaching of art. What is art? It is our struggle for existence; it is the effort we make to convert our needs, our desires, our feelings, thoughts, ideas, and ideals into realities. Art is all that. Art is, therefore, the expression of life; and the arts are the many and various modes, the ways, means, and methods, of our thought and activity. Our thoughts find their definition, as well as their expression, in the terms of art. Take art and the arts out of our life, and it becomes a sequence of vague emotions, of formless sensations. Life without art—we see it in the mere impulse, the dull habits, the automatic activities of the lower creatures. Art is, therefore, not only the expression of life, it is very nearly life itself. It is certainly all that makes life interesting and worth living. It is a mirror in which we look for all the wisdom and all the inspiration of life. It is the means by which all our purposes are fulfilled, all our ends achieved, all our ideals realized.

[1] The papers contributed by this department to the joint session with the Departments of Elementary Education and Manual Training are so closely related to manual training that they are printed in connection with the papers of that department.

It will be best for us, however, to consider life as distinct from art, and to regard art as the expression of life—life's work, life's achievement. Take anything that anyone has done in gymnastics, in music, in language, in construction, modeling, or carving, in drawing or painting, in any of the arts; anything that anybody has done or said, worked out or thought out, and you will find in it two elements; the motive which represents the life of it, and the performance, which represents the art of it. It is very important that the motive, representing the life, and the performance, representing the art, should not be confounded. It often happens that the motive is good when the performance or art is bad, and it often happens that the performance is good when the motive is bad. We all know how frequently people fail to do well, fail to succeed, when they have the best intentions in the world, simply because they cannot do the thing they have undertaken to do. They are ignorant of the materials perhaps, or the tools. The right method is unknown to them. They have no knowledge, or insufficient knowledge, of the principles of design. So they fail, because they have not mastered the art. On the other hand, we often find an achievement of art in work which is not only without value, but adverse to human interests—injurious, even destructive, in its tendency. We might say of a thief; his plan was admirable and admirably carried out; what he did was really a work of art, a masterpiece, tho he was afterward put in prison. We might say of a murder that it was planned, designed, and executed with consummate skill, with the very finest art, tho the artist was afterward hanged for it. He was hanged, not as an artist, but as a bad man. He was hanged because the motive of his work was so bad, not because he did his work so well. In other cases it happens that art gives a value to work which has no other, as when Ching-Ling-Foo, the Chinese juggler, waves a silk handkerchief in the air, turns a somersault, and rises before us with a large basin brimful of water—to our perfect astonishment. The whole value of such work lies in the manner of doing it—so perfect, so wonderful.

What we value in any work of art, apart from its motive—its use, its truth, its righteousness—is the design of it, which is revealed in its performance. By "design" I mean the form in which the work is achieved, the terms or materials used, the arrangement of the terms or materials, the composition and connection of the parts, the relation of the parts to the whole, the organic unity of the whole. There is a certain work which you propose to do. How is it to be done? What plan are you going to follow? You know what you want to do. Let us say that it is something necessary, or useful, or true, or right, or beautiful. There lies your motive, and it is a good one, but the problem of following the motive of achieving the thing technically, remains. That is the problem of design. The problem of design is the problem of art.

I find this passage in Plato: "The artist disposes all things in order, and compels one part to harmonize and accord with the other, until he has constructed a regular and systematic whole; and this is true of all artists."[1] The idea of design is well expressed also by Walter Pater in the phrase: "The rational control of matter everywhere."[2] Reason, regularity, order, system, unity, harmony — when we are able to bring these elements into our work we are designers and artists. Without these elements our work has only the value of its motive or purpose; it has no value as art. To teach what is necessary, what is useful, what is true, what is right, what is beautiful — that means teaching science, philosophy, the wisdom of life. To teach people how to yield to necessity properly and gracefully, how to produce what is useful, how to speak what is true, how to do what is right or beautiful — that is the teaching of art. The teaching of science, philosophy, and the wisdom of life is one thing; the teaching of art, another; but they must never be separated. We must never teach people what to do without at the same time teaching them how to do it, unless we wish them to become mere critics, calling upon other people to do what they cannot do themselves. Nor do we wish our pupils to become actors without a motive, or performers without a purpose. It is a grave mistake to give men motives without power or power without motives. It is a mistake we have made; and, as a result of it, we find in our community a so-called educated class monopolizing all the motives of science and philosophy, and a working class with all the power, all the technical knowledge and technical skill, that lies in art and the arts; and these two classes have but little association, but little sympathy, with one another. Idealism, with its love of righteousness, truth, and beauty, and its technical ability — the two elements which go to make up the artist and the artistic life — are separated; so much so that they cannot act together as they ought to. The problem of education is to bring them together and keep them together. We must give our pupils the finest possible impulses, the highest possible ideals, but with the impulses the ability to follow them, with the ideals the power to realize them. That is the problem of teaching, whether in the school, in the college, or in the university.[3]

As I understand it, the purpose of all teaching is twofold: to give to the child, to the youth, fine impulses and high ideals, and with them the technical ability, thru technical training, to follow his impulses and to convert his ideals into realities. We have been too well satisfied in the past when we have given to the student merely an impulse or an abstract ideal. The side of technical training has been disregarded and neglected. We are beginning, however, to realize its importance, and are now giving to technical training the place it ought to have in our system of education.

[1] *Gorgias*, Jowett ed., II, p. 383. [2] *Greek Studies*, p. 233.

[3] An article of some length on this subject by the author of this paper will be found in the January (1903) number of *Handicraft;* published by the Society of Arts and Crafts, 14 Somerset street, Boston.

Consider the principal or typical arts, with which all the arts of life are more or less closely connected—gymnastics, music, speech, construction, modeling, carving, painting. Taking each one of them, let us work out for it a system of instruction and training which will give, first, the knowledge of the terms, whatever they are; secondly, exercises in the use of the terms; thirdly, a thoro knowledge of the practice of the great masters; fourthly, exercises in original composition with the idea of exercising together the power of imagination and the power of expression.

I know it will be argued that, considering the short period of childhood and youth, the short period which we can devote to education, it will be impossible to carry out this plan which I propose: to teach even the principal arts in such a very complete and thoro way. I dare say, or rather it goes without saying, that we shall not succeed in doing this at once; but if we decide that it ought to be done, that it is the right thing to do, it will be done, and, in due time, well done. Nothing so fundamental, so comprehensive, so far-reaching as this is to be accomplished in any short period of time. It may take us a hundred years to organize and perfect such a system of teaching, but that is a very short time in the course of the ages. If we can be sure that the system proposed is the right system, we must go to work and establish it, no matter how much time it takes. The more energy we put into the work, the more intelligence we exert in it, the more money we are willing to spend for it, the sooner we shall bring our work to its end—if, indeed, there is an end to any such work. As we approach the horizon which we have considered the end, other horizons will appear which we cannot now see; and so our progress will be a progress without end. The only thing to worry about is that what we are trying to do should be the right thing to do; for if it is not the right thing, we shall be spending the energy, the intelligence, and the resources of life in vain; we shall be turning the forces of life in wrong directions in which they will be wasted and come to naught.

What I propose for consideration is this: to give to all men, so far as we can, the knowledge and understanding of life as a whole, of its principal modes of activity, of the best thought that has been expressed in these modes; a knowledge of the world's finest impulses and highest ideals, so that our motives may be the right ones, our aims the best; and with this knowledge, which we may call the wisdom of life, we must give what I have called the power of life—the power which lies in art and the arts to follow our impulses and to realize our ideals. Thucydides says of the Greeks (in the funeral oration of Pericles) that "they had the singular power of thinking before acting, and of acting too." That is what we want, as the outcome of our teaching. We do not want an impotent idealism, but a potent one. We want all that idealism means—discrimination, right judgment, high standards; but, more than that, the

ability, the power, to achieve our ideals technically. Then we may expect to realize them, when the philosopher goes to work and the workingman becomes a philosopher.

[Dr. Ross then described, at some length, his teaching at Harvard as a specific illustration of the method to be followed in the teaching of art: "Not what I really do, but what I try to do; my motive, not my performance."]

CONSIDERATION FOR A PRACTICAL STUDY OF DRAWING IN PUBLIC SCHOOLS

MISS BONNIE E. SNOW, SUPERVISOR OF DRAWING, CITY SCHOOLS, MINNEAPOLIS, MINN.

The study of art will come in time to be considered by all educators as a subject not less important than the study of literature. Theoretically, it is now so considered by many, but no one has as yet possessed the courage or the ability to organize upon that basis a school supported by public funds. Friends of the new education are loud in proclaiming in assemblies like this, thru the educational press, and upon the lecture platform their belief in the prophecy that the school of the future will provide intellectual pursuits for half the time of the daily program, and industrial and artistic training for the other half; but these friends go back to their executive and official positions and do little toward bringing about a realization of their eloquently expressed hopes. The influence of tradition is stronger within us than is faith in our own convictions. We are afraid. We know that the older conception of education made it the more valuable in proportion to its remoteness from ordinary life. Going to school and to college in the past has been an intellectual and a moral discipline. We are fond of saying now that the highest aim of man is to realize his faculties in acts, and we know that the education which enables him to do this is best. We know that the teaching of art in its true sense has a greater influence upon practical life than the teaching of mathematics; yet we lift no protesting voice when the program in the universal common school provides, not only a daily recitation in number, but a daily study period as well. We see to it that she who is to teach reading knows how to read, and we should consider it the height of the ridiculous for one not versed in number to attempt to give instruction in that science; yet we are passive when confronted by the teacher who knows nothing of art, yet who would essay to initiate others into its mysteries.

The teacher of art sees, for instance, an elaborate and thoroly up-to-date system of geographies, profusely illustrated, carefully graded, and furnished with addenda of maps, globes, sand tables, and all the rest, cheerfully provided for all children in the graded schools. There are,

too, a daily recitation and a daily study period for geography. Yet we believe that the study of art is not of less importance than a knowledge of the earth's surface. The school board that would fail to provide a system of readers — or a course in literature, as it is now called — for children from the entering room thru all the grades to the high school would be called derelict or behind the times; but the teacher of art must content himself with such scrappy material as he can glean from libraries, museums, books, and magazines, and the wonderful wilderness of nature. Yet we of the faith believe that the study of art, with all that it involves, is equal in importance to the study of English.

The proper test for any subject permitted on the school program is its effect upon the child and its attitude toward it. In the light of our experience, handicapped as we have been by meager equipment, short periods of recitation time, and insufficient preparation on the part of the teacher, proof that drawing with its related art work has stood this test is overwhelming. But it will never be placed upon its proper footing until teachers of art demand and receive for their subject equal recognition with branches that are indicated in the epithet "the three R's." Such recognition will mean:

1. As thoro preparation in drawing on the part of the grade teacher as is now required in English or mathematics.

2. A complete equipment of art text-books — not books in which the drawings of children are to be placed, but books containing lessons to be learned, related reading matter, beautiful pictures in color and tone by the best artists, and any other material helpful to the cause, which is now supplied, if at all, by the supervisor, at an undue expense of life, energy, and money.

3. Much additional material in the way of portfolios of fine examples of work from the masters, past and present, from the world of architecture, sculpture, and craftsmanship, and from the best designers and illustrators of our day.

4. A daily recitation period, varied in length to suit the age of the child, and in all grades where such time would be of advantage, a daily study period.

Is this asking too much? Not if we believe, as we say we do, that America is not only to be the leader in all departments of industrial life, but is also to be the scene of a great artistic movement, the outcome of a natural form of democratic life under modern conditions, and of a national appreciation of the value and beauty of æsthetic ideals and artistic work.

The art teachers of this country are not as yet a very numerous body, but they cherish high ideals and can wield a mighty influence for good in the direction of the educational work of today. In spite of unfavorable conditions surrounding the teaching of drawing and related subjects in most localities, I believe that art teachers have a sounder philosophical and psychological basis for their work than has yet come to any other class of workers in the educational field. If we might only realize a little more fully our ideals! I do not forget, in thus harping upon our deficiencies, the good that has come into the education of the common people thru

what may be called the art impulse. I know that schoolrooms are today more beautiful; that the architecture of the schoolhouse is improved; that we pay more attention to the beautifying of our school grounds; that school gardens of interesting flora are becoming a necessity; that schoolbooks grow daily more attractive and inviting because of improved illustrations, binding, and text arrangements; that the whole world of beautiful nature has been opened up to the children very largely thru the influence of the art teacher and his paint-box; that the whole movement for industrial education and manual training has been put upon a living basis because of its union with art principles; that millions of homes in our land have felt the uplifting influence of the love of all things beautiful developed in the children; and all this, I know, is directly traceable to the teaching of art, poor as it has been, in our public schools. It is because I believe so fully in the greatness of art that I plead for a fuller recognition of its power from those who have the shaping of courses of study and the apportionment of time in the arrangement of the daily program.

The art teacher of today has much to consider in laying out the work of eight different years to be carried on simultaneously in the different grades. He must bear in mind the needs and desires of the children; the limitations of the regular teacher, upon whom, in great measure, he must necessarily depend; the meager equipment as to materials he deems to be absolutely essential to successful work; the short and infrequent periods of recitations or class time; and the absence of any suitable text-book to be put in the hands of the children for definite study of principles. Remembering all this, he must be true to his artistic ideals and aspirations. These conditions must be met, and in a measure overcome, before anything like successful results can be obtained. His course of study must be such as will command the interest and respect of the grade teacher. She must be willing, by study and practice, to overcome in some degree the deficiencies of her own education in this regard. She must feel that she is indeed the teacher of drawing, coming in direct touch with the children themselves. She must be led to value its influence upon the children and to depend upon it as an indispensable factor in their general development of mind and soul. The art teacher must, therefore, not only possess opinions which will be respected by his *confrères* and superiors in the general work of supervision, but he must possess the ability to shape opinions, and to carry his points, because of his belief in the dignity and greatness of the work which he is fortunate enough to represent.

With the interest and co-operation of the grade teacher, the principal, and the superintendent, a more flexible program may be secured, and perhaps a more nearly just apportionment of time. School boards are becoming more generous in the provision of books, papers, pictures, and

still-life material; and if the right system of text-books ever does come to light, there is hope that purchasers will not be found wanting.

If my dreams could be realized in this respect, I would make those art books the most beautiful schoolbooks that ever were published. They should be eight in number—one for each of the eight grades below the high school. The books should contain no blank pages for the children's drawings; these should be placed on separate sheets of paper of ideal quality and tint. The book for the little folks in first year should be a combination picture-book and primer. There would be in beautiful color the first presentation of the landscape—blue sky, green field, the distant line of hazy foliage, the big tree or quiet pool in the foreground. The brief text accompanying the pictures should be of such simple nature and interesting style that the "A 1st" child could read it, as from a delightful story-book. There would be illustrations in color and tone of flowers and fruits, birds and insects, toys and objects of childish interest, pictures of the human figure, in mass, in line, in color, expressing the games and occupations dear to the childish heart. There should be pictures of cats and dogs and rabbits and squirrels. There should be a few lessons in geometry—yes, even in the first grade—illustrating ideas of form and shape, measures of distance, and names of certain conventions so cunningly related to fascinating exercise in modeling and making that the understanding of the term and the learning of the name would become a natural and inevitable outcome of the lesson. I would begin—yes, in the first grade—the first simple lessons in pure design, drawing upon my knowledge of the child-mind and childish interest to help me in guiding his dawning sense of rhythm, balance, and harmony. In this first-year book I would have bright-colored illustrations of Indian pottery, rugs, and blankets, and pictures of primitive looms. I would photograph processes of modeling, weaving, and making, so that I might make vivid the imagination and bring to it a wealth of suggestion.

The text-books of the other grades should be modeled after a similar pattern. I would introduce by precept and illustration the more difficult and technical lessons as the years progressed. There should be an eight-year course in the subjects so familiar to us all—in landscape, flowers and fruits, birds, animals and insects, the human figure, still-life and perspective, light and atmosphere, geometry and design, and construction. In this last I should affiliate all my art principles, as far as possible, in the making of things, and in the study of things not possible to make in the schoolroom. Thruout my whole course there should be shown examples from the masters, both classic and modern, in connection with the various steps in the development of the subject.

Within the limits of a twenty-minute paper it is impossible to be more than general in suggestions bearing upon a topic so broad. In the past we have been narrow in our methods of presenting art principles. We

have been bound by the letter, and not sufficiently imbued with the spirit. We have felt that the teaching of representation, for instance, was a distinct division by itself, and that its principles had little to do with the principles of design. We could trace a relationship, it is true, between the study of objects and the study of perspective, and lately we have endeavored to dignify our objective work from nature, life, and the world of manufacture, by uniting it with the consideration of what we have called composition. But it has remained for Dr. Ross and Mr. Dow to show us that the great mass of objective material which we have handled so confusedly and with so much awkwardness and misunderstanding is governed by very simple but very comprehensive laws, so that we have come to see that it does not so very greatly matter whether we study landscape or still-life, or model drawing or construction, so long as we recognize the unity of the laws which govern all these different manifestations. Can you imagine any art subject which cannot be submitted to the consideration (1) as to its measure in space, (2) as to its shape in space, (3) as to its position in space, (4) as to its tone value in space? Let us express it in common terms: Every element presented by the landscape, every object, every manifestation of distance, light, and atmosphere, every problem in perspective, design, or construction, can be studied in the light of these simple considerations. What is the space in which I am to place this thing? What shape is this thing? What is its position in relation to me, and to the other elements under consideration? What is its tone?

An understanding of the principles of *design* should permeate and influence the presentation of every division of the great subject of art. In the past we have thought of design as affecting decoration only. How different is our understanding of the idea today! Design used to mean to us little else but some expression of ornament, historic or modern. Now design means conception, purpose, production. We need to study nature, not less but more than formerly, but in the light of clearer conception, stronger purpose, and with the thought of its influence in the creation of beauty. We need to study the representation of objects, in all the interesting detail of form, color, arrangement, and expression, not as ends in themselves, but in order that we may learn to look upon the world of things as subject to laws of order and beauty. We need to know more of geometry, to dig into its wonderful harmonies, and to see there revealed the marvelous manifestations of law and order—indispensable factors in the creation of beauty. Emerson declared that he studied geology that he might better write poetry. We cannot dispense with constructive work in which design—that is, conception, purpose, and creation—is evidenced in concrete form; but here again we must not confuse the end with the means. The making of things is not for the purpose of glorifying things, but to the end that the faculties of creative imagination may find opportunity for development and growth.

Many interesting questions present themselves to the practical teacher. A "round-table" discussion as to the actual ways and means of presenting art principles to children of various ages is sure to be helpful. As the request for this paper was accompanied by the very pointed suggestion that it be made as practical as possible, I will tell you how the work is carried out in the particular field of my own operations, not because I consider the plan there evolved to be of especial merit, but because it may serve as a basis for definite discussion.

We begin in all grades with the study of the landscape. The little children learn in these very elementary exercises the use of water color, in simple washes, by dictation. Those older express different moods and aspects of nature, and study various elements in the landscape, such as trees, roads, rivers, houses, etc., according to their ability. They work from suggestive illustrations, from imagination and memory, and from nature. In the upper grades a large part of this landscape work is done in pencil and in flat tones of color. Pupils are taught in the fourth grade to use "finders," and below that the teacher fosters the idea of composition by the judicious use of various shapes and sizes of paper. Charcoal mass and pencil outlines are also used as media in the various grades in connection with landscape study. More time is devoted to landscape in the lower grades than in the upper.

Fall flowers and plants must be used while the season offers them, and we try to practice our own preaching in the effort to show that different materials and motives, such as landscape and plant life, teach the same art principles. Briefly, the work in all grades for September and October is based on the study of landscape, plant life, flowers, and fruits. In connection with the study of fruits and seedpods, much interesting work in decorative design is done by pupils in all grades.

The November work emphasizes the study of still-life forms, presented differently to children of different ages and interests. In the lower grades all nature and object-drawing is pictorial in its tendencies. Much brush-work is done here, making representations in mass rather than in line. With older pupils, the effort is to get away from mere pictorial drawing. More serious work in composition is done, working away from literal representation into a more subjective character or style; for instance, still-life forms are put into decorative compositions in color and into pencil values.

December work is dominated by the constructive idea. There are Christmas gifts to be made, involving the use of many different materials, according to grade. The little ones use paper, clay, soft yarns and wools, for folding, modeling and weaving. The older ones are working out their exercises in basketry and simple wood-work, involving the making and decorating of boxes, book-racks, calendars, etc. Lettering and illuminating texts form a definite part of the work of the intermediate grades at this time.

January brings a more noticeable differentiation of the work, according to grade. The primary children draw toys and other objects attractive to them, and make studies of winter landscape and of whatever material in the line of winter nature work is at hand, such as the growth of pine trees, the study of different kinds of evergreens, cones, etc. The older ones take up the study of perspective principles, from models and objects, from houses and streets, from steeples, housetops, and towers, from interior corners of rooms and exterior corners of buildings, according to grade. Many different media are used in this work, and it is treated sometimes in line, sometimes in mass, sometimes with reference to decorative composition, and sometimes with pictorial tendency.

February is devoted to the study of the human figure. This is varied in the lower grades with the study of such domestic animals as are available at the season, principally cats, dogs, and rabbits. Both color and ink washes are used for this work in the lower grades, as well as charcoal or soft pencil outline. Line, pencil tones, and flat tones of color are used in the upper grades, the effort being here always to get away from purely objective work as much as is possible. Some study of geometry follows. There is a place here for elementary work in mechanical problems in the upper grades, if time allows.

Design, both pure and applied, follows in March and April, and the spring nature work from landscape, flower motives, birds, and insects offers a wealth of material until the close of the year.

This, in brief, is our course of study, but how meager and bare it looks, separated as it is here from the rest of the school interests with which it is so closely connected! The drawing lesson must be a vital part of the day's work, and cannot be sundered from its sister-subjects "without tears."

"I buy the pictures of Mauve," remarked a clergyman in Paris, "because he puts into them what I try to get into my sermon — simplicity, suggestiveness, and logical sequence." Is not this a test also for any suggestions bearing upon the course of study in art?

DISCUSSION

CHARLES M. CARTER, director of art, city schools, Denver, Colo.— The first consideration is that the director or supervisor of art should have a clear conception of what he is to accomplish. That there may be some confusion in this direction is not to be wondered at, when one considers the various *raisons d'être* which have been advanced from time to time as a warrant for placing drawing in the school curriculum. From the time when Walter Smith based the claims of the subject upon its industrial value to the present, we have had varying points of view, many of which still remain with us. At one time we emphasized the fact that drawing is most important as a means of developing hand, eye, and mind; then it was the spiritual and creative activities of the child that were advanced as the greatest outgrowth of the study; then again importance has been

given to the study of æsthetics thru pictures; and now composition is advanced as a matter of leading importance; while some of our radical friends would have us believe that the development of the manual arts is the great end, and, if I may judge the signs of the times, there are directors who would devote to this work time which previously had been devoted simply to art study. Incidentally, as the years have gone on, we have seen various minor fads assume importance. For instance, Walter Smith showed us elementary designs by primary children which at the time seemed wonderful. Then again we were very much interested in the possibility of primary children making simple working drawings. Once type forms were the fashion; the same was true of historic ornament. Then, as you know, colored papers, life drawing, water colors, chalks, crayons, etc., have each had their periods of special importance.

The most radical change in method was, perhaps, when we attempted to substitute for exact representation less accurate but more artistic representation, which in our experience has often been a cover for imperfect instruction by ignorant teachers.

The result of all this is that we find our courses of study filled with a little of a variety of subjects, each having had its day of importance, and with our meager time we can barely touch on any one. It is like an elaborate *table d'hôte* dinner in comparison with a meal of healthful simplicity.

All of these considerations lead me to believe that a "fad" for simplicity is very much needed. That there have been excellencies in each of the subjects attracting attention in the past cannot be doubted, and above all it is apparent that drawing or art in the schools is a subject of considerable vitality, if it can stand so much tampering with its foundation.

We are led to ask which are the most important of these fads or subjects. As near as I can determine, after conversations with teachers, superintendents, and people in general, the study of art in the public schools should develop, first, ability to observe; secondly, ability to express; and thirdly, appreciation and application of art ideas thru composition, pictorial, constructive, and ornamental. The proper presentation of these features presupposes that the teacher has had good training in these directions. Generally she has not; for, according to a report recently made to the Western Drawing Teacher's Association, the normal-school graduate generally has an imperfect training in art; consequently time and strength are consumed in overcoming deficiencies. As a general thing, graduates have a smattering of the various "fads," but their ability to observe and express is very defective, and it is in these directions that special training has to be given in teachers' meetings. Say what we will, there is nothing more important for the teacher of drawing than to think, see, and express accurately. By these powers they are able to understand errors of pupils instantly, and to lead the pupils in their turn to think, see and express truly. We believe in downright hard study, whether it is agreeable or not — that the power thus gained is the only sure foundation for subsequent free, artistic expression.

But I would not have this discussion deal altogether with generalities. I should like to gain ideas of practical methods of supervision. For instance, what is the best method of giving directions to teachers?

We have made a study of directions as given by supervisors in various large cities of the country. Some are type-written, others printed. Some are extended, others brief. Some are sufficient unto themselves, while others refer to books for more detailed directions; and a few approach very near to complete treatises on drawing. In a general way it seems to us that a moderately brief outline of the work arranged in a clear manner, so as to be easily consulted, should be the principal guide, while, for more detailed information, reference should be had to published manuals of drawing. The supervisor, with his limited time and funds, cannot hope to produce complete illustrated printed directions which can compare with those from a publisher. Experienced teachers will not need detailed directions, but in cities and towns where there are constant additions of new teachers it is important that they have some source of detailed information.

My experience is that too many directions often prevent the careful consideration of the information they provide. The average teacher, with several subjects to teach many pupils, with perhaps the added affliction of two or more grades in a room, must have directions that are quickly and easily understood. I would not disparage the thinking out of plans of work by the teacher, but experience shows that the majority must have their work very definitely indicated by the supervisor.

As to methods of securing good work from the pupils, I would commend particularly the idea of having what I term "special exercises;" that is to say, in the second to the sixth year I would have one each month, except the first and last; while in the seventh and eighth years one each term will be sufficient. The special exercises are selected from the regular exercises. Each pupil does the same subject, and spares no effort to have it express in every way the best work of which he is capable. If the first attempt is not successful, the pupil is to try again and again, until the teacher is satisfied that the best result possible for the pupil has been gained. These results are preserved in special envelopes properly labeled, and subsequently submitted to the art director. In the high grades the works are not considered approved until marked "accepted."

Treating these exercises as of special importance results in securing the best efforts of both pupils and teachers, and helps to establish good habits of work which show their influence in all other exercises. The underlying idea thruout should be: "Not how much, but how well."

SOLON P. DAVIS, director of art, city schools, Hartford, Conn.—To one who has for thirty years been in accord with the first proposition of the able paper which has been presented before this body, the privilege of discussion resolves itself mainly into an opportunity publicly to approve its points. No one who has closely watched the development of art instruction in the public schools since its first adequate introduction into the curriculum of serious studies in 1870 can fail to understand its value for the masses from the standpoint of either utility, economics, culture, or ethics. Its place is secure; its true relation to the other subjects, its method, and its equipment for effective service are not yet fully determined.

The experience of over a quarter of a century in the schoolroom has borne in upon my mind so strongly the fact that "art is long" that I must confine myself, in the brief moments at command, to a few suggestions as to immediate possibilities by emphasizing one point in the paper.

While the growth of public opinion as to the value of art training as a constituent factor in public education has been marked, we are still at a considerable distance from the time when it can successfully claim a place in the curriculum so conspicuous as that accorded to it, rightfully, in the address. The subject of art will never attain its rightful and adequate place among the fundamental subjects in our public-school course by the path of a claimant. It will do it by recognizing the great ethical law: "He that will be great among you shall be servant of all." It is thru service to the other departments of school work, and the gradual recognition that they cannot be completely effective without it, that art is to perfect its standing and recognition as a vital factor in public education. Love for and practice of the beautiful must penetrate every activity of the schoolroom before that feeling for beauty can be developed in the mass of children which is the basis of art appreciation and the only hope of any satisfying art expression.

The effect of the most carefully conceived and conducted art period, whether weekly or daily, will be largely dissipated if it has not the same vital relation to the other work of the school that the study of English, when rightly conducted, has in the way of influencing verbal expression.

Therefore I would say that it is the present duty of the director of art education to place himself in touch with the entire work of the schoolroom, and to lay hold of the material there with an effort to infuse into its routine the spirit which he tries to beget in

the drawing period. While we abate not one jot of our effort to enrich that period with the sorely needed material set forth in the paper just read, let us not forget that measure in space, shape in space, position in space, and tone value in space have as direct a relation to the appearance of the written exercise in English or the printed page of a text-book as to a landscape composition, and that balance, rhythm, and harmony are just as desirable in an illustrated essay on insect life as in an "Evening" of Corot.

I would add to the sorely needed material suggested by the paper as desirable for our work a permanent exhibition room or museum for each school building, in which should be found for constant display and for circulation thru the schoolrooms the best examples of the embodiment of the beautiful in all the work of the school. I would charge the vision of the children with these things from the kindergarten upward, until their ideals for the common round should lead them into an enchanted realm, and design should become a part of daily life.

The writer of the paper under discussion has well said that "the drawing lesson cannot be sundered from its sister-subjects without tears." Is it too strong a statement to say that where it is so sundered it will sue in vain for permanent place and power among the fundamental educational forces in our public schools? I am sure that along this path lies the possibility of leading the regular teachers into full sympathy with the subject and a desire to equip themselves for the proper presentation of it.

Following the present endeavor on the part of educators to make the life of the schoolroom an integral part of the child's whole day and not a separated experience, questions of the particular subject of a lesson or a series of lessons — nature drawing, applied art, constructive design, representation, picture study — will come to have a natural relation to the day's work, and will partake less and less of the nature of a "special" subject. The inspirational and disciplinary features of art training will be more perfectly adjusted and the progress of art appreciation in the mass more surely and healthfully attained. The results will, possibly, be less exhibitory, but more sane, and will contribute more helpfully and genuinely to the great art movement now in progress.

I do not forget that in many of our cities this is recognized, nor that good work is being done toward this end; but that its recognition is sufficiently general I am far from persuaded. Let it not be inferred that I would abrogate or minimize the influence of the definite period of art study in the course; far from it. It should, however, mean far more than it does now. In the future it will have a larger place in the scheme of study, and the supervisor will have a richer influence and power and wider responsibility than is yet possible. But the subject must first justify its claim by saturating the entire curriculum until it claims art instruction as an essential element in its work.

In this work we must have the sympathy and co-operation of the regular teachers. The work must be made of such a nature that they will feel that they can undertake it. We must be ready to simplify, to readjust, to wait. In short, I am aware that I have outlined a work of infinite tact and patience — of self-sacrificing foundation work. But —

> "In the elder days of art,
> *Builders* wrought with greatest care
> Each minute and unseen part,
> For the gods see everywhere."

WILLIAM A. MASON, director of art, city schools, Philadelphia, Pa.—The function of drawing in the public schools, while it is generally educational and makes for æsthetic culture, aims also to develop many future artisans and not a few artists. The course in drawing consequently must be both practical and æsthetic — training the many to become productive artificers, and all to be appreciative admirers of art productions. More time should be given to the study of art and manual training in the schools, and teachers should be better trained in drawing. President Butler says: "No person short of a genius can command the scholarship to teach wisely and eco-

nomically the whole series of subjects which are represented in the upper, elementary, or grammar grades." Department teaching, which he advocates, is the remedy for poor work in our branch of study. Despite the amount of experimenting and the variety of propaganda that have burdened the subject, drawing is better taught today than ever before. It is becoming more and more a living factor in the educational life of the child. It is more closely correlated than ever before with all the school activities of the child and has become the ready instrumentality for self-expression in all his work. It is a mistake in any branch of the subject to pursue its abstractions beyond their immediate application to his wants. The work should be concretely applied from day to day.

A few suggestions under the three general topics of drawing are briefly submitted.

The drawing of leaves, sprays, and plants is practicable from the earliest school days. The exercise is incomparably more interesting and valuable than line drill. The best way to begin this kind of drawing is with colored chalk or colored crayons. Water color should be substituted just as soon as it can be mastered. Mass treatment is far more direct and pedagogical than pencil outline, which is more analytical and better adapted for advanced work. Free cutting of pictures with scissors is sometimes advocated; but when brush and ink are at hand, why use a dressmaker's tool? Would the child with the hoe be more incongruous? Borders often improve drawings. They should be drawn around the drawing, not around the paper. Every drawing should be made artistic, decorative. Our mission as teachers of art should be the banishment of the commonplace and the transfiguration of manual products by the touch of art.

One of our difficult problems is to maintain a reasonable balance in pictorial representation between objective and subjective expression. It is becoming the fashion to disdain object-drawing as being too sensuous and to establish pictorial representation upon the basis of creative imagination. I contend that the effort should be, not to get away from objective drawing, but to keep the balance of power on that side of representation. Rigorous drill in drawing from objects should precede imaginative effort.

Landscape-drawing is entirely practicable from the first year. It must necessarily be largely imaginative. The boundless variety of nature lends itself with graceful flexibility to the vicissitudes of individual treatment. It is a source of inspiration from which ultimate truth may be evolved. The exercise offers the very best opportunity for developing an artistic appreciation for tone and the relationship of size, shape, and position of objects.

The drawing of fruits and vegetables can profitably be begun in the second year, with grouping in the third year. To defer grouping to the grammar grades seems conservatism of the most timid and old-fashioned order. Why drill for four years on disconnected units? It is not so much good lines that we need as the cultivation of insight and comprehension which is gained by drawing related objects. Groups should frequently be drawn from imagination. Only when these imaginative groups show that perspective principles are well understood should any serious attempt be made in the direction of artistic composition. Otherwise it is as pearls cast before swine.

In the matter of decorative design it looks as tho the "abstract spot" were in danger of becoming the concrete whole. In my opinion it is too abstract for the average pupil. Besides, it is opposed to the prevailing motives in our manufactures, which for decades past have been, and probably for decades to come will continue to be, natural plant forms modified by geometry and historic ornament. We cannot teach everything that is good, but must concentrate on a few exercises from which to get the utmost educational worth with the least effort. I subscribe to all that has been said in regard to the great artistic possibilities in the application of the principles of design in landscape composition, in the pleasing arrangement of shapes and sizes of masses, in balance and harmony as to form and tone, in conjunction with lettering for titles, book-covers, calendars, programs, etc.

Construction-drawing may be made a dry, abstruse subject by limiting its range of exercises to the traditional working drawings of the geometric forms; or it may be made interesting and vital to the pupil by applying its method to the construction of the various articles made during the school year — as boxes, receptacles, racks, etc. Only as the exercises in drawing relate themselves to the immediate interests of the pupil and take their rise in his activities do we secure the happiest results. The desire to make the work practical, and at the same time to infuse into it the spirit of creativeness and imagination, has led some to advocate constructive building in the ordinary school models. Think of the violence done to art and reason by attempting to represent the Taj Mahal, Notre Dame, or any other architectural structure worth any consideration with such limiting and unimaginative materials! If we could furnish our schools with the "Anchor" stone building blocks, no exercise could be more stimulating to the imagination or more practical, constructively, than building according to the plans, elevations, and sections shown on the plates accompanying these blocks.

The constructive imagination should constantly be appealed to, as the faculty of constructiveness thus strengthened leads to invention, upon which depends the supremacy of our American manufactures.

Construction-drawing should be correlated with pictorial representation, not separated from it and deferred to the grammar grades. The two subjects are complementary and should be taught together. We need fewer fences around the respective fields of our subjects of study and more common avenues of approach to them.

Three final words of advice in regard to the practical course in drawing: correlate, correlate, correlate.

DEPARTMENT OF MUSIC EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 8, 1903

The meeting was opened by President Sterrie A. Weaver, who made a brief address of welcome and several important announcements.

P. C. Hayden, Keokuk, Ia., moved that when the meeting adjourn, it adjourn to meet at 3 o'clock, to discuss the papers of the morning, and to conduct such business as might come up. The motion was carried.

T. L. Roberts moved that the chairman name a nominating committee. The chairman then announced the following as members of that committee:

P. C. Hayden, of Iowa. George E. Krinbill, of Illinois.
T. L. Roberts, of New York.

The following constituted the program of addresses for the session:

1. "The Training in Sight-Singing and Song Interpretation Which Normal-School Students Should Receive"—C. A. Fullerton, teacher of music, State Normal School, Cedar Falls, Ia.; Miss Julia E. Crane, Normal Institute of Music, Potsdam, N. Y.; A. Stanley Osborne, teacher of music, State Normal School, New Paltz, N. Y.

2. "The Real Purpose of Teaching Public-School Music"—Samuel W. Cole, supervisor of school music, Brookline, Mass.; Miss Mary MacSkimmon, principal of the Pierce School, Brookline, Mass.

3. "School Music—Has it Made Music Readers?"—George W. Wilmot, supervisor of music, New Brunswick, N. J.; Ralph Baldwin, supervisor of school music, Northampton, Mass.

Adjournment was then taken until 3 o'clock P. M.

The afternoon session was opened by President Weaver.

Professor Leo R. Lewis, of Tufts College, then made an informal report of the work planned to be done by the New England Education League for the cause of music in public education. He said that a circular letter had been sent out to prominent musical and educational people in various parts of the country, asking answers to four pertinent questions. Many favorable answers were received, and later a committee was appointed to draw up a course of study in music, for future consideration. The members of the committee are:

Professor H. C. MacDougall, Wellesley College, chairman.
Professor L. R. Lewis, Tufts College.
Professor S. W. Cole, New England Conservatory of Music.
Professor J. M. McLaughlin, Boston.
A. T. Manchester, president of National Music Teachers' Association.
Professor E. D. Hale, New England Conservatory of Music.
Professor W. R. Spaulding.
W. Scott, secretary of conference.

It was moved and seconded that a committee of three from this body be appointed to co-operate with the committee of the New England Education League. The motion was carried, and the following members were appointed:

Benjamin Jepson, New Haven, Conn. C. A. Fullerton, Cedar Falls, Ia.
Miss Julia E. Crane, Potsdam, N. Y.

P. C. Hayden, of Iowa, then moved that a committee of ten be appointed to draw up a course of study for the grades. After some discussion, the motion was withdrawn in favor of one made by Professor Leo R. Lewis, who moved that a committee of ten be appointed to state results to be expected from the grade work. After extended discussion by Robert Foresman, Dr. Rix, Mrs. Hosmer, P. C. Hayden, F. E. Howard, and others, the motion was carried. A motion made by Henry M. Butler, that this committee be appointed by the president of the department, was carried, but the president declined to accept the responsibility. F. E. Howard then moved that the president appoint five members who should report at the next session a list of ten names for membership on the committee. This motion prevailed, and the president appointed P. C. Hayden, George E. Krinbill, T. L. Roberts, A. J. Gantvoort, and Ralph Baldwin to serve as a nominating committee.

The meeting then adjourned until the following morning at 9: 30 o'clock.

SECOND SESSION.—THURSDAY, JULY 9

The meeting was opened promptly at 9:30 A. M. by President Weaver, who, after making some announcements, introduced Frank Damrosch, supervisor of music, New York city, who addressed the audience on the subject of "Music as Part of Life."

This was followed by a paper read by Eugene D. Russell, principal of the Classical High School, Lynn, Mass., on "Music as a Subject to be Counted for Admission to College."

The remainder of the session was devoted to business.

The report of the committee appointed last year to formulate a plan of study for teachers of music in the public schools was then called for. Mr. Gantvoort, speaking for that committee, said that, owing to the illness of Mr. O. T. Corson, and the extended absence of Mr. Thomas Tapper in Europe, the committee was unable to report, and asked for further time.

P. C. Hayden then moved that two members be added to that committee, and that the chairman appoint them. The motion was carried. The chairman appointed Samuel W. Cole, Brookline, Mass., and George E. Krinbill, Dixon, Ill., as the two additional members.

The chairman then called for the report of the Committee of Five which was to present the list of ten persons as nominees for membership on the Committee of Ten on Results to be Expected of Grade Work. The committee reported thru its chairman, Mr. Hayden, the following ten names:

Sterrie A. Weaver, Westfield, Mass.
Miss Anna M. Allen, Peoria, Ill.
Miss Estelle Carpenter, San Francisco, Cal.
A. J. Gantvoort, Cincinnati, O.
Miss Julia E. Crane, Potsdam, N. Y.
E. B. Birge, Indianapolis, Ind.
F. E. Howard, Bridgeport, Conn.
H. M. Butler, Newport, Ky.
C. A. Fullerton, Cedar Falls, Ia.

The report was unanimously adopted, and the nominees were declared elected as members of the committee.

The report of the Committee on Nomination of officers for the ensuing year was then made by T. L. Roberts, of New York, as follows:

For *President*—Sterrie A. Weaver, Westfield, Mass.
For *Vice-President*—W. A. Wetzell, Salt Lake City, Utah.
For *Secretary*—P. C. Hayden, Keokuk, Ia.

The secretary of the department, on motion, was instructed to cast the ballot of the members for the nominees. The ballot being so cast, the nominees were declared elected.

The Committee on Resolutions offered the following report, which, upon motion, was adopted unanimously:

Resolved, That it is the judgment of the supervisors here present that it is a wrong method to have the children below the third grade study the details of the notation of music, separate from their use while singing.

Resolved, That this body memorialize the school committee of the city of Boston, in behalf of a high-school elective course in music.

A motion by Benjamin Jepson that the *School Music Monthly*, of Keokuk, Ia., be made the official organ of the association was, after discussion, referred to the next convention.

At the closing session a class of Mr. Weaver's pupils from the Torrington schools gave an exhibition of individual sight-singing and chorus work, with reference to which the following resolution was offered:

Resolved, That the sight-singing by the class from the ninth grade, Torrington, Conn., was a remarkable exhibition of proficiency in the sight-reading of music; and that the sincere thanks of this audience is extended to the children, to Miss Langdon, and to President Weaver for this delightful and convincing performance.

The resolutions were adopted by a unanimous and enthusiastic rising vote.

The meeting then adjourned *sine die*.

HELEN W. TRASK, *Secretary*.

PAPERS AND DISCUSSIONS

THE TRAINING IN SIGHT-SINGING AND SONG INTERPRETATION WHICH NORMAL-SCHOOL STUDENTS SHOULD RECEIVE

I

C. A. FULLERTON, DIRECTOR OF VOCAL MUSIC, STATE NORMAL SCHOOL, CEDAR FALLS, IA.

If the conditions were ideal, it might be the true mission of a normal school to give professional training only. Students of adequate scholarship upon entering the school could then give their whole attention to the study of the principles of education and to acquiring skill in the art of teaching. These ideal conditions are seldom supplied, however. The large majority of normal schools find an additional burden imposed upon them. The students when they enter the school are in need of thoro academic work, either prior to or in connection with their professional training. The necessity for this elementary work is specially emphatic in regard to vocal music; for, while the American people have an abiding interest in music, the masses of them have as yet given very little serious attention to cultivating the art. With the purpose of ascertaining as nearly as possible what the actual problems are which confront the teachers of music in the normal schools, the writer sent out a series of twenty questions to every state normal school in the United States. Of the one

hundred thirty normal schools eighty reported. By summarizing these reports the following data were obtained:

1. Over 60 per cent. of all the students in these schools have had no previous training in sight-singing.

2. On an average there are only about 5 per cent. of these students who practically cannot learn to sing.

3. Of the eighty schools that reported seventy require vocal music in the course, and the average time given to it is seventy-three hours.

These facts furnish a basis for the discussion of the subject in hand. Altho circumstances vary somewhat in the different schools, there is a striking similarity in the conditions with which the music teacher has to deal.

The problems in the various schools are almost identical. The music teacher finds a body of earnest, intelligent, well-disposed students who are reasonably ambitious and who have natural capacity to succeed in music, but who, in common with students in other educational institutions, are mainly without much musical training, and consequently without a very large degree of efficiency in music. These students come into the music class three hours a week for a period of twenty-four weeks. When we consider that "art is long," this time seems rather short, but when we consider how full the normal-school course usually is, and how much is required of the students in other lines of activity, we have reason to take courage. Every supervisor of music in a normal school is brought face to face with a double problem. He must determine (1) what to attempt, and (2) by what means he can best bring about the desired end. Both of these are vital issues. From my experience and observation I have a strong conviction that in all such work as this, where adults are beginning the study of music, much more could be accomplished if much less were attempted. There are almost boundless possibilities in normal-school music work. The future of general music development in this country is dependent in a large degree on the attitude of the public-school teachers toward music and their equipment for teaching it successfully in the schools. The urgent need in the normal schools is that the students themselves get a good start in music. The study of methods for presenting music to children is of supreme importance, but it should not precede the other important consideration of getting something to present. Since the time given to music in the normal schools is so short and the students are generally beginners, success depends on omitting some phases of the work, treating others incidentally, and focusing the energy in the beginning classes on those of vital importance. As a practical means for getting music on its feet in a normal school, under existing conditions, I submit the following suggestions:

1. Make it the main object of all class work to have students acquire the ability to read music.

2. Master the few essentials in the elements of music, but spend no time on definitions, etc., till note-reading and song-singing are well under way.

3. Give students careful and thoro training in singing songs, working specially for musical tones and an easy sympathetic rhythm.

Make sight-singing the principal aim in beginning classes. Spend two-thirds of the entire time in persistent work along this line. Master the major scale so that all the intervals can be sung readily and accurately. Use the syllables *Do*, *Re*, *Mi*, etc., beating time with the hand, not merely for some easy exercises at the beginning of the book, but for every song in the book, and continue to use them till the students can read music at sight as readily as they can read a newspaper. If normal students learn to read syllables merely as something to teach to children in school, the results will mean very little to both them and the children; but when they recognize the syllables as the means whereby they can learn the language of music, and thus come into possession of the works of the masters, they will bring to the work a spirit that will make for success.

Individuals who take special interest in music may, by continuous study, acquire the ability to read independently without the use of the syllables, but it is not so with the masses. I wish to emphasize this point. The great storehouse of rich music bequeathed to us by the masters is locked up from the rank and file of the people, and I believe the syllables *Do*, *Re*, *Mi*, etc., furnish practically the only key. If this is true, it is a fact of extreme importance. Music was intended for the people in general, not merely for a few, and it is in keeping with the altruistic spirit of the times that they be given the benefit of its refining influence. Why is it that in the large majority of the Sunday schools, Christian Endeavor Societies, Epworth Leagues, etc., in our country such cheap, claptrap music is used? There are various reasons, but those who have had much experience in such work know that the principal reason is that the people cannot read music. They can pick up the catchy tune that has the characteristic chuck, chuck, chuck, movement, but if they undertake to learn a real song, their patience is exhausted before they are able to sing it effectively. It is a fact that a depraved taste is responsible for the trashy stuff so often sung in the churches, but it is also a fact that the most effective way to improve the taste is habitually to sing good music; and this cannot be successfully done by the general public unless they can read. If the only hope of escape from this deplorable state of affairs is in educating the general public to read music—and the only practicable way to do this is thru the public schools—how tremendously important it is that the normal schools get their students on a good footing for carrying on the campaign. The public-school teachers have it in their power practically to banish trashy music from the church; and what a triumphant day it will be for Christianity when that is accomplished! In public-school work music is always in a crude state till the pupils can

read it independently, and in general pupils are not likely to advance far beyond their teacher in musicianship. The normal student, then, who goes out into the public schools incapable of reading even simple music is not much of a guarantee for the future in a musical way, as she has failed to get the start essential to her musical development.

If the success of music, then, in the churches and in the public schools is dependent on sight-singing, it is equally true in the normal school itself. If there is any institution on earth that should have a good musical atmosphere about it, it is a normal school. For students to learn facts about music and methods for teaching music is important, but infinitely less important than for them to form good habits in singing, to grow into real acquaintance with good music, to be born into the musical kingdom. Listening to good music has much to do in attaining to this end, but having a personal part in rendering good music is the real, educative process. But no one knows better than the supervisor of music what a fruitless task it is to try to do music work of a high order with people who cannot read. The energy and patience are absorbed in doing battle with time and tune, till the final outcome is likely to be the abandonment of the enterprise or such trivial work that little is gained by continuing it. The question, then, of whether a normal school will give its students the advantage of fine musical culture or have them live on a low musical plane is to be determined largely in the sight-singing classes.

The second aim—to master the essentials in the elements of music—is by far the least important of the three. In fact, there is relatively too much being done in that line now. One of the most disheartening forms of heresy that are abroad is that beginners in music should proceed to learn a list of facts about music and definitions of musical terms before they get hold of music itself. Definitions ought not to be even mentioned in the beginning work in music. It would be just as sensible to require a man to define a chair before he sits down in it as to require him to define a scale before he sings it. And are we not thankful that we are not required to pass the chair test? How many of us could frame a definition that would include all chairs and exclude everything else? And still we are not handicapped in the use of chairs. I would not belittle the value of information in regard to music, or definitions of musical terms, but I cry out against taking the precious time in a first term class for such irrelevant work. What theory is attempted in a beginning class should be presented in such a way as to appeal to the student's understanding. If the major scale be diagrammed in the form of a ladder, and a diagram be made of the keyboard of a piano, by applying the scale to the keyboard, there will be settled once for all in every student's mind the problem of different keys and the necessity for sharps and flats. If the theory work in music be arranged into blackboard

exercises, with daily drill, the students will soon grow into familiarity with it, and it will remain in the mind as a permanent possession.

The third suggestion — to give the students careful and thoro training in song-singing — concerns the final object of all public-school music. Skill in note-reading is valuable only inasmuch as it contributes to good singing. From the beginning in class work some time should be devoted to the singing of songs. Not many songs should be sung. They should be carefully chosen, special care being given to select those that will take a fine finish. These songs should be worked upon till the class can sing them together with an easy sympathetic rhythm, with a spirit that accords with the words and the music, and with at least a fairly musical tone. At the last analysis music is dependent on the quality of the tone. Harsh tones are powerless to convey a musical message of any value to the world. But it is a constant surprise to find what a large proportion of students there are who can sing a musical tone if they are careful to sing a light tone. Over 90 per cent. of the students are capable of doing very effective light chorus work, if they are given time to learn the music and the leader can get them into the right mood. It is not enough that they merely avoid harsh tones. Some soft tones are lifeless. There is a sort of musical fervor that constitutes the real charm in chorus-singing. The conditions for obtaining it are rather unyielding. The voices must be smooth. The rhythm must be sympathetic. The singers must be unified in spirit, and they must meet the conditions for singing with musical expression — i. e., they must feel something to express. While note-reading is essential to success in singing, it is also true that good singing is essential to sustained interest in note-reading. The most effective stimulus to music study is the thrill that people feel when their own voices blend with other voices in producing good music. If the standard is maintained of singing good attractive songs, and singing them uniformly well, there will be no lack of interest in music. At the beginning of the class work, when scale drill and note-reading are absorbing so much of the time and energy, the time used in singing will necessarily be short; but as soon as the class can read notes well enough to use songs as note-reading exercises, it should do so, and continue it thruout the course. Occasional exercises for developing special points are desirable, but, in the main, songs should be used for note-reading. Dead exercises are poor musical food for either children or adults. Singing experience is what makes note-reading easy. The whole realm of music, from the kindergarten melody to the opera and the oratorio, is open for note-reading work, and why should note-reading exercises be made up of disjointed fractions of tunes, or, worse than that, of combinations of notes which form no part of any tune? It is too much like using a spelling-book or a dictionary for a text-book in reading. The individual note is not the unit in sight-singing. The group of notes

or the strain of music is the unit, and what better strains can be found to practice on than the real songs? If songs of musical merit are used for note-reading, there will be better interest in the class and the note-reading work will have a more intimate relation to real singing. Apart from the regular class work in the normal school, there should be considerable singing done. If the note-reading has been successfully done, there is nothing to prevent the students from singing the best music. If they study the poetry of Shakespeare, why should they not study the oratorios of Händel? The sublime music of the masters will react and inspire them to further musical development. A permanent interest will soon be aroused in music. Voice teachers will be called for, and they will be forthcoming. More advanced work in music will be called for, and it will be supplied. Methods of teaching music will become a theme of real interest, and students having special qualifications for music work will prepare themselves for supervisors of music in the public schools (and where should they find a better place to do this than in a normal school?). Music will come to be a real vital force in the life of the school, and thru the school in the life of the state; for the leavening process obtains in music as well as in religion.

II

MISS JULIA E. CRANE, NORMAL INSTITUTE OF MUSIC, POTSDAM, N. Y.

The distinct province of a normal school is well understood, and yet few, if any, of these schools have been able to confine their work strictly to pedagogy. Even tho the high schools have done efficient work, teachers have never thought it necessary to make the supreme test in the high school: "Have you fluency enough to use your knowledge as a teacher must use it?" As it is often said: "It is one thing to know a subject, and it is another thing to know it well enough to teach it." For this reason, normal schools have been obliged to teach subject-matter, until in some of the best schools a very rigid academic course precedes the normal training, and students study from the beginning with the thought that this subject-matter which they are learning they must themselves teach.

If this plan has seemed necessary for the proper preparation of teachers of language, mathematics, and the sciences, how much greater is the necessity for such teaching of music in the normal schools! For, while in every primary school in the country reading, writing, and arithmetic are taught, it is the exceptional school in which music is taught, and students enter the normal schools, not simply with inadequate musical training, but often with none at all.

As Mr. Fullerton has said, "It is folly to give methods of teaching to

one who has nothing to teach;" but we may so teach the subject-matter in the first instance that students in learning it acquire that skill and understanding which make up the most important elements of scientific teaching. For this reason a normal-school music teacher needs a broad training and wide experience. That such a teacher must be a musician goes without saying; but he must also be a teacher, and acquainted with the research work of the most advanced thinkers along psychological and pedagogical lines.

So I understand that we are here today, not to set stakes beyond which no one dares think, nor, on the other hand, to theorize vaguely upon future possibilities; but to discuss practical plans of work, to bring to each other the fruits of our labors, and to say frankly: "Here is a thought that has been useful to me; does your experience agree with mine?" rejoicing if disagreement show a better way.

Out of my experience, out of my study of the results of the investigation of others, one thought has come of late, which seems to me to bear directly upon the study of methods of teaching music, which those of us who work in normal schools ought to consider most carefully. Whether we decide that in our particular school we teach sight-reading, song-singing, methods of instruction, or all three, one thing we must do: we must *teach*, that this teaching be well done is certainly of the highest importance. Can we all agree as to when teaching is well done? I think so. I doubt if anyone would disagree with me when I say: A child is well taught when he has learned to use his powers for the highest good of self. Since the highest good for self is possible only thru the truest altruism, I trust I am not misunderstood. Modern customs, modern luxury, and sentimental folly regarding child-life are proving an enervating influence in modern education. To be sure, we hear a great deal of talk about letting the child do the work; we see numerous plans for cultivating the inquiring spirit, the constructive habit; and one might almost say: The theories sound correct enough, but for some reason they do not seem to work. This, however, must be false, for a true theory must work; it is the incorrect theory that proves impractical.

No subject taught in the public schools is more capable of giving to the child real, active, independent work than music rightly taught. In its study he may see himself day by day acquiring power—the power to do today what he could not do yesterday. He may find himself skillful where once he was awkward, quick where once he was slow. He may hear from his own voice pleasant tones where once were only rough noises; and later he finds himself a useful member of society, helping in the church and Sunday school, joining with the family in the home singing, or even teaching his younger associates the songs he knows.

Or music may be taught on the amusement plan; and no subject lends itself more readily to false methods than this same subject—music. The

temptations to this kind of teaching are many and sore. The freshness and beauty of the child-voice are always attractive, the public gives great praise to the teacher who brings out her pupils, and the public asks no questions as to methods or future results. It is easy to do the work for the children, to make the pretty toy and present it complete, in the form of a beautiful song. But it takes skill, tact, real teaching ability, to make the child an independent worker in the field of music. There is much talk of the elevating and spiritualizing influence of music, and I should be the last one to deny any good thing that can be said of it; but I cannot refrain from uttering my Beware! Beware of any method of teaching which has as its basis an effort to amuse. Our race must be educated to sturdy effort, and whether we teach music or the carpenter's trade, our success is in proportion to the desire for independent effort which we awaken in our pupils.

I hear the shocked surprise with which some say: "You seem to forget that a man has an æsthetic nature. Would you bring the lofty art of music to the level of the trades?" On the contrary, I remember that art is often degraded to a debasing instead of an elevating influence, for very lack of the sturdy qualities of character in the artist which a right study of his art might have brought him. Sensuous enjoyment of the fruits of another's labors is not elevating either to taste or to morals. Every art is based upon a science, and while I must not necessarily learn the science in order to be proficient in the art, I must learn the art scientifically in order that it be true art. To be sure, some artists seem to be born with much of the technique of their art already in their possession. This seems peculiarly true of composers and of the greatest vocalists; but plans of teaching are never made to fit this class of students. The best methods are those which awaken dormant talents; and public-school work must be fitted to the needs of the average intellect; those of great talent need little teaching.

My paper may deserve the criticism that it makes no definite statement as to what are the best methods of teaching music. That criticism is quite correct, and would apply to the writer as well as to the paper. I do not know the best methods; but I have meant to say that in all education there seems to be a tendency to an enervating sensuous habit of work, which is as destructive to good results in teaching as the life which leads to it is to the progress of the race. In all our search for right methods we need to remember that showy structures are not always based upon stable foundations, and that, while time and storms may wear off the gilding and chip off florid ornamentation, the house that is built upon the rock will stand. And it seems to me not an indefinite or vague standard that I am setting up, for in simple language it reads: Keep your eyes open for the light; work with sincerity of purpose; have no fear when your pet theories are demolished; for nothing

that is right can be destroyed, and the destruction of the false makes way for the true.

The normal school which sends out teachers who work in this spirit must start a new center for real progress, wherever a teacher is placed, and the student, in Browning's words, will seek "To know not for knowing's sake, but to become a star to men forever."

III

A. STANLEY OSBORNE, TEACHER OF MUSIC, STATE NORMAL SCHOOL, NEW PALTZ, N. Y.

As the result of inquiries made from 154 students of a normal school in New York state, I find that ninety-seven entered the school on high-school credentials and fifty-seven on examination. The number of years spent in the graded and high schools averaged ten. An average of one period a week was devoted to the study of music. Thirty-four claimed ability to read music at sight, but subsequent experience showed that many were wrong in their claim. The general impression was that their musical training had been of little value.

Let us consider the amount of time given to the subject of music in the normal schools. In many states the subject is supposed to be covered in from 160 to 200 recitations,or about forty full weeks of teaching. This time includes the teaching of the elements of music, sight-singing, and the methods of teaching. The average student cannot master sight-singing in that time (forty weeks), or in twice that time; that is, the ability to sing all common harmonies at sight, such as hymns and patriotic songs.

Another difficulty which the teachers of music fail to consider is the period of adolescence thru which the majority of students are passing. Or, if conscious of tnis condition, they utterly ignore its psychological and physiological bearing upon their subject and its presentation. Still, between the ages of thirteen and nineteen a greater change occurs in the physique of a child than at any other period of his life. The form of the face, neck, and throat undergoes a great change, and a young man must relearn the use of the muscles and cavities of his head and throat in singing. But we must not fail to attempt to solve these problems, nor fall back upon song interpretation; for that condition, as Miss Crane has said, has been endured too long, and the church, Sunday school, and patriotic meeting furnish good examples of its results.

Let us give the student power to teach something of value. In the given time (forty weeks) he cannot master sight-singing, but he *can* master enough of time and tune and the elements of the art to understand thoroly, even if not able to execute, its difficulties. He can at

least learn the scale and its intervals. But, you will say, every student of music can sing the scale and its intervals. A short time ago I visited a prominent normal school in the New England states. After hearing several classes, I asked permission to test a class in sight-singing. I took as my test the scale and its diatonic intervals. Out of a class of fifty I found only two who had any mastery of them. I do not believe that one can learn to sing at sight if he does not thoroly know the intervals; yet many teachers attempt to develop sight-singers before their students can sing the scale.

In other words, the mechanics of music, and not the æsthetic, is of more value to the normal student. For one who is thoroly grounded in the elements of his subject will always have an abundance of material from which to teach. With a thoro knowledge of the scale, time and its divisions, keys and their relation, conducting and phrasing, he will handle the subject in an intelligent manner, while his teaching will be his training. By "phrasing" I mean not only an intelligent phrasing of the music, but particularly the phrasing of the words. The proper use of music is to convey a stronger impression of the sentiment of the words to the listener, and if this is overlooked, the beauties of both words and music are lost.

But, someone will say, if so much stress is laid upon the mechanics of music, the student loses the influence that the interpretation of beautiful music has upon the mind and soul. Would not our music be better if we were ready readers? Would not we appreciate a great musical composition more fully if we could read it? Would we be satisfied with poor music if we could read the more difficult? Can we expect an artistic interpretation of music if we are not well versed in the foundation of the subject? Therefore I advocate for the normal student a constant repetition of the elements of music, and as much sight-singing as will grow out of their application.

As for song interpretation, what material have we to give the normal student? Someone has yet to develop a historic order of musical works which will be suited to the student in each stage of his training from the primary grade to the close of the school life. I would make a plea for a course of musical literature as carefully worked out as that of English literature, and correlated as nearly as possible with the other subjects of the curriculum. Practically every subject except music is now correlated, and by this correlation it has gained materially in its effectiveness.

I think it would be well for this Association to appoint a committee whose duty it shall be to recommend a course of musical literature suitable for the pupil in each period of his school life and correlated as far as possible with the other subjects of the school course.

THE REAL PURPOSE OF TEACHING MUSIC IN THE PUBLIC SCHOOLS[1]

I

SAMUEL W. COLE, SUPERVISOR OF MUSIC, BROOKLINE, MASS.

The province of the public school is to give all the boys and all the girls an equal opportunity to develop what is in them. Let us inquire what music in the public schools does for the many, considering them individually. Does it teach them to read music fluently at first sight? Every musician knows that such persons are almost so rare as to be in demand for purposes of exhibition, and why? Because they lack the native gift, the musical heredity. Does it teach them musical interpretation, to make music say something? It is equally well known that even among those who style themselves artists one who can really interpret is a *rara avis*, and why? Because they lack the native gift. If to sing at first sight or to make music interpreters is the real purpose of public-school music, then it has been a miserable failure; but it has not been a miserable failure, even if it has not, up to the present time, been a commanding success. But what about the sight-singing tests you and I have been instrumental in exhibiting before a somewhat indifferent public? Well, I will not answer for you, but I will say for mine that they were genuine so far as they went; but they did not accurately represent the work of the average class, much less the musical ability of every individual scholar.

An incident from my European experience will fully illustrate their value. I had heard much about the sight-singing contests between the classes drawn from the English board schools. I had seen the tests offered, and I knew them to be severe enough to stagger the average quartette of professional singers, not to mention a class of children, and compared with which the most difficult tests I have ever seen offered in this country dwindle into insignificance. I was very anxious to hear such a class sing, and I anticipated the opportunity afforded me with the keenest interest. I am happy to say that my expectations were realized in all matters relating to musical intelligence and rendition, but by whom? By a class of sixty children carefully selected from a school numbering six hundred put under special training for the entire school year. This was not what I crossed the ocean to witness, and it in no way represented what I heard as I went from class to class through the school. Neither did it represent what they could do as individuals, and why should it? They had been trained as a class, not as individuals. The inference the public naturally draws is that music in the public schools pays because such

[1] By request of the author, the amended spellings adopted by the Board of Directors do not appear in this address. (See resolution of the Board of Directors adopted July 13, 1899.)

results are possible in the average class — an inference which you and I know to be false and misleading. I understand that such exhibitions have since been discontinued because of their manifest unfairness. This fully confirmed my own experience, and caused me to readjust carefully my own point of view.

What, then, is the purpose of teaching music in the public schools? I answer: the creation of a musical atmosphere in America; the establishment of a musical environment in every home; the development of a national type of music; the realization in this democratic nation of all the musical opportunities of the aristocratic nations of the Old World, including the governmentally endowed opera and orchestra. In short, the real purpose of teaching music in the public schools is to lay the foundation for all that we can hope or wish to realize, musically, in the United States of America. How is the teaching of music in the public schools to do all this, do you ask? I answer, first, by getting all the children to singing; and, secondly, by making the singing musical even to the point of artistic excellence. "Impossible," says one. "The words of an enthusiast!" says another. But not so fast, my friends! let us see how these things look when carefully examined. Why do we live in a government of the people, by the people, and for the people? Because somebody, sometime and somewhere, thought — far ahead of his time — that all, as well as a few, might learn to read, and tried to realize his thoughts in his own small circle of influence. As Emerson says: "Every revolution was first a thought in one man's mind, and when the same thought occurs to another man, it is the key to that era. Every reform was once a private opinion, and when it shall be a private opinion again it will solve the problem of the age."

Why have we not already realized a musical atmosphere in America, including a governmentally endowed opera and orchestra? Because, first, we are too young; for we are yet but little more than an infant among the nations, and this is most apparent in the domain of music. The comparison of a few dates will make this very plain. Our government may be said to have actually begun when Washington was made president in 1789; Händel composed his oratorio the "Messiah" in 1741; Mozart wrote additional accompaniments for the "Messiah" and also his three greatest symphonies, 1788 and 1789, while our first census was taken in 1790. The Erie Canal was opened in 1825; Beethoven's great "Choral Symphony" was first performed in 1824. Thus you see that when the greatest composer the world has ever seen was closing his career, our nation had not made a beginning in artistic music. It is well for us to recall also that it is only about thirty years since Beethoven's symphonies received their first adequate performance in this country, and even yet the performers and the conductors are not Americans. We forget the long centuries of musical growth in Italy, Germany, and France; we forget the

tremendous influence exerted by the Roman Catholic church in her lavish patronage of architecture, sculpture, painting, and music.

Secondly, we have not yet realized these great musical privileges because those who manage our affairs, including many of our most prominent educators, have never known the joy of participating in a musical performance. They lack the heredity, the musical strain in the blood; and they will always lack it until you and I get all the children to singing. Do you think it impossible? No, not impossible if you will get down low enough. This I have proved to my satisfaction in the schools of two well-known Massachusetts towns, and I can prove the same to you when you can find time to investigate the living, breathing, singing evidence. Do you not see that, if the same could become true in every town and city, but a generation or two will be required to make the change in this country, where centuries were required in the Old World?

I know of a concrete illustration of this principle: A teacher of penmanship of my acquaintance has held his position in a New England city for many years. He is a faithful, competent teacher, who has done his work well; nevertheless he has suffered much from scheming politicians on the school board. At length some of his pupils came upon the stage of action as members of the board, and to their credit be it said that they promptly took care of their old teacher, because they knew his worth by experience and not by hearsay. If the teachers of music in the public schools will make it their first business to get all the children to singing, will give them the joy of participating in a musical performance, the children, when they come upon the stage of action, will support by their influence, their money, and their votes all the interests of music. Not only this, but you may realize something of the nature of a musical heredity during your career, as I have in mine.

Children are unmusical, not so much because they are physically incapacitated as because they have wholly lacked a musical environment. The little boy or girl who first comes to school from such a home, and is taught to sing, becomes a musical missionary of the most effective kind. The songs they learn at school they sing at home, and thus they create a musical atmosphere. Baby brother or sister is lulled to sleep with the school song; and lo! when the baby reaches school age and is sent to your school, you do not find a monotone as before; your good work has already borne good fruit; the little one can sing. Would that I could herald it far and near through this good land of ours that a child's musical development begins with the lullaby sung by mother, sister, brother, or nurse.

But to get the children to singing is not all; it is only the beginning. The singing must be musical; otherwise it will not command either the attention or the respect of the musical profession. At present I fear the average professional musician looks with something like disdain upon the work of the public-school music teacher. If this be so, it is because he

believes that musical results are not evident; that the singing is rather noisy than musical. I cannot avoid the impression that this description of public-school music is far too true, and that it is because the real purpose of public-school music has not been clearly seen. But are musical results possible where so many of the participants must be unmusical in both nature and voice? I answer that musical results are entirely possible, as may be easily proved by visiting the schools of any supervisor who has been working for musical results. Let it be understood that in all concerted singing it is neither the poorest voice nor the best which is heard, but what Mr. Damrosch has well called the composite voice, with which surprisingly musical results can be accomplished if the teacher has the requisite skill.

But what about musical technique—would you leave this important matter out of the account? By no means; how can you teach music without it? I would simply make it the means, not the end. I cannot escape the conviction that most public-school teachers have made it an end rather than a means; hence the unmusical results and so many children shut out from music.

I have said that the public schools are not conservatories of music from whose doors should emerge a host of expert musicians. This is the trouble with too many of us: we have been striving to realize conservatory results from public-school conditions; therefore we have been off the track; we have been working for results which are impossible to achieve in this generation, with any except the very few. Look at the conditions for a moment: classes of from thirty to sixty children, and at the very most not over twenty minutes a day devoted to music. How will you spend those precious minutes—on the dry bones of musical theory, or in attempting to make soloists of the individual members of your class? If so, you will yourself miss, and will at the same time rob the children of, a brief period of association with delightful music. Some day, if you and I do our duty, all these results in the line of individual musical intelligence will be realized in the public school, but it will be when a musical atmosphere has been created, and when those who manage the schools will see more of education in an hour of music than in an hour of struggle to find out the value of an unknown quantity—a thing which is as true now as it will be then.

But what about the ethical side of public-school music? I must leave that to my colleague, contenting myself with one question, viz.: How can music have any ethical effect upon one who cannot tell the difference between "Old Hundred" and "Yankee Doodle"?

To sum it all up: The real purpose of teaching music in the public schools is not to make expert sight-singers nor individual soloists. I speak from experience. I have done all these things, and I can do them again; but I have learned that, if they become an end and not a

means, they hinder rather than help, because they represent only the abilities of the few. A much nobler, grander, more inspiring privilege is yours and mine: to get the great mass to singing and to make them love it. Let us look out with joy then upon our splendid task, and, laying all personal consideration aside, build worthily and well upon the foundation which has been laid by the noble men and women who have preceded us and who have made our opportunity possible.

II

MISS MARY MACSKIMMON, PRINCIPAL OF PIERCE SCHOOL, BROOKLINE, MASS.

It is now two generations since music gained its recognized place in the schools of this our city whose musical inheritance descended from the "Old Bay Psalm Book." We owe this debt largely to Mr. William C. Woodbridge, whose splendid work thru the *American Annals of Instruction*, based upon his observation of school music and folk songs in Germany and Switzerland, forced upon public attention the service that music might render in translating into the life of the American school the Pestalozzian principle of development. There was infinite gain to the school system thru this entrance of music, but nothing comparable in value with this idea, that the character of the nation was to be elevated by music.

Martin Luther has said: "The youth must always be accustomed to this art, for it makes good and virtuous citizens." During the sixty-five years that music has been a recognized branch of work in the school course we have proffered almost every other reason for teaching music, rather than dare to claim the noble one whose behests it is our plain duty to follow. We have claimed great benefit to accrue to the child thru the power of music in training observation, or judgment, or memory. Indeed, the heavenly maid has been called upon to do the drudgery of the maid of all work for the other branches of the course of study. "Oh, have you heard geography sung," and the multiplication tables set to a jingle, were some of many such devices to sugar-coat the pill which our ignorance of the child's nature was constantly forcing upon him.

This great ethical principle of development, the awakening of the child's possibilities, the fostering of every impulse of the higher nature, the nurture and encouragement of the good to the exclusion and atrophy of the evil—this was the great principle for which Mr. Woodbridge pleaded so well and which, radiating from him in a vast wave, reached other men, making them his followers; so that the practical solution of music's place in education was won among thoughtful men and women everywhere. Nor did the principle of development end with music. It spread thence thru the other branches of study, and the Pestalozzian beauty and dignity were felt to the circumference of educational work.

This masterful power of music to awaken and strengthen those impulses that lead to high and noble endeavor was not the discovery of our modern American philosophers, nor of the Middle Age prophet Luther. To that nation, the discovery of whose long-forgotten treasures of glorious literature gave us the new birth in art and letters thruout Christendom — the Renaissance — to that grand people, the Greeks, we owe the highest appreciation of the great, true use of music. Plato and Aristotle each taught the importance of the cultivation of the emotions. This education, thru music, of the æsthetic nature was not only an end in itself, but was the indispensable basis of all moral and religious culture. We of today do not deny the value of music as intellectual training, but we are beginning to realize its far nobler work in cultivating right feeling — the guide and soul of all our moral being.

In this age of vast material prosperity, of keen competition among equals, and of the relentless thrusting to the wall of inferiors, of expansion of trade and of fierce fighting for barbaric luxury, the social conscience of man needs awakening, and the human spirit as never before needs to be brought into the shining presence of the eternal verities of peace and faith and simple goodness. The fortune of the republic is in the hands of the schools. It is there that boys and girls must get the high vision of strong and purposeful living. As in the days of old, the voice of God comes not in whirlwind of contending sects wrangling over a course of study in morals; nor in the thunder of opposing schemes for instruction in ethics. It is in the still, small voice of music, waiting at the threshold of every little schoolhouse in our land.

We have long known that in order to make an impulse permanent we must give it expression in some form. Our Puritan training is yet strong in one form in us all, regardless of youth or age. We shrink from expressing our emotions in words. When this emotion is wedded to the rhythm of a poem, and set to true music, the natural expression is found that reacts upon the feeling and makes it permanent.

We have all seen a noisy, disorderly class-room, where the air seemed to grow thick and dark, as with mutterings of an approaching storm, change as completely as a mountain lake changes when the angry storm cloud passes, and the June sun smiles over it in joyous splendor. So has changed the troubled spirit of those children, when the gentle music of a song breathed its blessing over them, and to whose peace-bringing influence they responded as sweetly as tired flowers drink in the rain after the thirsty dust of a midsummer's blazing heat. We have seen rough lads grow gentle in word and manner, in response to the pure, sweet tone gained in a music lesson, where the teacher made the simplest singing music instead of measured noise. This is even now a daily miracle, but we are only as yet on the outer wall of the palace we might enter.

SCHOOL MUSIC—HAS IT MADE MUSIC READERS?

I

GEORGE W. WILMOT, SUPERVISOR OF MUSIC, NEW BRUNSWICK, N. J.

My paper is entitled, "School Music—Has it Made Music Readers?" My answer is in the negative. School music, as it has been generally taught in the public schools, has not made music readers. If you will pardon some personal allusions, I will give you some of my reasons for so saying: I have been a choirmaster for twenty years, and in all of that time I have never had a singer that was a music reader. I have been the leader of one of our college glee clubs for a number of years, and there I have never found a music reader. I have conducted choral societies in a number of places for several years, and have never had a chorus that could take an ordinarily difficult piece of music and read it at sight, with all of the parts, without a piano, and without trying over the parts first.

In my choir work the fact that all of the singers had been pupils in the same schools would perhaps have led me to think that the fault lay in the system employed in those particular schools; but in my college work the same argument would not hold, because the young men come from all parts of the country, and a great many of them have been educated in the public schools. I might have thought that I had found all of the dull ones; but, as a matter of fact, these young men are chosen for glee-club work because they are naturally musical. If these gifted ones have not learned to read music in the public schools, in what condition are the musically dull ones?

I think the work of a choral society is a very fair example of the results of the work of the public schools in sight-reading. In most choral societies the greater part of the time is taken up with the purely mechanical part of the work—that is, learning the notes—leaving very little time for the artistic part.

What do we hear when we go to church? We hear a very large number of the men and women singing the melody in octaves, and I have often sat in church and heard a lady on one side of me trying to improvise an alto; behind me, two men, one trying to improvise a tenor, the other a bass part. This picture, I am sorry to say, is not overdrawn. You may hear such singing in any church, on any Sunday.

Considering that music has been taught in the public schools in my part of the country for fourteen years and that a large number of the pupils who have taken the music course are grown up and are very largely the attendants at the churches, why should we hear such singing? I think but one answer can be given: They do not know how to read music, in spite of their public-school training; and if they do not know how to read music after from six to twelve years of school life, then there has

been something wrong with the system of teaching school music. I am aware of the fact that there are a great many people who say they can read vocal music at sight, but in a great many cases their reading is what has been called "clever guessing."

What is sight-reading? I should call a person a sight-reader who can take an ordinarily difficult piece of music—for instance, a four-part song—and sing his own part fairly correctly the first time, without assistance in any way, and without accompaniment. Why should we not exact the same standard in reading for a singer as for a pianist or a violinist? We do not expect the violinist to have any outside aid, when he plays a piece of music at first sight; then why the singer?

In visiting schools, I have found that the teacher almost invariably attempts to demonstrate the children's musical powers by class singing of songs. That children can be taught to sing songs very nicely without any knowledge of music is a fact known to all; but what I wished to discover was their real knowledge of music. This information can be obtained only by individual singing; but, for some reason, such a test, except in a few cases, was never given for me. This absence of individual singing may be caused by fear of criticism on the part of the grade teacher; if that is not the cause, then there is but one other conclusion to which I can come: the pupil is unable to read music at sight alone; and if he cannot read it alone, I fail to see its use to him.

I see no reason why the small child should not understand the first principles of music, if they are presented to him in a simple, straightforward manner, and one thing at the time, not giving him a half-dozen things to think of at the same time. It has always seemed to me that it is too much to expect the child of seven or eight years to understand that a quarter note, a half note, an eighth note, or a whole note can each stand for a beat; and that, when a half note is a beat, a quarter note is a half beat; that when an eighth note is a beat, a sixteenth is a half beat, etc.

Teaching music in classes has been one of the principal drawbacks to successful sight-reading. We do not teach the child his ordinary reading by letting him read in concert with others, and not have him make any individual effort unless he so chooses. Then why do we expect a child to learn to read music by this method?

We hear a great deal about the artistic side of school music, and it is undoubtedly a very important part of the work; but I think we often forget that the child must learn to read music fluently, before he can sing understandingly, and either appreciate or enjoy the artistic side; just as a child must learn to read fluently before he can enjoy his story-book. And yet the child is often expected to do artistic singing before he has mastered even the elements of sight-reading.

People often tell me that school music is not artistic, and I never try to argue that it is, because it is not, judged from the standard of a

trained musician. The children's efforts in music are no more artistic than are their first attempts in drawing.

Our business is first to give the children the necessary knowledge and skill to use their tools—which is the ability to read music; afterwards, the benefit of our own artistic training and experience; and then we may expect artistic results from the upper-grade classes.

It has always seemed to me that too much has been done for the children, instead of by the children. We should teach a child a principle, and then let him go alone; if he stumbles, take him back to the principle, and then let him try again. There is always a great temptation to help a class or an individual over a hard place by doing the work for him; but it is ruinous to the pupil, and is an impulse we should fight against; for the pupil only stumbles again when he meets the same difficulty.

If the individual cannot read music independently, as an individual, the class cannot do intelligent, artistic work as a class. It has often been said to me by a grade teacher: "This child is not interested in his music." When I have inquired, "Is he up in his music?" the answer has been almost invariably, "No." In that answer I had the key to the situation: the child did not care for music because he did not know music, and he did not know music because he had not received enough individual attention. My experience has been that a child likes to do that which he knows how to do well. I see no other way except to work with the individual. I believe that at least four-fifths of the time allowed for music should be devoted to individual work.

I believe that every pupil should have the chance to sing alone every day. I have found the individual work of immense value in eliminating so-called monotones. I have several cases in mind. One of these is of a boy who had been in school for five years and never sung. He had always been considered a monotone, and was told to sit still and listen. He obeyed religiously, but he did not learn to sing, and never would, by listening to others. He never showed the slightest interest in his music work; but after three months of individual work he can sing four tones of the scale in tune and is intensely interested. If a supposed monotone can accomplish as much in four months, what could he not have accomplished in his previous five years, if he had received individual attention for that length of time? This is but one of many cases.

In visiting schools I have often seen, in a class of forty, six or eight so-called monotones sitting together and doing nothing. The teacher has said to them every day: "You cannot sing, so you must listen." The children have listened, but have not learned to sing, any more than they would learn to read by simply hearing the others read. But what an absurd position to take! Because the child cannot sing the tone correctly the first time, or even the fiftieth time, must he sit still and never make an effort? And yet this very thing is done in scores of places today. If a

pupil is dull in arithmetic, do we tell him to stop work and watch the others work their examples, and perhaps, some day, he will learn how to do them by looking on? No we do not; we give the dull pupils the most attention; we know they will not learn by simply looking on; then why expect to teach music in that manner?

Supervisors and musicians in general are largely to blame for the strange ideas a great many people have about music. They think of music as being a mysterious sort of something, to be comprehended by only a favored few, and that the laws governing the teaching of music are mysterious and intangible, and not at all the same laws that govern the teaching of other subjects. It is time that such nonsense was abandoned, and music taught by common-sense methods. I do not wish to disparage the splendid work that some of our supervisors are doing, but we all know that there are a great many places where the music-teaching is a sham, and where the only results are the singing of a few songs on special occasions, with no real knowledge beneath.

Of course, we cannot make of everyone a great musician, but we can give pupils a good working knowledge of music; and that is all that can be expected in the public schools.

What is the cause of the difficulty experienced in getting boys and girls of from thirteen to sixteen years of age to sing alone? Why do they hang their heads and become embarressed if asked to sing a short passage alone? They do not act in this manner if asked to read a sentence out of a book. What is the reason they are afraid to hear their singing voice, and are not afraid to hear their speaking voice? Simply because they have been required to stand on their feet every day and read out of a book, from their first year in school, and hear the sound of their own speaking voice; they are familiar with it; but they are strangers to their singing voice, and always will be if they sing only as a class. They should hear their own singing voice every day, and get as accustomed to hearing it as to hearing their own speaking voice, and they will no longer be ashamed to sing alone. I do not wish to give the impression that I think class work should be abandoned; it is very valuable; in fact, it is indispensable; but I do think that four-fifths of the time should be given to individual work, especially in the first five grades.

As large a percentage of the children can be taught to read music as to read print; but not by depending on their neighbor's leadership. It is no great credit to us to develop only the brightest children in the class in any subject, including music. The bright ones will develop themselves with very little help; let us get at the dull ones. Then, when we have brought them up where they should be as individuals, when they can stand alone, and we do not have to drag them along, either by our own efforts or by the means of leaders, we shall have good and intelligent class singing, and not before.

The training of the grade teacher, under present conditions, is a problem. Most of the normal schools do not give their pupils enough instruction in music to make them competent to teach the subject. What shall we do about it, and how shall we best train our teachers under the present conditions? These are questions very difficult to answer. I should like very much to hear the opinions of my brother supervisors on the subject. I hold grade meetings frequently, and try to instill the principles of music into the teacher's minds, and also to show the best way to present these principles to the children; and then, of course, they have to go alone.

I hope the time will soon come when we shall have a larger proportion of the people music readers; it will mean much for the development of music in this country. And I think, if we do earnest, honest work, that music will not be looked upon as a sort of frill, to be tolerated, but not to be considered by any means as important as any other subject taught in school. It is the part of the supervisor to place it on a high level.

When educators see that we are in earnest, and our results are equal to the results in other subjects, they will no longer place music at the bottom of the list of subjects necessary to an education, but rather near the head of the list.

II

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In its educational aspects music is to be considered as a language, an art, and a science. Being elementary instruction, public-school teaching is engaged chiefly with music as a language and as an art. In our treatment of the subject of music instruction in public schools we must remember the truth that from language is born art, which could not exist without it; which may be amplified to mean that there can be no art without language, and that a true appreciation of art is dependent in large measure upon the knowledge of the language. Rubinstein wisely said: "The study of the musical language is like that of all other languages. He who learns it in his infancy can become master of it, but at an advanced age it is almost impossible to acquire it."

One would be led to suppose, then, that the first step in musical instruction should be the teaching of the language, its sounds and signs, thoroly. But this is not always the case in public-school work. The great stress, in many places, is laid on the attempt to teach music as an art to the exclusion of language-teaching. This calls for a consideration of the relative importance in early instruction of the mechanical and æsthetic phases of music. Both are important and essential, but the language is fundamental. The æsthetic must follow the mechanical. Many teachers assert that we must avoid the mechanical side, the study of scale, tone, and time, and teach the beautiful in music; that the child must not be

allowed to struggle with the dry problems of musical notation, but that the æsthetic nature of the child must be awakened. It has even been advanced that it is not worth while teaching children to read music, because they will forget it after leaving school.

Let us restore the equilibrium and find the true relationship between the mechanical and the æsthetic. We know best and enjoy most those things which we can do. The person who can read music is more interested in it, and led to make more of a study of it, than the one who has not mastered the language. Much less would be our enjoyment of good literature were we dependent upon someone else to do our reading! I reason that the language must precede the art, as learning to read English precedes the true appreciation of literature. The spire of the cathedral is not a part of the initial construction, but the foundation is first laid deep and strong. A true appreciation of the artistic and æsthetic side of music is largely dependent upon a knowledge of the mechanical. Therefore it seems that the language should be taught first and taught thoroly.

Has school music made music readers; that is, has it taught the language? Now, what shall be our standard of measure? I maintain that it should be the ability of the individual to sing, and to read and write the language with facility equal to that which he possesses in reading and writing English or any other language. The success of any system of public instruction must be measured by its ability to develop the individual. This in many cases is overlooked in music. If schools are able to sing songs well in chorus for exhibition, the system is acknowledged a success. It does not suffice in English that a child is taught to speak; he must also read and write; and the success is not measured by the ability of the class to read in concert. But in music we are satisfied if the pupils sing, and we do not stop to examine the individuals as to their ability to read and write the music language. As to the standard, I believe nine grades of public-school music should produce 80 or 90 per cent. of the pupils able to read and sing music at sight and alone. If this were the case, those pupils in concert would be able to read at sight many of the oratoric choruses. Other results, such as knowledge of harmony and musical history, I shall not discuss, as it is not within the scope of this subject.

Are we producing any such results in the mastery of the language? I think our work of today in schools generally is open to a scathing arraignment on this ground. There are few systems that can actually show 25 per cent. of results measured by this standard. In many places the language work in music is a farce, both as regards results obtained and methods of teaching pursued. Give a test to ninth-grade classes or to graduating classes in high schools—such a test as that given in English in this state to seekers after work certificates (fourth-grade standard);

namely, a new piece of music to read at sight and alone. Sing a four-measure music sentence and have it written. I dare to affirm that 25 per cent. correct results would be above the usual percentage. The class may be able to sing in chorus if propped up by a strong leader and a loud piano accompaniment, but how will the class or the entire school read at sight? Further evidence of the failure of the schools to teach the language can be found in any singing society, chorus choir, church congregation, or Sunday school. Give your average church choir a new anthem by Stainer. Sound the keynote, and have the anthem read at sight *a cappella*, and note the result, especially if the music is contrapuntal.

Public schools are teaching singing or teaching songs, but are not properly or thoroly or seriously teaching the language, at least as results indicate. This is further shown by normal-school examinations, and by observations and tests given by college instructors. A system of teaching the English language which produces but 25 per cent. results in independent reading and writing would not be tolerated an instant; yet this is the condition probably in the vast majority of places in this country where music is taught in schools. Moreover, teachers in music conservatories, instructors in colleges, and instrumental teachers complain of the lack of ear-training, and the absence of knowledge of fundamental principles of time and musical notation on the part of pupils who come to them from the public schools.

I shall not attempt to present a panacea for all the ills which produce this condition, but rather to call attention to some of the primary causes. One chief cause seems to be the lack of system in the presentation of the subject, as to the simplification and classification of the main essentials and fundamental principles, and as to the logical and reasonable arrangement of these principles in the course of study. Much of the theory concerning keys, key signatures, and scale structure needs to be simplified for presentation to primary grades, and analysis avoided. Our complicated and cumbersome system of time symbols needs simplification. Time teaching by analysis should be superseded by teaching by imitation. Time in music, as generally considered, is motion reduced to law. Specify what motions are fundamental, and teach those by imitation, giving to each at the outset but one symbol for its representation. Many things are done in musical instruction that are pedagogically wrong, owing to lack of knowledge of the real fundamentals of our own subject and poor discernment of the mental capabilities of the child. Hours are spent at the outset in attempting to teach the theory of musical notation, requiring analytical power to understand; questions relating to keys, scale structure, time and rhythm, which later can be grasped in a single lesson. Is it common-sense to attempt to teach a first primary grade tetrachords and expect six-year-old children to comprehend them? If possible, of what advantage

is it? The language needs serious study on the part of the supervisors for simplification. Then there is urgent need of a better arrangement of principles and an adjustment to the possibilities of the child. There should be a clearly defined, logical, and progressive outline of principles to be presented which should be plainly understood by the teachers. Fifth-grade teachers know, for example, what principles in arithmetic they are to develop, but I dare say they are not so sure of the exact music principles they are expected to teach.

Allow me to suggest some more specific causes which militate against a successful mastery of the language. There is too much teaching of songs of the rote-song order, and too little teaching of principles and their application. If school music is to result in sight-reading of the language, there must be practice in sight-reading. Part-singing is introduced too early, before pupils can even read readily a single melody. One of the principal causes which prevent successful results in reading is that which teaches dependence instead of independence. But over and beyond all causes is the failure to teach music individually, as every other subject is taught. Not until this antiquated and uneducational method of class instruction and concert recitation is supplanted largely by individual training can we expect any considerable improvement in the results of teaching the language of music.

The advancement of the art in this country is conditional largely upon the work in the public schools. From the ranks of the public schools are to come our future composers, performers, teachers, members of singing societies and choirs, and above all the support of musical enterprises. If, instead of 20 or 25 per cent., 80 or 90 per cent. master the language of music, the art in this country will be stimulated and supported as it never has been in the past; and for this we are directly responsible.

MUSIC AS A SUBJECT TO BE COUNTED FOR ADMISSION TO COLLEGE

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Since at creation's dawn the morning stars sang together, music has entered into the life of gods and men alike—of divine accomplishments the most human, of human the most divine. Apollo's gift of the lyre to man has been more potent to raise him from the savage state of the race's infancy than has Prometheus' stolen fire. Without it, mute and inglorious had been the bard by seven cities claimed, the sweet singer of Israel, and all the sacred brotherhood which, of every race and in every clime, has struck from the hard flint of human experience the intellectual spark that kindled the fires sacred to the Muses. Difficult as it is to conceive of literature originating in any other way than it did—i. e., from minstrelsy

—still less can we conceive of a religion, pagan or Christian, destitute of music. Strip mythology of the lyre and pipe, the Hebrew sacred feasts of the harp and psaltery, the Christian cathedral of its chimes and organ, and all, of the solemn chants and psalms of praise, and religion would be deprived of its main avenue of approach to the emotions. In war, no victory was ever won without music either to inspire or to reward the victor. In peace, David lays aside the buckler for the harp. In short, music tempered to his needs has at all times and in all places put man in closer harmony with the mood that sways him, whether merry or sad, devout or wanton. He was a philosopher, then, who said: "Let me make the songs of a nation, I care not who makes the laws." No wonder that Plato, in the *Republic* and later in the *Laws*, makes music one of the fundamentals in the education of youth. Their education should begin, he argues, with grammar and letters; afterward the use of the lyre and grave and simple melodies should be taught them; and their education should conclude with the rudiments of science.

Now, if music plays so important a part in the drama we call life, are we giving it due prominence in our scheme of education, considering that education is a preparation for the enjoyment of rational existence? This brings us to the theme we are here to discuss: "Music as a Subject to be Counted for Admission to College."

Harvard College, which under the guidance of President Eliot always leads in educational progress, has added to its list of elective admission requirements harmony and counterpoint, each to count two points toward the twenty-six demanded for admission. This means that the corresponding courses, now given in the college, may be anticipated by the candidate and credited to him in meeting admission requirements. The significance of this act is great. It is a proclamation to the educational world that the study of music, at least of harmony and counterpoint, may well occupy the attention, not only of the few who wish to specialize, but of the many who seek culture and self-mastery. Taken with what it presupposes, it is the twentieth-century recognition of a vital factor in Greek civilization—the civilization which has dominated all subsequent civilizations.

Our first impulse is one of exultation and thanksgiving. We would vote another crown for the head of that educational imperialist who still finds worlds to conquer. But we have suffered beneficence from the same source before. We are, for instance, still wrestling with Harvard's "new definitions." So we examine somewhat cautiously the proffered boon.

If the study of harmony and counterpoint will be available and attract pupils of the secondary schools in numbers, the study and what it stands for on the art side will prove a blessing to all, salvation to the musical who would enter college, a welcome addition to the program-maker's task, and an unbegrudged levy on the taxpayer. But if the study is not available, if it attracts only the few who would specialize, it will prove for

the program-maker and the taxpayer a white elephant, and for the interests of education and music a delusion.

The courses in Harvard which this requirement anticipates occupy in the college program two years of three hours per week. This means double that time in the secondary schools, where the average pupil sets the pace and must stand or fall on the result of a single examination at admission, and hence must be given thoro drill and frequent reviews. So to obtain the four points' credit given to harmony and counterpoint as much time, or more, must be given as to obtain four points in other subjects. This means that schools must provide additional instruction amounting to twelve hours a week. Hence the introduction of these courses will be unpopular with the taxpayers. But still this objection can be overcome if there is a demand for the introduction.

Moreover, twelve hours must be provided for in the already complicated daily program. This means that the difficulties of program-making in avoiding conflicts between the recitations of groups of pupils who always make all the combinations, in any election scheme, that mathematics allows, will be increased. Hence the introduction will be unpopular with heads of schools. But this objection also can be overcome, if there is a demand for the introduction.

The framers of the requirement undoubtedly assumed that hand in hand with the study of harmony and counterpoint in school would go the study of piano, organ, or some solo instrument out of school, and that Plato's ideal, "the lyre and grave and simple melodies," would be gained by indirection. But pupils are overworked now, and almost without exception drop music lessons and practice when they decide to fit for college; and I have already shown that the new requirement as a substitute does not economize time. This means that comparatively few pupils will be able to find the time to take the music requirement, loaded as it is with uncredited out-of-school demands. Hence classes will be very small. This objection will be found insurmountable, as it takes away the demand for the introduction of the study.

Is it likely, then, that the public schools will find the present music requirement available, or that, outside of a few wealthy communities, any trial will be given it? My own answer to the question is: I doubt if the proposed requirement is available, and I feel that a condition in our system of education that I have long regarded as intolerable is not relieved in the slightest degree. I believe that the cultivation of music should be fostered in every way consistent with sound educational principles, and I think that boys and girls of great musical promise should not be compelled, as they are now, to choose between music on the one hand and letters and science on the other, but should find it possible, until they reach the professional stage of their education, to carry along the three side by side. I am grieved to see a youth with great musical

possibilities immolate his talent on the altar of a liberal education, while, in view of the importance of a liberal education, I am equally grieved to see a youth of good intellectual parts wedded in his educational teens to any jealous mistress, since when too late, he may discover that youthful impulse led to an unfortunate union. I contend that the system of education that forces this immature choice and robs the victim of his birthright is faulty, and I shall attempt to outline a possible escape from the dilemma.

Altho I recognize the value of vocal music and the mastery of any of the solo instruments, still I place the piano before all as the instrument that may well form the foundation of any and all specialization in music, because its mastery depends less on special talent than that of other instruments — as, for example, an absolutely accurate ear in violin playing and singing — because it offers a wider scope for the study of harmony and has a richer literature of compositions, and because it is, with the exception of the voice, the most widely distributed instrument. Now, probably two-thirds of the pupils who would naturally take a college preparatory course are taking piano lessons on entering the high school. They rarely continue them beyond the first year. To be sure, a considerable number who have musical ambition drop into easier courses or out of school altogether. But of those who persist in fitting for the colleges of high requirements, few find that they can carry on their preparation for college and music lessons and practice at the same time. If, however, these elementary music lessons can be made the basis of an elementary entrance requirement of two points, as reckoned at Harvard, the best interests of music can be conserved, the coming generation of musicians will not be debarred from a college education, the courses in harmony and counterpoint will attract students in numbers, and no insupportable hardship will be imposed upon the schools. We in the schools shall have merely to arrange for the supervision of outside instruction in order to give it credit toward obtaining the school diploma; for it would, of course, be given the value of some elective of the present school program. That difficulties will be encountered here I am sure, but not severe, not insurmountable. That school authorities, aided by the school instructor of music and reinforced by college specifications and definitions, can accomplish this I do not doubt. In any case, the colleges can protect themselves against inadequate preparation, for they will have in their own hands the setting of the examination. Let the requirement be proficiency in playing on the piano, both difficult compositions prescribed for mastery and unprescribed simple compositions for sight-reading, together with so much of the theory and history of music as should accompany even an elementary course of piano lessons. This requirement could stand in the relation of an elementary subject to harmony or counterpoint, just as elementary algebra, physics, and French, for example, stand to advanced algebra, physics, and French.

Here the colleges can help us and serve their own interests as well, if among the subjects set for admission elementary music is given a place; if, for instance, it can be offered in place of physics, or history, or any one of the optional subjects. Before any such substitution can be allowed, it must be shown and admitted that music, as I am considering it now, is a fair substitute for the optional subject, and that it can be made the basis of an adequate examination.

On the first point, I submit that in acquiring the ability to play at sight on the piano compositions of average difficulty much the same powers of discrimination, comparison, and combination are called into play that the sight translation of a language demands, while the power of expression and interpretation, depending in part upon phrasing and shading, affords as wide a field for independent judgment and choice as any translation; and, further, the elaborating of a theme or motif offers much the same opportunity for developing the power to express original ideas without violating fixed conventions of expression that written composition offers. It would, of course, be absurd to claim that music can take the place of all language study, but I do claim that where five languages, all imperfectly learned, are now accepted for admission, the discipline to be obtained from music is not so different or so inferior to that obtained from the fifth language that it may not take its place in the education of some pupils. And I deny that the number of such pupils is extremely limited, or that the limitation due to incapacity need be greater than in many other subjects.

The technical skill required to manipulate the keys, carrying along as many as four parts, often intricate and involved, is in itself no mean training of hand and eye, while the mental process involved in transferring the score from eye to hand — one of mathematical exactness and lightning rapidity — has no counterpart in language.

Music offers, moreover, a substitute for literature and history in the study of its famous compositions, the biographies of distinguished composers, and the story of its development as an art. It has a culture side as well. I am not sure that ignorance of the masterpieces of music should be any more excusable than ignorance of literary masterpieces, at least to the extent of recognizing them when rendered. We might easily enlarge upon this side of the subject, designating music as the universal language, read and known of all men, and appealing to what is best in all; but we have yet to consider the second point.

Certainly examination papers can be set on the theoretical, biographical, and historical sides of music as readily as in mathematics and history; while the test of technical skill is no more difficult to make than that now given in laboratory physics. Ten minutes at the piano for each candidate would suffice to show his ability to read at sight, and also to interpret set compositions requiring careful study. For I should suppose that, just as

some books in English are prescribed for careful study, so certain classic compositions would be prescribed for thoro mastery, in addition to the unprescribed elementary work necessary to attain the power of reading at sight.

One other question may be raised here: Can any of the present requirements be given up to make room for music? The present requirements seek two ends: first and foremost the development of mental power; and, secondly, the grounding of the pupil either in subjects to be continued in college, but in which elementary instruction is not given by the college—e. g., Greek and Latin—or in subjects leading to allied subjects in the college curriculum—e. g., algebra, physics, and history. The first end has been considered already to some length, and the second requires a brief consideration only. All colleges have elementary classes in the subjects required for admission, except Latin, Greek, English history, algebra, and geometry. Now, there is no reason in the nature of subsequent work in college why anyone of these, or history or Greek as well, may not be postponed till entrance, provided something takes its place that affords a like means of mental discipline.

It is obvious that it would not be wise to make music a prescribed requirement, for that would make the schools directly responsible for preparation in it, and we seek no increase in the number of subjects which the public schools may be required to teach. But it would be wise and beneficial if preparation in music, which parents would gladly undertake independently of the public schools, or gladly pay extra for at the private schools, should be recognized as an option in admission requirements. Then it will be possible to continue music lessons out of school. Supplementing these lessons, the majority of girls and many boys will be able and eager to take harmony in school in completing their preparation for college. Thus the demand for the introduction of harmony will be imperative.

In conclusion, if the harmony and counterpoint option offered by Harvard is to be made available, if it is to prove other than a Tantalus cup to our thirsty lips, the college must go a step farther than its present proposition: it must give recognition to what we can offer, namely, elementary music; and then we can hope in time to enjoy the full measure of the benefaction.

MUSIC AS PART OF LIFE

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The question today is not: What method shall we employ in teaching music in schools? Volumes have been written, thousands of debates have been held, bitter warfare has been waged on the subject (the latter

chiefly by rival publishers of text-books); and the result is that today practically all the principal methods of teaching in vogue in the United States are good — that is, based on sound psychological and pedagogical principles — and are applied by means of carefully arranged text-books containing, for the most part, good or fairly good musical material. Nor are teachers lacking who have been well trained to do their work, at least in so far as the methods of teaching are concerned; the real musical equipment is often deficient. The question at issue is a much deeper one, namely: How shall music become a part of the life of the individual, the home, the school, the college, the community, and the nation?

In its highest function, music is a language, the language of the feelings, of the spiritual and of the ideal in man. Where words end music begins. We cannot express ourselves in a language with which we are unfamiliar. What wonder, then, that our deepest feelings, our highest aspirations, often fail of expression, because our only, poor method is speech, while music, the only adequate medium, is either unknown to us or so slightly known that we have only a superficial, smattering acquaintance with it?

Those who have tried to learn a foreign language know that the easiest and best way to learn it is to live among people who speak it; the most difficult is to learn it, unaided, from books. In order to enter into the spirit of a language it is necessary to know its idioms, to live in its atmosphere, so to speak. Similarly, in order to make music our true language, we must live in an atmosphere of music; we must hear it and use it constantly; it must become a second mother-tongue. A *mother*-tongue! That means that we must begin in the cradle. Blessed the child whose mother sings him to sleep! His ear will never lack the power to appreciate musical sounds. His voice will begin early to imitate, and thus produce correct musical intonation. We must, therefore, train the mothers of the future to sing correctly and with a sweet, musical tone; and, above all, we must teach them to discriminate between the good and the commonplace, the true and the false, between sentiment and sentimentality. If so equipped, the child at school will have no difficulty in learning to read, to spell, and to write music properly, in order that he may proceed to acquire independently all that is beautiful and appropriate to his heart and mind.

Here, again, it is essential that the teacher should have true musical culture. The influence of music in the school must be refining and elevating. Many teachers believe that because the child of the tenement sings music-hall and street songs he cares only for this so-called popular music, and they permit such songs to be used in the school. Yet even such a teacher would hesitate to use a dime novel as supplementary reading matter. The more beautiful the song, the better liked and the better sung will it be by the child. In this, as in all other things which we give

to a child's mind and heart, the rule holds: The best is only just good enough. We must remember that everything done in school becomes a life-habit. Doing anything every day for eight years, even for but a few minutes at a time, becomes part of one's nature. How important, then, that the school should introduce only the best in all things!

When the child leaves school, he should be so equipped musically that he can appreciate and enjoy good music, can sing fifty to a hundred good songs, can read at sight any simple melody or a second or third part in a chorus, can write a melody from hearing, detect impurity of intonation, and sing with a clear, true, musical voice and correct enunciation.

He now enters the third stage, adolescence. His mind is opening wide to the wondrous powers of life; he plans great things; he exults in his youth and strength; he dreams of a golden future; his soul is full to overflowing; he is unable to express, even to himself, all he feels, all he hopes; but, if he has song, he jubilantly sings, as the lark carols in the ether. No matter what the words nor what the tune—so they be but in harmony with his better nature, it matters little whether they be gay or sad; for joy and grief lie close together and complement each other. And what a bond of comradeship is forged by the power of united song; how it promotes good-fellowship, and brings good-will and peaceful intercourse where, without it, there would often be misunderstanding and strife!

Few of our great colleges appreciate as yet the immense opportunities for true culture they possess, were music to become a more integral part of college life than is now the case. With all due deference to the very eminent musicians who comprise the musical faculties of our eastern colleges, I think that far too little is accomplished by them under existing methods. It is the aim of the college to develop cultured men and women, to lay such a foundation of mental, moral, spiritual, and physical qualities that a strong tower of life may be built upon it. The love and appreciation of the beautiful in form, color, and sound are part of such culture, and it is this which should be given to *all* the students, if art is to enter deeply into the life of the individual and the nation.

What wonderful choruses of men's voices could be heard at Harvard, if all its students united in singing songs worthy of such an assemblage! Even a nonsensical college song seems to gain a certain dignity when sung by a thousand voices. How much more impressive, not only to the listener, but to all participants, would be a truly noble song correctly sung in four-part harmony! The kind of training which would bring this about need not exclude that which alone is offered at the present time—the teaching of theory to the few who wish to make a deeper study of music. This sort of work has hitherto produced results pitifully small in comparison with the ability of the teaching force and the possibilities

presented by the student body as a whole. What could not a musician of ability, a man of personal force and magnetism, a man of noble ideas and high ideals, accomplish with the choicest human material which the country possesses? With our youths and maidens trained to understand, appreciate, and love good music, we should rapidly approach the time when thruout our land our homes would be homes of refinement, love, and happiness, our communities composed of peaceful, law-abiding citizens, and the nation an example of ideal democracy. Of course, I do not offer music as a panacea for all earthly ills, nor as a charm that shall secure to men uninterrupted happiness; but I do believe that life with music is infinitely richer than life without it, and that it helps to soften our sorrows and enhance our joys.

I have not touched so far upon any other form of musical development than the general vocal training, of which practically all persons are capable, provided this training begins in childhood. Individual voice-culture, the study of instrumental music on a keyed, stringed, or wind instrument, lies outside of the present subject of discussion, because it concerns chiefly the few who are especially talented, not the people at large. At the same time, the influence of good instrumental music thru the medium of popular band and orchestral concerts should not be underrated. They help to create that atmosphere which is absolutely necessary to musical development.

Such organizations as the Boston Symphony Orchestra can do and have done a great deal in this direction; but, in my opinion, they have not accomplished the hundredth part of what they are capable of. They now reach between four and five thousand people—for argument's sake let us say ten thousand—of the class which already possesses cultured minds and tastes. These are filled with music to overflowing. Οἱ πολλοὶ, the people who most need it, get nothing! It is true, the doors of Symphony Hall are open to all, let all enter who will; but most people do not know what they most need and must be told. They are fettered by ignorance, by cares, and by false ideals, and do not realize that the good things of life lie close to their hand.

It may be difficult to reach and teach the adults of this generation what good music could do for them, but that is not the case with the youth. In every city there should be established a series of weekly orchestral concerts for the pupils of the high schools. Each program should be carefully prepared by the music teacher of each school in such a way that the pupils would listen with understanding. That this is possible and of great value has been proved by the symphony concerts for young people which I have given in New York during the last five years In Boston, Chicago, Cincinnati, Pittsburg, and Philadelphia, where permanent orchestras, liberally subsidized, are in existence, this should be done as a matter of course. In other cities it would not be difficult to

organize such concerts on a smaller scale with local musicians, and would be an impetus toward the establishment of regular orchestras. In this way thousands of our citizens would be brought under the elevating influence of music who would otherwise not even know of its existence.

But, excellent and necessary as are these influences which come to us from without, the greatest good comes from within — that is, from *doing*. The music we make ourselves may not be equal in quality to that which is brought to us from the outside, but it is part of ourselves, the result of our own effort, and the exercise of functions which help us to rise to a higher plane and in the use of which we are developing the nobler side of our nature. Opportunities should, therefore, be given to people to stimulate the exercise of these functions; and, in my opinion, nothing is better adapted to this purpose than choral singing.

Eleven years ago I invited the working people of New York to attend Sunday classes in sight-singing. Thousands have taken advantage of this instruction, which is now given in numerous classes in all parts of the city, and which culminates in a People's Choral Union which has a membership of a thousand voices. The great oratorios — the "Messiah," "Elijah," "Samson," "Israel in Egypt," "The Seasons," etc. — have been read at sight, studied and performed with orchestra. The movement is self-supporting, the expenses of hall rents and music being met by a fee of ten cents for each lesson. The teachers accept no compensation. Similar movements have been organized in Boston, under the able direction of Mr. Samuel W. Cole, and in many other cities, and they have stimulated an interest in good music in thousands of people who until then had never heard of Händel, Bach, or Mendelssohn. And they carry these works into their homes; these heroes of music sit at their tables in squalid tenement houses, and by their intercourse transform the hovel into a palace, the beggar into a king.

Here again, I would emphasize what I said before in reference to the musical education of children in schools: Give only the best! My Choral Union likes Bach and Händel and all great music better than any that merely tickles the ear. Great music plows deep into the soul, and it brings forth fine and fair fruit. Little music merely scratches the surface, and the result is weeds.

The songs of a people express its character. What are our songs today? Most of them are borrowed from other nations; of the rest we are not proud. Our national hymn, "America," is the union of a fine English tune with a fine American poem; but, oh, what a *mésalliance!* Where the tune demands an accent, the words refuse to give it, and *vice versa;* where the words require an upward progression in the melody it promptly goes down; in short, words and tune constantly swear at each other. "The Star Spangled Banner" was an old English drinking song before it became our national song. "Hail Columbia" is, I believe, indigenous to the soil,

but it is nothing to be proud of. And yet, in spite of all, it is a splendid thing that our people's hearts cling to these songs, because they are part of their youth, their history, their national life. It shows that we *can* be stirred by music which represents great ideas, even if in itself it is not great music. Let us create an atmosphere of good music thruout our land which will elevate the people's taste, and we shall then sing songs which will express our true feelings and of which we shall be proud.

No one can do so much to accomplish this as we, the educators of the young. Our seed falls on good soil; it grows under our daily, watchful care, and it is, therefore, our fault if the results are unsatisfactory. Do not tell me that you cannot do things because you are hampered by ignorant school authorities. If you set yourselves high ideals, give nothing but the best and accept nothing but the best. Your work will speak for you, and you will win to your side all the best elements in the community. If you believe that your town or village needs a choral society, organize it, teach the members to read from notes, and give them great music to sing. Do not lose time waiting for others to find out that they want it. Do not expect to get rich from the salary connected with the leadership. You will probably get no money, but you will get other things which money cannot buy. If you need orchestral concerts, organize the instrumentalists of the town into an orchestra and give your concerts. As soon as people find out that you are working for high aims, you will receive hearty support. Do not expect to accomplish things in a hurry. It takes years for a tree to grow. Things which ripen quickly die quickly.

Our field of labor is enormous. Our opportunities are unlimited. There is no nobler mission in the world than to bring beauty and happiness into the homes of the people thru the culture of good music, and to teach them to express their deeper feelings in the only adequate language—in song!

DEPARTMENT OF BUSINESS EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 7, 1903

The department was called to order in the First Church in Boston at 9:55 A. M., by the vice-president, Templeton P. Twiggs, director of the commercial department, Central High School, Detroit, Mich.

The following program was then presented:

Vice-President's Address, Templeton P. Twiggs.

"History in the Curriculum of the Commercial High School," Cheesman A. Herrick, director of the course in commerce, Central High School, Philadelphia, Pa.

Discussion: I. O. Crissy, C. B. Ellis, O. C. Evans, Frank O. Carpenter, W. C. Stevenson, I. R. Garbutt, and Mrs. Sara A. Spencer.

"Mathematics in Commercial Work," E. L. Thurston, Business High School, Washington, D. C.

Discussion: W. C. Stevenson, Carl C. Marshall, and H. B. Brown.

On motion of I. O. Crissy, the vice-president appointed the following committee on resolutions:

I. O. Crissy, of New York. W. C. Stevenson, of Maryland.
B. H. Donnell, of California.

Adjourned.

SECOND SESSION.—WEDNESDAY, JULY 8

The vice-president called the department to order at 9:30 A. M.

The program for the session was as follows:

"Commercial Geography: The New Science," Frank O. Carpenter, master of the English High School, Boston, Mass.

Discussion: C. A. Herrick, Richard Waterman, R. T. Green, Jr., F. A. Tibbitts, and H. C. Hustleby.

"Science in Commercial Work: Its Practical Value, Character, and Place in High-School Work," Frank M. Gilley, instructor in physics and chemistry, High School, Chelsea, Mass.

Discussion: W. R. Butler and H. B. Brown.

"Disciplinary Value of Bookkeeping as a Study," Enos Spencer, president of the Spencerian Business College, Louisville, Ky.

Discussion: C. B. Ellis, H. M. Rowe, H. G. Green, and Carl C. Marshall.

"The Disciplinary Value of Stenography and Typewriting as Studies," W. H. Wagner, teacher of stenography and typewriting, Commercial High School, Los Angeles, Cal.

Discussion: F. J. Stein.

The Committee on Resolutions submitted the following report, which was unanimously adopted:

The Committee on Resolutions begs leave to submit the following:

Resolved, That it is the sense of the members of this department that the commercial course in the high school should be equal in time of instruction, in educational content, and in disciplinary power to any course in the school, and that any commercial course falling below this standard is not to be regarded by this department as complete.

That we hail with satisfaction the increasing facilities for higher commercial education offered by colleges and universities, which we believe cannot fail to redound to the prosperity and glory of our country.

That we respectfully but earnestly urge upon the normal schools of the country the necessity of at once undertaking the preparation of commercial teachers, to meet the growing demand for such teachers, which cannot even at the present time be supplied.

That we fully appreciate the value of the better class of proprietary business schools, and recognize that they have done and are doing a work which could not be performed by any other existing institution.

That we congratulate the commercial schools and the nation upon the establishment of the Department of Commerce in the cabinet of the president, in the belief that such establishment will prove of incalculable value in improving our commercial relations with all the nations of the earth, adding new dignity to commercial education and marking a new epoch in our national development.

That we cordially thank the officers of the department for the able manner in which they have done their work, and that we especially congratulate the vice-president on the satisfactory performance of duties which somewhat unexpectedly devolved upon him.

That we tender to the generous citizens of Boston, and especially to the President of the Association and the local committees, our thanks for the many courtesies by which our stay in their hospitable city has been made so notably pleasant and satisfactory.

I. O. Crissy.
W. C. Stevenson.
B. H. Donnell.

The following officers were unanimously elected for 1904:

President—Cheesman A. Herrick, Philadelphia, Pa.
Vice-President—H. B. Brown, Valparaiso, Ind.
Secretary—Thomas H. H. Knight, Jr., Boston, Mass.

Adjourned.

C. E. Stevens, *Secretary.*

PAPERS AND DISCUSSIONS

HISTORY IN THE CURRICULUM OF THE COMMERCIAL HIGH SCHOOL

CHEESMAN A. HERRICK, DIRECTOR OF THE COURSE IN COMMERCE, CENTRAL HIGH SCHOOL, PHILADELPHIA, PA.

Any treatment of the topic assigned to me must take into account two notable reports on historical studies in secondary schools: that of the subcommittee of the Committee of Ten, known as the Madison Conference Report (1892), and that of the Committee of Seven of the American Historical Association (1898).

The reports just noted include some discussion of civil government and political economy. It has not been thought wise, however, to introduce any treatment of these subjects in the present paper; they are deemed of sufficient importance for commercial work to warrant an independent discussion of them. The report of the Madison Conference also includes recommendations concerning historical work in the elementary schools; it does not seem advisable to introduce the elementary-school problem in this connection.

The recommendation of the subcommittee of the Committee of Ten is for a study of Greek, Roman, English, American, and French history, with one year to be devoted to the intensive study of some one period, and provides that European history be taught in connection with the history of England and France, or in the final year of intensive study. This committee favors the pursuing of historical studies continuously thru the four years of the high-school course.

The Committee of Seven also recommends four years of continuous historical study in the high school, as follows: one year of ancient history, dealing with Greece and Rome principally, but also including some account of the oriental nations. It further favors taking, in connection with ancient history, the Middle Ages to the early ninth century; for the second year, general European history from the early ninth century to the present time; for the third year, English history; and for the fourth, American history and civil government. In a supplementary suggestion this committee advises that if but three years can be secured for historical study, general European history be omitted, and English history be so treated as to include the most important phases of the continental history parallel with it.

From the above reports, as well as from the experience in commercial schools, I make the following recommendation for history in the curriculum of the high school of commerce: Four years should be devoted to the subject: first, ancient history to *circa* 800 A. D.; second, English history, including the main movements in the history of continental Europe; third, American history; and, fourth, a general history of commerce. It is believed that this division will give at once the most rational general survey of the historical field and the best practical results that can be secured from the study of history in commercial schools.

Various explanations have been given for arrangements of historical studies different from that above indicated. One principal of a commercial high school justifies taking English history before ancient, with the argument that English history has the greater practical value, and, as the larger number of students are in the first year, they should be given the subject having the greater value. I doubt if the first premise on which this reasoning is based is sound. If students are to be but one year in school, they will probably get a better educational result from a study of ancient history than could be had from a study of English history without the ancient as a foundation. In any event, the reasoning is specious, and if adopted would lead to furnishing the narrowly technical short course.

Others have urged the teaching of the history of commerce in connection with general history, on the ground that by such an arrangement repetitions would be saved and this division of the subject brought into its proper relations to history as a whole. This suggestion sounds plausible, but I believe there are practical difficulties in carrying it into effect.

History may be considered as a texture into which there are woven many threads. We cannot undertake to say how many of these there are, or to what extent they may be singled out. Among the generally recognized threads of interest in history are: political and constitutional, military, church, and economic history. The history of commerce is a branch of the latter. It would be a mistake for the student of commerce

to try to follow the thread of his interest without some knowledge of the whole of which it is a part. Similarly, it would be unfair to deny him the privilege of following this thread when he has been prepared to do so. This should be to the commercial schools the year of intensive study ; it may, however, be devoted to one topic extending over a wide period, rather than to many topics for a briefer period.

The history of commerce should serve as the vocational study of history for commercial schools. It should occupy in its special schools the place occupied by the history of education in the schools of education, church history in theological seminaries, the history of law in law schools, and military and naval history in the academies devoted to the education of soldiers and sailors. In these several treatments of history each has a different thread to disentangle from the great coil ; " facts that are principal to one are often minor to another." Students in commercial schools should single out the phase of history dealing with their special work and study it, not lost in the mazes of other interests, but as a distinct thing.

I am not favorable to making history an elective subject. It has for the high school of commerce a cultural and practical value that warrants its being made required work for the four years of the course. The Committee of Nine may think it wise to offer an election in the fourth year between the general history of commerce and a more intensive study of modern commercial history. I am frank to say that I incline to the general course.

There are reasons for the preference just expressed that grow out of a consideration of the recommendation made at the opening of this paper. For classical and English high schools we may well question the wisdom of the Committee of Seven's recommendation covering the scope and method of treatment of the ancient period. But with a general sketch of the history of commerce it will be possible to overcome disabilities that might arise from a bad division of subject-matter and an improper relation of parts. Again, the general sketch can give the proper historical prospective that might be lost from the omission of European history. Anyone who has taught the history of Europe in connection with the history of England will understand what I mean when I say there is danger that the student will regard the history of continental nations as a mere tail to the English history's kite. The history of commerce will show perhaps better than any other division of history that England was influenced far more by the continent of Europe than was the continent by England. Thus the history of commerce furnishes at once the means of historical review and the principles of sound interpretation for history as a whole.

Concerning the time requirement, I would suggest that three hours a week should be devoted to history thruout the four years of the com-

mercial high-school course. If it is thought wise to take the subject in half-years, five hours a week should be given to it for four half-years.

I am asked to treat especially the *value* of historical studies in commercial schools. The value of history in general is well recognized; this phase of the subject has been ably handled in the two reports mentioned at the opening of this paper, as well as in several recent books on the study and teaching of history. I shall not take time, therefore, to discuss the general phases of the subject. It may be worth while to remark, in passing, that the history taught in the secondary school is largely a matter of selection from ample and readily accessible material. Now, it seems wise for commercial schools to select for the first three years those phases of the subject that will best prepare for the fourth year's work.

The writing and interpretation of history are influenced consciously and unconsciously by the period in which it is written or interpreted. The present distinctively economic age is having its effect alike on the interpretation of old historical writings and on the production of new ones. We may congratulate ourselves that both our authors and text-book compilers are giving economic history its proper place in relation to constitutional, military, church, and other phases of historical writing. Industry and commerce are claiming new attention in general history, and from what has been termed a "melancholy record of human crimes and calamities" history thus passes to be the "animating register" of the industry and ingenuity of men. With the change in point of view from military to economic history, there is less attention to the ways in which men are killed and more to the ways in which they are kept alive. There are special advantages in the economic interpretation of general history. More than any other branch of the subject, it contributes to correct notions of the unity of all history. Economic history deals with the basal needs of men—food, clothing, and shelter; and these have been the same in all ages. Teachers in commercial schools will not be slow to recognize the advantages that will come from a study of history in which the economic aspects of the subject have been given their proper setting.

It remains to speak further of the value of the special history recommended for the fourth year. This is the distinctively vocational subject in the historical group. Its highest, tho by no means its sole, function is in the orientation it gives the student before he takes up his calling. Every commercial man should find the highest pleasure and usefulness in his work. Knowledge of the past of any worthy calling ennobles its present and makes for its future. The business man can ill afford to be cut off from a knowledge of the development of the field of his activity. It smacks of cant to say that an acquaintance with the history of commerce will make of the man of commerce at once a better man and a better commercial man, but it needs to be said.

The above statement is true because the history of commerce shows

the business man his true place in relation to the phenomena with which he deals. To carry on a calling to best advantage one should know what those who preceded him did and where they left off. Two ends will be served by such knowledge on the part of those in commercial life: it will make them more humble, and it will exalt and dignify their work. Many of the self-important business men of the present should learn that they are only inheritors from the work of other men. Scarce a business custom but is rooted in the past, and many of them come from the remote past. Present commercial life cannot be cut off from its past, and business men should recognize that they enter into the heritage of other men's labor.

But familiarity with the lives of great merchants and knowledge of the accomplishment of other commercial peoples and times will do more than to make business men humble. It will stimulate and encourage them. In the grind of daily toil one needs to be lifted up with the thought that he is not the be-all or the end-all, the alpha and the omega, of his work. A conscientious minister of the gospel said to me recently that he found great comfort in the doctrine of evolution. When pressed for an explanation he said that he saw so little direct result from his labor that he could not carry it on unless he was encouraged with the thought of an ultimate result to which he was contributing. The business man, too, will be encouraged to feel that there are within the realm of his work ultimate worthy ends to which he may contribute. The division of commercial history into ancient, mediæval, and modern is misleading. We can say of all these divisions as Dr. Arnold said of the sixth and seventh books of Thucydides: they are modern history.

With a proper study of the history of commerce, it becomes to the present economic age a great searchlight on the deck of a ship, illuming the path over which the ship has passed and casting its beams forward to define a future course. There are many advantages from a study of the history of commerce, but if it should do nothing else than give future business men a proper attitude toward their work, it would have a value second to no other subject of the curriculum.

I am fully aware that there are differences among us as to what are the essentials in the history of commerce, as there would be in determining the essentials in almost any other subject. Commercial history is too new and ill-formed for a profitable discussion of this phase of it. To me the most vitally important thing about this, as about any other branch of history, is that it shall connect the present with the past. In our teaching the present may be made to call back to the past, or the past to call forward to the present. It is "the duty of every generation to gather up its inheritance from the past, and thus to serve the present and prepare better things for the future."

> "Yet I doubt not thro' the ages one increasing purpose runs
> And the thoughts of men are widened with the process of the suns."

DISCUSSION

I. O. Crissy.—The advantages of the study of the history of commerce have been more than hinted at; and while we are not prepared, perhaps, with any chart by which to be governed in regard to the matter, it seems to me that Dr. Herrick's view in regard to the advantages and pleasures of commercial history has been fully established. I wish more to commend than to discuss.

C. B. Ellis.—There has been too much of a feeling that commercial courses were to prepare for business or clerkships, and to fit a boy or girl to be a stenographer and typewriter. Now, that is only a small part of what a commercial course is designed to do; and if, as Dr. Herrick has said, the business men of the future are to fill the place which is rightfully theirs, and fill it as it should be filled, those business men must be educated. I hope that in the commercial course of the future we shall find an increasing prominence given to this subject of history, so that, instead of being relegated to a minor position, it shall be a strong feature of every year's work. I think the subject has been well outlined by Dr. Herrick, and that commercial history should be the last topic to be introduced and should be taught by itself. I think the study of history will tend to develop broad men who shall be thoughtful of others and shall consider that when money is given to them it is a trust which they are to administer wisely and for the good of all, and not for the good of themselves alone.

Mrs. Sara A. Spencer.—The paper has very materially modified my own convictions on this subject. I have been strongly opposed to devoting four years to the study of history in a commercial school, and yet I believe there should be a general knowledge by the business man of the needs of human life. My reason for being opposed to devoting a great deal of time to the study of history was that it dealt largely with the destruction of mankind, and that the stronger emphasis everywhere was laid on the ability to destroy life. Now, that was most admirably met in Dr. Herrick's appeal for the study of the history of commerce, and his declaration that it was a study of how life had been preserved and how men thru all the ages had been struggling for ways and means to protect, preserve, enlarge, and ennoble human life. That led me to see that the study of history might well be continued thru a four-year course.

O. C. Evans.—I do not quite understand what we are to select for the purely commercial side of history. It seems to me that the general history of Greece, for instance, is a history of colonization and the development of trade, and that it places comparatively very little emphasis on the destruction of man. I might say the same of all the other history, for it seems to me that the greater part deals, not with war, but with the development of the finer and better qualities of life, and the ennobling of men and bringing them up to their present state of civilization. I believe in this wider, freer, stronger course of history in our commercial courses. I am gratified to learn that our own course in history is almost exactly along the line sketched in Dr. Herrick's paper.

Frank O. Carpenter.—As regards history, it is only a few weeks ago that I recommended to the supervisors that they add this additional course in the history of commerce, making it a secondary course, and also one in commercial geography and one in commercial law, to be preceded and followed by economics, making really a three-year course along this line.

Thomas H. H. Knight, Jr.—Dr. Herrick thinks, and thinks very properly, that history ought to occupy a very important position in a commercial course. I have no doubt that Mr. Carpenter will tell us tomorrow that commercial geography has not had anything like the recognition that it ought to have. The truth is, we must prepare boys along all lines. Here in Boston we have only three years of history in the commercial course. We could not by any possibility give the child history as Dr. Herrick has suggested, unless

the course were revised. Perhaps it would not be altogether wise to make the history distinctly commercial; at the same time it does seem that a readjustment might be made which would recognize the history of commerce as being of just as much interest to the ordinary student as it is to the commercial student. It has been said that the development of the colonies around the Mediterranean sea was a commercial development and that many of the crises in history in the Middle Ages were to be traced directly to the influence of commerce. Now, if history can be taught in that way, the students will have a correct idea of the part that commerce has played in the development of the world.

W. C. STEVENSON.—While fully in accord with everything that Dr. Herrick has said regarding the advisability of the broadest courses in history, I desire to call attention to one difficulty in the way of the adoption of these courses in the high schools of this country, viz., that the teachers have not had the broad and comprehensive historical training that will enable them to sift the economic from the military and the purely literary features. The text-books which prevail are largely literary, military, and cultural, in which the economic phase of historical development is not emphasized. In fact, it is rarely referred to at all, and one must have a very broad and comprehensive training to sift the economic from the other phases of history.

I. R. GARBUTT.—I am very much pleased to know that the commercial course in the high schools of Cleveland coincides closely with the course recommended in Dr. Herrick's paper. The students in the commercial course are not taught alone by the commercial teachers, but by the teachers who have the subject of history in the other courses; so that they are not set apart in classes by themselves, but have the advantage of the regular teachers of the subject.

MATHEMATICS IN COMMERCIAL WORK

ERNEST LAWTON THURSTON, BUSINESS HIGH SCHOOL, WASHINGTON, D. C.

There is need at intervals, in most general courses of study, to rediscover mathematics; to determine again and again, in the light of the best thought and method at the time, its educative, disciplinary, and purely utilitarian value, its relative place in the course, its proper subject-matter.

With a wealth of admirably developed new matter in pure and applied science, constantly demanding an increasing emphasis in already overburdened curricula, mathematics has been relegated at times to a less important position than formerly. No doubt this is right in some cases; in others, it follows from a failure to realize fully its value. In the larger scientific and engineering schools alone has it retained its relative position, because here it is regarded as the bed-rock on which to a large degree the superstructure of technical training must be built.

In our modern secondary schools of commerce, however, we need not to *re*discover but to discover mathematics, in the light of the purpose of the school. We are only beginning to realize the possibilities of correlation of mathematics with other subjects, and of such selection and treatment of the subject-matter as shall be highly educative thruout, while strongly utilitarian in parts.

The subjects commonly required are not new, and no new ones need

be introduced, altho opportunities should be given in the final year for electives of a higher order. But these subjects should be commercialized, to a slight degree at least, where this is possible without decreasing their full educational and disciplinary value.

That which is distinctively utilitarian in the course must be thoroly practical and in accord with modern usage. Business arithmetic, especially, is undergoing marked changes in system and development. The arithmetic of today in method and application is not that of yesterday.

Educationally, the greater results will come from those parts which appeal to the pupil's life, activities, and interests. Mathematics should be live, and dead matter. The arithmetic we know is the outcome of daily needs in every phase of life. It touches life at many points, and in this close contact interest will start and flourish. As has been well said: "The mainspring of mathematical ability in a race is the attempt to adjust means accurately and economically to a given end."

As a whole, the course must give power, vigor, and strength to the mind, cultivating clear thinking and ability to see all sides of a question, and developing that individual capacity which is needed in every form of mental activity. A magnificent exercise in logic, it may sacrifice at times the teaching of facts, if only it gives power to *prove* facts.

In the light of these requirements, commercial arithmetic must be abridged by cutting off obsolete subjects and complicated methods, and enriched by increasing greatly the quantity of simple calculations and of modern, practical, concrete problems, especially those that deal with our active participation in life. Altho business grows steadily more complex, details of organization and methods of work tend steadily toward simplicity. This tendency results in increased demands for accuracy in fundamental processes of arithmetic, and for a working knowledge of the principles of percentage and of elementary business principles, with ability to apply them in an increasing number of ways. The arithmetic of actual business discloses:

1. That common fractions are *un*common; those with denominators of two, three, four, six, and eight alone finding extended use; for others, the nearest two-place decimal is the common substitute.

2. That quantities are generally expressed in one or two denominations. The merchant sells 1¾ yards, not 1 yard, 2 feet, 3 inches; the grocer, 1½ pounds, not 1 pound, 8 ounces; the engineer measures in feet and hundreds of feet, not in rods and feet.

3. That the majority of numbers expressing quantity and value are exceedingly simple. It follows naturally that ability to work mentally should be cultivated, even if the volume of modern business did not demand it. Employees waste time, energy, and frequently costly stationery in unnecessary paper calculations; yet mental calculation, once a habit, is always easier.

4. That in actual business there is little recognition of text-book case or subject. A single real-estate problem may involve simple percentage, taxes, commission, insurance, interest. Solutions must rest on the bed-rock of fundamental principles, not on the shifting sands of arbitrary cases.

5. That actual problems are frequently so expressed as to make essential the ability to understand them as well as to solve them. A book says: "I bought 40 chairs; $8.40, less 15 per cent. discount, paying freight of $11.20. Terms: 30 days; 2 per cent. cash. I paid cash. Find the marked price to gain 15 per cent." A similar problem I overheard expressed in these words from dealer to clerk: "John, we want to clear 15 per cent. on this invoice!" (handing him a bill). And John noted terms, discounts, prices, allowed for freight and store burden, and marked his chairs. The employer says: "Do this." The clerk must make the problem and find or select the values necessary for its solution.

6. That calculation tables for interest, discount, insurance, taxes, wages, earthwork, etc., are commonly used to save time and insure accuracy.

7. That the use of ruled forms, many requiring extensions and calculations for which text-book courses do not prepare, is increasing rapidly.

The course in arithmetic now, to meet business and educational requirements, must be woven together by mental exercises. These may to advantage cover one-half of each recitation period. Mental calculation finds its first field in rapid reviews of fundamental processes in whole numbers, and in common and decimal fractions; its second, in exercises in numbers under 100, continued thruout the course, and in percentage and interest — all intended to develop speed, accuracy, and knowledge of number combinations. It is the tool for systematic review and for developing shorthand arithmetic. Ready-made short methods must be handled with exceeding care. There is danger that they will "go off" the wrong way, or at the wrong time, or — not go off at all. But those developed instinctively by the pupil, thru increasing knowledge of number in combination, remain with him — a valuable business capital.

Moreover, every practical topic may be introduced and developed thru brief, pointed mental problems, and drill secured by a series of related mental problems — a series with the same central idea, a statement on the board around which exercises may be woven.

In close co-ordination with the mental work, the written exercises and test problems "clinch" the subject. These should be brief, practical, living questions, at times expressed in memoranda or bill form, in order that the problem may be determined as well as solved; at times grouped to relate to the same business or business condition, for related problems have far more educational value than those having simply the arbitrary connections of the text-book case.

From the principles and terms of arithmetic, in combination with business terms and forms, has been evolved a business language in which business transactions are expressed and business records written. Its literature consists of notes, drafts, bills, estimates, books of record; its phraseology, of symbols, business expressions, terms, forms of tabulation, etc. Some knowledge of it the pupil gains from his bookkeeping, but it is acquired more effectively thru applied arithmetic, which should form the next step in the mathematical course.

Commence with sales and order sheets, requiring horizontal and vertical addition; follow with carefully graded bills of different kinds of business, reading and solving the problems involved, studying the meaning and relative value of "terms" and the essentials of form. One wholesale bill, with discounts and choice of terms, contains several pages worth of text-book problems. Master, then, commission forms; use actual notes for interest, discount, and partial payments. Solve office paper, pay-rolls, requisitions, inventories—the field of arithmetic as recorded in business paper. At every step, too, require the preparation of original paper, having it checked and audited by the class.

Finally, later in the course, when the pupil has gained strength of mind, breadth of outlook, and a knowledge of business conditions, study in detail some of the greater problems based on arithmetic: those of banking and finance, of insurance, annuities, and endowments, of taxation and duties; the use and proper design of working tables; the effective preparation of statistics; the great problems of "cost-keeping" and factory mathematics. Here, in its highest phase, arithmetic may touch and interpret the work of most other departments of the school.

The course, thus outlined in salient points, is highly utilitarian; yet, when one has taught it, he finds it also highly educational. The principle of fair settlement, which underlies so many business arithmetic processes, and other business and ethical principles, are constantly emphasized. The unusual opportunities for individual and original work bring breadth of mind and training in system, form, and arrangement; while class discussions and rigid analyses give ability to judge before solving, to reason accurately, and to do away with that inaccuracy of statement which is the parent of inaccuracy of thought.

Algebra is not taught distinctively for its utility to the coming merchant, altho to the mathematician and to the engineer it is indispensable. Its greater value is as an exercise in applied logic, where it gives character to the teacher's work and raises it to the plane of true education. It developes capacity to master subjects of kindred, or of totally different, nature.

Algebra in part is distinctively universal arithmetic, and the two subjects work well in double harness. Elementary algebra and arithmetic, in combination, should precede commercial arithmetic, for the methods of algebraic reasoning aid in mastering arithmetical problems—the method of the equation often solving easily what is otherwise difficult. This suggests, too, the substitution of practical business-arithmetic problems for the many exercises in algebra now used.

A scientific treatment of the subject should lead from the beginning to the equation, which should be introduced early, and emphasized until the pupil is familiar with the principles on which the processes of operation are based. Factoring and its relation to equations and fractions

should also be a strong feature. In work of this class the mental exercises should develop the same accuracy and facility in handling the literal as later the numerical. In all stages of the work methods of checking solutions are important in cultivating a valuable business habit and in encouraging independence as well.

That part of higher algebra, less distinctively universal arithmetic, covering the theories of combinations and probabilities has also sufficient value, from practical and disciplinary standpoints, to warrant its rigid treatment. On problems of life insurance and in studies of various business conditions it will be found to have direct bearing.

Geometry claims place, especially because of its value as an exercise in formal logic, altho in parts—in mensuration, for example—it has high utilitarian value. In class it is often effectively taught as a combination of the inventional and the demonstrative. The inventional, leading to a right conception of the truths to be established, introduces naturally the deductive method of establishing them. Elementary ideas of logic, however, may be introduced from the beginning, and demonstrations made exceedingly rigid—with the rigor contributing to soundness of logical development, as well as to clearness and effectiveness of expression.

The field of demonstrative work should include plane geometry and the principal theorems of solid geometry—many of the latter having unusual disciplinary value.

The field of applied work should be as broad as time allows, for here is possible correlation with other subjects and contact with actual life. The practical problems of mensuration, the preparation of plans and estimates, designing, pattern-making, the geometrical representation of statistics, suggest lines of development.

The value of geometry is measured to an unusual degree in terms of the teacher. His insistence on rigid demonstration and clear statement, especially in oral work, and on neat, accurate, effective figures; his method and expression before the class; his choice of original exercises for assignment at every stage of the work; his methods of review, measure the value of geometry to discipline the mind, to arouse interest, and to inculcate habits of neatness, order, diligence, and honesty.

The final year should offer opportunities for advanced elective work, consisting possibly of trigonometry, or of problems relating to heat, light, and power, with which many business men need familiarity; but preferably of descriptive geometry. From experience with classes in this latter subject, I regard it as the most attractive subject-matter mathematics has to offer. As a theoretical subject it has no mathematical equal in arousing general class interest, while it develops a high degree of mind-power. Its applications in practice, also, cover an exceedingly broad and interesting field. The Committee of Ten, speaking of projective geometry, which includes descriptive, says :

It is astonishing that this subject should be so generally ignored, for mathematics offers nothing more attractive. It possesses the concreteness of the ancient geometry without the tedious particularity, and the power of the analytical without the reckoning, and by the beauty of its ideas and methods illustrates the æsthetic quality which is the charm of the higher mathematics, but which the elementary mathematics in general lacks.

Enough has doubtless been suggested to show the natural order of the subjects. Details of the exact order and of number of recitations must depend on the other courses of the school with which the mathematical work must be properly co-ordinated. It is safe to add, however, that in a time no greater, and more probably less, than the average period devoted to the other major subjects, mathematics may claim, if properly treated, at least equal value with these in progressively expanding the interests and powers of the pupil; in training him to think clearly, to plan, to organize, to see relations; in developing the broad, active man of affairs.

But this requires the right man behind the mathematics! "It would be a good thing," reads a rule of the Franke Institute, laid down two centuries ago for the guidance of teachers, "if the teacher would himself work through the book so that he could help the children." It would be a good thing today if the teacher would read deeply in the living book of his subject, in the book also of business life and activity. A broad man, he should understand the purpose and principles of the other subjects of the curriculum, drawing inspiration and illustration from them, yet be ever sharpened to a mathematical point.

DISCUSSION

W. C. STEVENSON.—This is a thoroly practical paper. I would call the attention of those who believe that all commercial education should be highly cultural — that it should never train anybody for a clerkship, but that it should train pupils to be captains of commerce, etc.— to the fact that this paper establishes what to me is fundamental in commercial education, namely, hooking on what it does to the living, moving, active world, and the student beginning in arithmetic where he ought to begin and where he must begin in life — with the thing itself, the practice.

CARL C. MARSHALL.—As a teacher of some twenty years' experience, I want expecially to commend Professor Thurston's paper with respect to the emphasis which it places on studying the elementary numbers. I discovered a good many years ago that the cause of a large part of the ineffectiveness of the average student who leaves the school or comes to the study of commercial subjects lies in his unfamiliarity with the numbers under 100. In business we have a great deal to do with the smaller numbers, such as 2, 3, 4, and the like, in combination with the numbers beyond twelve. The ordinary boy when he learns the multiplication table stops with 12 times 12. He remains absolutely unfamiliar with 26 of the composite numbers under 100. Their combinations do not occur to him. For instance, the ordinary boy sees nothing in a number like 51. He cannot tell you promptly and without calculation what twice 19 is. And yet when he goes into a store as a clerk he is confronted with the proposition: "How much are two yards of cloth at 19 cents a yard?" and so on. I recently had a conversation with a business man connected with the World's Fair in Chicago, and he told me that the pupils

who came out of our public schools were particularly inefficient in their ability to make those short extensions, and he suggested that they ought to be drilled more on the elementary numbers. I wish we could follow out the suggestion of making a multiplication table that would adopt all the numbers up to 100—extending the 2 line of the multiplication to twice 50, instead of stopping at twice 12; and extending the 3 line to 3 times 33, and so on up, until every combination has been included. Take the number 96—the ordinary student sees in it only 8 times 12. He ought to see 6 times 16 and 3 times 32. I think Professor Thurston has suggested a very important consideration in the fundamental studies of those elementary numbers.

MR. GIBSON.—The allusions which Professor Thurston has made to mental processes in the teaching of arithmetic, and to which Mr. Marshall has referred, are certainly those which we cannot afford to neglect in the teaching of commercial processes. I believe, if we take the testimony of business men, that we shall find that men who were in school twenty-five or thirty or forty years ago will say, almost without exception, that the subject which did them the most good in their career was the study of intellectual arithmetic. I have heard men make that statement who had been out of school for twenty-five or thirty years. It seems to me that such testimony is well worth our while to consider. In fact, we are 3,500 or 4,000 years behind the times in our multiplication table. If you take the testimony of Professor Hilprecht, who has just been digging out that immense library of Nebuchadnezzar in that old temple at Babylon, you will find that he makes the statement that the multiplication of the old Babylonian students went as high as 60 times 60, with all the grades between, while we stop at 20 times 20, and at 12 times 12 in most cases. It seems to me that mental arithmetic, rapid mental processes in the class-room, is among the most important and the most useful subjects that we can teach as business educators.

H. B. BROWN.—I want to commend the general thought that has been conveyed here this morning; that a business education today means more than it did twenty or thirty years ago. A business man employs another because he wants him to help him, not merely to count up figures and keep accurate accounts, but to help him in the community and with other business men. So it takes a broader culture today than was required thirty years ago.

COMMERCIAL GEOGRAPHY: THE NEW SCIENCE

FRANK O. CARPENTER, MASTER OF THE ENGLISH HIGH SCHOOL, BOSTON, MASS.

During one of the campaigns of Napoleon in central Europe a curious event is said to have occurred. The emperor had been at Paris for a long time, and the troops on the frontier had grown inactive. Suddenly, without any apparent cause, the troops began to work with feverish activity at their ordinary tasks. The officers shared in the enthusiasm, but were unable to see a cause for it. The excitement lasted a day and a night, and on the second day the news spread that Napoleon had arrived during the night, quietly and unannounced. It appeared that the mere presence of that great leader had inspired the troops along the frontier, altho they did not know of his arrival.

So during the last twenty years a new movement has arisen in education. Old systems of training and long-accepted standards have suddenly become unsatisfactory and have been thrown aside. New methods

of teaching old studies, new ideas of the purpose of education, new activities such as the kindergarten and manual training, the elective system, laboratory methods, have swept over the school world with a speed and force which even their most earnest supporters have been unable to explain, and which their opponents have believed would destroy the entire system of sound and thoro education.

This new force is the modern idea that the thinker must also be the doer; that faith, however lofty, without works cannot lift mankind; and that the dreams of the student in his library must be tested by the sturdy workman in the workshop before they can lead the world. The application of this force may well be called "the science of practical life," or, more correctly, "the science of commerce and industry," commonly called "commercial geography."

The science of commerce and industry, as the subject should be called, deals with several branches of study: (1) the study of commercial products, as wheat, cotton, lumber, from raw material thru manufacturing processes to the finished product; (2) the ways by which these products are transported by sea and land over the world to the consumer; (3) the mechanism of trade, as banks, credit, clearing-houses, markets, by which the great masses of productions are handled and the money in payment for them is returned to the producer; (4) the comparative study of the nations with regard to their productions and commercial importance in the world, and their need of each other as markets or as sources of supply of raw materials; (5) the history of commerce and industry, showing how the conquests of work, in spite of the conquests of war, have made the epochs of civilization; (6) the economics of industry, which shows the position of man in regard to productions, commerce, and trade, and how they are essential to his welfare and happiness.

The subject of commerce and industry is a science with laws as precise and unerring as chemistry, botany, or physics. It may be called a "master of sciences," for its scope is wider and includes the others. Chemistry and physics deal with things and forces by themselves; commerce and industry, with things and forces as applied to the needs and uses of man. In the study of wheat, for example, botany shows the growth of the plant; chemistry, the nature of the soils and the food substances in the grain. The transportation and milling of wheat demand the sciences of engineering and physics; the marketing and payment, the science of finance; the effect of the wheat on the body, the science of physiology—six sciences for a single thing. Then comes the master-science of commerce and industry, and, joining together the reports of the subordinate sciences, itself shows how men use wheat for their labor, food, and civilization. So with all other commercial products and labor. Mr. Gilley, whose paper follows mine, will tell you better than I can how chemistry and physics serve their master, Commerce.

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In the application of this science to the schools there are two points to consider: first, the preparation of the teacher for his work; secondly, the training of the pupil in the study.

The idea that "anybody can teach that subject well enough" is already becoming "who is able and ready to teach that study." The teacher of commerce and industry must be a man of affairs as well as of books. Where now the college student prepares in a normal school or in special courses in pedagogy, the teacher of commerce will turn to the actual study of business life and conditions. Where a normal graduate gladly gives his time to gain experience in school practice, the student of commerce will spend several months in a bank, some months in a great department store or a factory where textile fibers are turned into cloth, or in a railroad office where problems of transportation and management are solved. Probably, also, he will follow the construction of some modern office building from foundation to capstone. Does this seem like adding another straw to the overloaded camel of what a teacher should know before he can earn his living? Let me show you.

Take the time you would spend on books and devote it, as I have done for the last three years, to the men who make things and the men who sell and transport them, and you will find that "as the cyclopædia withers, the world grows more and more." So shall the teacher, in the same time, with the same effort, gain a knowledge that will be incandescent, not a reflected glow. I do not wish to say that books are not of use. They are valuable as records; but it should be men of commerce first, books last.

What bond of union have wheat, cotton, paper, steel, the Panama Canal, and the roaring of the stock and produce exchanges? Like all great truths, this becomes simple if you have the magic key to the puzzle. This is the talisman which makes these tumultuous forces take their proper places. What are these things to man? What does he do with them all? How do they serve his development and needs? Let us look at our points in this new light. Wheat—man uses it for food, and in raising it, carrying it, and selling it the larger part of mankind find their labor, their living, their happiness. Cotton—man needs it for clothing. Paper—man keeps his records and sends his messages on it. Steel—with it he builds his bridges, his railroads, his swift-darting ships. The Panama Canal—it will cheapen cost of transportation so that a poor man in Australia can buy a coat the making of which enables the English workman to buy bread for his babies in London. The roaring of the stock markets—you see beneath the confusion the great forces of trade by which men move the mighty masses of productions and control the powers of industry, and you see men shouting, fighting, cheating it may be, but still doing the work which serves their fellow-men.

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This is the main thought which I want to bring to you this morning, that the new education is sound in so far as it teaches man to know himself — first the body and its uses and needs, and then his mind and soul. And to do this is, in my belief, the province, the power, and the destiny of this great science of commerce and industry. There are few books as yet for the training of its teachers, but Clow's *Commerce* and Thurston's *Industrial and Economic History* every teacher should have and know. They are brave and worthy pioneers in a new field.

The second point is the way the study should be taught to the pupil. There are three methods to be followed: First, the geographical method. The pupil begins with the study of the United States and its products; then England, France, Germany, etc., until the world or the text-book is finished. This method is unscientific, and its results are not satisfactory. Second, the Philadelphia method. In this the pupil begins the study of commercial products by classes or groups, such as those used in the census reports, as minerals, then vegetable products, animal products, forest industries, fisheries, etc. This method is scientific at least, and in the hands of trained teachers, like those in the Central High School of Philadelphia, can be made highly successful. Its fault lies in the fact that these groups, as such, are separate and unrelated, not parts of one great system. Third, the Boston method. This method which seems far more sound and scientific is the one used in the English High School in Boston. The pupil studies commercial products and human industries from the standpoint of man and the needs of human life. In this way every commercial staple, each form of human labor, takes its place as a part of a harmonious system the purpose of which is the development of mankind. The idea kept constantly before the mind of the pupils is: "What use is this to man, what does he do with it and by means of it?"

Taking the needs of man in the order of their importance, we find that first of all he must have food and drink, then clothing, then shelter, fuel and lights, transportation mechanical power, minerals, metals, paper, etc. So the pupil studies foods, textile fabrics, building materials, etc. He begins with foods. Among these the cereals — wheat, corn, rice, etc. — are the most important.

The method of studying wheat will show the method for all. The pupils study; (1) the growth, varieties, and method of planting wheat; (2) the way it is reaped, threshed, transported, and stored; (3) the way it is milled or turned into flour and carried over the world to the consumer; (4) the way it is made into bread, macaroni, breakfast foods, etc., and sold under varying conditions; (5) its nature, food value, and use to man; (6) the localities in the United States where wheat is grown, and the amount of the crop raised for domestic use or for export; (7) the other nations of the world which are or can be rivals of the United States in wheat-raising, and the nations which furnish the markets for our wheat.

After wheat, the other cereals, fruits, nuts, sugar, beef, fish, dairy products, tea, coffee, and other chief foods. Next the textile fibers — wool, cotton, silk, flax, hemp, etc. — are followed from the raw materials to the finished fabric, showing of course the processes of carding, spinning, and weaving. Leather, furs, rubber, used for clothing, follow. After textiles the building materials — lumber and its uses, stone, brick, cement, steel, etc.; methods of construction and uses of buildings, bridges, railroads, etc.; then fuels and lights, as petroleum, coal, gas, electricity, etc. Transportation, manufacturing, mining, methods of trade, banking, finance, are studied as fully as time will permit. The method is flexible. It will expand to use an hour a day or the student's entire time, or it can be condensed to a couple of hours a week. In dealing with these subjects the commercial value of the product or labor is always kept in mind, and other points are left for further study in the appropriate courses of chemistry, botany, physics, economics, etc.

Second only to the right subjects of study in the English High School is the principle that the study of these productions must be based upon the observation of and laboratory work upon actual specimens of the substances. It might almost be said that if the specimens are not at hand, the subject is not studied. In studying from book descriptions the pupil is listless and uninterested. In studying the actual things and processes the pupil is alert, eager, enthusiastic, and the recitation hour becomes too short. A collection of specimens, therefore, is absolutely necessary if the subject is thoroly taught, and will some time be as regular an item of expense and equipment as chemical apparatus or books. The exhibit of specimens displayed in the library of the English High School during this convention will show what it needed for this work.

After the collection of specimens comes the library of books. There are today few good text-books on commercial geography at hand but many are planned by the publishers and within a few years will be issued and supply the demand. Of the books now at hand, Tilden's was too condensed, but the new edition is much improved. Adams' is a valuable collection of important information, but is badly arranged for teaching, tho the grammar-school edition is better. MacFarlane, the best just now on the market, has charts of great value. *Raw Materials of Commerce*, by Dr. Trotter, of the Central High School of Philadelphia, now in press, will be exceedingly helpful. Sanford's *Outline Blanks* are good and can be used with any text-book. More valuable than any text-book are the United States government publications, such as consular reports, year-books of agriculture, census reports, treasury bulletins, etc. Each school should try to obtain them, and the pupils should be trained to use them from the beginning of the course. Some have to be bought, many are free, and thousands are distributed every year by congressmen to their constituents and soon thrown away. These could be saved if it were known that they were of value. The popular magazines of today are full

of articles dealing with human industries and should be in every high school in the country. Sunday newspapers often contain articles of the greatest value by the foremost men of science and industry. These books and articles can be made easily accessible by a subject card catalog, which can be written out by the pupils in connection with their work. Lantern slides should be used to illustrate the great subjects, like cotton, wheat and lumber. A laboratory is as necessary in commercial geography as in chemistry, physics, and other sciences.

Lastly, I can imagine your asking, what is the effect and value of this study to the pupil and the community? First and foremost the boy gains a respect for labor. This would correct one of the serious evils of the time—the tendency of the youth to choose a profession as the only work giving a position of dignity and reward. To be a workingman seems a thing to be ashamed of and the work profitless toil. So thousands of men, fitted to be great leaders of industry, crowd the professions and pass their lives in an eternal struggle for a small return —an infinite waste of force.

If a youth feels work to be noble, he soon sees in it financial rewards as great as in a profession. Few professional men earn or expect to earn an amount equal to that received by the captains of industry or the managers of great business enterprises. The natural result of the study of commerce and industry is that the youth turns to the field of work as eagerly as a soldier to the field of battle, and learns that to be a captain of industry is greater glory than to be a captain of war, that the man who builds a city is greater than he who conquers it, and that men who do the work of the world are too busy to fight each other.

DISCUSSION

C. A. HERRICK.—There should be in the field of what has been understood as commercial geography, the study of commercial products preliminary and leading up to what is properly and distinctively commercial geography. Furthermore, the distinction which Mr. Carpenter has made between pure geography for the elementary school, and the applied geography for the high school, in the form of the study of commerce, is a very important distinction which I think should be emphasized. Commercial geography is *geography*, but it is the facts of pure geography applied to supplying the needs of men for food, clothing, and shelter. That is a fundamental distinction, as I believe, between commercial geography and general geography, as it has been heretofore understood. Mr. Carpenter is also right in saying that general geography has been made the means of furnishing a vast amount of commercial information that might well have been reserved for separate treatment in its own proper place.

We in the Philadelphia High School make the co-ordinating unit the scientific aspect of the subject and divide commercial products into the threefold units of mineral, vegetable, and animal products. Mr. Carpenter claims that we should make the needs of men —the need for food, clothing, and shelter—the co-ordinating units, and that we should approach the subject of products from this standpoint. There is no essential difference in our points of view. We restrict the field to those things that have value to man, and our study is not mineralogy, botany, and zoölogy—the old threefold division of the

kingdoms of the universe — but it is mineralogy, botany, and zoölogy as applied to the needs of men — rather economic botany, mineralogy, and zoölogy. Now, I maintain — and I believe that the position can be sustained — that, having fixed upon the needs of men as the determining thing in the selection of material, we shall gain in scientific method by separating the material into scientific divisions. These are scientific divisions that are recognized in scientific study everywhere. I want, therefore, to dissent from Mr. Carpenter's general statement that we should deal first with those things which are most important. Which, after all, are the more important things? Are not several things equally important? If we go back into the development of human history, we shall probably find that the thing of first importance to humanity has been salt; that next to salt the most important and necessary thing has been iron—both in the field of mineral products. I think we are in great danger of adopting unscientific and unsatisfactory methods in the study of commercial products if we do not hold to the principle that, after we select things which are of economic value to men, we should conform to a sound scientific study of these things within the great groups or divisions of science of which they are a part.

RICHARD WATERMAN.—We find in Chicago that it is possible to use the sort of materials that Mr. Carpenter has mentioned very effectively in teaching the regular geography work in the elementary grades. That is, we get a cotton collection containing specimens and pictures and books which treat it from the elementary-school standpoint, and this collection enables us to teach about the southern states better than we could without the collection. A good silk collection enables us to teach about China better than we could without it. So we have developed a series of traveling museums for the public schools of Chicago that are sent out to the schools on requisition.

R. T. GREEN, JR.—One thing is certain, that in many schools there is but one way to give this subject proper attention, and that is to divide it. I believe I could get three hours for commercial history and three hours for the study of raw materials and three hours for the study of commercial geography, but I could not get nine hours for the three of them combined.

F. A. TIBBITTS.—I believe in teaching commercial geography by countries. If you have but a limited time, you can take up the most important first, beginning with the United States; then Canada, Great Britain, Germany, France, and other European countries; then South America and Asia. The important facts must be considered by themselves, and in doing that work I have started with the facts in physical geography which the pupils will need in commercial geography. Following these facts in physical geography we come to the important products of each country and the means of transportation for export and import.

H. C. HUSTLEBY.—This gentleman from Chicago suggests an idea which I have been following in my school for the past year; that is, using the Tiffany cabinet of eighty-six different industries, each industry being represented on a card. I have put this cabinet into all the grades of my schools, and find there has never been anything in all my teaching which has aroused so much enthusiasm in the grade work in geography.

SCIENCE IN COMMERCIAL WORK: ITS PRACTICAL VALUE, CHARACTER, AND PLACE IN HIGH-SCHOOL WORK

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The course of study of any high school should be along broad lines. Courses of study should be fitted to the pupil, and not the pupil to the courses of study. Altho earning a living is one of the primary aims of

everyone, and altho nearly all of those who attend the high school will follow commercial pursuits, the aim of any course should be to start the pupil on the way to an education.

The system of election in courses of study generally prevails, but election by subjects is growing in favor. In election by courses the opportunity for selection comes early in school life; in election by subjects the opportunities for exercising a choice increase year by year. The separation of a high-school system into English, classical, manual training, and commercial schools forces the child of fourteen, or his parents, to choose a course in which there is comparatively little election. If the commercial high school is not large enough to include a great variety of subjects, there should be considerable flexibility in changing from one school to another. There can be no true election without such flexibility. Boys at work develop tastes for different lines of business; and boys at school should be given opportunity to change their direction without returning to the point from which they started.

The methods of science instruction, as well as the content, must be considered. What can be taught is more or less influenced by the method of presentation. The method of teaching one pupil at a time is much more common in science than in other branches.

The success of science-teaching depends on the co-operation of other departments: co-operation of the modern-language department, by teaching scientific French and German; of the English department, in dictation and notebook records; of the art department, in the use of drawings, diagrams, and lettering, and the general attractive and self-explanatory appearance of the notebook pages; of the manual-training department, in the construction of models and apparatus. In the same way, instruction in science should be helpful to the commercial branches.

The reform in mathematical teaching is well under way. The simpler and more practical teaching of mathematics, in part using the work in science for concrete work, might be tried in commercial high schools, unhindered by tradition and college-entrance requirements. It is recognized that a much less theoretical knowledge of algebra, geometry, and trigonometry than is current today would be helpful in science-teaching. Examples and problems in these subjects might bring out important scientific facts: that the power of the tides everywhere and solar engines in most places is more expensive than power from steam or gas engines; that wherever the barometer is low, as on the elevated plateaus of the West, air compressors work less efficiently and the addition of a condenser to a steam engine gives less economy than at the sea-level.

Science should be studied as a whole, and not as if composed of unrelated branches. There has been too much separation of physics and chemistry. There is no neutral zone. In portions of physics—electrolysis, batteries, energy of combustion—little time is well spent on chemical theory and chemical experiments. Chemistry without some

knowledge of density, methods of electrical measurement, and the whole subject of heat is at times unintelligible. Chemistry, physics, biology, and physical geography are difficult subjects. It is impossible to make them easy and at the same time valuable as training or information. Science should not be a playground or an asylum for the lazy, the mentally weak, or those who cannot or will not learn languages and mathematics.

The course in science should cover in each year such portions of each branch as are adapted to the progress of the pupil — a spiral arrangement, each year going farther into and taking up the more difficult portions of each subject. Physics, chemistry, meteorology, physical geography, and biology, including quantitative laboratory work, would then form a part of each year's course. Chemistry should be taught from the energy standpoint. Even if cadmium is omitted, teach something about tungsten, titanium, and molybdenum; for these by no means rare metals form, with iron free from carbon, alloys that hold an edge at a red heat. By their use iron and steel will be worked from two to five times as fast as before. The new abrasive and other products of the electric furnace and electro-chemical processes of manufacture, enough blowpipe work in the determination of minerals to get a comprehension of how this work is done, and other work of a practical nature should be included in the course. The manufacture of a few chemicals, keeping a careful account (perhaps with the co-operation of the bookkeeping department) of the cost of raw materials, rent, labor, depreciation of apparatus — an item brought home to the student by the laboratory fee and breakage bill — gives an idea of what is known to manufacturers as "costing." The construction and cost of producing electric current from galvanic cells, as determined by actual tests, show how inefficient zinc is as fuel for generating power in large amounts; the measurement and calculation of the horse-power of engines and motors, and practice with the photometer, are good preventives of the craze for perpetual motion. There is no place for Aladdin's lamp in the business world. The millions that are wasted yearly in foolish ventures would not be lost if the owners had studied science and had correct ideas of the laws of conservation of energy, but would, if turned into the channels of legitimate business, make America the foremost commercial nation in the world.

The work in science should be practical. In specific gravity, weigh something besides blocks: take the native rocks, specimens of minerals, coal, the common metals, and wood in common use. In heat, learn the names and uses of actual working instruments — the pyrometer, ecometer, safety valves, calorimeter, always using the commercial names of things. Study the catalogs of trade supply houses, plumbers, and steam-fitters, the trade journals and scientific magazines, and consular reports. Call atten-

tion to the economic value of inventions, and the way we do things now as compared with a century ago when there were few time-saving machines. The raw materials — wood, lumber, minerals, fuel, and the tillable land — are the stock in trade of the whole world. We should work for the intelligent management of forests and for the economical use of fuels and ores. The climate, natural resources, and accessibility of each section should be taught together. Is it not better to know the boundaries of the coal and iron fields than those of the states? Is it not better to have on the mental map we form of a country the obstacles to commercial intercourse, the rainfall and climatic conditions, than the dividing lines of towns and counties? Does the botany we teach make a pupil eager to reforestize land, plant fruit trees, and cultivate food plants? Does zoölogy inspire a pupil to do his little part in mitigating the mosquito plague, in destroying injurious and in cultivating beneficial insects? The meteorology we learn ought to make us satisfied with the weather we have and contented with our surroundings.

The business man or engineer must use his knowledge in the big and little emergencies of business life. It is perhaps just here that education for culture alone differs from a commercial or technical training. A culture knowledge includes a large amount of information, most of which is not at ready command — a *reminiscence*, as Plato calls it; while the business or professional man has a ready knowledge, or cognition, of his particular calling. Those who hold our fortunes and our lives in their keeping must have more exact knowledge than the accepted standard of culture demands. Absolute ignorance frankly admitted is far better than the vague knowledge of material, processes, and business methods that makes a man think he knows when he does not. He must learn to inquire when in doubt, and to use every source of information. The lesson of the message to Garcia has been overdrawn. A man may be admired for his pluck and persistence; but fortune falls to the lot of him who informs himself thoroly.

DISCIPLINARY VALUE OF BOOKKEEPING AS A STUDY

ENOS SPENCER, PRESIDENT OF THE SPENCERIAN BUSINESS COLLEGE, LOUISVILLE, KY.

This is a busy, hustling, energetic age. Commercialism is fastened upon us. That it is an evil, we will not admit. On the other hand, we know the world is growing more liberal, better, broader, and more humane. Superstition and ignorance are being displaced by enlightenment and reason. It takes only a momentary lapse into barbarism in some quarter of the globe to furnish the exception that proves our rule. With what universal horror is the news of a fanatical massacre now received! A

similar occurrence a century or less ago would not have created half the commotion and would have been forgotten in half the time.

What is responsible for the world's advancement? Nothing more so than the application of the science of accounting which alone makes possible commercial expansion and progress. About two years ago I read a report of a United States senator who had made a trip to the Orient. He said:

> Honesty of method is increasing because civilization is increasing all around the globe. Men are growing more and more upright, from principle and from policy, and it is a shining defense of what some immoderate minds harshly call commercialism that fraud, dishonesty, and financial unrighteousness are being eliminated and gradually being made impossible even, by the highly complex organization of the commercial world. Out of the chaos and disorder of things business methods, far more than moral improvement, are bringing regularity, accuracy, and therefore honesty. Russia's finance minister has applied to all expenditures a system of audit through which the smallest item of outlay must pass. He and other men of his quality are the hope and salvation of commercial and constructive Russia.

If accounting, and thru it commerce, is of such great value to a nation and the world at large, how essential is it that every individual come under the uplifting influence of the science and the system of business history-making — bookkeeping! Couple these with knowledge, and we have progress and enlightenment — the roadway to true civilization and to world perfection.

Turning directly to the text given me, I advise against the study of bookkeeping for mere disciplinary effect. Such is not the purpose of bookkeeping, nor will discipline be attained by the mastery of the science. Study bookkeeping, by any and all means, I would say to the young; but study it for its practical utility. We should take it as we do our food. We do not eat because it gives us physical training and improves our table manners. We eat because we need the food. Bookkeeping is an essential in every-day life, no matter what our vocation. It must be regarded, not as a horizontal bar of a mental gymnasium, but as the plow-handle of the bread-and-butter phase of life.

Disciplinary training should commence with the child's mental development. Our public schools are too prone to take up technical subjects and to waste time on drawing, music, and side issues. I should not be surprised to hear of some public-school board announcing that a course of law, journalism, advertisement-writing, or blacksmithing would be inaugurated in the fifth or sixth grade, or that pupils would graduate with a degree at the age of thirteen. I insist that children should be thoroly drilled in the fundamental branches. Let all else alone. That is the sole purpose of the public school. Why should it not be carried out completely and successfully? The course should train for general citizenship and its high duties. Make men and women of the boys and girls who are the charge of the nation. Do not expect the youth to put on the cornice when the

walls are not yet builded. "Readin, 'ritin', and 'rithmetic" are the three R's that move the world today, just as they did in the time of our fathers and the log schoolhouse. Here lies the disciplinary kernel. Let the young crack the shell and dig it out. See that the child does the digging, and when he reaches the point where he must grasp the technical and the practical, he will then have the mental development needed.

We often hear it said that we are living too fast, that the race will burn itself out at the rate things are going. I doubt that. Work will not hurt us; it is abuse, idleness, and dissipation that tear down. Idleness is one of man's chief enemies—in fact, the chief enemy.

There are many improvements I should like to see made in the public-school system. One of them is to put in more hours and days and weeks in a year's schooling. When I leave my office at lunch time every day, I see boys and girls on their way home from school. An hour or two later, as I return from lunch, I find many of those boys on the street corners or in doorways smoking cigarettes and idling their time away. The germs of mischief float around such gatherings. The boy out of school and on the street is in positive danger. In fact, the idle boy is on the broad road to ruin. Besides making the school day longer, I would add another day to the school week; and, lastly, would shorten the summer vacation. I would have the school course so arranged that mental and physical training would go hand in hand, the one relieving the tediousness of the other. The objection might be raised that there would be no time for rest. That is exactly what I would seek. With a healthy child it is always so. When not at work or study he is at idle play—merely another kind of activity. I would not deprive him of his physical exercise, but merely regulate and systematize it and apportion the time for it with that for work, in order that the most good might come to him. But the downright, trifling idleness of the lad who spends his after-school hours in the street or at idle sport would have to go. Idle sport is the curse of city life for our young, and is the reason why country boys are the bone, sinew, and upbuilding vitality of the city.

The energies of educators should be concentrated in qualifying young Americans to cope with twentieth-century men and methods. In the majority of cases we must give the youth that which will be of the greatest benefit to him in the limited time at his disposal for getting it. That serves best which serves longest. Let the public and parochial schools furnish us our disciplinary training. That was the idea, I am sure, of the originators of the public-school system. Again I say, teach the fundamentals. I would divide the school day thus: one hour for penmanship—not cramped copy-book drawing, but free, muscular action, bringing into play the large, tireless muscles of the arm, and producing ovals, straight lines, and curves from which alone a free, clean, legible handwriting can be obtained; one hour for reading and elocution, the reading not to be

dry articles for elocutionary gymnastics, but free, fluent, natural reading of matter containing valuable information in history, science, and government, especially along the line of hygiene, and correct living and acting; one hour for spelling and language; one hour for arithmetic and mental drill—not complicated arithmetical puzzles, but rapid and accurate work in the common everyday calculations, especially thoro drill in that greatest of mind trainers, mental arithmetic; another hour for geography, history, physiology, hygiene, and the principles of right living. Between these hours intersperse recreation periods for physical culture. Let this program be followed six days in the week. Children will not tire of a school properly conducted with mental and physical culture blended in such proportion that the one relieves the monotony of the other. Let the teachers teach more and examine examination papers less. Cut out the machinery and reduce the number of pupils to a teacher. See that *every* child is given thoro training in the fundamental branches before a dollar is spent on high schools or technical training of any kind. Do not attempt to broaden the course of the public school. The boy or girl that has mastered the rudiments will have appropriated a magnificent fortune beside which the riches of the princess of India will appear as the personification of poverty. The common-school education carries with it—if it is properly given to the youth—all the fundamental discipline needed. If the fundamentals are properly mastered, there is no necessity for bookkeeping or any other technical subject as a disciplinary study. In fact, without mastery of the fundamentals, all the bookkeeping or other technical training in the world would be valueless to the student.

Formerly not one out of ten business-college students made direct practical use of the technical or bookkeeping part of his education. Now the number is more than nine out of every ten. More time is now devoted to the fundamentals—penmanship, addition, billing, and correspondence—and less to bookkeeping. The business schools recognize that where the common school has failed to supply the rudiments—either thru a defective course or in the student's failure, by non-attendance or other cause, to avail himself of it—the business-educational institution must first make up the deficiency before success can be expected.

Bookkeeping means the mere recording of business transactions in a systematic manner. The records are called accounts. Three prime factors, and only three, figure in these accounts—namely, English, penmanship, and arithmetic. These are the three essentials. Without any one of these, books cannot be kept. Just in the measure in which these three things are mastered will the bookkeeper be able to keep books. The more proficient he is in these fundamentals, the better and easier will he perform his labor. Practice may breed accuracy, neatness, and speed, but it will not necessarily discipline the bookkeeper. He must come to his work already disciplined thru the acquisition of his English, his penmanship, and his arithmetic.

Of course, every boy and girl should learn bookkeeping. I make no exceptions, whether a youth purposes to become a carpenter, a farmer, a lawyer, an artist, a merchant, a mechanic, a banker, an electrician, or even a housewife. But the study should never come before the ward- or grammar-school course is completed. Give the pupil all the fundamental training, all the discipline, circumstances will possibly permit him to acquire. Then let him have bookkeeping. Ascertain how long the student has to devote to his schooling; then give the last year of that time to business training. Suppose he has three years to attend school after leaving the ward school. Let two of these be spent in the high school and the third in business training. Or if he has four years more, then give him three of those years in high school and devote the last one to technical business instruction. If he can spend the entire four years in the high school and have an additional one for training in business, all the better. If he can spend only one year in school after having completed the ward- or grammar-school course, let it be given to business training. If the student can avail himself of a college education, it would be greatly to his advantage to take a year's good close training in business or practical living-making subjects before entering upon his college course. Then, if he would be best qualified for meeting the demands of this great commercial age, he should take the last year of his college course in higher commercial training, studying the commerce of the world from the broadest point of view. I do not make these recommendations for the benefit of private business colleges, but as a result of my thirty years experience in qualifying young people for business and success in life. By all means let our young people have the fullest and best education possible. The world individually and collectively will be the better for it. The only point on which I insist is that the last of the allotted years for schooling be devoted to the practical. General training makes the man mentally strong. Technical training renders him capable of applying his knowledge.

The technical training — the business education, if you please — strengthens the youth to meet life's temptations and battles. The needed strength to combat these influences is obtained in his study of those things in which he realizes there is an immedate possibility of working out life's problems. While he studies bookkeeping he takes a new hold on things. He is brought face to face with success and failure arrayed side by side. While he has been disciplining himself he has not recognzed these factors. He has been a mere sponge, absorbing all that came within his reach.

Now, in the first lesson in business training he beholds the practical. In the same moment he realizes his former dependence and his future independence. It is a change of life for him. The more thoro, better, and broader has been his disciplinary course, the mightier is his strength.

He finds himself against the world, as it were, and bends his energy on conquering, not alone for mere victory's sake but for life's sake. He must sink or swim. So he masters the technical and finds himself—a citizen.

DISCUSSION

C. B. ELLIS.— The author of the paper believes thoroly in the teaching of bookkeeping. So do I. I believe, as he does, that every young man should have the opportunity to learn the principles of bookkeeping, but I cannot quite agree with him in the place in the course to which he would assign the subject. If he is going to cut bookkeeping out of the grammar school, he will deprive a large percentage of boys and girls of the opportunity of studying it. Many boys and girls need to study bookkeeping, not for the purpose of putting it to practical use as bookkeepers, but for keeping records of their own. Not every boy can pay tuition to learn how to keep books, but if you put into the ninth grade of the grammar school a short course in bookkeeping, the boy can learn the principles there. The speaker has given us a strong picture of what may be accomplished by the study of accounts. I believe it all, but if what he says can be accomplished by the study of accounts is true, the study of accounts has a decided disciplinary value. Mr. Rohrbach in his text-book on psychology says: "Accuracy is the chiefest intellectual virtue." Now, the gentleman who read the paper has put special emphasis and value on accuracy, and few subjects develop so much that essential quality of accuracy as bookkeeping. A boy cannot keep books unless he is accurate. Now, if Mr. Rohrbach is right, that accuracy is the chiefest intellectual virtue, then bookkeeping must have a disciplinary value without question. If we accept the gentleman's conclusion, we must wipe out our high-school system. The high school gives above all a preparation for life. It does not matter whether the pupil passes on to college before he goes out into life or not; that high-school training is a part of his training and preparation for life. If he is going to be a professional man, and goes thru the high school and college and a professional school beyond that, still that high-school training is an essential part of his preparation for his work. If a boy who is going to college and intends to enter a profession has a right to that high-school training for four years, then this other boy, who has not the opportunity for going to college, and who perhaps has not the fitness for one of the professions, has the same right to a training which shall fit him for usefulness and help him to go out and earn his bread and butter. The speaker is behind the times here. There is no question but what the trend of educational thought today is that our schools shall, so far as possible, fit boys for lives of usefulness when they have left school.

THE DISCIPLINARY VALUE OF STENOGRAPHY AND TYPEWRITING AS STUDIES

W. H. WAGNER, TEACHER OF STENOGRAPHY AND TYPEWRITING, COMMERCIAL HIGH SCHOOL, LOS ANGELES, CAL.

The value of a subject for study should be measured by the power it develops in the student to think, plan, and execute. The possibilities of mental development involved in the study of stenography and typewriting are unquestionably very great. As educative forces they have few equals. They are especially valuable, not only as cultural, but as utilitarian subjects. The study of these subjects develops the power of

expression, which is the soul of education — that power which asserts itself, makes itself felt, and moves the world. Tho largely vocational, they have a high disciplinary value when correlated with other subjects, and it is in this relation that we shall discuss their educational value.

The prevalent idea, which has long obtained, that stenography and typewriting, being practical and having a high commercial value, are not disciplinary, is rapidly being dissipated by their general adoption and correlation with other branches in our schools. They have been regarded as mechanical arts which it required no great amount of mental ability to master; and it has been thought that any person of ordinary ability can learn to be a successful stenographer without much effort. Recent experience in the schoolroom with these subjects has, however changed the views of many leading educators in this regard. It is now conceded that stenography and typewriting as studies and practical arts admit of the widest range of mental action.

The student of stenography not only thinks, but he executes, or expresses, his thoughts in words and action. On the practical side its advantages are so obvious as hardly to need mention, and its value too great to be measured in dollars and cents. But its greatest value lies in the mental training which its study imparts. No other subject in the school curriculum can excel it as a means of cultivating quickness of thought and concentration of mind. From the first lesson the student of stenography begins to think more quickly than before and to act more promptly in putting upon paper the picture of his mental impressions. He undergoes mental gymnastics which are a sure cure for sluggish and slovenly mental habits. The mind is awakened, becomes alert, quick, and active; hearing is made more keen, and the hand is trained to execute with precision and rapidity. In mental culture stenography as a study compares favorably with other subjects. In many respects it resembles the study of foreign languages. The mental processes involved are much alike. The same faculties are developed and trained — reason, memory, observation, comparison, investigation, judgment, and conclusion. Both give the student a better command of his mother-tongue; in both, the grammatical laws of language are the basis of interpretation; both give exercise in spoken language; both introduce the student to literature. Where correlated with other subjects, such as English, history, and geography, dictations may be given in class which will serve to create a lively interest in the subject in hand, and at the same time afford stenographic practice.

The intimate relations existing between the study of stenography and that of English makes these subjects mutually helpful in the course. To pursue a course in stenography without a good knowledge of English is like building a house upon the sand. Learning stenography is a study of English from the practical side, giving the student specific, utilitarian training in his mother-tongue. The student of stenography works at his

English seriously; he gets the true meaning of words, the relation of phrases, or clauses, to other parts of the sentence, their interdependence, and their force; he comprehends construction, becomes familiar with the use of synonyms, and the relations existing between the derivative words and their roots; he studies the sequence of ideas, the development of thought; he corrects, transposes, separates, and reconstructs—in a measure he creates. The process of working out the thought involved in brief, often imperfect, shorthand notes, turning spoken thought thus recorded back into faultless English and correct print, is an exercise which gives a discipline of the greatest value and a practical command of the mother-tongue which can be gotten in no other way. The study of stenography and typewriting acts as a corrective in spelling, punctuation, capitalization, paragraphing, and style. It also serves to form habits of neatness, accuracy, and form.

In an examination recently given for the selection of eight young men for cadetships at West Point and Annapolis, the applicants were all graduates of high schools and were chosen with special reference to their good standing as pupils. Every one of the eight were rejected, however, for lack of thoroness in the elementary English branches. The state representative where the applications were made says there can be no question about the justice of the decisions and declares that the case in point is simply a striking evidence of the fact that the American public-school system is defective. It indicates that not enough attention is paid to the educational foundation and too much to the superstructure, pupils being rushed thru the grammar schools without proper elementary training. Another instance where an examination was given high-school graduates for entrance to a university, nearly one-half failed because they were unable to spell words in common use.

The following is quoted from a high-school principal, who testifies to the effectiveness of the study of shorthand as a corrective and having disciplinary value. He says:

> I have heretofore held that none of our business studies could be compared in cultural value with our common secondary school studies, but I am getting away from this theory, when I see what good results our school is accomplishing. I appreciate that the study of shorthand, besides the practical gain it offers by being a means of getting certain facts and of noting them with little time or energy as compared with writing, supplements our work in English in the lines of spelling, punctuation, and paragraphing, and particularly in pronunciation. It is of value as it emphasizes the importance of neatness and accuracy, and at the same time demands habits of close and concentrated attention to the matter in hand. I also see how it is helpful to the memory and to a quick-witted presence of mind in the one who seeks to master it.

Stenography and typewriting as studies are the antidote for poor spelling. The treatment goes direct to the root of the disease; it applies the right remedy to each individual case. This is the proper and most effective way to teach spelling.

The use of the typewriter makes the operator his own critic. It is commonly known what skill in the technique of English the typesetter acquires. The writing machine affords even greater advantages in this direction. The operator not only sets the type, but he also reads the proof. For discipline in practical English there is no training better than that of proofreading.

The value of typewriting, considered as an instrument of manual training, is great, but in cultivating rapid thought and quick action, accuracy, neatness, and general utility it serves a yet higher purpose. The general discipline gained in learning typewriting alone places the study among the most important educational agencies of modern times.

The study of stenography and typewriting cultivates concentration. In this age of intense mental and physical activity, competition compels the youth to fight the battles of a strenuous life. Our schools should so shape their courses as to develop concentration of the forces of youth. The present tendency is to scatter. Concentration is highly disciplinary; it is the first element of thoroness which is the golden key to success. Our technical schools afford excellent discipline, because in them the student pursues subjects which, from their utilitarian nature, develop concentration. Reporting a speaker requires intense concentration of mind and physical effort. The mind cannot wander nor the hand cease its action. When the mind and hand become fatigued thru this strenuous effort, they move along lines of least resistance. The work is done in the easiest and most natural way.

The "touch" method of learning typewriting is valuable in training the mind and hand to work harmoniously. The disciplinary effect is similar to that of learning the piano-forte, with that difference in favor of the typewriter which the utilitarian has over the purely cultural study. There is no more valuable lesson to the beginner in typewriting than being required to produce perfect work. To make a complete page without a single error requires intense concentration of mind and trains the hand in exactness of movement.

Perhaps the most important educative feature of the study of stenography and typewriting is that it teaches the student to think. To be able to think is the first element of successful shorthand writing and note-reading. The stenographer *must* think; he cannot be mechanical and succeed. When transcribing shorthand notes there is the greatest necessity for thinking; bad sentences must be reconstructed, grammatical errors corrected, historical facts looked up, literary quotations verified.

The pupil should be taught the necessity of following the thought of what is being said as he records the words of the speaker, and in transcribing his notes to take up the thought and hold to it, that he may see the complete, unbroken chain of ideas, the whole thought, from beginning to end. He should be taught to get behind and under his

notes, to read between the lines, to see more than mere stenographic characters on the page, to have a clear concept of the subject-matter in hand; and when that is done we can depend upon it that there will be good, intelligent copy. This is the development of power and its consummate result. This is what stenography and typewriting as studies will do for the student under proper instruction. Teachers should carefully guard against placing the stress of their work upon the mechanics of these subjects which must necessarily turn out poor stenographers who might otherwise be an honor to the shorthand profession.

The study of shorthand and typewriting does no less for the pupil than any other subject in our school curriculum, but gives him better mental equipment for an active, useful life and for self-support than many others, while it supplements, corrects, and utilizes all subjects in a way which adds strength to the whole course. It assimilates knowledge, clears the mental vision, teaches what to do, and how and when to do it, in the best and quickest way. In the highest and best sense it disciplines, it educates.

REPORT OF ROUND TABLE CONFERENCE

HELD FOR THE PURPOSE OF DISCUSSING THE CURRICULUM SUGGESTED IN THE FOLLOWING REPORT

BOSTON, MASS., July 10, 1903.

To the Department of Business Education, National Educational Association:

At the Detroit meeting of this body, the president elect was authorized to appoint a committee, to which was assigned the work of preparing a monograph on commercial education in the American public schools.

The following committee was named:

Durand W. Springer, director of commercial department, High School, Ann Arbor, Mich.
William E. Doggett, assistant principal of Commercial High School, Brooklyn, N. Y.
Cheesman A. Herrick, director of School of Commerce, Central High School, Philadelphia, Pa.
Allan Davis, principal of Business High School, Washington, D. C.
I. O. Crissy, state inspector of business education, Albany, N. Y.
J. H. Francis, principal of Commercial High School, Los Angeles, Cal.
H. M. Rowe, author and publisher of business text-books, Baltimore, Md.
E. E. Gaylord, director of commercial department, High School, Beverly, Mass.
T. W. Bookmyer, principal of Sandusky Business College, Sandusky, O.

The first meeting of the committee was held at Philadelphia, March 27–28, 1902, the only absentees being Messrs. Bookmyer amd Francis. During one of the sessions we were favored with the presence of Professor Charles DeGarmo, of Cornell, and Dean Haskins of the School of Commerce, Accounts, and Finance of the University of New York. A discussion of the general problems involved occupied our entire time, it being agreed that the course of study outlined should be four years in length.

The programs for the departmental meetings, at both Minneapolis and Boston, were arranged with the idea of assisting the committee in its work by securing, in the discussion of the formal papers presented, the opinions and experience of a large number of commercial teachers.

In connection with the Minneapolis meeting, the committee held three sessions, with six members present, and an open conference meeting, attended by about one hundred

persons. Each member had drafted a course which he advocated, and each course was submitted to those present for criticism. Much of the time was spent in discussing the classification of the technical subjects that should be given in a commercial course and the order of their presentation. The following general statements were agreed upon as governing the committee in its further deliberations:

The paramount factor in shaping commercial courses in public schools should be the welfare of the student who goes directly from the high school to his life-work. It is expected, however, that such courses will provide a training of such a character as will fit the student completing them to enter the schools of commerce and industry now being established by many colleges and universities as well as other modern courses in colleges and universities.

We believe that, where possible, separately organized commercial schools are advisable; but we realize that in the great majority of places the work must be given in regular public high schools as one of the several courses thereof.

Commercial courses will include many subjects now taught in public high schools, altho the methods of presentation in some cases may not be those best adapted to the needs of the business student. We realize that in most schools it will not be possible to organize separate classes in those subjects for the commercial students with methods especially modified to meet their wants.

During the past year work has been carried on by correspondence, and this week three sessions have been held, attended by the members whose names are signed to this report. We herewith submit an outline of a four-year commercial high-school course. It is needless to say that it does not follow exactly the original plan submitted by any member of the committee. Neither is it expected that it will suit every commercial teacher or public-school superintendent. It is hoped that it may be of service to all, in that it is suggestive. Allowances must be made for local conditions and the personal equation.

FIRST YEAR

FIRST HALF	Recitations per week	SECOND HALF	Recitations per week
English	4	English	4
German, or French, or Spanish	5	Same language continued	5
Algebra	5	Algebra	5
Bookkeeping	3	General history to 800 A. D.	4
Drawing	3	Bookkeeping	3
Penmanship	3	Penmanship	2
Total	123	Total	123

SECOND YEAR

FIRST HALF		SECOND HALF	
History of English literature; composition	3	History of English literature; commercial correspondence	3
Modern language continued	5	Modern language continued	5
Commercial arithmetic	5	English and European history	5
Study of commercial products, or local history and industries	5	Commercial geography	5
Bookkeeping	5	Typewriting	5
Total	23	Total	23

THIRD YEAR

FIRST HALF		SECOND HALF	
Rhetoric and composition	3	Plane geometry	5
Political economy	5	Physics or chemistry continued	5
Physics or chemistry	5	Commercial law	4
Bookkeeping and office practice	5	United States history	4
First language continued, or second modern language, or shorthand and typewriting	5	Election of first half continued	5
Total	23	Total	23

[1] The suggestions as to the number of recitation periods are based on the supposition that the length of a period is 45 minutes. It is suggested that wherever possible periods be added for physical culture.

FOURTH YEAR

FIRST HALF	Recitations per week
English literature, themes, and parliamentary practice	5
History of commerce	5
Fifteen periods to be selected from—	
Language elected continued, or shorthand and typewriting continued	5
Physics or chemistry	5
Banking and finance	5
Solid geometry	5
Mechanical drawing	5

SECOND HALF	Recitations per week
English continued	5
Civil government	5
Fifteen periods to be selected from—	
Same election continued	5
Physics or chemistry continued	5
Accounting, organization, and auditing	5
Advanced commercial arithmetic	5
Advertising, study of trade journals, and commercial English	5

The committee will hold one more session while here for the purpose of completing some matters in connection with the proposed monograph, which we hope will be ready in time to form the basis of our next year's program.

D. W. SPRINGER, *Chairman.*
W. E. DOGGETT.
C. A. HERRICK.
I. O. CRISSY.
H. M. ROWE.

About one hundred persons were present, and over twenty took part in the discussion. The principal criticism of the suggested course was that too much work would be required of the pupils, and therefore it would fail to draw and retain students.

At the close of the session the committee was requested, on motion made by W. C. Stevenson, of Maryland, to complete its work upon the monograph so that it should be available for the next meeting.

DEPARTMENT OF CHILD STUDY

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 7, 1903

The first session of the Department of Child Study was called to order in the Auditorium of the First Baptist Church, Tuesday morning, July 7, at 9:30 o'clock, by President G. W. A. Luckey. The following program was presented:

Topic: "Child Study in Relation to Elementary Education."

1. "A Study Based on the Children of a State," Earl Barnes, lecturer for the American Society for Extension of University Teaching, Philadelphia, Pa.

Discussion: Miss Lillie A. Williams, professor of psychology, State Normal School, Trenton, N. J.

2. "The Teacher's Practical Application of the Results of Child Study," F. E. Spaulding, superintendent of schools, Passaic, N. J.

Discussion: George E. Johnson, dean of lower school, University School, Cleveland, O.; Ida C. Bender, M.D., supervisor of primary grades, Buffalo, N. Y.

3. "The Health and Growth of School Children," W. W. Hastings, professor of physical training, International Y. M. C. A. Training School, Springfield, Mass.

Discussion: George W. Fitz, M.D., Boston, Mass.; Helen C. Putnam, M.D., Providence, R. I.

4. "School Hygiene in its Bearing on Child Life," Thomas D. Wood, M.D., professor of physical education, Columbia University, New York, N. Y.

Discussion: "Medical Inspection of Schools," Homer W. Zirkle, principal of the Elmwood School, Denver, Colo.; C. P. Cary, state superintendent of public instruction, Madison, Wis.

Under the order of business the following committee on nominations was appointed by President Luckey:

E. G. Lancaster, associate professor of philosophy and pedagogy, Colorado College, Colorado Springs, Colo.

Gertrude Edmunds, principal of Normal Training School, Boston, Mass.

T. L. Bolton, associate professor of psychology, University of Nebraska, Lincoln, Neb.

Adjournment was taken until Thursday morning at 9:30 o'clock.

SECOND SESSION.—THURSDAY, JULY 9

The department was called to order at 9:30 o'clock A. M., and the following program was presented:

Topic: "Child Study in Relation to Secondary Education."

"Sex Differentiation in Relation to Secondary Education," A. H. Yoder, professor of pedagogy, University of Washington, Seattle, Wash.

Discussion: Edwin D. Starbuck, associate professor of education, Stanford University, Cal.; Z. X. Snyder, president of State Normal School, Greeley, Colo.

2. "The Percentage of Boys Who Leave the High Schools, and the Reasons Therefor," A. Caswell Ellis, associate professor of education, University of Texas, Austin, Texas.

Discussion: J. W. Carr, superintendent of schools, Anderson, Ind.; Thomas M. Balliet, superintendent of Schools, Springfield, Mass.

3. "How to Increase the Attendance of Boys in the High School," J. K. Stableton, superintendent of schools, Bloomington, Ill.

Discussion:

a) "Self-Direction as a Motive for Increasing Attendance," Colin A. Scott, Boston Normal School, Boston, Mass.

b) "Influence of Men and Women Teachers," Sanford Bell, professor of education, University of Colorado, Boulder, Colo.

4. "Psychic Arrest in Adolescence," G. Stanley Hall, president of Clark University, Worcester, Mass.

Discussion: Adolph Meyer, M.D., director of New York Pathological Institute, Ward's Island, N. Y.; George E. Dawson, professor of psychology, Hartford School of Religious Pedagogy, Hartford, Conn.

A. H. Yoder, Washington University, Seattle, was unavoidably detained, and in order to preserve the continuity of the program his paper was read by E. A. Kirkpatrick, State Normal School, Fitchburg, Mass.

At the close of the session the following resolution, presented by Dr. Colin A. Scott, was adopted:

Resolved, That, in consideration of the scientific character of the material presented and the large attendance in the Department of Child Study, President Luckey be asked to nominate a committee to confer with the proper officers of the general Association with the view of obtaining a sum of money for scientific child-study investigation, including the publication of the results in a report for the benefit of this Association; the control of which is to be placed in the hands of a second committee selected specially for this purpose.

The following committee was appointed by the chair:

E. G. Lancaster, assistant professor of philosophy and pedagogy, Colorado College, Colorado Springs, Colo.

Thomas D. Wood, M.D., professor of physical education, Columbia University, New York, N. Y.

Miss Lillie A. Williams, professor of psychology, State Normal School, Trenton, N. J.

The election of officers for the department resulted as follows:

President—E. A. Kirkpatrick, Fitchburg Normal School, Fitchburg, Mass.
Vice-President—Jenny B. Merrill, supervisor of kindergartens, New York, N. Y.
Secretary—A. H. Yoder, professor of pedagogy, University of Washington, Seattle, Wash.

The session then adjourned.

SUSAN F. CHASE, *Secretary*.

PAPERS AND DISCUSSIONS

A STUDY BASED ON THE CHILDREN OF A STATE

EARL BARNES, LECTURER FOR THE AMERICAN SOCIETY FOR EXTENSION OF UNIVERSITY TEACHING, PHILADELPHIA, PA.

When explorers first came to America, each hoped to do some great new thing; one would discover a road to India, another a northwest passage, and a third the fountain of perpetual youth. After a time these visions of discovery were superseded by a common-sense recognition of the value and necessity of definitely mapping the coast line and surveying the interior of the country. The few gentlemen adventurers were followed by a host of inquiring workers.

In child study we have had much this same experience. At present, child-study workers are looking, not for startling new lines of investigation, but for fruitful lines; not for great masses of data, but for just enough facts to settle conclusions; not for glittering generalizations, but for true ones. It is being steadily recognized that here, as in all branches of natural science, comparative studies must give us our most significant results.

The definitive studies we need are laborious and expensive, and for their successful prosecution we increasingly need the support of the city, state, and national departments of pedagogical investigation. If we could have in this country a central bureau of investigation which would do for the science of education, thru the direct study of children, what the Fish Commission has done for the study of the fishes of America, it would greatly strengthen the work of individual investigators everywhere. At present the national government is spending more money on the study of fishes and reindeer than on the study of its children.

The aim of this paper is to indicate some of the ways in which the methodical extension of any study over the state could be expected to yield valuable results.

Thru much multiplied data we might certainly hope to establish fundamental conclusions touching the points involved in investigations. Of course, with any good test it is possible to reach a limit beyond which variations do not appear, if conditions remain constant. In most of our studies so far made, two hundred papers by boys of each age and an equal number by girls give us returns that remain constant when we add more papers from the schools or homes. To illustrate the uselessness of accumulating observations beyond a certain point, I have just worked over one thousand papers, all written by eleven-year-old girls from Hudson county, New Jersey. The girls had written answers to the well-known test on ideals: "What person whom you have known or of whom you have heard or read would you most wish to be like? Why?" We divided the papers into ten packages of one hundred each, and then classified the answers to see what percentage chose an acquaintance, what percentage a character in public life, and what percentage chose some person of the opposite sex as an ideal. The results were as follows:

	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
Acquaintance	28%	37%	23%	36%	27%	37%	28%	29%	32%	22%
Public character	72	63	77	64	73	63	72	71	68	78
Opposite sex	55	52	61	41	60	52	55	59	51	52

If, now, we combine these answers in sets of two hundred, the differences are slight:

	First	Second	Third	Fourth	Fifth
Acquaintance	32%	29%	32%	28%	27%
Public character	67	70	68	71	73
Opposite sex	53	51	56	57	51

If we further combine the above results so as to have five hundred papers in each package, the results from the two sets are exactly the same. We have 30 per cent. of acquaintances, 70 per cent. of characters from public life, and 54 per cent. of the opposite sex chosen, in each lot. Thus we see that there is a point beyond which it is useless to multiply data. In general, it seems true that the extent of a useful educational investigation will be determined by the size of the administrative unit dealing with the subject under examination.

Granted, then, a fruitful investigation and a sufficient range of data, we should expect that certain large generalizations could be definitely settled thru many repetitions of the same study. Not only would the general law be accentuated by tracing it under various conditions, but the variations in the successive studies would also furnish the limitations and qualifications necessary to make the general law clear and definite. The following table, based on data in the "Ideal Test" just mentioned, and drawn from ten cities or counties, illustrate the persistence of certain tendencies, and the variations are as significant as the agreements, had we space to examine them.

ACQUAINTANCE IDEALS — BOYS

	Ages							Papers
	8	9	10	11	12	13	14	
London, England	42%	40%	26%	11%	18%	15%	...	1,000
Springfield, Mass.	57	48	38	22	20	18	11%	1,300
Johnstown, Pa.	42	36	30	21	7	9	7	825
Trenton, N. J.	46	36	31	22	15	19	12	1,200
Chester, Pa.	52	37	34	29	30	25	16	675
Lancaster, Pa.	44	56	38	40	16	28	24	190
Hudson county, N. J.	38	37	29	17	22	13	18	700
Atlantic county, N. J.	52	29	18	19	13	14	11	800
Sussex county, N. J.	52	45	39	22	25	17	13	750
Chester county, Pa.	46	29	25	39	17	22	9	1,000

ACQUAINTANCE IDEALS — GIRLS

	Ages							Papers
	8	9	10	11	12	13	14	
London, England	49%	51%	37%	27%	18%	14%	...	1,100
Springfield, Mass.	82	68	59	39	24	30	30%	1,375
Johnstown, Pa.	59	55	36	34	21	16	6	875
Trenton, N. J.	52	47	48	37	32	26	17	1,150
Chester, Pa.	72	48	43	59	35	34	24	750
Lancaster, Pa.	72	66	65	51	45	15	17	300
Hudson county, N. J.	67	61	45	39	25	38	16	700
Atlantic county, N. J.	72	58	42	42	24	32	22	975
Sussex county, N. J.	82	61	54	40	35	22	29	925
Chester county, Pa.	71	54	48	36	32	25	11	1,050

CHARACTERS FROM PUBLIC LIFE — BOYS

	Ages						
	8	9	10	11	12	13	14
London, England.....	17%	17%	34%	50%	60%	69%	...
Springfield, Mass.....	43	52	62	78	80	82	89%
Johnstown, Pa.....	51	55	61	78	93	90	93
Trenton, N. J.....	54	64	79	78	85	81	88
Chester, Pa.....	48	63	66	71	70	75	84
Lancaster, Pa.....	56	44	62	60	84	72	76
Hudson county, N. J....	62	63	71	83	78	87	82
Atlantic county, N. J....	31	51	62	74	70	73	66
Sussex county, N. J.....	48	55	61	78	75	83	87
Chester county, Pa.....	30	69	63	60	81	73	77

CHARACTERS FROM PUBLIC LIFE — GIRLS

	Ages						
	8	9	10	11	12	13	14
London, England.....	26%	14%	21%	40%	46%	44%	...
Springfield, Mass.....	18	32	41	61	76	70	70%
Johnstown, Pa.....	35	40	59	61	79	80	90
Trenton, N. J.....	48	52	51	63	67	72	83
Chester, Pa.....	28	52	57	41	65	66	76
Lancaster, Pa.....	28	34	35	49	55	85	83
Hudson county, N. J....	33	39	55	61	75	62	84
Atlantic county, N J.....	11	25	42	45	69	49	65
Sussex county, N. J.....	18	39	46	60	65	78	71
Chester county, Pa.....	19	44	52	63	64	67	81

OPPOSITE SEX CHOSEN — BOYS

	Ages						
	8	9	10	11	12	13	14
London, England.....	...	...	...	...	...	...	...
Springfield, Mass.....	13%	11%	11%	2%	2%	1%	1%
Johnstown, Pa.....	8	5	6	7	0	1	0
Trenton, N. J.....	4	13	7	3	5	5	4
Chester, Pa.....	20	12	6	5	2	3	4
Lancaster, Pa.....	12	8	6	10	6	4	0
Hudson county, N. J....	3	8	2	0	3	1	0
Atlantic county, N. J....	21	16	0	12	11	5	0
Sussex county, N. J.....	8	9	7	4	1	1	2
Chester county, Pa.....	12	4	4	5	3	1	0

OPPOSITE SEX CHOSEN — GIRLS

	Ages						
	8	9	10	11	12	13	14
London, England	13%	10%	16%	17%	12%	14%	...
Springfield, Mass.	16	23	34	49	50	48	44%
Johnstown, Pa.	28	36	50	35	62	51	56
Trenton, N. J.	39	45	37	44	42	45	46
Chester, Pa.	28	46	52	44	68	56	52
Lancaster, Pa.	20	28	29	43	47	69	60
Hudson county, N. J.	24	41	43	54	56	51	72
Atlantic county, N. J.	33	48	38	28	84	48	42
Sussex county, N. J.	20	37	39	50	51	55	49
Chester county, Pa.	16	37	41	51	51	55	57

Even a cursory examination of these tables shows that acquaintance ideals are strong with the little children, and that in the ten districts examined they die out with pretty steady regularity as the children grow older. For these acquaintance ideals the children gradually substitute ideals drawn from public life. In the last tables we see that few boys choose women as their ideals at any age; many girls, however, choose male ideals at eight, and they choose them increasingly until they are twelve or thirteen, when they tend to return to women ideals. Such uniformity of development, running thru such large groups of children, from so many localities, must have a foundation in the nature of children themselves, or else it must be deeply bound up with the fundamental beliefs and practices of our civilization.

If critics retort that we always knew this fact, that of course children must begin to admire those whom they know, and then go out to those whom they have become acquainted with thru books or hearsay, the reply follows that children of eight have heard of more people than they have known personally, and that if we have known their law of development we have not recognized it in our teaching. Biographical work in schools is still as foreign to the child's real world as geography once was.

But the different rapidity with which the lines of growth develop is as striking as the general agreement in tendencies. Look, for instance, at the difference between London, England, and Lancaster, Pa.; and yet the differences are themselves always consistent and significant. If in any community many of the boys choose acquaintance ideals, the same holds true of the girls; if many eight-year-old children in a city choose public characters, a corresponding proportion of the ten-year-old children for that place do the same. In such studies we are really dealing with the general social intelligence of the community — that subtle thing which it is the aim of all forms of education to mold, and which at the same time largely determines the education which is possible for the locality.

Along with the general laws established by the massing of such collections of data, there is revealed the peculiar qualities of each community represented. Local feeling is, however, so sensitive in America that at present it seems almost impossible to discuss the qualities of particular localities. Still there can be no doubt that the lines of percentages placed after the cities and counties in these tables are very fair exponents of the educational conditions in the several places. Springfield, Mass., certainly represents the soundest growth.

But such quantitative studies will not only help us to determine general laws of physical and moral growth, and to diagnose educational conditions of particular communities, but they will also throw a flood of light upon many social and political problems. For instance, there is no other country in the world that furnishes such opportunities as our own for studying the children of different nationalities. Our study recently made on children in New York kindergartens shows how widely the children from southern Europe differ from those coming from the north.

We have also in our midst nine million colored people whose children are to share with ours in determining the destiny of our country. We talk a great deal about the problem of the colored people; we spend millions in educating them, and yet we have made virtually no studies at all to determine what pecularities are possessed by negro children. When we want to master a force in the material world we ask what it is, what it needs, and what it can do—then it serves us. Is it not time for us to ask our colored fellow-citizens, our Indian wards, and our new-bought Filipinos what they are and what they can do?

In conclusion, our studies on children have reached a comparative stage where we need the support of city, state, and national departments of education. The possibilities in such study are great, but the labor and expense make individual work difficult.

DISCUSSION

MISS LILLIE A. WILLIAMS, of the department of psychology, State Normal School, Trenton, N. J.—In this interesting paper Mr. Barnes undertakes to show us, first, that for a safe generalization it is necessary to take only two hundred papers. I notice that his ten one hundreds taken by chance alternate small and large. Can we count on chance always thus equalizing things? Suppose that the two hundred papers taken happened to be the third, with 23 per cent., and the tenth, with 22 per cent., we obtain as the generalization 22.5 per cent. But this is nearly eight points below that obtained by taking five hundred papers. The chances are more in favor of equalizing when we take the larger number. I incline to think that five hundred is the safer number.

Secondly, Mr. Barnes implies from this use of his tables that we have here a means of diagnosing the educational conditions of a place. Before discussing this point, let me say a word about the test used. The name "children's ideals" is misleading. An ideal is "a conception proposed by the mind for imitation, realization, or attainment; a standard or model of perfection or duty." Children do not have ideals; youths in mid or

late adolescence do. These ideals grow out of the daydreams of adolescence, which are a sort of mental play with models. Children's daydreams are not of this sort. Children do not mentally play with models. But they do experience wishes to be like this or that person, some merely fleeting, others recurring more or less frequently, and these are reached by Mr. Barnes' question.

The childish answers summed up in the tables we are about to examine were due to a great variety of causes. The mental content for the word "person" differs in different children. The younger ones, owing to their lack of power to deliberate, tend to take the first thing offered in the question — "person known," altho there is a choice between three. Natural interest varies with age, sex, nationality, race; in the same child it varies from day to day and from hour to hour. A child is naturally reticent about his deepest feelings, and so tends to name a surface fancy. The most recent interesting thing, whether in public affairs or in literature or history lessons at school, or any recent happening at school or at home, colors many answers. The frequent, too, is a powerful factor — what is oftenest praised at home comes up easiest; the character of the parents, their religious beliefs and practices, the occupation of the father, the home surroundings, all tell upon the results. The fact that the question is asked in school by the teacher must be allowed for.

A glance at causes named — and there are many more — shows that it is probable that the younger children will wish to resemble acquaintances. Mr. Barnes thinks that there is a normal rate at which this tendency will die out in properly developing children, and that, this norm being used as a standard of comparison, we can, by repeating this study in a town, know whether the children are developing normally, and so judge of the general social intelligence of that community. Let us turn to his tables, confining our observation to the figures for eleven-year-old girls, since for these only we have a generalization. We are first confronted by the astonishing fact that the Hudson county girls run nine points above the 30 per cent. which that very county gave us as the law. Here is London, England, 27 per cent., nearest the average, and Chester, Pa., 59 per cent, farthest from it. Mr. Barnes does not regard the existing state of things expressed by the 30 per cent. law as the norm. For this he selects Springfield, Mass. Inspecting the table, we find Hudson county, N. J., exactly the same, 39 per cent.; Trenton, N. J., very near with 37 per cent.; and Sussex county and Atlantic county, N. J., and Chester county, Pa., all within 5 per cent. These localities differ widely in important characteristics both in community life and in schools, yet so numerous are the factors entering into the result and so variable are they in amount that they equalize, and the result of the test is practically the same in all six. We have learned nothing. As to London at 27 per cent., I fancy that, instead of being as troubled over the fact as she would be over the discovery of a contaminated water supply, she will remind us that there Queen Victoria, a public character, brought down the percentage for the acquaintance wish; and perhaps Chester, Pa., will find a reason equally reassuring for her very high percentage.

An analysis of the results in these tables has led me to the query: Is not this question too complex to be a fruitful one for study of the sort which the paper aims to further? I agree with Mr. Barnes that the definitive studies we need are laborious and expensive, and that for their successful prosecution we increasingly need the support of the city, state, and national departments of pedagogical investigation. But I think that, whatever may have been the indifference of such departments in the past, the idea of statistical study is now so in the air that the future will find them ready to co-operate, if they are convinced that the questions to be investigated so laboriously and expensively are really fruitful. To make a mistake here is to imperil that cause which we desire to promote.

PROFESSOR BARNES, in closing the discussion, admitted the force of Miss Williams' criticism, but pointed out that it concerned itself with an analysis of a particular period or section. The variations at any one point were not denied. Still he claimed that the

general direction is so emphatic as to reveal itself plainly independent of any individual peculiarity. The particular instance selected by Miss Williams he noted was favorable to her contention. Others would not be so favorable.

Miss Williams' claim that we do not get at the real ideals of children he admitted to be true. The answers presented do not refer to ideals in the completed sense. No child was ever so transparent as to reveal his whole inner ideal. This is but a study of what we can get from children in school.

THE TEACHER'S PRACTICAL APPLICATION OF THE RESULTS OF CHILD STUDY

F. E. SPAULDING, SUPERINTENDENT OF SCHOOLS, PASSAIC, N. J.

Picture to yourselves, each one, and hold vividly before your mental vision, a teacher in the presence of a class of forty children. For the sake of greater definiteness, let that teacher be yourself; let the class be the last one under your instruction; let the scene be your own schoolroom, and the time the opening of the school year just closed. What practical application can you make of the results of child study?

* * * * * * * * * *

You are thoroly familiar with Burk's masterly study of the laws of development from fundamental to accessory; you have heard and read Dr. Hall on adolescence, the contents of children's minds, the moral and religious training of the young, and many other subjects; you have tried to appreciate the phenomena, causes, effects, and dangers of fatigue, as set forth by Mosso, Kraepelin, Leuba, and Thorndike; Dr. Burnham has opened your eyes in amazement at the range, peculiarities, and differences in childish imaginations, and has quickened your sense of the importance of hygienic conditions; Bryan and Hancock have discovered and formulated for you some of the laws of development of motor ability and muscular control; you know all that Lukens, Barnes, and Burk have published concerning children's drawing; something of the development of power in the discrimination and naming of colors has been made known to you by Wolfe and Luckey; Johnson has shown you, both in theory and practice, the educational value of plays and games; the phenomena and laws of physical growth you know from the work of Bowditch, Fitz, and Smedley; Colegrove's study of the memory you have made your own; Daniels, Barnes, Starbuck, Leuba, and Ellis have helped you to a sympathetic insight into the religious and theological ideas and emotions of children and youth; Professor Barnes has also shown you the child's attitude toward punishment; you have studied children's language and vocabularies with Tracy, Greenwood, Lukens, and Miss Williams; you have read all the twenty-odd studies on children's ambitions and ideals, even to the last and best by Professor Chambers; the recapitulation theory and nascent stages of development are perfectly familiar; you know when

instincts characteristic of different periods of growth tend to manifest themselves and how they should be managed; you can name the books that will interest, or ought to interest, the average child from year to year; you know what percentage of defective eyes and ears you may confidently expect at different ages; in short, not one of the 2,054 good, poor, and doubtful contributions to our knowledge of the child and his education, as listed in Wilson's *Bibliography*, is unknown to you; you have absorbed and are well filled with the "results" of child study to date. What of all these are you going to apply to the pupils waiting, or rather growing, before you?

Is the little girl in the front seat of the first row in need of glasses, or of an operation for the removal of adenoid growths affecting her hearing; will she read *Alice in Wonderland* with absorbing interest; is the collecting mania just breaking out in her; is she recapitulating the nomadic period; is she fired with ambition to become a milliner; is she terrified with theological concepts; does she belong to the motor type? You don't know. Where do each of your other forty children stand in respect to these and a score more of equally important conditions, to whose study by experts we have just alluded? You don't know. What, then, of all the accumulated results of child study can you apply in practice? Nothing, off-hand; absolutely nothing.

Are all the painstaking studies of various child-study investigators of no value to you as a teacher? Have you mastered them in vain? It all depends upon the use to which you try to put them. They may be made the most precious and practical part of your professional equipment; they may be turned into positive obstacles to your success, misleading your efforts; or they may prove but a burden of unusable knowledge to let slide as soon as possible.

We teachers have been unfortunate in some of the leaders to whom we have listened, most of them self-appointed, and rising not from our own ranks, but coming to us from other professions as missionaries to show us the way to the light of their own superior callings. A few years ago, when the child-study epidemic was at its height, the most noisy and enthusiastic young heralds of this movement—scientists, or would-be scientists, of one kind or another—graciously assured us that we knew nothing; that our whole teaching activity was based on habit, tradition, accident, and guesswork; that the science of education must be built up from the very foundation and in all its details thru a most minute and exhaustive study of all the phenomena and conditions with which the teacher has to deal. Some of these leaders were kind enough to furnish elaborate directions for observations, measurements, experiments, records, and tabulations; and some of us were foolish enough to undertake the work recommended us for the salvation of our profession. We were just beginning to consider thoughtfully the value to us as teachers of any possible results, in

comparison with the labor involved, when other high "authorities"—scientists, certainly not teachers, altho possibly teaching—kindly assured us that there was nothing for us in the whole child-study movement; they went even farther and declared that psychology was not for teachers. Such experiences and such assurances, together with a failure to realize largely and immediately on the time unwisely invested in the subject, were quite sufficient to chill the sudden gushing enthusiasm of a host of easy converts; until today the very name "child study" has become almost a reproach. But in reality, only the bubbling foam has burst and subsided; the underlying currents of the movement are stronger now than ever.

We are only just beginning to take our bearings, to determine whither we have been borne by this mighty movement, and to readjust our conceptions and our activities in accordance with the new conditions in which we find ourselves. We are becoming convinced that our problem is not primarily the teaching of so much arithmetic, reading, and spelling; much less is it the recording of endless measurements, the tabulation and comparison of extensive observations and experiments, with the purpose of making some scientific generalization. Our problems are living problems demanding living solutions. Each one is presented in the shape of a living child, who, we quickly find, is the focus of endless subordinate problems, whose conditions are changing from day to day. Our primary duty as teachers is to solve each of these child-problems, not with paper of text-books, not on paper of a thesis, but in the broader, richer, nobler, healthier lives which we can enable and inspire these children to live. In the performance of this duty we need text-books—the very best procurable; we need theses—every one that has a fruitful fact, principle, generalization, or suggestion, in any way related to child-life. Incidentally, but only incidentally, to our work as teachers we may make text-books and write theses.

Some of our superior scientific counselors have assured us of our incompetence to make observations and to draw valid conclusions, and have advised us to wait for the scientist to furnish us with reliable data and sound generalizations; and some of us have meekly accepted this assurance and have shown ourselves only too ready to follow this advice. It is a profound mistake. No results of child study can ever reach the children except thru us as teachers, and thru our observations and inferences. We deal with the concrete, the individual, the particular and unique child, and the special conditions of mind, body, and environment in which he is placed. What does this child need right now? What must we do to supply his need? Science has never answered these questions. Science never will, never can, answer them. These are the questions that we teachers are called upon to answer over and over again each day. On our answers we must immediately act. All valid results of child study are of invaluable assistance to us. They are not

to be applied directly and mechanically. They can simply serve to stimulate, guide, and check our observations, and to suggest suitable action when the conditions before us are determined.

There are, then, two kinds of child study, with two kinds of results, each supremely important, but each the special function of a different class of workers. The one aims at generalities which may be formulated on paper; truths which are generally valid anywhere. This may be called scientific child study, and belongs to the scientist. Teachers engaging in this line of work—and many can do so incidentally and with immense benefit to themselves and to science—do so, not as teachers, but as scientists. The other kind of child study begins and ends in the concrete. Facts concerning an individual child, here and today, are the data; other facts concerning the same child tomorrow, who has grown better and stronger under the teacher's influence, are the results, if the teacher's diagnosis and treatment have been successful. The former kind of child study—and this unfortunately seems to have been the only kind which most of the leaders of the movement, scientists, have had in mind even when urging its pursuit upon already overworked teachers—may fairly be regarded by the teacher as an "extra," an additional line of effort, perhaps related to, but not a necessary part of, her real duties. The latter kind of child study is evidently an integral, inseparable part of the teacher's work every day and every hour; we may go even farther and say that the teacher's real work consists in just this and nothing else, if only she is really and consistently educating boys and girls, and doing it with full intelligence.

Invaluable to the teacher as are the guidance and suggestion to be derived from the scientific generalizations of child study already well established, the limits of their applicability are soon reached. Most of the great, crude, fundamental facts in the life and environment of every child have never been seized and reduced to scientific formulæ. But these facts the teacher must perceive, comprehend, and act upon. Teachers have no need of psychology! The successful teacher must be a practicing psychologist *par excellence.* I am inclined to agree that the teacher can profit little from the intricate and too often jejune machine studies of the psychological laboratory, even less indeed than from some of the webs spun out of the introspective experience of the now scorned and ridiculed arm-chair metaphysician. I have yet to learn of the professed psychologist who has had the temerity to forsake text-books and lecture notes, lead his pupils out boldly among the great, throbbing, psychic facts of life, and there teach his lessons from the crude living materials themselves.

I can barely mention a very few of the innumerable applications of the results of child studies constantly made in the schools with which I am most familiar. Knowledge from personal observation that all those

refining influences which go to make up our concept of home are lacking in the living places of great numbers of children has led teachers to supply these deficiencies as best they could. Children have come to the schoolhouses regularly evenings, where they have met their teachers, who have played games with them, sung with them, read to them, and told them stories. Interested citizens have furnished them programs of music and recitations. Some have been delighted to learn knitting after school; others have remained then for their games and social intercourse. Even the teacher who is with her children only thru the regular school hours can do much to supply some influences and training which ordinarily ought to come from the home. It is not the children alone who are reached; but thru them and directly teachers are doing more for the present homes, for uplifting and Americanizing the adult foreign population of our city, than are all other agencies combined.

Medical inspectors watch over the health of the children. Eyes are tested—not primarily to report the percentage of defect, but to see that each suffering eye, if possible, is remedied. It is the teacher who advises and persuades the parent, and sometimes secures the means to help the suffering child. The child's food and drink can be determined to some extent by the instructions of the regular teacher; more by those of the cooking teacher. Parents have been instructed and influenced in matters of nutrition by talks from someone who inspired confidence. Good physical development is a part of the curriculum, and is under the direction of a specialist who plans suitable class and often individual exercises. Teachers visit parents in their homes, especially in the poorer parts of the city. Many parents' meetings are held. This contact of parents and teachers results, not only in increased mutual respect and sympathy, but in much knowledge of the children, and especially of their home environment, occupations, habits, etc. All of this knowledge is turned to practical account.

The curriculum has been arranged not without constant reference to the most important results of child study. And in carrying out this curriculum innumerable studies are made in connection with all the subjects of instruction, involving the child's capacity, interest, etc., and determining, not only the best mode of procedure on the part of the teacher, but often important modifications of the subject to be presented.

While the pursuit of child study was begun years ago voluntarily by such of our teachers as recognized its possibilities, and while it is still nominally optional with each teacher, it is practically the basis of our school system and strongly pervades the spirit of the work thruout. Altho it seems best to encourage each teacher to devote particular attention to those phases of the lives of her children and of their environment which appeal to her as most important, or most interesting, teachers' efforts are not lacking in system or in co-operation. An extensive suggestive

outline of practical possibilities is in the hands of each teacher. Several meetings are held each year especially devoted to reports and discussions of practical work being done. The important facts of the educational history of each child, as learned by that child's teachers as he advances from grade to grade, is briefly recorded and accompanies the child in available form thruout his school career.

We go more than half-way to meet the teacher's frequent and, on the whole, reasonable demand that she be required to do nothing which is not practical, by insisting that she confine herself, so far as child study is concerned, rigidly to such things as she can see are of immediate use to her and to her present pupils. While following this rule of practicality, we have never yet known a teacher to want for something to do.

We have at last raised our eyes from the pages of the text-book and are now just beginning to see and recognize real educational facts and processes wherever they are. We are already convinced that the most real history of every individual from birth to the grave, of every nation and of every people thruout their existence, is a history of their education. We are just beginning to "take ourselves into our own hands," to use the late Dr. Davidson's expression, and consciously to shape to some extent the course of our future evolution. This divine ambition we can hope to realize only thru constant study, in its setting, of each young life intrusted to us, and thru intelligent adaptation, in the light of such study, of means suitable to effect the desired end.

DISCUSSION

G. E. JOHNSON, dean of the Lower School, University School, Cleveland, O.—It has been a pleasure to me to listen to Dr. Spaulding's paper. He has admirably and encouragingly presented the status of the child-study movement from its practical side. I agree with him that in the less tangible but broader results of child study lies the best that the movement has for us now or will have for us in the future. Still, I can but feel that his presentation of the immediate practical results of child study is too modest. He asks us what of all the accumulated results of child study we can apply in the schoolroom, and answers for us in these words: "Nothing, off-hand; absolutely nothing."

Now, I feel sure that the accumulated results of child study have even an "off-hand" value. Suppose the "little girl in the front seat of the first row" has just entered school at the age of five. You have read Warner, and you can tell at a glance whether she is a very nervous or a very lymphatic child, and you plan accordingly. Perhaps she has noticeable abnormal nerve signs, as twitching of face muscles or of fingers, and you will be very careful as to the kind of work and confinement you require of her that day. Perhaps you notice that she is poorly nourished, and even have reason to think that she did not have the breakfast she needs for her morning's work; and somehow the apple or the graham crackers you brought in your bag find their way to her hands at recess, and you make a mental note to look into her case later. The time comes for writing. You find paper with fine guide lines provided by your school committee. You have read Burk and Hancock, and you send the little tots to the blackboard or find them other paper. This little girl in the front row perhaps has learned to write, but she writes very poorly.

You watch her. You have read Krohn. You wonder if her eyes have anything to do with it. A tactful note or a kindly call results in expert advice, and the little girl comes to school with glasses shortly after, and in a few weeks she writes almost as well as the best.

I am not drawing entirely on my imagination in these cases. A little boy, apparently bright enough in most ways, could not learn to read. His teachers had not been interested in child study; but finally he was taken to an oculist. A peculiar defect of the eyes was found and remedied, and he showed his appreciation by doing four years' work in two. I know another boy, who could not make his promotion. A mere suggestion to his father resulted in glasses for the boy. He was placed in a special class for a year, then returned to his former classmates on equal footing. When the little girl writes her spelling lesson you are inclined to be annoyed because she makes a noise with her lips. My teacher used to come around with a whalebone and snap my lips because I persisted in forgetting that it was not nice to make a noise with them when I learned my lesson. But you know from Smith and Schiller, that speech movements greatly aid the memory of words in little children, if indeed they are not actually necessary in many cases.

Perhaps you have a boy in the first row, and he is a naughty boy. You have read Barnes, and he has helped you to a better understanding and sounder sense in the matter of punishments. You know that children are not so easily shocked as your own tender-hearted self by the administration of discipline, and proceeding accordingly, you win a boy and the admiration and respect of his classmates. I wish a certain member of this department might tell you how she won over a naughty kindergarten child. No one but a student of that child and other children ever would have thought to do it just that way. She applied child study, off-hand, and the little chap was good, and happy, too, ever after.

You would not be half as apt to think that the dull boy in the back seat might he hard of hearing if you had not read Sexton and Chrisman; but you have, and you bring him at once to a seat nearer you to watch the effect. A little girl seemed to have a perpetual cold and to hear with difficulty; one glance was enough to give suspicion of adenoids. A call on the parents resulted in her being taken to a surgeon. How can you have read Mosso, Kraepelin, Lukens, Thorndike, and Burnham, and not be quicker to perceive when fatigue sets in and to know, off-hand, the value of open windows and a merry game? You have studied about the play of children, and you know just what to do.

I examined not long ago a set of test papers in arithmetic. The pupils were fifth-grade boys. Only three or four boys got a good mark, and most of them failed. The examples were of uniform difficulty and length, the same principles being involved in all. If they had been marked on the first half of the paper, nearly all the boys would have passed, and most of them with good marks. Any teacher who had studied school hygiene and fatigue would have known off-hand what was the matter.

And thus I might go on, if time permitted, and from my own experience mention many other ways in which child study has had for me an off-hand practical value. But I have a suspicion that all this was included in what Dr. Spaulding meant by the second "kind of child study, which begins and ends in the concrete;" so that when we understand each other we wholly agree. It is sometimes said that child study has placed the child in our midst. It would be true to say also that child study has placed the teacher veritably and literally in the midst of children, to live both for them and with them. It is an apt quotation that Dr. Spaulding makes from Dr. Davidson, that we have begun to "take ourselves into our own hands." The instinct of preservation of offspring, found thru the whole scale of animal life, takes on a new significance in our endeavor to shape, from this generation on, our future evolution. And to do this we must know the past and its prophecy for the future; and very much of this history and this prophecy must be read in the nature and phenomena of childhood.

DR. IDA C. BENDER, supervisor of primary grades, Buffalo, N. Y.— If anyone came here doubting the importance or range of interests comprehended in the term "child study," or questioning the earnestness or high purpose with which it is being conducted, or the sterling character and fine attainments of child-study leaders, his questions and doubts have vanished before the splendid record of what has been accomplished, as given by Superintendent Spaulding.

It is to be hoped that no one teacher has attempted to cover all the vast field of which we have had a glimpse. If anyone has, it is small wonder that she stands helpless before the little girl in the front seat of the first row, and seems to find neither aid nor comfort in the conclusions of child study which vaguely float before her mind. "Seems," I say, because really she and every other teacher is the beneficiary of someone's study of children, whether or not the debt is consciously acknowledged or the aid recognized. Teachers who glow with pride at having repute as successful practical teachers may turn up their professional noses at what is termed child study; but they also owe more to this movement than can be exploited in this day's discussions, in spite of all mistakes made under cover of the name.

I instance the greater attention paid to sanitation and hygiene in schoolhouse construction and equipment; the more rational administration of the school itself, affecting both discipline and instruction; the more wholesome school atmosphere, using that term as would an art critic to describe the subtle influence which relates the parts of a picture, the one to the other. Involved in these statements are such vital matters as the more humane care of backward or defective children; the cultivation of taste, as a legitimate school aim; the provision for more effective avenues of expression and self-realization on the part of pupils, especially in field work, manual training, and play. Superintendent Spaulding has already called attention to this. Principal Johnson furnishes data to confirm these statements.

The gist of the whole matter lies in the meaning we read into the term "practical." The attitude in challenging child study to deliver up its results may be that of the quack doctor who, suspecting either scarlet fever or measles, flies to his manual and, because he does not find symptoms and remedies described with nickel-in-the-slot certainty, grumbles at the lack of practical teaching.

To some persons that alone is practical which calls for no exercise of judgment, thought, or will. Happily, the term "practical" may with truth be applied in a larger and better sense to any factor, influence, utterance, or act the ultimate of which is the readier, more effective solution of the problem in question. Has child study led teachers to feel more deeply that their real business is, as Superintendent Spaulding has already so well stated, to teach children — not studies, nor classes, nor averages, but individuals — everyone of whom has a given capacity to think, to achieve, to love, and to serve; powers to be exercised and strengthened and turned to good uses for self and society? Has any contribution of scientific child study made teachers more watchful of the physical well-being of pupils, readier to detect deviations from the normal, better able to deal with them; or rendered insight into mental processes keener, made them wiser in estimating the interdependence of bodily and mental states? Has any student thru his investigations caused teachers to become more sympathetic, open-minded, and tolerant in dealing with the conduct of children, or unfolded more truly the social and physical environment as agencies playing upon each child? If so, then rich results have crowned the work, altho it may not be catalogued under the head of child study primarily.

Why is the influence of child study in these directions so often denied? I have asked this question of hundreds of teachers — keen, fair-minded. The most frequent answer was that many investigators whose methods command respect fail to reach teachers thru a too obscure or too technical use of terms. Others do not win confidence because of the nature of their inquiries, which seem bizarre or trivial to the busy teacher, whose allotment of service, made up of hours of instruction, preparation of plans, correction of

manuscript, family, professional, church, and social duties, brings her dangerously near the limit of nervous exhaustion.

From this it appears that, however minute and refined the research may be, its results, be they imparted by word of mouth or printed page, must be stated in language simple and direct, with a style which has power to stir a feeling of lively interest.

Time is wanting to speak fully about the teacher as a scientific investigator. To my mind, the two functions are antagonistic. Unquestionably co-operation may be established between the two classes of workers described by Superintendent Spaulding, but the successful method of the one cannot be the successful method of the other. If this is recognized at full worth, there will be fewer skeptics when the balance is established between the effort and the result of child study in the grand scheme of teaching the children of the greatest nation of the world to know and realize themselves, and to find their true place in the social whole.

HEALTH AND GROWTH OF SCHOOL CHILDREN

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The topics of health and growth are very properly correlated, since growth is dependent upon normal physiological function.

I. HOW ESTIMATED

Under certain restrictions, the measure of the growth will exhibit clearly the health and general organic condition. Measure, then, this growth, compare it with known standards, and ascertain from this point of view whether the function is normal.

Two necessities are immediately established: first, to ascertain what is normal periodic increase of growth: secondly, to find a practicable method of comparing the individual child with this known standard. The first necessity has been met to some degree by various investigations of the laws of growth both by the "generalizing" and the "individualizing" methods, notably those of Drs. Bowdich, Boas, Beyer, and Porter, in the United States; by Galton and Roberts, in England; and by many recent investigations in Scotland, Germany, Bulgaria, Bohemia, Denmark, and Russia.

By the earlier of these investigations, standards of annual increase in height and weight for each age and sex have been closely estimated. These and later results are well summed up by Frederick Burk in his "Growth of Children in Height and Weight."[1] To Dr. Franz Boas' labor in the correlation of data from Boston, St. Louis, Milwaukee, Toronto, Worcester, and Oakland, Cal.,[2] we owe the first noteworthy effort to establish standards of height and weight for each age and sex for the United States and Canada. It is very evident also from his work that what we

[1] *American Journal of Psychology*, April, 1898.

[2] *Report of the Committee of Education*, 1896-97.

have been pleased to call difference in type between various sections of the country is very slight—is insignificant when placed alongside of the normal variability of children of the same age, and in many cases scarcely greater than the average error in observation.

In Nebraska normal variability in weight of boys increases with age from five to fifteen years, with the exception of ages seven and eight. During these years the normal variability is lower. The occasion of the fluctuation appears to be connected with the second dentition.

The absolute annual increase in height and weight is less regular. The general statement may be made, however, that annual increase of growth in weight tends to increase with years. There is a retardation of rate of growth and weight in the seventh year, which begins to be overcome in the eighth year. There is also apparently a prepubertal retardation in rate of growth during the tenth year, followed by a wave of pubertal acceleration of growth. A similar retardation of growth in height occurs in the eighth and tenth years respectively. These transition periods appear to be resting periods preparatory for the great physiological changes which are to follow. As has been pointed out already by others, growth appears to take place in waves.

The 25 per cent. boy in weight or height increases less rapidly year by year than the 50 per cent. boy, and the 50 per cent. boy less rapidly than the 75 per cent. boy. This cannot be otherwise when the normal variability increases regularly with age.

Normal (mean) variability in height increases with age. The limit of mean variability is somewhat less for Nebraska than for the United States. This is true of all ages in some measure. This smaller variability would naturally be true for any one section, since mean variability depends upon the number of individuals and upon the local variation in the mean height.

It is not enough, however, to know the annual increment of growth for each age, or even for each height of each age. The recent research by Malling-Hansen has demonstrated that there are both seasonable and diurnal fluctations in height and weight. In two recent monographs, published in the *Physical Education Review*, Dr. T. A. Storey has pointed out also diurnal variations in height, weight, strength, and muscular contraction. These facts have an important bearing upon physical examination. They establish the importance of making the second examination of the same individual at about the same time of day.

The value of the knowledge of seasonable variations in growth is twofold. It establishes the necessity for taking successive individual examinations at the same time of the year. It demonstrates also a great difference in the rate of growth at different times of the year.

It is especially important that the relation of school life to these seasonable variations be established. Wretlind, in Denmark, found that

children increased more in weight during the summer vacation, July to September, than during the school year. From this he concluded that the conditions involved in school life are unfavorable to growth. Evidently seasonal rhythms of growth may be somewhat affected by the local hygienic conditions of school life. It is important to determine how much is due to natural law and how much to abnormal and unwholesome environment. Here is an important question which demands investigation, and a question which demands simply time, care, and a large body of accurate data for solution.

To careful periodic measurements we must look for an accurate knowledge of normal seasonal rhythms of growth, of variations in these seasonal rhythms of growth which are to be attributed to specific diseases, to unhygienic conditions of school life, and to unhygienic conditions in the home; and for a knowledge of the acceleration or retardation of growth peculiar to each nascent period.

To such periodic measurements the physical director must look for guidance in adapting various types of exercise to individuals and to groups, and for the estimation of the comparative beneficial effects resulting from these various forms of exercise.

Such measurements must furnish education and stimulus to teacher, pupil, and parent for the care of health and the development of organic vigor. Such care can be induced in children and parents by the presentation in concrete form of a statement of the actual status of growth. This is best accomplished by a graphical outline on an anthropometric table showing how they compare with children of the same age and type of development. An ordinary age-table shows the typical development for the child of mean height of a given age, and provides a standard to which he can be expected to conform. It does not, however, afford any such standard for the short or tall individual of that age. Only an age-height table, giving the type for each height of each age, will manifestly afford such a standard.

If Malling–Hansen's seasonable rhymes of growth in height are true for the United States, the best months for semiannual physical examinations of school children are October and May, since, when divided into halves at this point, the year in its two halves shows equal growth in height. These months are the most suitable also from the equality of weight of clothing in spring and fall during these two months. They are also the most convenient months for the introduction of a new item into the school program and for the organization of forces to push it, since the work of the term is all settled and the children are under good discipline.

We must look to periodic measurements for guidance in several important investigations of the health and growth of school children. The measurements and physical diagnosis employed must then have

definite value for estimating organic vigor. Of measurements the most important group is trunk dimensions; of strength tests perhaps lung capacity and shoulder retractors are most valuable; of psycho-physical tests those for the eyesight and hearing are most essential. The emphasis in physical diagnosis is difficult to determine. It depends largely upon the point of view of the observer. Posture, nutrition, and function of heart, lungs, and skin are all of importance.[1]

Summing up briefly my conclusions under the first section, "How Estimated":

1. For the immediate estimate of present health and organic function physical diagnosis is most to be emphasized. For the estimate of permanent or prevailing organic condition the measurement of growth is most to be emphasized.

2. Only careful periodic measurements will determine the normal seasonal rhythms of growth, the variations in these seasonal rhythms which are to be attributed to specific diseases, to unhygienic conditions of school life, and to unhygienic conditions of home life, and the acceleration or retardation of growth peculiar to each nascent period.

3. Such periodic measurements alone will provide proper guidance to the physical director for the adaptation of various types of exercise to individuals and to groups.

4. Anthropometric tables showing the type for each height of each age furnish education and stimulus to teacher, pupil, and parent, for the care of health and the development of organic vigor.

5. Our greatest need in this matter of estimate is to determine the relative value of measurements. Height, weight, trunk dimensions, and lung capacity have a definite value for estimating organic vigor.

II. HOW RETARDED

Health and growth of school children are retarded by causes so many and so complex that it is difficult to discriminate as to some items and to place the responsibility for them. It may be well to attempt a rough classification of these in outline form, in order to reach a better basis for discussion of removal of these causes.

Health and growth are retarded—

1. By infectious diseases — including ordinary children's epidemics, such as scarlet fever, cerebro-spinal meningitis, measles, diphtheria, conjunctiva, whooping cough, etc.; psychic epidemics, such as epilepsy, chorea St. Viti, masturbation, etc.; and germ diseases of a chronic character communicable thru sputum, clothing, and excretions, such as phthisis.

2. By organic defects easily removed by surgical operation or treatment, such as adenoid growths, defective eyesight, hearing, etc.

3. By constitutional diseases due to heredity and early environment, such as rickets, anæmia, tuberculosis, scrofula, mental alienation, etc.

These various diseases spring from bad heredity, from lack of proper enforcement of quarantine regulations, from unhygienic conditions in the home, and from unhygienic conditions connected with school life.

[1] For a full discussion of vital measurements and anthropometric tables see HASTINGS' *Manual for Physical Measurements, Boys and Girls.*

The responsibility for bad heredity evidently belongs to parents, but the removal of so great a mass of self-perpetuating misery and crime belongs to state legislation. The state must ultimately protect itself from the propagation of chronic disease, industrial unproductiveness, pauperism, and crime by eligibility laws on marriage which shall require a thoro medical examination preliminary to the issue of marriage licenses. Such legislation has been submitted before two legislatures in the state of Michigan, and was finally approved June 15, 1899.[1] The state Medical Association and state board of health believe in prevention rather than cure.

The responsibility for the suppression of infectious diseases rests with our boards of health. Popular sentiment must push them up to the full exercise of their authority.

The unhygienic conditions in the home which have been most productive of unhealth and of retardation of growth are such common, simple things as defective food and drink, sleep, clothing, cleanliness, and sanitary plumbing. The removal of these unhygienic conditions will depend directly upon such agencies as lecture courses on health for parents, provided by school authorities free to the public, and indirectly but mainly upon the education of children in the principles of hygiene thru regular study in text-books.

The unhygienic conditions connected with school life naturally fall under the headings, buildings, equipment and care, and pedagogical method. Injury of health of children thru bad ventilation, heating, lighting, and plumbing of buildings is inexcusable. The remedy is executive, mechanical, and financial. Find an intelligent architect, build well, and pay for it.

The spinal curvature which arises from improperly adjusted desks; the myopia which has its origin in poor paper, long lines, small type, poor spacing, and poorly formed letters; the tubercular and other troubles which are aggravated by dust from slates, blackboards, and the floor of the schoolroom, are inexcusable. The remedy is again executive, mechanical, and financial. Buy the best equipment and supervise teachers closely in all preventive measures.

Pedagogical method is responsible for school hours, number of studies, length of lessons, length of recitations, rest periods, recesses, etc.; in brief, for all that makes for over-pressure and neural fatigue. Headaches, excessive neural fatigue, and all cerebro-spinal neuroses may be induced by over-pressure. From this failure in pedagogical method a great variety of diseases actually result, which exhibit the characteristic symptoms of lassitude, hyperesthesia, habitual inattention, lack of concentration, stupidity. The final results are, on the intellectual side, chronic dullness and low standing in school grades; on the physical,

[1] The same being compiler's section No. 8,593 of the compiled laws of 1897.

poor development and low vitality. What is responsible? Our ignorance of brain hygiene and our false perspective for mental training. Education should include the whole man.

III. HOW INCREASED

Negatively, health and growth may be increased by the prevention of the abuses noted in the foregoing section; by legislation upon eligibility for marriage; by quarantine of infectious diseases; by insisting upon the removal of organic defects, like adenoid growths, deafness, defective eyesight; by insisting upon the provision of expert medical treatment for constitutional diseases before certain children shall be retained in school; by the removal of the unhygienic conditions of the home; by the removal of the unhygienic conditions connected with school buildings, equipment, and pedagogical method.

Positively, and principally, health and normal growth must be secured by the provision of proper food, rest periods, recesses, vacations, excursions, baths, and exercise. Warm milk with lunches in the winter and warm lunches in general have been found wholesome in various cities. Rest periods of ten minutes between recitations are helpful in lessening fatigue; also, and more important, a long rest period after lunch. Recesses should be spent in recreation, and not in formal gymnastics; in the open air, if possible. Neural fatigue is materially lessened by spontaneous activities, most effectively by free play. Roomy, well-equipped playgrounds are a prime essential. Vacations should be more evenly distributed over the year, shortening the summer vacation as much as the climate will allow, and lengthening the other short vacations, and perhaps increasing the number to three or four. A change to mountain or sea air, general travel, or farm life, affords the most advantageous use of the summer vacation. The acquisition of a new fund of vitality thru such means is now more or less practicable for even the poorest. In Germany this matter is being taken up by municipal authorities; here we are handling it thru charitable organizations by "fresh-air funds," and the like. The introduction of a regular system of baths in several cities has so fully demonstrated the wisdom of enforced cleanliness that no defense is needed. Under exercises must be included corrective exercise for the removal of postural deformities, hygienic body-building, games and outdoor sports upon the playground and elsewhere. The encouragement and supervision of all wholesome forms of physical activity are the principal care of the physical director, and for these at least he may be held responsible.

But how shall all these ends be assured? By education of children and parents, as already stated; but primarily by education of teachers, by requiring them to be familiar with the best research on growth and development, with some good books on personal hygiene, or at least with one or two short manuals on school hygiene, such as Shaw's and Kotel-

mann's. How shall their knowledge of facts be made practical? By placing some vital thermometer in the hands of the teacher which shall enable her to observe the rise and fall of energy in the lives before her day by day; by educating her thru physical examination to observe at least gross results.

How shall we insure greater progress in child study? How remove from scientific circles the lingering stigma of inadequate observation, of dealing in glittering generalities for popular gratification, of spreading ourselves out thin over the whole field of knowledge? Not by giving up the attempt to focus the best thought of men upon the plastic period of man's existence, upon the period which holds the hope of the higher evolution of the race, but by resolving the field of child study into its natural sub-divisions, such as personal hygiene, public hygiene, school hygiene, brain hygiene, genetic psychology, anthropometry; by the systematic apportioning of problems and the proper division of energy in our investigations; by the creation of definite and permanent subsections of this Department of Child Study; by forcing upon them the responsibility for digging up new facts for the annual program.

DISCUSSION

GEORGE WELLS FITZ, M.D., Boston.—Child study from the health standpoint has from its nature three essential functions: First, the training of teachers to recognize the health conditions of children; from this training there must result for the teacher the formation of such concepts of normal conditions as shall enable him to detect the abnormal; secondly, the collection of observations which, as Dr. Hastings has so clearly shown, owe their value in establishing normals to statistical treatment; thirdly, the resulting effective protection of the child from the bad effects of predisposition to physical and mental disabilities, of faulty development, and of beginning illness.

It is trite, and yet it would seem to be necessary to repeat that the test which should be applied to all child study is the ultimate direct or indirect benefit to the child. Toward establishing the details of a systematic and comprehensive psycho-physical examination of children, and the value of the results to be derived from it, much has been accomplished by Hastings, Sargent, Christopher, and others; but the value is far more generally acknowledged than are the results actively sought.

That such should be the case, that school children should constantly come to physicians with marked anæmia of long standing, with habitual headaches, or with spinal curvature to which their teachers have paid no attention is, to my mind, little short of criminal.

Is it not time that the teacher's relation to his pupil be clearly defined, on a broader basis than mere responsibility for intellectual improvement? We must not forget that the teacher is, in a vast number of cases, the only intelligent person who comes regularly into contact with the child and who is free from personal bias as to his real condition. To the teacher, then, should be given the responsibility for the discovery of that which may not merely make the child dangerous to others, as is the case with contagious diseases, but which make the child dangerous to himself and to his future. We must come to realize that the school is for the whole child, and that the teacher who ignores home conditions, congenital defects, or acquired weakness of body should be held far more

strictly accountable for these oversights than for her failure to advance her pupil to the specified standard in arithmetic and reading.

Fortunately, the conditions on which this phase of child study is based are so tangible as to permit of far more definite and exact determination and statement than is the case in the ordinary school tests for promotion. No special medical training is required to recognize the presence of marked anæmia, weakness, lack of endurance, poor vision, habitual headaches, spinal curvature, round shoulders, flat chest, mouth-breathing, constipation, fever, and similar manifestations of abnormal condition. Hence we need not wait with folded hands for the time when there shall be adequate medical inspection in the schools, but may use the present school organization in this work.

Is it not possible to have a printed card or folder blank started for each child when he enters school, in which the important items of his physical and mental history may be entered as it passes with him from grade to grade and school to school, so that each teacher will be prepared to understand him and to give sympathetic help at each step of his development? The necessity for making and recording a set of measurements, tests, and observations for each child at the beginning of the year or half-year would make it virtually impossible for the teacher to neglect any essential of a child's chronic condition, and must serve to keep the teacher's attention trained and alert for the recognition of the slight evidences which show abnormal tendencies in a plastic, curable state.

The careful study of the health of the child would undoubtedly lead the teacher to a more conscientious consideration of the question in how far school conditions are responsible for the poor health of his children. It is unfortunately true that many teachers are careless in permitting poisoning by bad air, over-fatigue by prolonged mental application and eye strain without adequate recess or relaxing periods, and bodily deformity thru the fixation of bad posture by growth. It is also true that in the majority of cases, and even under very unfavorable conditions, an intelligent use of the means at the disposal of the teacher may entirely prevent these results.

It seems to me that what we need most at the present time is a clear definition of the relation of the teacher to the health oversight of the children under his charge, and that we may hope that such a definition of the teacher's duty will result, on the part of the parents, in a full recognition of its necessity and value; on the part of the teacher, in such careful preparation for this phase of his work that, with the co-operation of physicians, the physical defects of school children may be earlier recognized and much more effectively remedied.

I congratulate Dr. Hastings upon the work which he has done to provide teachers with standards for judging the growth and development of their children, and our president for giving due prominence in his program to the study of the health and physical condition of children.

Dr. Helen C. Putnam, chairman of the Committee on Teaching Hygiene in Public Schools of the American Academy of Medicine, Providence, R. I.—I am particuiarly glad that Professor Hastings specifies methods both for solving certain problems and for their practical application to improve school health—the physical basis of many child-study problems. On all sides we hear about faults in school hygiene. It is fully time we attempted their remedies. With many proposed by him we cordially agree. He has, however, suggested one that experience demonstrates to be useless. I wish to discuss this suggestion and a substitute therefor, hoping that this section, with Professor Hastings as one of its leaders, will advocate this advance step.

He says: "How shall all this be assured? Primarily by educating the teacher, by requiring her to be familiar with the best research on growth and development, with some good books on personal hygiene; by educating her thru physical examination to observe gross results."

Our schools have demonstrated with practical unanimity for over a century that

hygiene taught by the general teacher is an entire failure. Commissioner Harris believes the schools would be as well off without any teaching of hygiene as with the present teaching. The Committee of Ten gave it nine lines in its report of fifty-five pages; the Committee of Fifteen omitted it wholly — these the two greatest committees of investigation that we have appointed.

Physicians are even more dissatisfied with this narrow, crude instruction than are scientists with the teaching of their specialties.

Why, then, should we persist in an unsatisfactory method, when a better way has for years been demonstrated in the public schools of Europe, where the teachers are usually men, and in our private, technical, and vacation schools? President Eliot says: "It was in 1766 that Harvard College abandoned the method of teaching all subjects to one class by one man. The American public-school system bids fair to be nearly 150 years behind Harvard College in adopting the departmental method, a method that develops in both teachers and pupils a growing interest in their work and increases greatly the personal influence of teachers." In New York last winter Superintendent William H. Maxwell introduced departmental teaching for all grades above the sixth. I know of no step more progressive since the establishment of normal schools. It will draw more men into the profession. Specialization characterizes man's work and largely accounts for its better quality. No college man or woman wishes to dissipate energy, lessen standards of good accomplished, and cease growing in some favorite line, as miscellaneous teaching compels. I earnestly hope all women will promptly advocate this advance. Even if they cannot see how they themselves can specialize, they may help raise the standing of their profession and of their sex in the profession, as well as benefit society.

Hygiene, whether personal, domestic, or public, can be made interesting even to children when taught by an expert. It is literally indispensable in common-school education.

Should railroad corporations be responsible for preventable accidents, and no one responsible for preventable disease? The victim of tuberculosis has lost as much because of some other victim who casts the seeds of that disease abroad in public places, as has the man who had both legs amputated because of a careless switch tender. An appalling responsibility connects the authorities with that typhoid case whose excretions poisoned the water of Ithaca and blighted fifty-eight homes forever, in that, with amplest warnings, they neglected to provide against such destruction of precious life. We may add, also, that a very grave responsibility is upon those who educate children as future voters and caretakers in the elements of community, family, and personal health.

This responsibility can never be even passably met by one who must give equal attention to six established subjects; to school discipline, playground supervision, gymnastics, music, drawing, nature study, and science-teaching, child study and its applications.

The head of the department of hygiene should be a physician with a liberal education, who has had some years of private practice, thus learning of the homes, their conditions, influences, temptations. Most teachers know these but slightly, often at third hand, more often not at all. He should have made special study of pedagogics, psychology, child study, gymnastics (and anthropometry), games, school architecture, ventilating, plumbing. He should be an expert — a specialist. His staff should be college women and men who took scientific electives and normal courses. His assistants in gymnastics and games and in the study of foods should have had courses in special schools.

Medical inspectors should be chosen and held to a certain standard of work by this expert. The prevailing impression in Germany is that general practitioners are not prepared for this work. The criticisms may be classed as follows: lack of tact in disturbing school routine, lack of neatness, the use of tobacco and of intoxicants, technical incapacity; and lack of system, resulting in irregular and unreliable reports. Expert supervision can remedy all this.

Such an organization of special instructors will secure co-operation from the whole force of teachers, who will depend much less on text-books, and much more upon practice and demonstration, to impress the principles of hygiene upon the future life-habits of their pupils.

SCHOOL HYGIENE IN ITS BEARING ON CHILD-LIFE

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The attention given to school hygiene at the present time is, on the whole, desultory and spasmodic. This department of school work has no well-defined and established place as yet in educational theory and practice. The best developed phase of this field is the medical inspection of schools for the control and prevention of infectious and contagious diseases. This is important for school and community, and is conducted measurably well in a number of our cities. It is primarily, however, a public health measure and represents only an external phase of school hygiene.

This subject, particularly in some of its more vital aspects, will not have the recognition in practical education which it deserves so long as the schooling process is so abstractly cultural, on the one side, and so concretely utilitarian, on the other; so long as the conscious end of education is so partial and temporary as compared with its responsibility for the entire life of the individual and the welfare of human society.

Not until education has the advantage of a larger vision, a keener prescience, and is inspired to a wiser practice by an ethical principle and an altruism which will subordinate the achievements of childhood to the realization of mature power, and, even more, subordinate the entire career of the individual, so far as may be necessary, to the present and future welfare of society and the race, will some of the less conventional, but more fundamental, values in education receive adequate recognition and care; and among these the various interests belonging to the field of school hygiene.

The argument for this attention to the various aspects of health begins in the very nature of life and in the manner of its evolution. The biologist defines life as the adjustment of an organism to its environment. In the organic world, for the most part, this is an instinctive, rather unconscious and impersonal process. Human life in civilization, on the other hand, involves the conscious and intelligent understanding of both organism and environment. Successful human living requires the rational adjustment of the organism to the changing, complex, and increasingly difficult environment, and the training and development of the child up to maturity in order that he may assume his responsible part in the intricate process.

Public education is the process by which the state prepares the individual for his immediate and larger life in society. The state, as the responsible agent of society, should, thru public education, stimulate the home as the most fundamental and important human institution, to do all that it can and will for the training of child-life. Much of the important work of education will be expressed directly and indirectly in the home. But, after all, it is the function and duty of public education to do all for the preparation of the child for society and complete citizenship, which cannot be, or is not, done in the home or elsewhere, even if this preparation involves provision for physical and health needs.

The first care of education should be the preservation and improvement of health. School hygiene in the past has been too largely concerned with the child's environment and the external conditions affecting his health, such as the school building, its sanitary features, and the sources of infectious disease. These factors should not be neglected, but the pupil with his own personal status and problems should be understood, and his adjustment to the environment of school and of his life outside should be more carefully considered. School hygiene should be responsible for all the phases of education directly related to health. These various interests—some already provided for in part, and many others as yet neglected—should be unified and co-ordinated as much as may be necessary for the effective attainment of health results and economic school administration. Special teachers or supervisors should be trained as health specialists and made responsible for the different phases of school hygiene.

With reference to the scope of this subject, the first factor is one directly related to the field of child study. This is the biologic examination of the child. This study and investigation of the physical and organic conditions and tendencies of the child should be repeated at intervals varying according to age and individual necessity. Dr. George Gould in discussing the value of such studies has called them "periodic biologic examinations." They should combine certain features of physical, anthropometric, and medical examinations, and something more. No one or all of these terms with their ordinary meanings explain the full purpose of such examinations. The examination should be conducted from the standpoint of education, in a uniform manner, and with a common purpose, so far as any school or locality is concerned. The inspection of pupils from day to day, for the detection of disease, may be carried on independently of the general examination, or, where more convenient, it may be a part of a combined system of health supervision. The technical inspection of the schools for the control of contagious disease, if carried out by a board of health, especially in a large city, will be in charge of physicians appointed by the board. This form of medical inspection, while of great importance, is always liable to perfunctory per-

formance, particularly as the city physicians have so many children to examine. Much may be gained where the school physician is appointed by the board of education and extends his study of the pupils beyond the scope of contagious disease to the conditions and tendencies of so much moment from the view-point of modern education.

There is a growing conviction on the part of those who appreciate the conditions of childhood that such examinations are important and worth while. The laws of evolution operate in the human species as elsewhere. The fittest survive, and the unfit gradually disappear in any case. But without the intelligent care of health and life which is possible, there is inestimable human failure and economic loss that might be avoided. There is, perhaps, no more important development of wisdom and prudence than that which conserves the biologic human values, and most of all in childhood. It cannot be taken for granted that the organic condition of the child will be sound. Under our present conditions of life and education, it is possible in any case, and certain in a considerable number of cases, that normal growth and development will not proceed without individual care and adjustment; that there may be present, without special symptoms of disorder, physical defects of a more or less serious character; and that the only rational and adequate basis for the direction of the child at home or in school is the thoro knowledge of his physical status, so that existing conditions and tendencies may be recognized, important changes noted, and that it may be known that growth and development are proceeding satisfactorily, or, in case of abnormalities of any kind, that these may be corrected as soon as possible.

Dr. Hertel, in his well-known investigation of the health of pupils in the better-class schools of Copenhagen before 1885, found that of the boys 31.1 per cent. and of the girls 39.4 per cent. were sickly. Examinations of 40,000 school children by school physicians in the duchy of Saxe-Meiningen, Germany, in 1900, showed that 23 per cent. were myopic, 10 per cent. or more had spinal curvature, and 60 per cent. had bad teeth which needed attention.

Examinations of nearly 900 pupils in an American school during the past year showed that 34 per cent. had myopia; 12.9 per cent. had functional heart disorders; 5.6 per cent. had spinal curvature with some vertebral rotation; 31.2 per cent. more had asymmetry of spine, hips, or shoulders; 14.6 per cent. had adenoids or chronically enlarged tonsils. In over 10 per cent. of the cases letters were sent to parents recommending that medical attention be given to some physical condition.

These examinations should include the information about the child's health, habits, and tendencies furnished to the school by the home, the observation of the keen-visioned teacher, trained to note important signs, and the results of the study of the special examiner. More specifically, the examination should include some measurements, not too many, but

those which are worth while. There should be tests of sight, of hearing, and of the nervous and muscular systems. Further, there should be examinations of general form and symmetry of the body; of posture and mechanical adjustment; of spine and feet; of heart and lungs; of teeth; of throat and nasal passages, where, in younger children more particularly, enlarged tonsils and adenoid growths often injure health and interferes, perhaps seriously, with mental and bodily development. Beyond this, there should be judgment of nutrition and general vitality, and, finally, an estimation of temperament and other general characteristics difficult to define, but important to take into account. The observations and judgment of the child should be thoro and complete, and those of a wise and carefully trained examiner.

The information gained should be furnished to the home, and thru the home the attention of the family physician or medical specialist, and should be directed to conditions about which there may be question. There are, of course, technical medical examinations and tests which it is neither necessary nor desirable for the school examiner to undertake. This co-operation between school and home is of mutual advantage and of great importance in this, as in all other matters which concern the child's welfare. The teacher, again, should have all of this special information which will help to a more favorable adjustment of school work. This biologic knowledge is essential to any true or just estimation of the pupil's intellectual power or capacity, and to an understanding of personality and individual characteristics.

This examination, let it be repeated, must have a broad educational motive. It is the fundamental feature of school hygiene and should be the basis of all educa ion.

In the second place, school hygiene should test and judge the entire environment of the school, its adaptability to the pupil, and effect upon health. To be included, also, in this department of the subject are the hygiene of instruction; methods of study, of recitation, of school examinations; home study; length and arrangement of the school program; recesses; school lunches; alternation of activities in the schedule. All of these items in this passive and active school environment of the pupil should be subjected to careful study and judged partly and primarily with reference to health.

Health is not everything. It is not to be considered in itself as an exclusive end of living. It should not be the main or final goal of education. It is, however, an absolutely essential means to forms of human achievement of most worth. It is even more essential to the welfare of the future than of the present, if the race is to progress and not deteriorate.

The health of the adult under certain conditions may be justifiably sacrificed to other ends, but the claim is made with great confidence that

the health of the growing child may be sacrificed to nothing; that nothing may be allowed in education which injures or interferes with the pupil's health in any way whatever; nay more — that, with our present and larger social view of education, its first care and effort, as has been stated earlier, should be the preservation and improvement of health and organic power and efficiency, as the fundamental condition of individual and social well-being.

As Dean James E. Russell of Teachers College, New York, so well pointed out in his report two years ago:

> School life is a highly artificial product of modern civilization. It is today one of the most sedentary occupations in which workers are engaged, and its social significance is readily discoverable in the fact that approximately fifteen millions of children — more then one-fifth of our total population — are being influenced for good or ill by the school-room environment. Serious as are the evils of sedentary occupations in general, their disadvantages are especially emphasized in the case of growing children, who are often unduly crowded together in our public schools. Moreover, the urban tendencies of our population make it extremely difficult to secure to the young that which is essential to their physical well-being — namely, light and air and freedom of movement.

In the third place, it is the function of school hygiene, thru the instruction which is called physical training, to provide for those larger motor activities which should supplement the exercises and movements otherwise required by school work. These larger fundamental movements are necessary to counteract certain undesirable tendencies in posture and action of school life, and for the health and complete organic development of the pupil. The beneficial effect of this training upon the nervous system, upon mental and even moral qualities, may be as important and definite as that upon the body in general. In this scheme of physical education should be grouped and co-ordinated the more formal gymnastics and games, the simple corrective and relaxing exercises to be used between classes, and the free play of recess periods. It is desirable to correlate the gymnastics, as far as may be practicable, with the interests of regular school work, and to make them in any case more rational, practical, and serviceable in many ways than they have been in the past. It is not in place here to discuss the details of the technical work of physical training, but simply to state that this belongs to the larger field of school hygiene.

The biologic examinations which have been described will give most necessary and valuable information as a basis for the adaptation of exercise and the direction of the general physical education of the pupil.

Finally, school hygiene should provide for the instruction of the pupil in matters relating to health and hygiene. No knowledge is of more worth than that which bears upon the immediate problems of life. Human living must always rest upon a biologic basis. The human being knows less instinctively how to live as civilization advances. The study of the science and art of health must play an increasingly important part

in the education of the future. In a recent popular article on health, Dr. T. Mitchell Prudden, one of our best authorities on general hygiene, emphasizes the importance of this factor in education in the following words:

> One of the most urgent necessities of the coming years is education in personal hygiene. This knowledge of the ways of healthful living must be systematically and intelligently imparted in the schools, and it should not be perverted, as in many instances it is today, to serve the worthy but narrow aims of an anti-alcohol or anti-tobacco crusade.

And he adds in another place: "Honest hygiene must be taught in schools."

All of the health instruction should be under the supervision of a special teacher, that there may be rational progression in matter and method thru the grades, the working out and suggestion of correlations of other topics with hygiene which seems practicable, and the effective teaching of the subject where it is given as a distinct course.

In conclusion: If the work of school hygiene is to be successfully accomplished, there must be:

1. An educational philosophy which recognizes health, not as an end in education or life, but as an essential means to human achievement, immediate and remote; a philosophy, again, which provides practically for the preservation and improvement of health and the development of those fundamental organic qualities which are so essential to the success of the individual, and even more to the integrity of the race and the permanent welfare of society; and, finally, a philosophy which makes place and means for the instruction of the young with reference to life on its biologic side so that they may intelligently and successfully meet the problems of living as they present themselves.

2. The different phases of this health side of education may best be accomplished by uniting the fields of school hygiene and physical education under one department of school effort for the purpose of supervision and administration. The position of teacher or director of physical training is already recognized and provided for in many schools. The efforts of this special teacher are, or should be, devoted primarily to the interests of health. This field may be advantageously enlarged and called "physical education and school hygiene." Professional schools and courses of instruction are needed for the training of these health specialists. The special teacher or supervisor must be trained very thoroly and broadly to meet effectively the demands of this larger, more dignified, and richer field of education. These specialists in hygiene should be prepared to look after the various interests of this field, to supervise that part of the work which falls naturally to the grade teacher or to others, and to perform well, from every point of view, the work which belongs logically to the health specialist.

3. The special teacher of hygiene, however, can alone do very little of this large and varied work. Every teacher, supervisor, principal, and superintendent in the school should have a keen and intelligent appreciation of health values and interests, and of the measures necessary to preserve and foster them. If our general teachers and educators are to have this understanding of hygiene, which is essential to their necessary and effective co-operation in the united effort which is needed, there must be, beyond the general instruction in hygiene in school and college, thoro courses in physical education and school hygiene in all the normal and training schools and colleges for teachers. Such courses are being advocated and introduced into some of the normal schools of Germany and other European countries, and are finding place already in a few institutions in the United States.

DISCUSSION

HOMER W. ZIRKLE, principal of the Elmwood School, Denver, Colo. — Medical inspection of schools has been instituted in many of the cities of Germany, France, and America. Wherever it has been tried, results show conclusively its value. A large percentage of all school children are defective in sight, hearing, or some other part of the physical organism. A very large percentage of these defectives are unaware of any bodily ailment. Medical inspection in America seems to have been instituted chiefly for preventing the spread of contagious diseases; but it may have a far wider usefulness.

The relation between the physiological and the psychical functions is becoming more and more recognized, as is shown by the attention now given to physical culture and the health of the body. It is an established fact that physical exercise produces mental fatigue — i. e., fatigues the nerve centers — and that mental exertion produces muscular fatigue. Thus the mental and the physical are mutually interdependent.

Since education is concerned with growth of mind, and growth of mind depends on growth of brain, and growth of brain on growth of body, it is all-important to determine the laws which regulate physical development and to know in what degree body growth may be taken as an index of cerebral development. From anthropometrical measurements and comparisons of different classes of society, made in America, England, and other countries, it is clearly shown that a man's stature is somewhat modified by environment, and that mental development depends on the normal development of the body. The work required of the pupil of the average strength cannot be done without injury by the pupil of less than the average strength. It should be the duty of the school physician to determine the cause of the weakness, whether it be from the lack of nutrition, bad sanitation, sickness, or what not; and to suggest the remedy. The medical inspector should always be psychologist as well as physician, that he may assist the teacher in determining how much mental exertion should be required of each age or period of development, that evil may not result from overexertion at critical periods. He should assist the teachers in classifying the pupils with respect to their physical abilities, placing those together who are physically able to do without injury the full amount of work of their age, and making another division for those whose physical development makes it probable that they cannot do the work without injury, and who need special care and watchfulness. In periods of rapid growth, care must be had not to irritate unduly or to depress by inappropriate tasks the nerve centers so as to produce various forms of neurotic diseases. The protection of the growing brain from misdirected work is a difficult task and an appropriate undertaking for medical skill.

The system of medical inspection of schools should be under the control of the board of education. It should be a department of the school system, and only related to the board of health as the two bodies may be of mutual benefit in performing their respective functions. It would be less liable to interfere with any other department of the school system, and be free from the vicissitudes frequently incident to the board of health from political changes.

By daily medical inspection diseases are detected in their incipiency, and therefore most easily dealt with, and cases of infectious diseases can be isolated. The treatment of diphtheria with anti-toxin, it is well known, should be as early as possible to insure success. In November and December of 1898, in Chicago, there were 219 cases of diphtheria treated with anti-toxin. Of this number nine died, but there were no deaths among those treated on the first or second day. Medical inspection of school children is the best means of preventing disease. It should be the aim of the medical profession to prevent sickness as well as to cure the sick, and by doing this the profession is attaining its highest ideal. It is a public blessing and should be paid for from the public purse. Medical inspection is truly prophylactic work, and when it is well established our physicians will be able to broaden their field of usefulness by the more careful study of the growing body in relation to exercise and education. The field is a practical one and worthy the ambition of the best talent of our race.

Disease not checked or prevented in childhood is what makes dependents in adults. Our country is burdened with the insane, the feeble-minded, the deaf and dumb, the blind, the epileptic, orphans, and paupers. Ohio is a fair representative of the states. There was spent in Ohio in 1894 for charities $4,175,915.47. The income of all the colleges of the state for the year 1896–97 amounted to about $1,000,000. Over four times as much was spent for charities as for higher education. Education is nothing without health and a physical constitution. It is high time that we strike a blow at the root of all this defectiveness. One does not wonder at the condition of adults when he reflects on the percentage of defectives among children. Strong, robust, healthful childhood would prevent much of this inability in adult life. The cost of medical inspection is but a bagatelle compared to the good it accomplishes in mitigating suffering and making those self-supporting who otherwise would probably be objects of charity. We spend millions in taking care of these dependents: would it not be true economy and equally just and appropriate to take like care of all children who show beginnings of spinal curvature, defective vision or hearing, signs of consumption, or symptoms of nervous diseases of every kind? These diseases, if detected in their incipiency, could generally be cured.

Chronic diseases of all kinds often have their beginnings in environment. It requires a bacteriologist to detect the germs of disease. The state which provides a place for the assembling of children and does not provide for the prevention of the spread of contagion or any disease, whose germs could be detected by a competent expert, is morally responsible.

SEX DIFFERENTIATION IN RELATION TO SECONDARY EDUCATION

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The effect of sex difference so far as school education is concerned, is not important until about the time children begin their secondary education.

As the body nears the completion of its quantitative growth, nature

establishes sex functionally; the boy develops toward manhood, the girl toward womanhood, and there results a biologic difference, real and imperative. "The biologic differences between the sexes result in psychologic and social differentiations. We must insist upon the biologic condition underlying the relation of sexes."[1] The sex element is in one case characteristically active and aggressive, in the other passive and receptive. This physical difference cannot be changed, and its significance must not be overlooked, for it has a real influence upon the mental life of the individual. However, it is not the only influence of the body upon the mind.

There are other real sex differences. "These differences may be exaggerated or lessened, but to obliterate them it would be necessary to have all the evolution over again on a new basis. What was decided among prehistoric protozoa cannot be amended by act of Congress,"[2] nor banished by prudery, personal ambition, or economic conditions. This difference is a factor in the problem of general education as well as school training, and a system of training which does not recognize such a condition can never be truly effective.

The question which continually presents itself is this: How much of sex differentiation is due to sex as such, and how much is due to social custom and training? For example, the rapid growth in height and weight which ushers in the phenomena of adolescence begins earlier in girls than in boys. This is a difference which at first seems plainly a matter of sex alone, but may it not be that the freer outdoor life of the boy or the custom of very early marriage for girls among remote ancestors has had a considerable influence upon the earlier growth in case of the girl?

Some of the differences which we are accustomed to attribute to sex are certainly individual differences. Leaving these out of account, may it not be true that some of the sex differences are due to non-sex causes? If this be true, such differences are within the possibility of modification.

Certainly some of the distinctions are the result of conceptions which are not consistent with present ideals of life. These conceptions are perpetuated chiefly by the training of the home and society, and not a little by the church and school.

Sex differences are due also to manner of living—social custom and economic condition. From the beginning there has been some division of labor based upon sex difference; this division, to some extent, must continue, and education, in its scope and method, should recognize it.

In some instances the division of labor was and is such as to favor one sex and to exploit the other. This fact, coupled with a biological difference, has caused further sex differentiation. Augmented by prejudice and strengthened by the force of conservatism which sanctions existing conditions, we have come to emphasize differences of sex which are not

[1] Geddes and Thompson. [2] *Idem.*

fundamental and which are therefore harmful. Take, for instance, the following examples in the influence of dress. Two sisters, married to two brothers, gave birth to two boys about the same time. When the time came for sex differentiation as indicated by clothing, the mothers decided to keep the children as girls. The mothers told me afterward that they could not bear to expose the children to the meanness of boy life. Then, too, the fathers were railroad engineers and much away from home. Perhaps the force of the father's pride in papa's little man was largely absent; at least the two boys were taught that they were girls, dressed as girls, given dolls, etc., and treated as girls. This was continued until they were seven years of age, when the children entered the public school, where they were refused admission until the proper change in clothing was made. Both mothers assured me that immediate moral degeneration was the result; from modest girls they became forward boys; quiet changed to noise, frankness and truthfulness became deceit and hypocrisy. According to this experience, it is much more difficult to bring up a boy than a girl. Again, a mother who has an older girl and younger boy told me this: After long plays the boy grows tired of playing his sister's games and becomes unruly. When the mother adopted the expedient of dressing him in the cast-off clothes of his sister, he always becomes docile. A Washington mother sometimes puts overalls on her little girl of eleven or twelve to save her clothing. In such dress the girl readily fights boys, while in her usual dress she will only "sass back." We know that biologically it costs more to produce a girl. Does it cost more morally to produce a boy? If so, how much of that cost is due to the artificial sex distinctions inherited from an uncivilized, un-Christian past? Have you ever observed the training given children in sex prejudice?

In the preparation of this paper I have asked a number of men and women a half-dozen questions. All agree that we are failing to recognize real sex differences, and that harm is resulting. Dr. Chamberlain says:

> We are not in a position to determine with accuracy what is *manly* and what is *womanly*, since the "trail of the serpent" is over the thought of men still, and woman's ways are not yet fairly judged. There is much more to be granted to the *womanly* woman than the man is prepared to concede at present.

In answer to the question, "Are we not substituting unreal distinctions for real ones, making 'masculine' mean something which is not truly manly, and 'feminine' something not womanly?" Dr. Van Liew says:

> In many cases it seems to me we are. For example, many of the things associated with manhood, as sowing wild oats, hunting, waging war, and the like, were primarily simply the incidental associations of environment. They may, however, have aided in the selection of certain fundamental physical and emotional traits.

In further discussion of the subject Dr. Chamberlain analyzes the problem thus:

He must lose what remains to him of the savage, she, what clings about her of the slave. The perfect equality in a political and social sense must come ere long. The limiting of man's field, where he is inefficient, and the widening of woman's sphere, where she is effective and capable, are problems with which the twentieth century may deal. Not less a man, not less a woman, but a being more serviceable to the race must each be.

The most interesting, intense, and suggestive replies were in answer to a question concerning the meaning of the segregation of sexes introduced into two of our large institutions this year. Space will not permit much quotation. A prominent Chicago physician says:

. . . . due to the prurient prude of both sexes, who found something lowering in biologic and embryologic topics discussed before mixed audiences.

An eastern physician, a neurologist, takes an opposite view:

It is not for the man who has spent all his life giving didactic lectures to young women to express his opinion upon the value of coeducation. He sees merely the academic side. Neither does the opinion of that anti-social being, the woman of "advanced" ideas and undeveloped sex-life, have any weight with the normal man of experience. The neurologist who has the confidence of his women and girl patients will have the sex differentiation so thoroughly impressed upon his mind that he would never allow a daughter or a sister to go to a coeducational institution. After sufficient trial, the mingling of the sexes in colleges is shown to be inexpedient, if not dangerous, to the future welfare of all concerned.

A leading student of the child says:

It is one of the ebbing wavelets of the military spirit (always anti-woman) stirred up by the Spanish war. It is a shallow play of the water on the sand, nothing more. It will be much less effective in the end than Mrs. Partington's famous attempt to stop the Atlantic.

A well-known woman writer upon the economic side of the woman question says:

A local reaction merely, owing to the tremendous changes already glimpsed — not understood. Also a money reason. The "sporty" colleges get the richest students; coeducation is not "sporty."

The majority of correspondents favor coeducation, some without restriction, some with certain differences in the courses. No new reasons are advanced.

The man's greater economic value dictates the policy of education, and as we progress in material matters the man has tended to leave to the woman types of education, subjects of study, of lesser value; hence we see the classical and literary courses of our schools and colleges composed largely of girls and young women, while the scientific, professional, and technical courses are made up largely of boys and young men — an illustration of the law governing the relations of the stronger and weaker. One of two things must happen: either the education of women must give her greater economic value, or there must be a differentiation in the courses of study based upon a recognized difference in sex.

During the period of secondary education there should be *coeducation with differentiation in curricula according to real mental and economic difference in sex.* The separation of boys and girls in school training should be no greater than their separation in the good home, the progressive church, and society in general. Differences in the source of study will provide for natural differences in the sexes as well as for individuality.

There are two dangers in differentiation of the courses:

1. In many schools there is a real danger of catering to a feminine mental attitude, because (*a*) there are more girls than boys in attendance in the average high school or academy. The teacher unconsciously selects and arranges the work, presents and illustrates it, judges and marks results, with the girl in mind. This is unfair, not only to the boys, but to the girls. (*b*) The girls are intellectually superior to boys on account of their greater relative maturity. Women teachers, embittered by the unfairness of opportunity toward their own sex, often do harm to young girls by pushing them beyond the demands of the course and in excess of physical energy in order to demonstrate the superiority of the feminine intellect. They fail to recognize the deep significance of the earlier maturity of women, seeing in it only an opportunity to make a point in a controversy. Here lies one of the great dangers of modern life. Until teachers and parents learn the meaning of adolescence we must expect physical weakness in girls and restiveness in boys during the period of secondary education. (*c*) The growing tendency to employ many women teachers and few men is the third cause of the effeminization of the schools. There are not too many women; there are too few men, and in many instances the men are too weak. In the schoolroom a strong woman is always better than a weak man, but if we are to attain physical, moral, and intellectual vigor and courage, intellectual acumen, tolerance, and breadth of view, we must have a nearly equal proportion of men and women among our teachers. To have all teachers men would not be any better than to have all women. At the time when the ideals and virtues of manhood and womanhood are forming, the adolescent of either sex needs the stimulus of the highest type, not only of his own sex, but of the opposite. No half-grown boy is going to develop into his best self under the exclusive teaching of a woman in a school made up largely of girls. There is danger of mental perversion in some degree. Such a condition is equally unfair to the girl. There are about the same number of each sex in the community; there should be, under normal conditions, about the same number in school. Likewise there should be a somewhat equal balance in the sex of the teachers.

2. Girls suffer from lack of opportunity to express themselves educationally. Prejudice, due to several causes, among which "sex-slavery" is chief, still withholds from girls full freedom. This works greatest harm during adolescence, when ideals are being realized. The girl does not

have the opportunity to scheme, plan, and experiment as has her brother. We have not the courage to divert her ambitions in the direction of her womanhood; so we either check her attempts or indulge her vagaries. Have you noticed how much easier it is to speak to boys than to girls about their life-work? It is embarrassing to attempt to harmonize the usual school training of girls with opportunity to succeed in life. Our training ought either to fit girls for the work of womanhood or give absolute equality of opportunity to the sexes, and not force girls into courses of study more or less abandoned by boys.

The continuation of the progressive evolution of man demands that school education shall more definitely recognize the real differences in sex; it likewise demands the conscious abandonment of those inherited sociological differences inconsistent with modern ideals of living. Evolution depends quite as much upon what is eliminated as upon what is acquired. The point of attack is the period of secondary education.

DISCUSSION

EDWIN D. STARBUCK, associate professor of education, Leland Stanford Junior University, California. — I wish to speak of three points that have been raised by Dr. Yoder in his paper. Two of these points will be in essential agreement with his paper, and the other will, perhaps, be somewhat at variance with it.

First, it comes as a refreshing shower to find a man who, in this time when all matters that pertain to the mental life, and especially to the differentiation of the sexes, are regarded simply as an outgrowth in one way or another of the reproductive instinct, dares raise the question as to whether sex difference has not other, and perhaps many other, conditions underlying it. I am in hearty sympathy with his opinion that environmental conditions enter very largely into the explanation of the divergence of the sexes. The accumulating evidences as to the sensitivity of the organism to its environment, the fineness of its response even to the unconscious influences that are going on about it, the certainty that these responses influence our judgments and conceptions, and perhaps react upon the central springs of character itself, put us into a position to believe that such is the case. Still, I must confess to a certain degree of skepticism as to the deep-going effects of mere change of clothes on children's moral nature. I would be the last to deny that the reproductive instinct has given its own strain and coloring to all our evolved consciousness; but I am willing to be among the most emphatic who declare that contact with nature, the gregarious instinct, as Ribot calls it (largely independent of, and often contradictory to, sex), all the instincts — hunger, curiosity, self-expression — each likewise gives its strain and coloring. We have had our perspective of the things which are going on here and now much distorted, it seems to me, by this attempt to explain everything from the single standpoint of sex irradiation. There is a certain fascination in tobogganing sliding down the biological ages, and coming into our interpretation of the present with the dynamics of race-life involved in our thought; but it is dangerous business, just as in tobogganing we lay ourselves liable to leaving in our trail a host of shattered and abused facts. There is a charm about being profound, but in digging down among the biological facts for the explanation of our peculiarities we are like the seeker after deep-hidden gold who comes up out of the dark depths of earth — with his gold, to be sure — still, with his eyes blinded to the perils that may chance to lie at his feet and the beauties that shine about him. Even at the cost of seeming profound, we should clear up our horizon and cease looking at the matter of adolescence and sex differentiation from the single

standpoint. I wish to affirm that our interpretation of sex differences would be more wholesome if we viewed it as rather essentially a psychological problem, and not so much as distinctly a biological or a physiological one. The important question is, comparing the sexes as they now exist, what is their relation in regard to tastes, mental ability, conditions of life that education should meet, and the like. It is at bottom a matter for careful observation and psychological experimentation.

I shall take the liberty of speaking of the question before us for a few moments from this unfashionable standpoint, and shall limit myself entirely to the relation of mental ability of the sexes, and shall further confine myself to two points raised by Dr. Yoder's paper. There is no need of apology for speaking from a personal standpoint. My students and I have been making tests during the last five years on school children and adults of all ages to determine their relative ability in a score of different aspects, including muscular ability and endurance, acuteness of the various senses, mental and muscular quickness and accuracy, reliability of reasoning, and mode of approach to difficult problems.

The first significant point from our present consideration is that *there is a consistent difference between the sexes*, as shown by most of the tests, and that this difference is probably fundamental in that it extends back to the earliest years and continues to the later. Boys and men are quicker mentally and physically, are less enduring, slightly superior in those senses naturally most exercised, slightly inferior in those in which girls have had larger experience, reason more alertly, come up to large questions more specifically rather than in a general way. Whatever differences exist are consistent. That is, they fall in line with each other and with certain physiological and biological differences in so far as we know them. In saying that the differences extend back to the earliest years I am at variance with the view of Dr. Yoder, who makes the point of divergence the beginning of the adolescent period. The difference during adolescence is not greater in comparison with the difference during earlier years than would perhaps be accounted for by the more rapid maturing of girls.

The other point is that, altho there is a difference between the sexes which is consistent and fundamental, *the difference is small*. What difference is there, and what is its significance? Fortunately, we have a means of giving an intelligible answer to both questions. In nearly every test, and in almost all the ages, *the difference between boys and girls is less than the variation of boys among themselves or of girls compared with each other*. This point is important and should be entirely clear. The way the conclusion is reached is this: We may take the average ability of boys in any given test, and regard the value thus obtained, rather arbitrarily, as the standard of proficiency. Then we may find the average variation of boys from this standard. This average variation of boys which measures their lack of conformity to a type nearly always includes within its range the average proficiency for girls. In many of the tests the "probable" variation for either sex—a much closer limit of variation—includes the standard for the other sex. That is, in these particular tests the divergence of the sexes in less than the variety which exists within either sex. The significance of this conclusion is this: if we claim, as many do at the present time, that the difference in mental capacity between the sexes is so great that they should have entirely separate curricula and their particular assignments of work, the same argument would lead us to insist on different courses of study for dull and bright boys, or for healthy and nervous girls. It may be that the variety within either sex as well as the divergence of the sexes furnishes just the variation nature demands for carrying out the process of development, and that individuals need for intellectual, social, and moral enrichment.

So we cannot side with those who wish, for practical purposes, either to magnify or minimize the difference between the sexes; but, since the divergence between them is small, taken together with the fact that our courses of study are becoming more and more elastic, so that individual tastes and capacities can be respected, we can but infer that the importance of the "problem" of coeducation is materially weakened if the arguments for or against it center in the question of the relative ability of the sexes to do mental work.

Z. X. SNYDER, president of State Normal School, Greeley, Colo.—1. There is a physical difference between boys and girls as to endurance and organization. Energy that is used up to develop and prepare girls for the natural functions of life is consumed in school grind. In the very nature of the case, the powers of life of a girl are used more largely to develop her future functions than those of a boy during the adolescent period. Less energy goes to the development of nervous tissue in the girl than in the boy. Naturally less function must be required of the nervous centers of a girl than of a boy.

2. More time and energy growing out of home duties and social relations are required of girls than of boys. There are duties belonging to the household, of a domestic nature and also of a social nature, that consume the time and energy of girls more than of boys, which absolutely prevent girls from doing as much work in school as boys do. It is unfair to their organization and to their standing in school to require of them as much work as thoroly completed in the same time.

3. Mixed schools stimulate the premature development of social life. This premature social life leads to dissipation of energy, and often to premature marriage, which sometimes ends unfortunately. During the early part of the adolescent period the powers of life of a girl go, or should go, to prepare her for her natural function. The grind of the schools arrests this natural development, especially if she attempts to keep pace in her studies with boys. Now, the high school, which is a school of the people, should ever aim to give the physical nature a chance. Posterity demands this; the girl's nature demands this; civilization demands and requires it.

If the above three theses are true, this fourth one follows:

4. That more time should be taken by girls to do a given school work, and separate schools established for boys and girls.

The above theses seem true from certain investigations that have gone on, both from theoretical and practical standpoints. Superintendents of schools who have been observers of the practical workings of high schools feel the truth of them. They feel sure that there should be some source of relief, and that it must be found in taking more time for girls and probably separate schools for the sexes. From the theoretical standpoint, or from the standpoint of quantitative investigation by educators, psychologists, and physiologists, the truth of the theses seems to appear.

Admitting the truth of the first two theses, it would seem that it might be arranged without separate schools. But, admitting the third, it seems almost impossible to meet the conditions without separate schools. It would seem that the third is the most important of the three.

In the association of the sexes in high schools, familiarities and intimacies develop very frequently by which the energies of the boys and girls are dissipated and experiences had which are the regret of their lives. There is undoubtedly an excess of social dissipation connected with the high schools. Card-playing, dances, receptions, hay-rides, and individual indulgences seem to be the aim of a modern high school, so far as the students are concerned.

THE PERCENTAGE OF BOYS WHO LEAVE THE HIGH SCHOOL AND THE REASONS THEREFOR

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The statistics indicate that little over 5 per cent. of the pupils who enter the elementary schools remain to enter the high schools. Of those who enter the high schools, between 20 and 24 per cent. are

reported as graduating. That is, our elementary schools eliminate over 90 per cent. of their pupils in eight years, and the high schools eliminate about 80 per cent. of what is left during the next four years, leaving to graduate from the high schools about 2 per cent. of the original number entering the elementary schools. About 3 per cent. graduate in Boston, while St. Louis falls to 1.6 per cent. The slaughter of the Light Brigade at Balaklava pales into insignificance, then, beside the slaughter of the educational hopes and possibilities of our children by the present school system.

What causes the loss of this 98 per cent. of our pupils before graduation is a question of burning importance for teachers.

This paper can touch only a few points connected especially with the loss of boys during the high-school course. (1) What portion of the students in the high schools are boys, and what portion graduating are boys? (2) What portion of the boys entering ever graduate? (3) When do the boys drop out? (4) Why do they drop out?

Of the 541,730 pupils reported in all grades in the high schools there are 42 per cent. more girls than boys. Of the 65,696 graduating yearly, only 34 per cent. are boys; that is, about 50 per cent. more girls than boys enter the high schools, and 100 per cent. more girls than boys graduate. Texas schools graduate only one boy to three girls.

Concerning the second question — what percentage of the boys entering the high school ever graduate — data are difficult to obtain. The best statistics indicate that about 20 per cent. of the students, boys and girls, in the United States as a whole graduate. In Kansas 33 per cent. graduate; 37 per cent. of the pupils in Massachusetts remain to enter the fourth year; 23 per cent. in Missouri. These are doubtless reduced below 30 per cent. and 20 per cent. before graduation.

Superintendent Greenwood made a study of fifteen selected city high schools scattered from Cambridge to Portland, many of very high repute, yet only 16 per cent. of the students entering these schools remained till the fourth year. Hardly more than 12 per cent. or 14 per cent., therefore, graduated. That only 14 per cent. of the pupils in fifteen select city schools graduate, while 20 per cent. of the pupils in average schools graduate, should be a significant fact in determining why the pupils leave the schools.

The number of boys in the different grades is not usually reported separately from the number of girls; hence for facts on this point we are obliged to rely upon a few city reports and upon statistics gathered by me thru a questionaire from fifty-six widely separated representative cities and towns. In Kansas City, out of each 100 boys entering the high school, 54 remain to enter the second year, 46 the third, 33 the fourth, and 28 to graduate; in Boston, 56 remain to enter the second

year, 40 the third, and 10 the fourth; in thirty-two Texas towns and cities averaged, 56 remain to enter the second year, 31 the third, and 17 the fourth; in five California cities, 42 remain to enter the second year, 23 the third, and 14 the fourth; in ten New York and Massachusetts towns, 49 remain to enter the second year, 35 the third, and 19 the fourth; in nine Georgia cities and towns, 66 remain to enter the second year, 51 the third, and 50 the fourth. The widest variations may be found within different cities of the same state. In Kansas, for instance, it varies from 15 boys entering and none graduating to 15 entering and 15 graduating. A certain Massachusetts town has steadily fallen from graduating 30 per cent. to graduating 5 per cent. In Augusta, Ga., on the other hand, out of 127 boys entering the high school 66 per cent. graduate.

	Kansas City	Boston	Thirty-two Texas Towns	Five California Cities	Ten New York and Massachusetts Cities	Nine Georgia Cities
First year	100	100	100	100	100	100
Second year	54	56	56	42	49	66
Third year	46	40	31	23	35	51
Fourth year	33	10	17	14	19	50
Graduates	28	...	...	...	...	...

Summarizing these facts, we find that of the children going to school little over 5 per cent. reach the high school. The number of girls in the high school is 50 per cent. greater than the number of boys, and the number of girls graduating is 100 per cent. greater than the number of boys. Of the boys entering the high school nearly half drop out before the second year in all sections of the country, after which the numbers dropping out each year vary from 50 per cent. to less than 10 per cent. There are left for graduation less than 20 per cent. of the boys entering the high schools. This varies from ten per cent. in Boston, 15 per cent. in Texas, 12 per cent. in California, and 17 per cent. in New York and Massachusetts, to nearly 50 per cent. in Georgia, with great individual variation in neighboring schools.

These statistics are probably not far from correct, but are based upon a study of too few schools. A full and complete study is impossible until our superintendents and principles learn the value of such study and prepare reports. If this department, in conjunction with the Department of Secondary education, would prepare a uniform plan of recording the experience of the high schools in the above matters, and in the matter of age, health, numbers of failures in various subjects, causes of withdrawal, etc., we should soon have a proper basis for a scientific study of these problems.

Coming now to the last question: Why do four-fifths of the high-school

boys leave before graduation? I asked the same fifty-six principals who made the other reports to state, in order of importance, the causes they considered the most potent in taking pupils out of the high schools. The following are the reasons assigned by these principals, given in order of importance as it appeared to their united judgment:

	Texas	Georgia	New York and Massachusetts	California
Needed to support home	Fifth	Fifth	Second	Third
Mentally incapable	Ninth	Twelfth	Seventh	Seventh
Lazy, ashamed not to pass	Fourth	Third	Fourth	Second
Desire to make money	Third	Second	First	First
Enter business school	Eighth	Sixth	Sixth	Sixth
Enter factory or trade	Tenth	Eighth	Fifth	Fourth
Commercial ideals at home	Second	First	Third	Eighth
Lack of discipline at home	First	Fourth	Eighth	Fifth
Dislike high-school subjects and methods	Sixth	Seventh	Ninth	Ninth
Dislike high-school discipline	Seventh	Ninth	Tenth	Tenth
Object to length of time	Eleventh	Tenth	Eleventh	Eleventh
Object to women teachers	Twelfth	Eleventh	Twelfth	Twelfth

Teachers in all sections of the country placed mental incapacity on the part of the pupils far down in the less potent half of the causes of withdrawal. As this is the only absolutely irremediable trouble, there seems cause for hope. While the order of importance as given varies slightly from state to state, yet the following causes were put among the first six by teachers in New York, Massachusetts, and California, and nearly all of them by Georgia and Texas teachers as well: (1) needed for support of home; (2) desire to enter factory; (3) desire to enter business school; (4) commercial ideals and lack of appreciation of education at home; (5) laziness. Fortunately, these are all curable evils, unless it be the "needed for support at home." That the number leaving for this reason is greatly overstated will be shown in a moment.

This kind of second-hand child study, with the observer so personally interested in the outcome, is, I admit, of questionable value until verified by other methods. If one could get two thousand boys who had left the high school to tell frankly why they left, and get an equal number who graduated to state why they remained and why they think the others left, we should have a contribution to child study of real value. This I have commenced, but the task proved too heavy to complete in time for this report.

One worthy study of this topic has been made by Supervisor S. D. Brooks, who induced 111 selected superintendents to make a record for each student who left school, giving age, grade, sex, nationality, health, temperament, mental ability, class standing, cause of leaving school, occupation and financial standing of parents, etc. Out of 400 high-school

pupils who withdrew from the school and were reported on, he found the causes assigned by the teachers to be as follows:

	Boys	Girls		Boys	Girls
Desire for activity	9%	..	Dislike authority	11%	4%
Indifference	12	14%	Home influence	1	1
Failure in work	11	13	Miscellaneous	4	5
Truancy	4	..	Ill-health	5	38
Bad conduct	2	1	To work	37	17
Other school	4	7			

A moment's consideration will show that these teachers only half answered the question as to why these boys left school by saying "indifference," "failure in work," "desire for activity," or "to go to work." The real questions were: "Why was he indifferent?" "Why didn't the school give him something to interest him?" "Why did he fail?" "Why didn't the school give him work he could do?" "Why did not the school satisfy his desire for activity?" "What made the authority of the school so obnoxious to him?" "Why did he want to go to work rather than to work in school?" This study shows that all the causes for leaving school are in large measure within the power of the school to change, except possibly "home influence," "miscellaneous," "ill-health," and "to work." Aside from the 1 per cent. "home influence," 4 per cent. "miscellaneous," and 5 per cent. "ill-health," the 37 per cent. of the boys who left to work appear to be the chief factor beyond the control of the school. The records of these 37 per cent. leaving to go to work were especially examined. Most of them were in the first half of the class in ability, hence failure in school did not drive these boys to work. Of their parents 21 per cent. were above medium in wealth, many more were not poor, and even some of the poor ones could have strained a point and remained, if there had been sufficient desire; so that hardly more than half of those students who left to work really had to work for the support of their homes; that is, only about 19 per cent. of the boys who left school really had to go to support their families. If now to these 19 per cent. who must work to support their homes we add 20 per cent. as a liberal allowance for the others leaving because of incapacity, illness, and other unavoidable conditions, there remain over 60 per cent. of the losses from our high schools due to the fault solely of our poor school system.

The reasons usually assigned for this 60 per cent. of unnecessary loss of boys from the high school are: lack of properly educated teachers, and the commercial ideals of this generation. Yet statistics show that many schools with highly cultured teachers and elaborate equipment hold fewer boys than the average schools; e. g., the select city schools reported on graduated one-half the percentage that is graduated in Kansas, and only

three-fourths of the average for the United States as a whole. The small schools of Texas likewise graduated a larger proportion of their boys than did the richer and better-equipped city schools. Concerning the effect of the presence of commercial ideals, statistics again indicate that in the most commercial and money-getting sections of the country a much larger percentage of the boys graduate. Texas graduates only 14 per cent., while Massachusetts graduates 26 per cent.; Augusta, Ga., full of factories and push, graduates 50 per cent.

Of course, the result in any case is due to a large group of factors, but the evidence is sufficient to show that scholarly teachers will not necessarily keep students in school, nor will commercial aspirations necessarily take them out. Neither will the presence of educated people and of a college atmosphere hold them. The high schools in college towns show worse records than the others. I had thought that the length of the course was a large factor, but the records of the three-year high schools are as varied and bad as those of the four-year schools. Scholarly teachers, elaborate equipment, atmosphere of culture, short course, all fail unless the subject-matter and discipline of the school meet the inner and outer needs of the adolescent's nature better than do the shops and factories. This is the simple secret of the whole matter. Mr. Bumble, in explaining to Mrs. Corney the proper method of managing outdoor relief for beggars, hits the fundamental principle of this whole question. Says the beadle: "The great principle of outdoor relief is to give the paupers exactly what they don't want, and then they get tired of coming."

The high school receives the adolescent youth, with a new and changing body, disequilibrated now by new and rapidly developing organs connecting him with the race, by a rapidly medullating brain, by new-grown heart muscles and heightened blood pressure; a creature with intense but fickle emotions; with rising sense of self-importance; with vague aspirations and longings for great things; with new religious and social needs; with his childish love of activity for the mere sake of doing passing into desire to do things having a real end; with the infantile sense of dependence and willingness to obey mere authority yielding to a feeling of self-dependence and a desire to control himself—a changing, high-pressure, destructive-constructive creature, now yearning for the unattainable ideal, now tingling with desire to do things and to count for something in the world. What do we do with this self-conscious, hopeful, unbalanced youth? He is taught in a group of twenty-five, is cramped into the swaddling-clothes of elementary discipline, and this by teachers who never saw him before and never will see his home or home life, who know nothing of his personal aspirations, talents, weaknesses, or abominations. His course of study is often prescribed, notwithstanding the fact that this is the period endowed by nature with that restlessness and fickleness which impel the organism to try all things and to test all its powers,

that it may both develop breadth of interest for life and find the special line of its peculiar power.

Closer personal relations between teachers, parents, and pupils can accomplish much, as is shown by the fact that the smaller schools hold their pupils better than the large ones do.

Allowing electives, breaking the lock-step, and treating these youths as individuals can likewise do much good, without producing the evils so many think inevitable. Making the course elective increased the attendance of boys in the high school in Galesburg, Ill., in seven years nearly 400 per cent., and the number graduating nearly 500 per cent., while the elementary pupils increased during the same time only 9 per cent.

Again, the introduction of more practical courses for such students as are better fitted for these, the appeal to the desire to do something concrete and immediately useful, will accomplish much, as has been shown in many cities. Kansas City, for example, increased the attendance in her high schools 64 per cent. by adding a manual high school.

These worthy features of progress must be pushed on and perfected; but even after this is done, entirely too many pupils will be driven from our schools until we bring about far closer relations between parents, teachers, and pupils; until superintendents and principals learn more of the psychology of boyhood; until the history courses are more human, the science courses less arid, the language courses less formal, the literature courses have more literature to read and less to vivisect and triturate; in general, until the subject-matter of each study and the methods of teaching and discipline are brought into harmony with the inner demands of the adolescent's nature. And then, just as sure as there is law and evolution in nature, will these youths be likewise getting the best preparation to meet what is worthy in the demands of the civilization about them.

DISCUSSION

SUPERINTENDENT J. W. CARR, Anderson, Ind. — Professor Ellis has given an *extensive*, and I shall endeavor to give an *intensive*, view of this important subject.

There is a complete record of only ten graduating classes of the Anderson High School — from 1894 to 1903. Belonging to these classes there were 381 boys. One hundred and thirty-one, or 34.5 per cent., of these graduated; 250, or 65.5 per cent., withdrew before graduation. Of the withdrawals, 124 were during the first year, 74 during the second year, and 54 during the third year. Nearly all the boys who entered the fourth year graduated. The reasons assigned for withdrawal are as follows: 20 removed from the city, 28 went to school elsewhere, 3 withdrew on account of ill-health, 17 became indifferent and quit, 120 withdrew to work, and 62 withdrew without assigning any reason.

Compared with the towns and cities mentioned by Professor Ellis, this is not a bad showing, especially when we consider that Anderson is a manufacturing city and that the demand for young men has been very great. The percentage of boys who have graduated in Anderson is one and one-seventh times that of Kansas City, nearly twice

that of the ten New York and Massachusetts cities, more than twice that of the thirty-two Texas towns, two and a half times that of the five California towns, and three and a half times that of Boston. The nine Georgia cities alone surpassed Anderson in the percentage of boys who graduated.

After making deductions on account of sickness, removals, attendance at other schools, withdrawals to work from necessity, and all other necessary causes, I believe that there were one hundred boys, or 25 per cent. of the whole number, who might have graduated from the Anderson high school if they had really desired to do so. Why did they not have this desire?

The answer to this question, in my opinion is threefold, and I give the parts inversely in the order of their importance.

1. The opportunities for learning a trade or for going into business were such that they did not think it advisable to disregard them. The number who withdrew from high school for this reason is comparatively small, perhaps not more than twenty.

2. They did not believe it necessary to graduate from the high school in order to succeed in business or in life. Fortunately this sentiment in the high school and in the community is growing less and less. The success of those who do graduate is the best argument in favor of a high-school education.

3. They became indifferent to school work or impatient to school restraints. This indifference and impatience were due to a number of causes — lack of preparation, lack of interest and purpose, and consequently lack of application on the part of the boys; lack of sympathy, insight, tact, and power on the part of teachers; lack of flexibility and adaptability of the course of study; lack of proper training and discipline on the part of the home. The school will never graduate a large number of boys whose attendance is irregular, who are out late at nights, who spend their time loafing at cigar stores and on the corner, who have never been trained to work or mind at home, whose bodies are enervated by the use of tobacco and the practice of other vicious habits, and whose minds are filled with sporting news, trashy literature, and other things that make for unrighteousness. For these the school can do but little except to appeal to parents, to society, and to a merciful God.

The most important question is: What are we going to do about it? How are we going to keep the boys in the high school? How can we graduate a larger percentage? This question can be only partially answered. I venture two suggestions: increase the efficiency of the high school, and build up a stronger public sentiment.

Several things must be considered if we would increase the efficiency of the high school. The work in the grades must be well done. High-school teachers must have scholarship, special training, tact, sympathy, and teaching power. The course of study must be liberal and practical — liberal in the sense that there is opportunity for choice; practical in the sense that it supplies the needs of the pupils, fitting them, not only for college, but to a great extent for business and for life. I believe that the introduction of manual training in the Anderson High School would add 50 per cent. to the number of graduates among the boys. And, finally, if the high school would be most efficient, it must develop a high type of manhood and womanhood. Its graduates must have intellectual attainments, must know how to use their knowledge, and must have acquired habits of industry, fidelity; perseverance, and rugged honesty.

We should strive to build up a better public sentiment both in the high school and out of it. If the disturber and the "never study" are unpopular among their fellows; if the boys take pride in their school work and want to excel in the class-room as well as on the athletic field; if the teacher is regarded as a helper and a friend; if the boys speak of it as "our school" and are willing to stand by it at all times and under all circumstances — if such a spirit as this exists among the pupils themselves, it will not be difficult to keep the boys in the high school until they graduate.

Again, if the people esteem the high-school teacher as a truly valuable citizen; if they look upon the high-school boy, not as a "smart" young man unfit for work, but as a gentleman able and willing to do something; in a word, if they regard the high school as one of the most useful institutions of the community, then we shall have their confidence and co-operation in full measure. Such public sentiment without will react on the sentiment within, for the betterment of all. With greater efficiency in the school and the right spirit within and without, the circle of influence is complete, and each aids and strengthens the others. Like the electric current that passes through the transformer, the voltage is multiplied and the energy correspondingly increased. This is the line of progress, not only for increasing the percentage of graduates, but for solving other high-school problems.

Superintendent Thomas M. Balliet, Springfield, Mass.—The admirable paper just read opens a subject of the first importance. School statistics are so imperfect, and often so misleading, that I can but hope that the author of the paper may find, upon further investigation, that the facts are not quite as bad as his figures now indicate. At all events, there is a problem here which we cannot afford and ought not to desire to dodge.

In interpreting such statistics, several considerations must be taken into account as at least possible explanations of some of the facts, and I wish simply to mention a few.

In the first place, if all pupils admitted to the high schools entered with the intention of remaining to graduate, the dropping out of so large a percentage would be a very serious fact indeed. It would mean disappointment or defeat for the majority. But some pupils enter simply to get one or two years more of school training, knowing beforehand that they will not be able to remain to graduate. They may be needed to assist in the support of the family, or they may be obliged to become at least self-supporting. So far as this class of pupils is concerned, the dropping out is rather an encouraging fact; it shows that the high school has attracted, for a time at least, pupils who might have ended their education with the completion of the course in the grammar schools. It indicates also that the gulf between the grammar school and the high school is being bridged, and that pupils and their parents realize that it is a perfectly natural process for a pupil to step from the grammar school into the high school, whether he may be able to remain one year or four. Furthermore, the excellence of our grammar schools renders it possible for pupils of a much lower grade of mind to pass the examination for admission to the high school than was formerly the case. Some of these pupils find it impossible to keep up with their classes sufficiently to make their promotion from year to year. Moreover, class feeling becomes stronger than it was in the grammar schools, and in many cases the mere fact that a pupil cannot graduate with his class leads him to drop out of school entirely. Furthermore, at this age personal pride is more marked than in the grammar schools, and a failure of promotion is felt as a deeper disappointment. This accounts for the dropping out of a certain number, some of whom no doubt the high school ought to hold, and could hold if its course were broader and the instruction appealed to a greater variety of taste and talent. Again, some pupils are sent to the high school by their parents for only a year or two, mainly for the sake of the social position it will give them in the future to be able to say that they have "attended high school," just as many boys are sent to college for the same reason. This is one of the many points where caste feeling cannot be ignored in interpreting school conditions and school statistics. This same caste feeling accounts in large part for the enormous increase in recent years in the number of pupils taking Latin in our high schools; it causes many private schools to thrive regardless of the quality of their work; and it often militates against the attendance at manual-training high schools, before their real purpose is understood in the community, because they are mistaken for trade schools, and to send a boy to a trade school would not especially advance his social position in the future. The city high school, it may be added, has also to contend with another difficulty which is felt less

in the small high school of the village and rural district. I refer to the social life of the pupil out of school, and the many attractions which tempt him to neglect his studies. Country life, as we all know, develops early a degree of earnestness and a steadiness of purpose which city life has thus far failed to develop in children. In the country there are many forms of manual labor, both on the farm and in the village, which children can perform and which develop in them a sense of responsibility which in the city neither home life nor the school has yet succeeded in developing. It is, no doubt, this early development of a sense of responsibility, and the moral earnestness and ambition which go with it, that accounts in large part for the well-known fact that most men of marked success in business affairs were country-bred.

Making allowance, however, for all these facts, there remains undoubtedly a serious problem to be solved, and the paper states this problem with clearness and force. There is no doubt that a number of pupils who leave school "to go to work" would remain a year or two longer if they could receive training along the lines of their future vocation. The lower the grade of mind, the less interest it has in general culture, and the more it must be roused to activity by those studies which make directly for the realization of the highest ambition. Such pupils invariably ask: "What's the use of this study? What good will it do me?" This is a healthy instinct; only in such cases it is almost invariably too narrow to make broad training possible. The theory of harmonious development in the case of such pupils is fatal; it drives them out of school. Such pupils must be developed along the lines of their greatest strength, even if such a course means narrow development. The introduction of commercial courses has helped to hold many such pupils. The elective system has also had, in another way, the same effect. A certain number of pupils leave the high school solely because they are tired of book study and are anxious for a more active life. Such pupils may be held by manual training, and their interest in school work may be deepened by laboratory work. They are interested most deeply when they are doing something. It is not fair to say that this type of mind is inferior to the type which readily takes on liberal culture. It is a different type, and a type which the schools have only recently recognized in their course of study.

HOW TO INCREASE THE ATTENDANCE OF BOYS AT THE HIGH SCHOOL

J. K. STABLETON, SUPERINTENDENT OF SCHOOLS, BLOOMINGTON, ILL.

The "political ward boss" in a city knows every voter in his ward, be they many or few, and the political complexion of every one. The principal of a ward school should know every eighth-grade boy in his building, and should classify him so far as the possibilities of his attending the high school are concerned. This should be the work of the early part of the year. The absolute certainties will require but little attention. The probabilities will need to be continually strengthened in their good purposes until they pass over into the class of certainties; and the possibilities, even the almost hopeless ones, must be brought, one by one, into the class of probabilities. Here is where the greatest work is to be done.

After this classification comes a still closer knowledge of each individual in each of the uncertain classes. And the beginning is the question: "Why do you think it is uncertain that you will attend high school

next year?" This opens up the subject, and soon, in a confidential way, the boy will reveal himself fully to the interested teacher, principal, or supervisor.

One boy is not certain that he wishes to go to the high school. His parents would like him to go to the high school, but would not press him. An interest, an overpowering interest if possible, to attend the high school must be aroused in him. Just how to do this will depend on the boy. It may be that the interest of the teacher or supervisor is the one thing that holds him to school, and that no overpowering desire to attend the high school can be awakened in him; in this case we must be content with an interest sufficient to cause him to enter the high school, as he puts it, for one year only. When the situation with a boy is as I have described, then the work of holding him can be carried forward somewhat after the following plan. The teacher must keep in close touch with him; the principal must take opportunities to visit with him and in a friendly way help him to plan a little for his future, and into this planning some high-school work must enter; then the district supervisor or superintendent, having been fully informed as to the boy, can greatly strengthen the pull on the boy for the high school by coming to know him personally and by, in a tactful way, saying: "On to the high school!" Then let the teacher learn from the boy whom among his outside friends he most respects. Then, unknown to the boy, she can ask his friends to join with her in holding him to the high school. There is always some person not connected with the school whose influence, secured thru this word of the teacher, has great weight with the boy.

The fact is that when the forces are thus organized to hold the boy for the high school it is almost impossible for him to get away. When he finds everyone expecting him to attend the high school, he is convinced that it must be the best thing, and so settles it in his own mind that he is to go to the high school, at least for a year or two.

Here is another boy whose father says that he is now able to make money and must go to work. The boy is a bright fellow, manly, and willing to work both at home and at school. His father is not an educated man, has known nothing but hard work all his life, yet by careful managing has come to possess considerable property. To him his boy seems well educated; the father sees the dollars the boy can soon be earning, while he does not clearly see what the high school may mean to the boy.

What shall we do—lose the boy? Never. The teacher, and if need be the principal, must call upon the father and explain to him what the high school has for his boy; must plead with him to give the boy at least one more year in school. It is not best to ask for too much the first time; for after the boy has had one year in the high school, the father may favor another and another, and so on. But the first year is the work we are

considering. After a pleasant call with the father in the interest of his boy, leave him to think it over, with the promise that you will call again. In the meantime hold on to the boy and keep his interest at white heat; and then another visit later on, and the father is converted to the plan of sending his boy to the high school. This boy now passes over from the merest possibility to an absolute certainty, and is thoroly alive to the thought of pursuing his studies another year.

Here is another boy who is not counting on attending the high school. His teacher and his principal know him well. His people have not the means to clothe him and provide him the necessary books for the high school. What else can he do but drop out of school and go to work? He is a splendid fellow and ought to have high-school training. Must he be given up? No. The school people, teacher, principal, and supervisor or district superintendent, one or all, must try to help him find something to do for a part of the time that will give him money for clothing and books, and make it possible for him to be in school a part of each day. Often his school work can be arranged for the forenoon or afternoon, thus giving an unbroken half-day to outside work; but whether it can or cannot be so arranged, help him to get work for part of the time and encourage him to take whatever work he can in school. We must hold on to this boy and keep him encouraged; he will win out in the end.

But this is taking them one at a time and means a vast deal of work. And that is just what I intend it to mean. Boys are saved to the high school more by this personal, hand-to-hand, heart-to-heart work than in any other way. The school that saves the greatest number of boys to the high school does not do it by saving them as a class of boys, but as individuals; and this saving individuals soon begets a class sentiment in favor of the high school that helps to tone up or strengthen the personal work that has been done with individuals.

This work of holding boys for the high school does not belong alone to the eighth grade, but in all the grades there must be a feeling among the teachers that it is a part of their work to inspire the children with a desire or ambition to go on to the high school.

Then, too, the personal work with individual boys must be closely followed up in the grades below the eighth grade. Here is a boy in the sixth or seventh grade who has developed very rapidly physically and mentally. The stage of puberty has come to him early, and the restlessness of the wild goose to be on the go or for something new has taken possession of him. In mere formal work he is not much, if any, the superior of many others in his grade, but in his ability to think and to do he far outstrips them. What shall we do with him? If we hold him too long on the work of the grammar grades, we shall lose him. His mind demands food for thought, such as is not to be found to any great extent below the high school. What shall we do? I do not hesitate to say that

we should help this boy to make the technical connection between his present work and the work of the high school, and, without holding him for the drill and training that the ordinary boy requires, pass him on to the high school. It saves the boy to an education and wrongs no one. Teachers often object to this plan because they fail to see the difference in the mental grasp of this boy and of the other boys.

I once visited a greenhouse where the glass was low down over the beds. A number of varieties of plants were growing in these beds; the seed of all had been planted at the same time; but some had outgrown others and were pressing against the glass and being ruined for want of growing space. These should have been transplanted to other beds where the glass was high above, that they might have room to reach upward. Just so with boys; not only must they each be carefully tended, but at the proper time for each individual boy he must be transplanted, that his development may not be retarded and that he may not lose interest in the work of the grades above him. The plant that presses too long against the pane is distorted and loses its value. Is not the same true of the boy?

Give the slow boy time without upbraiding him; keep close to him that he may not lose faith in himself. Do not lose him because he is not developing just as you think he should; give him time, hold on to him. A teacher once said to me, in speaking of boys in the eighth grade: "We get rid of all those of mediocre ability by working them out, and thus save a class of choice intellects for the high school." When boys are just entering the adolescent period of life, it would take an all-wise teacher to tell who are and who are not the boys of mediocre ability; so we should not attempt this impossible classification of what the future alone can reveal, but should hold on to all of them.

In this way I might give case after case typical of the boys that belong to the class of uncertainties who can be held for the high school only thru the persistent efforts of either the teacher, principal, or supervisor, or of all of these.

But says one: "Does it pay to do so much work? It's not a part of our regular business, why should we do it? If we take care of those who wish to go to the high school, it's all we are paid to do." That is putting it on a low basis when we say, "it is doing all we are paid to do;" but, after all, is this taking care of those who wish to go on to the high school, doing all we are paid to do? I think not. A man of means employs a man as his business manager for some important undertaking; possibly it is to take charge of a large manufacturing establishment. Is not this business manager paid to do everything in his power to make the business a success?

The high school is a business investment of the community; in fact, so are all the schools. Are not we who are in charge of the schools

the business managers for the community? Do we not owe it to the community to make the investment pay as high a dividend as possible in the number of boys it trains for useful citizenship? We most certainly do; and we are not first-class business managers if we in any way slight the work commited to us.

In the general management of the higher grades of the grammar school much can be done to interest the pupils in the high school and to give them an intelligent idea of the advantages there offered. Every eighth grade in the city should be invited to spend a day visiting the high school. Certain days can be set apart for these visits, and the eighth-grade visitors, boys and girls, can be so carefully looked after by the high-school teachers and pupils that the day helps to crystallize the desires of the eighth-grade pupils to enter the high school at the opening of the following term. In fact, this visiting the high school begets in the eighth-grade classes a real enthusiasm in favor of the high school. Ordinarily it seems best to have these eighth-grade visitors spend the day in seeing the regular work, each one being escorted from class to class by a high-school pupil. However, in some high schools a special eighth-grade day is held, and a program is given for the eighth-grade pupils and their parents. This does not appeal to me as a better plan. But the fact is that anything we can do to bring the eighth-grade pupils into close touch with the high school lessens the distance between them, and thus saves a greater number of eighth-grade pupils to the high school.

At some time during the latter half of the eighth-grade year printed high-school courses of study should be given to every pupil, and, with these courses of study in the hands of the pupils, someone—a supervisor, district superintendent, or some high-school officer—should talk over and explain the work of the high school, and give the pupils the privilege of asking questions about it. This is very helpful indeed, and adds much to an intelligent sentiment in favor of the high school.

Not only should pupils have the course of study explained to them, but it is well to call the parents of these pupils together to explain to them the work of the high school. Many even of those who wish their children to enter the high school have but a very limited knowledge of what the high school really is. All of this is building sentiment in favor of the high school, or, in other words, creating an atmosphere for high-school work, which atmosphere cannot fail to have a helpful effect on the eighth-grade boys, and the lack of which makes the work of holding the boys for the high school doubly heavy.

All this planning and all the personal work of which I have spoken presuppose school principals, supervisors, and teachers of the higher grades well fitted by temperament and training to do this work. I doubt not that all of us recognize the fact that there are some teachers in these

grades who inspire every boy that comes under their touch with the desire for the high school or for a wider education; and that there is another class of these teachers, principals, or supervisors who have none of this power—strong teachers in many ways, but hard on boys of this age. A boy can often be held for the high school by transferring him from a teacher of this type to one of the other type. Where lies the fault? Who can tell? I think possibly a boy of twelve years gave me the correct answer when he said: "Mr. Stableton, she just don't know what a kid likes, that's the trouble."

Have you read of David in James Lane Allen's *Reign of Law?* I picture to myself David, as he stood with his scythe in the old briar path, tall, angular, ungainly, half-clad for a back-woods Kentucky boy of that day. I can see the disappointed father and the bullet-headed mother who know not their son and set no value on him. I can see David a few days later at the church; a visiting professor is telling them of a college soon to be opened at Lexington, and the great opportunities it would offer young men. David is drinking it all in, and is thinking, planning, deciding; the decisions of that hour are to affect his whole after-life. It is Sunday afternoon, a number of neighbors have called at David's home, and are talking about the professor's lecture. They ask David's father and mother if they are going to send David to college; but his parents shamefacedly make no reply. The neighbors have gone home. David's father and mother talk to each other as they would not dare talk to their neighbors; the father wishes he had a son fit to send to college; the mother says she always "knowed" there was nothing in David, and the father says he always "knowed" so too; they are without hope in their boy. Just then David comes in, bashful, awkward, hesitating, and then, wonder of wonders, he tells them of his decision to go to college; that it is made, and that they must not attempt to turn him from it; for he has settled the matter that he is going to the college at Lexington. They had not known their boy; and they are not the only parents who do not know their boy at this time of life; and there are many teachers handling boys of this age whom they do not know and understand; and for this reason they fail to enter into the boy's life and to direct aright.

Does not the boy long for some friend—his superior, man or woman—in whom he can trust; not one ready to ask him impertinent questions, not one who mistrusts him, and whose very manner jars on the boy's highly sensitive nerves; but a friend who loves boys, not because they are without fault, but who loves them with their faults with a love that will stimulate them to overcome their faults? This friend they know intuitively they can trust not to question them too closely, and yet they are free to tell him almost everything that comes into their lives. Why is it? Is it not because this friend has somewhat of common-sense linked with such a big sympathy for boy life that by mere suggestion he puts them in

harmony with himself? Does not his very presence suggest the right attitude in the boy?

It is not a difficult thing to come to a boy's confidence at this period of his life, and it is an enjoyable companionship to live near him; in fact, to know him is but to enjoy him. Several years ago I heard Edward Everett Hale preach a sermon. His theme was the enjoyment of God. He said that the answer to the first question in the old catechism had never been improved upon: "What is the chief end of man?" Answer: "To glorify God and enjoy him forever." And then he said, "especially to enjoy Him." Here is much of the secret of dealing with adolescent boys; it is not only to know them physically, mentally, spiritually, and in their environment, but it is to cultivate that within ourselves which enables us to enjoy them.

I do not believe the ability to interest, control, and inspire adolescent boys is all a gift. Natural aptitude there no doubt is, but he who is skillful in the work has become so by a careful study of boys and a close training of himself. And there are those, both men and women, who seem possessed of a power over boys at this time of life which to the ordinary observer is almost wonderful. Could we secure for grammar-grade teachers and for high-school teachers those who possess this ability in so marked a degree, one of the most difficult problems of holding boys for the high school would be solved — grammar-grade teachers to interest, control, and inspire the boys with a desire to go to the high school; high-grade teachers strong and sympathetic, inviting the boys to come on. And may I stop one moment to say that it is often an unfortunate thing for adolescent boys and girls that young men and women, fresh from colleges or universities, untrained in the actual work of teaching, and too often unconscious of the critical period of life thru which the boys and girls at this age are passing, are employed to teach in our grammar grades and high schools. They have the information our high-school teachers must possess, but they lack that knowledge of boy life so necessary to deal wisely with boys at this stage of their development.

While courses of study must contain food suited to this stage of mental growth, above all we need for teachers great, warm-hearted, common-sense men and women; for there is nothing that can shape the character of an adolescent boy, lifting him above himself and inspiring him to nobler things, like the thrilling touch of a strong, warm-hearted, sympathetic personality.

For, after all things have been considered that tend to carry the boys over from the grammar grades to the high school, the greatest of all is the work done by these great-hearted, masterful teachers, whether men or women, whose intimate knowledge of the awakening period of adolescence and whose keen appreciation of the same enable them to work along broad lines that continually inspire the boys to higher things.

DISCUSSION

SELF-DIRECTION AS A MOTIVE FOR INCREASING ATTENDANCE

COLIN A. SCOTT, PROFESSOR OF PSYCHOLOGY, BOSTON NORMAL SCHOOL, BOSTON, MASS.

Superintendent Stableton's advocacy of strenuous, almost evangelical, educational advertising for the high school reminds us of what we already have four years later, when competing institutions use every means to convince the youth of the advantages of a college course. When these methods do not descend to mere educational drumming, they are without doubt useful both to the boy and the community.

The question, however, still remains after every attempt to portray the advantages of a high-school education. There are still left pupils who do not wish to go on, even for a year. It is this class of pupils who are able to see the disadvantages of a high-school course that we should, if we are wise, observe with the closest scrutiny. Even if we succeed in converting them outwardly, we may not have done the best either for them or for the high school. It is possible that many of those who actually attend the higher institutions belong to this class. Some years ago I had in writing an expression from about five hundred of those belonging to the entering class of the Chicago Normal School, which convinced me of this possibility. Of this class there were actually 45 per cent. who claimed that they were going to that school, not because they really desired to do so, but because they did not see what else they could do. This state of affairs exists also in the first year of the high school, and largely accounts for the drop in attendance observed at this time. To fill up our schools with pupils of this type is to degrade the quality of the courses that can possibly be offered, since the eager attitude is lacking, and to fill the higher circles of society with a race of pseudo-intellectual pessimists.

This condition no doubt depends upon a variety of causes. Ill-health, hereditary inertia, the stupefying effect of bad teaching in the grades, enter in. But, apart from these, and if not more important, at least more manageable, is the character of the high school itself in comparison with the opportunities which loom up big with the promise of freedom before the boy who desires at this stage to attack what seem to him the real problems of existence.

I have no doubt that the variety of different high schools, the manual-training school, and the variety of courses in the older type of schools meet the case of a considerable number. The statistics of the growth of attendance at these institutions point in this direction; but electives, however varied, have always one fatal feature. Each one may still be as rigid, and is generally assumed to be as rigid, as any course that was ever offered at any time. Modern electives are like the ready-made clothes of many sizes, and, altho vastly superior to the old-fashioned single garment into which everyone had to crawl, are yet far from fitting all the needs, and even many of the most vital needs, of individual modern minds. A stirring boy of the eighth grade wants to help make his own spiritual clothes. He wants to feel that he is getting his hand in; and too frequently it is because the high school offers no opportunities for such constructiveness of life as those for which he feels himself yearning, that he strikes out boldly into what seems to him a larger sphere. But surely this is the very boy of all others that we would wish to save for the high school, even if some of those more easily won by the enthusiasm of conversion methods should be allowed to go; and in this I am sure Superintendent Stableton will agree.

But why, it may be asked, does such a boy not see, or why can he not be brought to see, that the courses in Latin, English, science, etc., are just those that prepare him for anything he may want in life? Alas, the argument is too fine. The boy is longing for self-control. He already has ideas, such as they are. He hastens to put them into effect, to incarnate, however rudely, his budding schemes. There are stages in the growth of the practical life as well as in the intellectual, and at the lower stages it is impossible to see

that the things of higher culture have any value for the purposes and plans which now occupy the brain. The only practical thing to do is to meet this instinct where it really exists. If our curriculized material in Latin construction, mathematical construction, iron construction, wood construction, are too differentiated for this type of boy, let us give him a chance in life construction; and by this we must mean that the actual plans and purposes of the boy, however unacademic, be taken as the material to be educated, and the forms be fitted to these concrete actualities as best they can.

In the case of the boy who will, for a part of his time at least, let him make his own time-table and his own course of study. If this course is not at present in the books, or even lies entirely outside of the possibility of books, it does not follow that it may not be real and full of life. I would not specialize this notion by calling it original research, tho no doubt it partakes of something of its spirit. That such work could be original is quite certain, but this is not a necessary characteristic. The essential point is that the boy stakes himself on something that he has at heart, no matter where he may have picked it up; that he feels himself a cause and learns a little of the joys as well as the anxieties of real control.

Such schemes will rarely be purely individual. In order to withstand inner temptation and overcome outer difficulties, a social relationship will rise up almost spontaneously. Here comes the opportunity to influence others and be influenced by them, from which are wrested the difficult secrets of masterhood. This becomes true self-government based on real needs and the sense of sovereignty, and will parallel very closely the conditions which are actually found in life in democratic communities, where it is left to the individual to say what he shall do, but where the community passes judgment upon his output. It therefore avoids the disadvantage of using motives and building up habits in school that have no counterpart in the larger school of life.

INFLUENCE OF MEN AND WOMEN TEACHERS

SANFORD BELL, PROFESSOR OF EDUCATION, UNIVERSITY OF COLORADO, BOULDER, COLO.

Five hundred and forty-three men and 488 women have testified to me concerning the teacher who did them most good. These people received their schooling between the years 1870 and 1896 in a section of the middle West where at that time the general distribution of teachers was approximately forty-one men to fifty-nine women. All of the men and all but two of the women had had teachers of both sexes. On the whole, they had come under the influence of more women teachers than men teachers, thus giving the women the advantage in opportunities for doing good. Notwithstanding this, 81 per cent. of the men and 50 per cent. of the women testify in favor of men teachers. The kinds of influences named are such as the moral uplift and inspiration, the stimulus to the intellectual awakening, and the spur to scholarship, help in getting a clutch upon the great vital issues of life, personal kindness, special interest, encouragement at crises, sympathy when things seemed crushing, self-reliance, hints in social graces, etc.

Among the men who testified, women teachers had led in none of these influences; among the women they had led only in personal kindness, self-reliance, and social help. All thru the thousand testimonies is abundant evidence, in the form both of explicit statement and of implicit suggestion, that the influence which was felt to be the best was not the effect of subject-matter taught, nor disciplinary drill, but the effect of the personality of the teacher. The following are typical expressions: "He was my ideal, and I wanted to be like him;" "he laid the very foundation of my character;" "he was grand, understood people and could manage them; was masterful — he could do things;" "he was a noble, dignified leader among men;" "he was fearless of opinion in doing right;" "he saw the beauty in everything;" "he taught me the dignity of duty;" "he set me afire;"

"I wanted to be the greatest and best man in the world." "She inspired me to everything good;" "by her purity of life;" "she was so quiet, lady-like, and controlled;" "gave me a taste for the higher, more refined and beautiful life;" "she was a pure, tender, noble, beautiful, sweet Christian."

With both sexes, the man teacher who had done most good was one who to a high degree was the incarnation of massive strength and masterfulness in relation to vitally significant things. Vigor, courage, independence, fearlessness, ability to do, ability to lead, are the aggressive manly virtues emphasized. Purity, refinement, beauty of spirit, self-control, tenderness, kindness, sweetness, patience, are the passive feminine virtues admired in the favorite women teachers.

Eighty per cent. of the thousand who testified received this most helpful influence during adolescence. The period of greatest susceptibility for good is at fourteen in girls and sixteen in boys. This, taken in connection with the above facts, points in favor of men teachers for adolescents. We are not justified in making the general statement that men are better teachers than women for children of all ages. Up to the age of nine the child needs mothering and the tender sympathetic patience so necessary in giving him his alphabets of life's useful habits. Women are better teachers than men for this period of life. From nine to adolescence both sexes are equally good teachers. During adolescence the men seem to be the better teachers. During all periods the child needs the influence of both sexes.

The advantage of men teachers for adolescents lies in the fact that the adolescent needs powerful, masterful leaders; and thus far in racial advance men have been the leaders. He feels broadly and keenly the problems of life, and his growing strength to meet them. It is the most rapid formation period of life, when the influence of massive strength and the aggressive virtues are needed. The adolescent is a hero-worshiper for racial as well as for individual reasons. During childhood he learns the necessary automatic adjustments to the general conditions of existence. At adolescence he is inspired to an aggressive mastery over special conditions of existence leading to advance, growth, development, evolution.

Twin-born at this time are the instincts to lead and to follow. All racial advance has been made by the leaders of men. He who by power, originality, courage, endurance, or ability of any sort could hit upon a better way for himself and fellows, survived. On the other hand, those who were able to follow such a leader survived, and others were cut off. These two instincts are not antagonistic, except in their very superficial relations. Both are very powerful in the adolescent. The following by adolescents is very different from the following by children. The latter is prompted by dependence and helplessness; the former, by co-operation and helpfulness.

Nearly all genuine racial advance has been made by adolescents. They are fundamentally original until made commonplace by conformity. By nature they are not ready for conformity; they are prophets, not priests. They love power, for they feel its freshness and significance developing within them. They love the man of power, the man of ability, the masterful man. Such men they need for their teachers. Such men they will follow without artificial inducements. There is no allegiance so whole, intense, self-sacrificing, loyal, as adolescent allegiance. The man of power will be their teacher, whether in the school-room or out. Him alone will they follow. Him will they follow as long as he is their superior in masterfulness. After that they will be followed. Put such men in our schoolrooms, and our youth will storm doors and walls to get in. At present not enough such men are there.

But if the adolescents of both sexes do need the massive strength of masterful men, the example and encouragement of the leaders among men, the influence of the masculine, aggressive virtues, they also need the less spectacular, but none the less essential, influence of the refining, inspiring, beautifying virtues of the leaders among women. Naturally, it seems to me, the more decisive, aggressive influences of men who command

admiration and discipleship thru genuine manly power should lead during the early adolescent years; and after it has effected the general rugged outline of the youth's character, this should be toned and refined and beautified by the influence of noble womanhood.

In conclusion: The women teachers seem best for the period of childhood; both sexes equally good for the period from nine to thirteen; men for adolescents. The influence of both is needed for all ages.

PSYCHIC ARREST IN ADOLESCENCE

G. STANLEY HALL, PRESIDENT OF CLARK UNIVERSITY, WORCESTER, MASS.

Mental development after puberty is much more uncertain than before. The first twelve years of life represent larger and more fundamental qualities. Adolescence adds a new story, less stable, very liable to arrest at any stage. It is a period of reconstruction and sometimes revolution. Both parts and powers often develop disproportionately, so that cohesion is weakened and psychic unity impaired. This makes nearly the whole post-pubic period critical, peculiarly exposed to dangers from without, because it is so plastic and susceptible, and still more so because the growth forces that push youth on toward maturity are so liable to show signs of exhaustion before their work is finished.

Hence it follows that length of the growing period is one of the most important factors in development. Lower races often stop short when sexual maturity is achieved. John Fiske's chief contribution to evolution was in calling attention to the fact that the higher the species the larger the proportion of its average life that was spent in attaining maturity. The lowest creatures mature very speedily, in one-twentieth of their average length of life, while man requires at least a third. I urge a law for adolescence which is the infancy of our higher life. In the best individuals and races this is longest, and we should lengthen to its maximum this most educable of periods in which all conscious training began. Our youth must continue its apprenticeship to life as long as growth makes this profitable for their further development.

Now, the world is full of laggards who have been arrested, or perverted, at every stage of this toilsome, devious, complex, excelsior pathway upward. There are gamins, hoboes, hoodlums, rowdies, vagrants, "mattoids," as Lombroso calls them; "young leaguers," as they are termed in Sweden; vagabonds, spendthrifts, dudes, egoists, dullards, who are now being gathered into special schools; to say nothing of dements, idiots, and criminals, who fill the institutions prepared for them. There are very many degrees of failure. Those whose childhood was full of promise in grammar school, high school, or college begin to lapse, disappointing the fond expectations of friends and parents, instead of fulfilling their own early, or their friends', high ambition. They drop into humble stations

and are content with simple duties and a livelihood. Others are blasé and quite indifferent, lose enthusiasm; and what is youth without it? Others come up to years of discretion having lost their innocence before they know what purity is. Here too, perhaps, we may class the 289 Prussian students who between the years 1885 and 1889 committed suicide. At another stage, perhaps near incipiency, are school children in their teens who appear in the morbidity tables suffering from headaches, sleeplessness, chlorosis, imperfect appetite; nascent stammerers, the overanxious, sufferers from slight cardiac, hysterical, epileptic, or periodic troubles, but with no very overt or flagrant symptoms. It is upon these classes that pedagogical pathology and therapeutics are based, which are already beginning to broaden our ideas so that education may be preventive as well as curative.

Teachers interested in these things owe a new debt, which they will be sure to recognize, to alienists. It is especially within the last few years that pubertal weak-mindedness, under the name of *dementia praecox*, has attracted great attention; and I am glad to be followed by Dr. Meyer, who has done more to give this subject the place it belongs in American clinics and hospitals than anyone else. In the Worcester Hospital for the Insane, the scientific work of which he reorganized, a little over one-fifth of all the inmates are youths of this class. Of course, hospital patients have passed the subtler early stages which abound in our schools, and the records of the beginnings of their decline are very hard to trace; indeed, even specialists in medicine have only lately begun to realize that their profession rests on a study of adult diseases, supplemented largely in the past century by new specialists devoted to the distempers of children; but there has been a gap in our knowledge of the stage when youth begins to lose liability for infantile diseases without having acquired full liability for those of maturity. Thus it happens that, according to the conceptions of Marro and Wille, puberty gives a special character to all its diseases. Kraepelin, who has best studied such cases, while discriminating three different forms, each with almost innumerable symptoms, lays chief stress on the mode of termination, which is likely to be dementia. I suggest it is an error to base a scientific term upon a most frequent outcome of a disease, for by this principle general paralysis might be termed thanatic decay, because so likely to end in death. A negative principle is like Hartmann's *Philosophy of the Unconscious*—identifying things by darkening all distinctions. What we chiefly want are detailed paradigms of premature decay. Another error of Kraepelin's is that, baffled in his efforts to find cause and first stages of genesis, or to find the pathology of brain lesion, he has recourse to the desperate hypothesis of a toxic agent, altho this is utterly undemonstrable.

Adolescence is a period of change, when the soul is everything by turns and nothing long. It explores the whole gamut of feeling, will,

and thought. There are spells of almost invincible laziness, both of mind and body, and restlessness and mobility and utter silliness, verbigeration, idiotic nonsense, imitativeness, suggestion, and also morbid obstinacy and sympathy. Supersensitiveness is succeeded by carelessness; excessive conscientiousness, by immorality. But when any of these become fixed or stereotyped or excessive, so that plans, harmony, and unity are upset, we have the salient symptoms of morbid arrest.

The practical suggestions are: (1) To make the school interesting, vital rather than mechanical; to exercise all the powers rather than memory alone; to avoid strain and overwork. These can only mitigate, because such degenerations are not largely traceable to school. (2) We need schools for dullards or slow children, both for their own sake and to relieve the school of the great strain of carrying the lower tenth or twentieth of the class, so that teachers may give their attention to the average of ability in their rooms, rather than to the average child, and work for the upper half fully as much as for the lower. (3) These cases immensely reinforce all arguments for individual study and care, especially in the upper grammar and high-school courses. There should be in every high school someone familiar with the literature and symptoms of arrest, in order that by counsel, conference with parents, and resourceful advice, prevention may be secured. (4) Altho here I speak with deference to special authority, it seems to me, from considerable recent hospital observation of these cases, that many of them would be greatly improved, and their chances for amelioration increased, if there could be special institutions for them.

DISCUSSION

Adolf Meyer, M. D., director of New York Pathological Institute, Ward's Island, New York, N. Y.—A short time ago I was asked by a former dean of a prominent American college whether I did not think that alcohol had a good rôle in mankind in weeding out those who are not able to face the conditions of the world. In the same way one might ask whether what Dr. Hall has so graphically pictured to us is not nature's way of weeding out the unfit.

For a teacher and a physician this attitude would never do. Our working hypothesis must imply positive and inspiring activity. The progress in psychiatry during the last decade has clearly shown that what we need is to turn from generalizing attitudes to a concientious observation and careful valuation of actual facts, to definite chains of causation, if we wish to learn something. General paresis, a disease much dreaded and carrying off up to 14 per cent. of the men admitted to the hospitals for the insane, is now fairly definitely traced to infection which may be avoided by the individual, whereas, to this day, a great part of the profession and public opinion believe it to be the consequence of overwork and of city life. Over such generalities, the only chance to prevent this disease is obscured. Similar efforts to reduce the generalities like "overwork," "stress," and "poor make-up" to definite casual factors must be our aim in the other forms, as far as this is possible.

Dr. Hall has outlined a topic of much concern to us all, and it will become more

and more important in a measure as we shall be put under the moral obligation of prevention.

As an alienist, I divide the arrest of development during adolescence into forms of imbecility and constitutional inferiority, and into actual disorders of adolescence. Constitutional inferiority represents the persistence or cropping out of signs of defect in one of the many directions of human development, as evidence of poor endowment, or of scars produced by disease or mismanagement in early childhood. In a large number we are unable as yet to describe the conditions which might figure as real causes; at the same time, we know the difficulty in influencing these defects.

What concerns us much more is the second group, which seems to develop from adolescence itself, from conditions which are still open to influence. Even here part of the trouble is, as it were, a simple perversion or stunting of growth of essential components of our personality. But quite a few causes seem to be avoidable, which we can do something to forestall.

Before all you must free yourselves of the idea that insanity is something utterly different from simple nervousness, lack of balance, and so-called nervous breakdown. Some forms of insanity may appear as if a poison, such as alcohol, or other direct damages of the brain, brought in foreign elements; but the types of adolescent deterioration can very largely be traced to disharmonies of thought, of habits, and of interests which bring about a stunting in one direction or another. It is true that, during the disease, peculiar physical changes take place in the circulation, and in striking variations of weight, which has called for the theory of Kraepelin that we deal with a disease of metabolism. Unfortunately, physicians are rarely in a position really to study the candidates of deterioration during the relatively healthy days. We see them when the foundation of the peculiar, fantastically religious, mystical, or hypochondriacal or fretful interpretations or imaginations is already in the foreground and has roused the fears of the family. I read out of the accounts of the friends many of the traits which have been insisted upon as marking the final outcome of the deterioration — a dilapidation of interests, erratic attention, social indifference. Before all I miss a sense for actuality, a living with life as it is and an enjoying the opportunities that are within reach. Where flights of thought rise above indifference in such individuals, they naturally suffer from not being adapted to actuality. In the ambitious we see the features of daydream rather than of strength. Virtue and social emotions remain abstract and in exalted words. Many of these weaklings become conscious of the contrast between their words and their nature. They become self-conscious, suspicious of being discovered, and drift into solitude. Abnormal hankerings fail to be corrected there by a healthy spirit of social and other activity; the touch with actuality is lost more and more, and over a shock or some disappointment, or a setback in general health, the poor frame of judgment gives way, and the person loses balance. The eagerness with which hypnotism, mesmerism, mystic powers, and the unreal are elaborated into delusions and depended upon for explanation of the peculiar sensations connected with disordered circulation, nervous heart, the nervous excitability shown by increased reflexes, feelings of uneasiness and anxiety, and unusual intestinal and sexual sensations, seems to me to show the great danger of all half-understood things which are not brought to the test of actuality. An aversion to actuality seems to lie in the trend of much modern teaching.

The emphasis of nature study does perhaps much to bring a healthy turn into education. But we need more; we need greater wholesomeness in the training for human relations and aspirations; a better knowledge of what is likely to rouse a sound interest even in those who are naturally careless and indifferent, and otherwise tickled merely by the sensational or by what gratifies crude emotions; we need a preparation for actual life, not for dream existence. What is called "new thought," tho to a large extent a mere revival of the food for the eternal gullible, may do much good where it incidentally

encourages healthy instinct. But it is like strong wine — a questionable article of food, sometimes a useful drug, but really unfitting one for a good digestion and assimilation of what makes man the master of nature. Too many suffer from the effects of intoxication or the untimely use of these mental stimulants.

The greatest stumbling-block is undoubtedly that which stands in the way of the development of sexual maturity in that broad and lofty sense of becoming the originators of a better race. That which in actuality is the center of the highest altruistic possibilities of mankind is allowed to be a social playground of chance, fed by dime novels and literature of doubtful adventures; fashions in dress and in social customs usher the young precociously into a world in which even too many adults fail. Abnormal responses lead to abnormal seclusiveness, and quack literature nurtures a fear and hopelessness, and frequently wrecks the chances of a timely reconstruction.

Don't let us say that this is merely one of nature's methods of weeding out the unfit. Among the twenty-five thousand persons who are today in the public and private institutions of New York state alone, there are many brilliant hopes buried, largely owing to a lack of knowledge of what some people need in the way of social and personal hygiene. Remember that some of the most illustrious members of the race have been dangerously near the borderland of insanity, and altho they seem to have been great, they showed obvious traces of the same misled instincts that have completely wrecked others. Are such people not worth our help? Should not the home, the press, and the school know these dangers, and shape their ethics and methods accordingly?

This is the practical lesson to be drawn from the theory of degeneracy which is spread into immature minds as a doctrine of fatalism, so that even high-school pupils excuse themselves in some such way as: "I can't help this. It is heredity in the family." Part of this may be sadly true. But it is the duty of pedagogy and of psychiatry to distinguish what is to be accepted as inevitable from what is open to correction. We have faith in gymnastics for the correction of physical defects. Let us devise more efficient gymnastics which lead us heartily to enjoy actuality, instinctively to shrink from anti-social ideals and aimless fictions, and to get time for an unsophisticated growth. For this I believe with Dr. Hall that we need special provisions, and perhaps even special institutions. It will be necessary to select teachers with especial care, to frame the course as a training in life-habits rather than in schooling as ordinarily understood. We must keep these classes as free from a stigma as possible.

GEORGE E. DAWSON, professor of psychology, Hartford School of Religious Pedagogy.—As may be inferred from President Hall's suggestive paper, the possibilities of psychic arrest are doubtless as numerous as are the possibilities of growth. Of all these possibilities, however, the average teacher is in a position to note only the more general and obvious. Typical of such, according to my own experience, are the following:

1. More or less general arrest. Here belong the listless, apathetic, indifferent, dull students. The causes producing this are often beyond the reach of the ordinary schoolroom. Maladjustment of the student to his work, intellectual confusion, emotional waste due to worry, and excessive fatigue are often involved, however. These it is within the power of the teacher to remove.

2. Arrest in the power of mentation. This is characterized by vagueness of expression, diffuseness and incoherence of ideas, impracticable and visionary notions. The principal cause is our excessively symbolic education, by which the student gets the symbols of thought faster than he gets the experience to render these symbols intelligible to him. The remedy is more natural science, more manual activity, more contact with real things.

3. Arrest in the feelings relating to self. This takes two forms — exaggerated self-regard and exaggerated self-depreciation. The symptoms of the former are self-conceit, boastfulness, contentiousness, etc.; and of the latter, self-distrust, shrinking from diffi-

culties, oversensitiveness, and suspicion. The cause is often excessive emulation, the marking system, class honors, etc., and wrongly assigned tasks, discouragement, harshness, and general selfishness in the teacher. The school should neither stimulate nor wound the student's pride unduly. It is the very center of the soul's gravity.

4. Sexual arrest. The normal maturing of the sexual life in adolescence is one of the principal objects of nature. The ideas and feelings relating to the opposite sex express this development on the psychical side. Precocious functioning of the sexual life, physically, produces arrest in body-growth. There is just as much reason to suppose that precocious functioning of the sexual life, psychically, produces arrest of the soul. The social environment of school life, example and precept of teachers, and subject-matter of education should combine to prolong the ripening process of sexual adolescence.

DEPARTMENT OF PHYSICAL EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 8, 1903

The meeting was called to order at 9:30 A. M., by the president, Dr. William O. Krohn, Chicago, Ill.

Some announcements of receptions and excursions to be given in the interests of the department were made. Then followed the president's address, upon "Physical Education and Brain-Building."

The next speaker in order was Dr. E. W. Lyttle, inspector of schools, University of the State of New York, Albany, N. Y., who addressed the meeting upon "The Place of Physical Education in the Curriculum—Should it Be Fundamental or Incidental?"

Following was a symposium: "How to Improve Public-School Gymnastics." The speakers who took part were: Miss A. C. Skeele, of the State Normal School, North Adams, Mass.; Miss Edith Maclure Love, director of woman's gymnasium, State Normal School, Terre Haute, Ind.; Miss Mabel L. Pray, director of physical training, public schools, Toledo, O.; and Miss Nina B. Lamkin, of the Jewish Training School, Chicago, Ill.

A committee on nominations was appointed as follows:

Miss Mabel L. Pray, Toledo, O. Miss Edith M. Love, Terre Haute, Ind.
E. W. Lyttle, Albany, N. Y.

The meeting then adjourned to meet at 2:30 P. M., in Mechanics Hall, where an exhibition of Swedish gymnastics was given.

SECOND SESSION.—FRIDAY, JULY 10

The meeting was called to order at 9:30 A. M., by the president, who spoke on behalf of the department, expressing thanks for, and the highest appreciation of, the sincere courtesy, warm cordiality, and hospitality on the part of local support and management.

The following report of the Committee on Resolutions regarding the future policy or aims of the department was read and adopted:

Resolved, That the president of the Department of Physical Education be empowered to appoint the following committees to report at the next annual meeting, or as soon thereafter as possible:

1. A committee of physicians to report on the proper scope and the value of medical inspection in public schools.

2. A committee to ascertain what is being done in cities of 20,000 inhabitants and over to provide systematic physical training for public-school children.

3. A committee to formulate plans by which physical training in our schools may be increased and made more productive of tangible results.

The report of the Committee on Nominations of officers for the ensuing year was submitted. The following officers were elected:

President—William O. Krohn, Chicago, Ill.
First Vice-President—Thomas D. Wood, Columbia University, New York city.
Second Vice-President—Miss Rebecca Stoneroad, Washington, D. C.
Secretary—Baroness Rose Posse, Boston, Mass.

The program was opened with a paper upon "Tests of Efficiency of a Normal School of Gymnastics," by Baroness Rose Posse, director of the Posse Gymnasium, Boston,

Mass. The discussion was led by Dr. Walter Channing, Michael Anagnos, and Dr. Elizabeth T. Gray.

Dr. William G. Anderson, of Yale University, read a paper upon "Physical Training for the Mass of Students," and Dr. F. N. Whittier, of Bowdoin College, followed upon the same subject. The discussion was led by John R. Kirk, president of the State Normal School, Kirksville, Mo.

Dr. Thomas D. Wood, of Columbia University, followed with a brief paper upon "How to Improve Public-School Gymnastics."

Dr. E. H. Arnold, director of the Normal School of Gymnastics, New Haven, Conn., closed the program with an address on the subject of "The Relation of Physical Training to Other Studies."

The minutes of the two sessions were read and approved, and the meeting adjourned.

ALTA WIGGINS, *Secretary*.

PAPERS AND DISCUSSIONS

PHYSICAL EDUCATION AND BRAIN-BUILDING

WILLIAM O. KROHN, PRESIDENT OF THE DEPARTMENT OF PHYSICAL TRAINING, CHICAGO, ILL.

It is only within the latter days of research and investigation that we have come to know anything of real scientific value concerning the special peculiarities of the nervous system of infancy and childhood, more particularly of the brain. In fact, it is only within the last decade that educators have come to a full realization that children are not little men and women, but that children are children. It has been a hard task to make even some of the most devoted teachers in Uncle Sam's great national schoolhouse believe that child-life is not simply a vest-pocket edition of adult life; that children are not the same in kind as regards action, mental, moral, and physical; that children do differ from adults in kind as well as extent and degree of capacity. Modern child study of the saner sort, and that best of all the true specialties in medicine, pediatrics, have accomplished much in leading us to know the functional as well as the structural peculiarities of the child.

While as yet our knowledge is of necessity immature, still there are some things that we know positively and with definiteness along the line of the nature of the child's nervous system. What value has this knowledge for us who are engaged in the study of physical training with a view of determining the function of our great branch of educational work in developing the nervous system of the child and in building his brain? The purpose of this paper is to sketch in outline the *modus operandi* by which physical training can perform its perfect work in the building of the brain.

I. THE BRAIN AT BIRTH AND DURING EARLY CHILDHOOD

At birth the brain is the most immature of all the great organs of the human body. This is in large part due to the fact that the brain of the child has had little or nothing to do during the pre-natal period; for we know that the child at birth has already exercised but two of his fourteen or fifteen senses, viz., touch and temperature. While we are wont to say from the point of view of the lungs that the bird is the best animal, and from the point of view of the liver that the lion is the best, are we warranted in saying from the point of view of the brain that man is the best animal, especially during the years of infancy and early childhood?

From birth to seven or seven and one-half years of age the brain develops enormously in weight, in function, and in complexity of structure. As any other organ, it increases and develops thru use; it atrophies and dies thru disuse. During the first seven years of child-life the senses are most keenly alive and are most active in response to impressions. As a result of the wonderful activity of the senses in carrying impressions to the brain, thereby inducing the brain to respond almost constantly, the brain develops; its cells enlarge (especially the large pyramidal cells in the gray cortex); the fibers of association increase in complexity and extent—the brain grows. It grows because of the nutrition the body receives. It also grows because of the uses to which it is put. It would die in one or all of its parts from disuse, and it suffers most keenly of all the organs from malnutrition.

At seven and one-half years of age, when the child has been but little over a year in the schools, his brain has attained more than 90 per cent. of its maximum weight (our authorities on this point are Vierordt, Donaldson, and Boyd). After this, the brain increases slowly in weight until about the age of eighteen, when the maximum weight has been attained. Increase of function does not keep abreast with increase in weight, for the brain of the child of eight is practically as large—as heavy—as the brain of the adult. Or, as Clouston puts it:

> The difference between what the brain of a child of eight and the brain of a man of twenty-five can do and can resist is quite indescribable. The organ at these two periods might belong to two different species of animals, so far as its essential qualities go. The unique fact about the nerve-cell is the extreme slowness with which it develops function after its full bulk has been attained. In this it differs from any and every other tissue. We may say that after most of the nerve-cells of the brain have attained their proper shape and full size, it takes them the enormous time of eighteen or nineteen years to attain such functional perfection as they are to arrive at.

What, then, are some of the characteristics of the nervous system, especially the brain of the child?

1. At birth the nervous system is structurally immature, more especially it is functionally immature.

2. Thruout infancy and the earlier years of childhood the nervous system, and more especially the brain, undergoes very rapid structural development.

3. Thruout the entire period of childhood and youth the normal brain undergoes very rapid functional development.

4. We have learned that the structural instability of the immature nerve-cell and the more immature brain-cell of the child makes it more irritable and excitable, and more responsive to stimuli, than the stable, mature nerve-cell of the adult.

It is necessary just here to remind ourselves of the threefold function of the nerve-cell. Nerve-cells exist for three distinct purposes; viz., to generate, to discharge, and to inhibit energy. In any survey of the general scheme of growth we are soon made to see that, of all cells in the body, the cell that develops the higher forms of nervous energy and constitutes the basis of mental activity is the cell that is the slowest in reaching the perfection of function for which it is destined. In other words, the group of nerve-cells most intimately linked and associated with the higher forms of mental activity are the last to generate energy —the last to develop. If these cells remain immature, we have a child with arrested mental development, or imbecility.

II. GROWTH AND DEVELOPMENT OF THE BRAIN

There are two great forces that make for the growth and development of the human brain: first, the brain grows and develops in structure thru proper nutrition; second, the brain grows and develops functionally thru proper methods of education.

With reference to the necessity for proper nutrition of the brain I need only to remind you of some of the nervous diseases that are caused by malnutrition. There are, as you know, distinct types of nervous diseases that are occasioned by partial starvation and partial starvation only. The disease of rickets in children is occasioned solely by lack of sufficient fat in the food of the child; it is a malnutrition disease due to fat starvation. There are also nervous diseases occasioned by carbo-hydrate starvation; that is, due to the lack of sufficient food of the carbo-hydrate group. Likewise there are nervous diseases due to lack of lime salts and lack of acids, such as the fruit juices.

That the brain more especially suffers from insufficient food, from impoverished blood, is due to the fact that, while the brain weighs but one forty-fifth of the rest of the body, it utilizes for the nutrition of its cells one-eighth of the total blood supply; consequently the effects of malnutrition, of fatigue, of excitement, of worry, are shown first in the brain and its activities. We need only to note the anæmic headache— that dull, heavy headache at the top of the head which is always occasioned by poor blood supply. We are often reminded of the great

achievements that have been wrought by students who have lived upon poor food; many are the fairy-tales related of the inventors, poets, and statesmen who won their way to success on a diet of cold potatoes in a garret. But have you ever stopped to consider what these self-same men could have accomplished had they been favored by a more nutritious diet of porterhouse steak? It is practically a truism that if a person lives on a skimmed-milk diet, he will think skimmed-milk thoughts; if he live upon a more nutritious diet, he will be capable of greater and clearer brain effort.

But it is not within the province of this paper to discuss in more than an incidental way the problems of nutrition. Our chief purpose is to present the function of education in building the brain. Of the three functions of the nerve-cell—generation, discharge, and inhibition of nervous energy—I think none is more significant for the teacher than inhibition. The child is at birth a mere bundle of impulses. His first activities are in no sense voluntary. They are simply the results of an overplus of nervous energy.

In the newborn child, as in the newborn animal, the impulsive movements embrace all these spontaneous kickings, rollings, lip-suckings, cooings, jerkings of the head and arms, as well as the comical grimaces, all of which are such a paramount feature of the early weeks of infant life. The little fists are tightly clinched, the arms are continually performing wild gyrations, the hands are moved toward and from the face, toward and from each other, without being prompted by any definite purpose; in fact, nearly every muscle of the body is called into activity without the presence of any sort of external stimulus.

Most of the impulsive movements, indeed nearly all of them, disappear by the end of the child's second year, tho some of them, like yawning or gaping, persist thru life. Seemingly many of the impulsive movements are unexpected by the child itself. He cannot understand their purport, and his surprise at some of them is quite marked and notable.

Impulsive movements are given such free play in childhood because of the feeble powers of inhibition that characterize the nervous system of the young being. Education seeks to develop those inhibitory centers in a measure; i. e., it seeks to cultivate self-control and self-direction; in other words, education seeks to develop the animal child into a personality.

The inhibitory function of the nerve-cell is the last to be developed; the economy of growth is such that the cell first learns to generate energy, then to discharge energy, and lastly it acquires the function of co-ordinating and inhibiting energy. And this is the order in which the functions are needed. No occasion arises for discharging energy until it is first generated, and no occasion can be conceived for the exercise of

the co-ordinating and inhibiting function until the capacity to discharge energy has arisen. All authorities agree that feeble inhibition is one of the chief physiological characteristics of the immature nervous system of early childhood, and is really the most frequent factor in the rise and occasion of nervous diseases in children.

III. SPECIAL FUNCTION OF PHYSICAL EDUCATION IN BUILDING THE BRAIN

I have spoken of the development of inhibition of the nerve-cell as one of the chief purposes of education. Every educational fact and every educational force must contribute to the development of this higher function of the nerve-cell. By inhibition of course we mean inhibition in the broader sense. It includes all that is meant under the terms "self-control" and "self-direction of energy." Just here is the peculiar province of physical training. There is nothing so important, nothing so significant, nothing so vital in the whole scheme of education as the development of the proper self-control, self-direction, and co-ordination of muscular activity. Our whole purpose in our work is to make the child's organism intelligent in its every activity. It is necessary only to indicate that physical training accomplishes, more than any other educational force, the desired ends in this direction. No matter to what school of physical education we belong, our own common purpose and aim is so to fit, so to adjust, so to train the body of the child that it will obey every behest of the will. If a definite movement is willed, the trained organism must execute it. If refraining from certain movements is decreed, then the trained organism must and does obey the behest of will. Thru physical training of the right sort—and physical training only—it is possible for the child in his education to gain absolute control of his muscular system and organize a perfect muscle economy. The result of this systematic training of the body is a well-ordered, well-balanced brain-life.

I cannot refrain from making a statement here that I have made on two former occasions before this department: that I have never seen, in all my experience and observation, a single case of brain disorderliness, of brain slovenliness, that was not benefited by physical training. I need give but one example: Many of you recall the epidemic of chorea that occurred in the *Volkschule* in Vienna some years ago. The mimetic movements, the jerkings and twitchings, absolutely destroyed every effort of the teacher at orderly, systematic work. Practically every child of the school was affected with choreiform movements. This epidemic was overcome; every child was completely cured by special work in physical training. The brain slovenliness and brain disorderliness were eradicated.

Further, we must remember that at birth the child possesses all the brain-cells it will ever have. Brain-cells do not proliferate after birth. If they are not exercised, they entirely drop out of existence, they die,

The problem before us is to educate the entire brain of the child—it is given him for that purpose. We can give him this complete education only when we approach him thru every one of the avenues of sense and educate him into a wide range of motor activity. Life is growth. A brain-cell that does not grow is dead. A brain-cell cannot grow save thru exercise and use. All the brain-cells can be made to grow only when the school and home environments of the child are such as to appeal in every possible way and with sufficient energy to arouse the child's many-sided activity. If a certain group of nerve-cells is uneducated, is allowed to die, then the child becomes mentally and nervously abnormal in just so far. Brain disorderliness is due more to one-sidedness of methods of education than to any other possible cause. This disorderliness, I repeat, can best be overcome by well-adapted, properly adjusted physical exercises.

Of course, as teachers of physical training we must acquaint ourselves with some of the abnormal nerve signs. We must know what it means to see the child with bagginess of the under lids of the eye; we must be enabled to interpret the significance of that condition in the child in which he moves his eyes without moving the head; we must know clearly the significance of the slouching gait, weak hand balance, and slovenly posture. All these are abnormal nerve signs that furnish us clues for our best and most successful lines of work in the great department of physical education. Mental poise cannot exist without perfect physical poise. By continual watchful care, by arduous endeavor in dealing with the children under your tutelage, you will be able to develop a physical poise and physical orderliness of activity that cannot but redound to the highest form of orderly brain development, that cannot help but result in developing the raw material, the untutored child placed in our care at the beginning of school life into that highest type of citizenship, best mentally, best morally, because best physically. And it is this ideal citizenship that we set up as the goal of the educational process in all our American schools.

PLACE OF PHYSICAL EDUCATION IN THE CURRICULUM—SHOULD IT BE FUNDAMENTAL OR INCIDENTAL?

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It is not necessary to prove that the place which physical education now holds in the school curriculum is incidental; but two facts serve to show how very incidental to educational thought and practice is the notion that education should concern itself largely with physical development.

1. The National Bureau of Education, in reporting the number of students in secondary schools receiving instruction in various subjects, makes no report whatever in regard to physical training.

2. An exhaustive search made in 1901, with the able assistance of Mr. Frank C. Hoffman, statistician of the Prudential Insurance Co. of Newark, N. J., failed to reveal that any school or system of schools in the world kept records of the morbidity and mortality of the children instructed. If so small attention is given to hygienic environment, to what may be termed the negative side of physical development, it is hardly possible that the positive side receives much careful consideration.

Briefly, what consideration does physical education receive in our schools; and what consideration should it receive?

In nearly all colleges, and in the better class of private schools, some provision has been made for systematic physical training; but generally this provision has been forced upon the colleges and schools by an outside demand, and has not come as a result of internal growth. Even in the colleges it is more common to find physical education intrusted to a well-known athlete than to a cultured physician. In fact, physicians with the needed athletic training are not easily obtained. In a few of our high schools there is a gymnasium, and in but a few of these schools is found a trained instructor. Nearly all our high schools have football and baseball teams, which at least serve the end that they encourage—vigorous lung exercise on the part of the student body. The grammar schools and primary schools in nearly all our large towns and cities have calisthenics; let us not forget that, and let us be grateful for what we have. But, seriously, we might as well try to feed a boy on charlotte russe as to provide proper physical education from calisthenics. What are calisthenics compared with the wild scrimmage of the football game; with the ability to pitch an outcurve, an incurve, a drop, or an upshoot; with the free chase of hare and hounds? Certainly there is no objection to calisthenics in moderation, or to calisthenics as an introduction to better things; but why stop with calisthenics when the boy wishes to swim, to run, to jump, to wrestle, to box, to fence, to handle a gun, to make tools, to use tools? If education is development, not cram; unfolding, not molding; expansion, not repression, then should educational systems have regard for all the natural activities of youth. If it be urged that great attention to physical development degrades education, makes it materialistic, exalts the physical at the expense of the mental and spiritual, the contention is not sound. The end or purpose of education, not its methods, is what gives it character. If the end be materialistic, if educational purpose stops with the development of a physically perfect man, then only is education degraded; but if the end sought is complete manhood, a body that shall be the obedient servant of a cultured mind, then the highest educational ideals are in no way violated. The end of

the sowing is the harvest of ripened grain, but the first care of the farmer must be healthy root-growth.

It is said that the school, especially the public school, should not attempt a complete education; that it should have regard only to the mental development of the child; that it should leave to the home and to chance the physical side of child-growth. This is exactly what our schools have been doing, and with what results? The weakest schools have been furnishing the world with a large proportion of its strongest men. Seek out the leaders in business, finance, and professional life in our large cities, and find where they received their elementary education. Was it not for the most part in the district or small village school, taught by poorly paid and poorly trained teachers, kept open for hardly half the year?

The very arguments used against a generous provision for physical training in the public schools have been used again and again against all free public education and against every proposed educational extension and improvement.

Those who especially have in charge physical education should make a bold claim; they should assert that their special work is in point of time the most fundamental, and that in the primary, intermediate, and secondary departments of education there should be graded courses of physical training; and the younger the child, the greater should be the emphasis placed on the training of the body. In primary and intermediate schools the teachers of physical and manual training at least should be as numerous as the teachers of the three R's. That early physical training should be for muscular ease, grace, and rhythm, rather than for strength, also for correcting asymmetrical growth in special cases, seems to be demanded by the nature of childhood; also that in all grades there should be generous provision for playgrounds and for outdoor sports. There is every reason why the school playground should be as constantly occupied during school hours as the recitation rooms. As soon as the physique of the child will warrant ordinary youthful sports, baseball, football, swimming, running, jumping should find a place in the educational program. In the period of high-school life the gymnasium may be used more and the employment of the more complex tools encouraged. At this time also military drill may be very properly introduced, especially in a land where every citizen should regard himself as in some sense a soldier. At the age of eighteen or nineteen, after graduating from the high school, the youth should know whether he really wishes to go to college, there to engage in four years of intellectual effort, with physical exercise used as a rational recreation, or prefers the life of a professional baseball or football player. He ought to be saved from the mistake too often made of matriculating at college for the purpose of becoming an athlete. He usually would be saved from this mistake, had

his early physical education been of the proper sort, and did physical education hold a proper and rational place in the curriculum. The repression of physical development in the grammar and high school either drives the boys from school or encourages undue attention to physical education in college. By trying to make the child fit the curriculum, instead of making a curriculum to fit the child, do we not sometimes produce childishness in those who should be men?

He who proposes a revolution must give sound reasons. Can any reasons be found that would justify such radical changes in the curriculum as those proposed? The high average of Athenian culture in the Periclean age has always called forth most praise from those who knew it best. That culture was in part the result of an education as largely physical as it was intellectual.

Up to the time of the empire Rome had no school system. Cicero in *De Republica* says: "Our ancesters did not wish that children should be educated by fixed rules, determined by laws publicly promulgated and made uniform for all." The education that made the early Romans great was evidently not gained from schools, but from family training which concerned itself almost wholly with physical and moral culture; while the education of the later Romans, like the Roman literature, was borrowed from the Greeks. As Roman education came to be neglected in the family and intrusted more to the school, as the Roman citizen felt less the need of military training because barbarians could be hired to do the fighting, physical education was not transferred from the home to the school, but was neglected. Was this neglect of the physical side of education in any way responsible for the division of the Roman empire by those Teutonic races whose physique the Roman Tacitus so highly praised? The question at least seems a fair one.

In hatred of the pagan world the early Christians renounced much of educational value. In preparing for death, they neglected to learn how to live. The body was regarded as an enemy to be subdued; therefore physical education was neglected by the church. Fortunately for education as a whole, fortunately for race-development, unsettled social conditions made military training a necessity. But mediæval education divides itself into physical, intellectual, and manual; the school of the cloister, the school of the camp, and the school of the guild; and not even the statesmanship of a Charlemagne or of an Alfred was able to effect any kind of a fusion, tho the Benedictine monks in a large degree did recognize the importance of manual training. Of course, we may not say that the dark ages resulted from this division of educational aims, but we may clearly see that much confusion and conflict resulted from it, and that Germany and Italy were kept in ferment and discussion until the present century by misunderstandings between church and state. And it was not until the student sometime turned warrior and the warriors began to turn

students that Europe woke from the lethargy of barbarism and entered into the educational heritage bequeathed by Greece and Rome.

Looking now to modern educational practice, these facts seem patent: The men who have made England great have generally been educated in the great public schools, like Eton, Harrow, and Rugby, where field sports receive much attention. It is true that these sports are not provided for in the curriculum, but are left largely in the hands of the boys; but it is none the less true that outdoor play constitutes a real and no small part of the boy's education. Unfortunately, the education that has made great Englishmen is not making England great, because it is the education of the few. According to Mr. George F. Shea, in the *Nineteenth Century*, "76 per cent. of England's population is urban, with the consequence that the healthy outdoor recreations which invigorated the country-bred race of the past are largely replaced by the unnatural, and in part vicious, pleasures afforded to the tired worker in our big cities." These are some of the results: Out of 11,000 men presenting themselves for military service in Manchester in 1889, 8,000 had to be rejected, and of the remaining 3,000 only 1,000 could be put into the regular army. In 1845 the standard of height in the British army was five feet six inches; in 1872 it was one inch less; in 1883, three inches less; and in 1901 permission was given to enlist men as low as five feet. In 1871 out of 1,000 recruits enlisted 159 weighed only 120 pounds, but in 1900 the proportionate number was 301. That the British army falls far behind the German in health and stamina is shown by the circumstance that the constantly non-effective thru illness are over four times more numerous in the British army, and the death-rate nearly four times as great. In Germany, where universal military service has been longest in force, physique has been improving, as is seen by the following facts: Tho the standards have remained unchanged, the rejections of recruits for physical reasons diminished in nine years, from 1878 to 1887, nearly 50 per cent. Other countries—Austria, France, and Italy—that have adopted military systems show like improvement in the general health and physique of enlisted men.

Universal military drill and military service may or may not be desirable, but such facts as those presented argue forcibly for universal physical education.

But statistics of the school as well as of the army tell the same story. In the Education Report of the National Bureau for 1899-1900, p. 1444, we find the following statements from Dr. Schmidt Mounard, of Leipzig, who bases his statements on several years of careful investigation:

> During the first school year the average child gains only two and a half pounds in weight, instead of four pounds as heretofore, and increases only five centimeters in height, instead of seven. . . . . Children who do not go to school until they are seven years old become stronger, and in all other respects are better developed, than those who go to school a year sooner.

In the higher boys' schools, in which the pupils are obliged to practice gymnastic exercises, and in which on such occasions no lessons are taught in the afternoon, the percentage of sufferers from some ailment varies from 20 to 35, whereas in those schools in which there are no compulsory gymnastic exercises, and in which pupils are obliged to study every afternoon, the percentage is as high as 79.

HOW TO IMPROVE PUBLIC-SCHOOL GYMNASTICS

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The conditions which will insure improvement in the gymnastics of the public schools are related in practice, of course, to changes in matter and method of gymnastic instruction. Those who discuss this question would find it as difficult perhaps to agree with reference to modifications to be made as upon the best usages of the present.

School gymnastics should, if the term may be used in this way, be more phylogenitic in character and progression than they are at present; i. e., they should correspond more closely to the motor activities which enabled our ancestors, amphibious and otherwise, from the more remote times to the more recent, to live successfully. The study of organic evolution, and of the life-history and motor habits of animals and men at different stages of development, will give the clue to the types and the sequence of movements and exercises which are best adapted to the different stages of the development of the child.

Closely related to this are changes that may advantageously come in the subjective attitude and conscious interest in the minds of the pupil toward these forms of neuro-muscular activity. This attitude of mind cannot usually be made as fundamental as the movement involved, for obvious reasons; but there may be a certain natural interest in the efforts made, as there is at present in other lines of instruction. The interest and enthusiasm (more particularly in the lower school grades) in the study of nature, of history, and of primitive life are of immense value in elementary education. The gymnastic work may be to a considerable extent, and very beneficially, correlated with the other subjects where modern and vital methods are used.

Again, it is desirable that the pupils should have explained to them the purposes of gymnastics and the beneficial results which are sought, in order that they may co-operate in all possible ways in the processes of their own development.

There is in gymnastic work and in the general physical education of the pupil a splendid chance for the development of individual initiative, self-control, leadership, and other social and moral qualities, for the exercise of which the school too often gives little opportunity of a definite kind. These may be provided thru the fullest possible participation by the pupils of different ages in the selection and organization of exercises

and games, and in definite plans of assistance in the conduct of classes. The play of recess periods and the outdoor exercise should be improved for the most part by the wise suggestion of materials, and how they may be used without lessening in any way, but rather increasing, the joy in and enthusiasm for spontaneous activity. It is desirable for the corrective and antidotal effect of gymnastics in the schoolroom, which should not only counteract unhygienic tendencies, but improve the quality of all school work and make for a better economy of time and energy, that a few vigorous setting-up exercises, with deep-breathing movements, should be given several times a day between class periods, and especially after work which has required close, sustained attention, muscular inaction, and cramped positions of the body.

More important even for the improvement of gymnastics in the schools are the better preparation and training of the general and special teachers who give the instruction in this line. It is essential that the general grade teachers, who must give most of the gymnastic instruction in the elementary schools, should understand the larger aspects and relations of physical education and be trained to give the technical instruction adapted to the needs of their pupils. The special teachers and supervisors of physical education must have a background of general and scientific education which is so important, the technical training and experience which is of course essential, and a devotion to the professional work and the human service accomplished thru it which will inspire their students and the teachers under their supervision to do all which wisdom and judgment indicate as worth the doing.

It is desirable finally, if the work of physical education is to be effective and is to have the recognition, dignity, and influence which it should possess, that this gymnastic training should be made a factor in a larger department of education which shall be concerned with all the health interests of school life.

We may call this larger field physical education and school hygiene, and it should include the investigation of the physical condition and needs of the child, the supervision of the active and passive environment of school which so vitally affects health, the direction of the motor activities involved in physical education and the instruction of pupils in health and hygiene.

TESTS OF THE EFFICIENCY OF A NORMAL SCHOOL OF GYMNASTICS

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Normal schools of gymnastics occupy a somewhat unique place, as they are not the outgrowth of any great public movement, nor have they been established thru municipal action. They have come into existence

thru the energy of private individuals, or thru the interest and appreciation of a few educators or philanthropists.

When normal schools of gymnastics were first started, the pupils had to create positions for themselves. There was practically no demand for teachers, and the first students who went out prepared to teach had to acquaint educators and the public with the need for their work. Those pioneer teachers were as brave as they were wise. They had to start their own schools and show by their work what they intended to accomplish. But the thing that struggles is the thing that succeeds, and your presence here today attests the vigorous growth of this important branch of education.

Commissioner Harris has said:

> In the department of education in the university, the students should be taught how to present a branch of study symbolically, as in the kindergarten; by typical facts, as in the elementary schools; scientifically, as in the secondary schools; comparatively, as in college; as a specialist would investigate it in the post-graduate course.

This very nearly approaches a description of what is done in training teachers of gymnastics. The students take a course which corresponds to a college course, but they will apply their knowledge in all grades of work, in teaching children, youths, and even elderly men and women. Health is the center of interest, and theory and practice go hand in hand.

To teach gymnastics according to the best ideas, one must follow very closely the modern methods which obtain in all forms of educational work. Yet a normal school of gymnastics has a wider field of usefulness than the majority of educational institutions. The subjects taught are not only interesting and valuable in themselves, but they have a more far-reaching effect in that they are studied that they may be scientifically applied to the more important subject of physical training. Gymnastic students study anatomy, not for its sake alone, but in order to give the proper force and direction to physical exercises. So with physics, which doubles in interest when its principles are illustrated by the operations of the bodily mechanism.

In a special normal school the subjects are new to the pupil, so that he must be taught both the subject and the method of teaching it. A person frequenting a gymnasium merely for the benefits of exercise will see only the result, and will not note the method by which such result is obtained; whereas the trained gymnast will find an added pleasure in the work because he knows just what he is trying to accomplish. * * * *

Physical training is a valuable aid in the education of feeble-minded or defective children. The muscular exercise trains the motor centers, and the sluggish brains develop without any conscious mental efforts on the part of the children themselves.

While this effect has been recognized by educators as an advantage to

be derived from manual training, very little regard has been accorded physical training for its good offices. Someone has said that physical training today is where general education stood during the Middle Ages. It is certain that modern physiology opens up to physical trainers a vast sea of knowledge which has never been sounded or crossed. For instance, we hear that increase in lung dimensions is merely nominal until pubescence. This has been adduced from facts about children who have not had the advantage of physical training. Will these facts remain if we give children between the ages of five and twelve graded, systematic gymnastics, where every exercise to be correctly executed must be first of all a breathing exercise?

Again, the brain reaches its full weight as early as at eight or nine years, and the addition in weight is about nine times as great during the first four years as during the second four. Suppose we give work to develop the brain thru muscular activity between the ages of four and eight, what may be the gain in brain weight as compared with the brain of a child who has not had scientific exercise? If by training the hand we may accomplish so much in developing brain centers, there certainly must be a general or gross development of the brain if the whole body be exercised according to a scientific and definite plan. Suppose we give gymnastics to children all thru the nascent periods, putting particular emphasis on exercises that tend to develop the qualities supposed to be characteristic of each period. What will result? It is said that the development of every organ and tissue is of direct significance in the development of the nervous system. Suppose that we regulate this growth by properly applied exercise, so that the correct equilibrium be established, not only between the different parts of the body, but between the body and the mind as well; surely this is not a fanciful idea. The child will then be led to educate himself. He will develop his brain thru his own acts, not by study, but by purely physical processes. The teacher will merely direct his movements so that they may produce the desired results.

These are questions which are certainly of enough importance to receive consideration. This will form part of the research work in the normal school of gymnastics of the future, and the amount accomplished in the solving of such pregnant problems will be one of the tests of its efficiency. The aims of general and special normal schools are alike in that the pupils must be led to acquire the critic's attitude; to develop a desire for research; to judge acurately and correctly of the worth of things, and, perhaps of most importance, to develop the individuality of the student.

One of the best tests of any school's efficiency is the success of its graduates. By success we need not think entirely of notoriety. Many a teacher has been more genuinely successful in some small country town

than one who has had opportunity for showing his ability before a city school board. We have said that a normal school must be able to command success by developing the individuality of its pupils. No graduate will accomplish much who goes out impressed with the idea that in order to succeed he must pattern his work after what he has seen others do. Whoever believes that in his own little school he has met and conquered all the problems pertaining to his future work, and that he has only to go forth to put his ideas into execution, to meet success awaiting his efforts, will be apt to find himself, after the lapse of a few years, in the rear of the race. He must fashion his work according to his surroundings and his pupils. A good example he may have had, but to train all children on one and the same plan is narrowing and fatal to progress. The normal school merely starts the pupil in the right road. Comparison should have been an essential characteristic of his whole course of study. The knowledge he acquires is mainly for reference. All the problems confronting him are new, and according to the efficiency of his training will he be able to meet them.

In considering some of the special ways in which a normal school of gymnastics proves itself efficient, it is apparent that such a school has not served its purpose if it has not practically demonstrated by its course of training that gymastics improve the health and counteract the evil effects to mental strain and overwork. The senior year of the course, with which I am most familiar, is in some respects identical with that taken in the first year of the leading medical schools. There are five hours a day of regular work, and enough outside work to fill an average of at least two more hours. If it were not for the daily practice in the gymnasium, the pupils would find it impossible to accomplish such an amount of work with so little strain. But the effect of the gymnastics is so marked that the entering pupils need not be exceptional physical types of manhood and womanhood in order to finish successfully the course of the school. Many pupils who are physically weak are possessed of superior mental ability. The restoration of such semi-invalids to a condition enabling them to become useful and prominent factors in the world's work amply justifies the extra attention required for the purpose. Students who are strong and able-bodied usually lack harmonious development and co-ordination of movement, so that the two years of physical discipline is especially needed by them.

A very important part of the training of teachers of gymnastics consists in teaching them how to avoid injuring their future pupils. Upon the gymnastic teacher rests a great responsibility; and when we consider the numerous pitfalls in the way of the inexperienced trainer, the wonder grows that so comparatively few cases of injury have been traced directly to gymnasium practice. There was a time when the less the teacher knew of the effects of exercise, the more confidently and zealously he carried

on his work. But the more one studies the human body and the effect of exercise thereon, the more caution he instinctively uses in applying such exercise. We have learned that such seeming trifles as the turning of the hand, the poise of the foot, the inclination of the head, all play a prominent part in helping or hindering the effects we wish to produce, and it is with a feeling akin to awe that we realize that we may control the great vital forces almost at will. We may correct faults, repair damage by building up tissue, take away refuse that is clogging the delicate machinery; indeed, we may clean and regulate the entire system much as the skilled artisan regulates a French clock.

The chief dangers to be avoided in gymnasium work are heart weakness and pelvic weakness. In gymnasia for women there is always the necessity for watching closely the effect of the so-called abdominal exercises. Arch-flexions and abdominal exercises are types of movement which outwardly resemble each other very closely. But therein lies a great opportunity for harm. To give one for the other is to give a movement which causes a great quantity of blood to flow to a certain portion of the body where no provision has been made for its use, or a movement which is intended to act on another part of the body demanding blood which is not there. If the excess of blood sent to the abdominal region (a region well fitted to hold a large amount on account of the great vascular capacity of the membranes) be not disposed of, but allowed to remain to clog the overfatigued muscles, the result may be a diseased condition causing irritation and eventually peritonitis.

Appendicitis may result from too strong abdominal exercises, especially if the pupil has had a tendency to this disease before, or has undergone an operation of the pelvic region. Close questioning should always accompany exercises in such a case, and at the first sign of discomfort this particular kind of movement should be omitted altogether.

The heart must be a constant study. While a weak heart may be strengthened by proper exercise, a perfectly strong one may be weakened and permanently injured by certain violent movements, if no effort is made to counteract their bad effects. For this purpose too much cannot be said in praise of the respiratory exercises practiced by the Swedes. They have an almost instant effect in quieting and regulating the heart-beat.

With regard to games, basket-ball in particular, a great deal should be said. The time is too limited to speak in extenso on this subject. Basket-ball should be played according to the skill, strength, and endurance of the pupils participating. Just here I would call attention to one difference between gymnastics and games. In the latter the effect is almost always that of fatigue. It must be so from the unusual nature of the action required. This is convincing evidence that games cannot be substituted for regulated gymnastic exercise whose effect is that of

exhilaration rather than of fatigue. Exception may be made in the case of small children who have not arrived at an age when they either injure or improve themselves to any great extent by their efforts.

The greatest difficulty experienced in substituting games for gymnastics lies in the fact that the correct physiological effect cannot be produced, because it is almost impossible to oppose against the violent running, jumping, stooping, etc., which are the inevitable concomitants of games, any other movements forcible enough to adjust evenly the physiological balance.

Games may do actual harm where they are practiced without any precautions being taken for quieting the heart-beat or reducing the labored respiration. Thus one may easily lay the foundations of a disease that may not be apparent for some time, yet which will eventually shorten the usefulness and life of the citizen.

Strain, whether arterial or muscular, ought never to occur from gymnasium work. No pupil should be allowed to exercise to excess, and no movement should be given which is beyond the strength of the individual. If a teacher cannot adjust the exercises for each pupil, he is unfitted for his work. Much harm of this special kind has occured in times past as the outcome of engaging ill-taught or self-educated teachers; but their day is quietly passing, and a new era is surely approaching when a college graduate will have to show other and special preparation for the position of director of a gymnasium, and when of the graduate of a normal school of gymnastics will be required a broad and comprehensive education outside of his particular profession, in order for either to be intrusted with the great work of caring for precious human bodies. Happily the time is past when the gymnasium was considered merely a place where one could learn how to perform acrobatic feats; the aim of the present day is to give pupils the exercise that will be most beneficial to their general health and strength. With this object in view, the liability to injury has greatly lessened. Moreover, the increasing amount of knowledge required of a competent physical trainer brings a better class of teachers into the profession and insures a greater stock of common-sense being applied to the care of the students.

The gymnastic teacher has an immense power for good or ill over those who come under his ministrations. He comes into very close relation to his pupils. He is watching them from the personal standpoint, studying them, prying into their personalities, weeding out their defects, developing in them certain traits of character. It is essential, then, that the normal school should help future teachers to be honest, to be broad, to be eager to appreciate and admire the good for itself and not for a small personal advantage. It should cultivate truth, dignity, repose, self-control.

By gymnastics, then, we must develop the individual power inherent in the pupil, we must teach him how to use this power, how to control

it. In other words, we must develop the will. As the will develops, character is made. * * * *

The study of the human body as related to the best means of developing and preserving it, the attention paid to the duties of sanitation, proper dress, diet, and good habits, present great problems to the awakening minds of young men and women—problems the consideration of which inspire feelings of the highest nature and create impulses toward clean and right living. They learn to strive without selfishness or greed; to admire the good in others; to control their will, their temper, their fear; they understand what it means to overcome obstacles, to be defeated, to deserve praise.

With regard to the standard of work, there is no question but that in the leading normal schools there is better work done today than ever before. As the schools have gained influence and prominence, they have striven to elevate the standard of work, to keep pace with modern educational ideas, and to carry thru important measures which only time and experience can effect. One very important feature which makes for the general improvement of normal schools is the increasing amount of consideration that is given to the Swedish ideas in schools which were loath to credit this system at the time of its introduction here.

For some inexplicable reason, physical training has not received the warm encouragement extended to other young educational movements, such as manual training, the kindergarten, and child study. Yet this science is closely allied to all of them, and may be truly said to form the basis of all education. "What a man is physically, that he is," and what the child becomes is largely dependent on proper attention to this fact.

One great difficulty in the path of those who would raise physical training to its proper place among the sciences has been its past record, which has placed it upon such a low plane that men of learning have passed it by on the other side, and have been prone to say: "Can anything good come out of Nazareth?" But that handicap is being gradually removed. Since Ling's logical principles have become better understood and appreciated, and since teachers of physical training of all schools and systems have discovered that they may adopt these principles to advantage without in the slightest degree interfering with the use of most of the exercises they have advocated before—since the essence of Ling's great discovery lies in the plan or arrangement of movements and is not dependent on exercise or apparatus—there has been a unification of effort and a gradual drawing closer together of those engaged in gymnastic work.

The idea of gymnastics as a source of entertainment or amusement is being relegated to the past. Little by little we have divorced from physical training the idea of money-getting, once the sole object of its devotees. Gymnastics meant exhibitions, exhibitions meant more pupils,

and the sole aim of the exercises was prettiness of effect thru appeals to the eye and ear. But we are coming to the time when the children will get what they need, and when it will be as interesting to see the homely exercises as the pretty ones. As a matter of fact, there is no more reason for making gymnastic exercises a means of entertainment than the movements of a child practicing his scales on the piano.

Perhaps we may best determine the value of the work accomplished by normal schools of gymnastics by a glance over the country to see what place is occupied by physical training in the school curriculum of today. We find that where twenty or even ten years ago school gymnastics were sporadic and exceedingly elementary, today there is hardly a school of prominence that has not its teacher of physical training. There are thirteen normal schools of physical training either as distinct schools or as departments of other schools, and there are no less than seven summer schools where some theory of gymnastics is taught. The demand for teachers is greater than the supply.

In conclusion, let me say one word as to the value of physical training. Did you ever think that our real selves are buried deep within us and very seldom come to the surface? We are more or less playing for the applause of our audience, either consciously or unconsciously. We say what we think is pleasing at the time. Perhaps we change our attitude altogether with our next companion. Once in a while our souls free themselves, and we speak from within outward rather than from outside only. We reveal our real selves for a passing moment, and then, click! the door shuts, the soul disappears, and the old, unreal, artificial, everyday personality comes back again.

The motions we use in our everyday lives are extremely limited. We express ourselves only partially. We live cramped, confused, half-lives. Nature has given us the power of almost unlimited motion. Our bodies are beautiful, intricate machines capable of the most delicate and the most complex movements, but the bodies of most of us are undeveloped mines of health, strength, and beauty. Self-expression we hear something about, but we do not study physical self-expression. We need the freedom of action that comes from the use of thoroly awakened bodies to bring out what is in us. Everyone needs physical training. It teaches men and women to reach out to something beyond. The very act of stretching the limbs makes the mind grow. It follows the track of the nerves, and we become less cramped, less narrow, less constricted, more willing to live and let live. It is a form of education that should extend thruout one's whole life. If the time ever comes when this science is recognized as its merits warrant, and men and women everywhere practice their daily exercises as regularly as they take their daily meals, sickness will be but an old woman's tale, and death but the falling to earth as the ripe and rosy apple in the fullness of fruition drops from the tree.

PHYSICAL TRAINING FOR THE MASS OF STUDENTS

I

WILLIAM G. ANDERSON, DIRECTOR OF GYMNASIUM, YALE UNIVERSITY

The subject of this paper has appealed to me strongly. It is: "Physical Training for the Mass of Students; with emphasis upon the necessity and kind of physical education for the rooter with cane and ribbon, rather than for the men who make the team." The subject will be divided into three parts: (1) the conditions as we find them today; (2) the causes of these conditions; (3) the remedy.

This paper has to do with the college, not with the secondary and public schools. The work in universities and in public schools is neither parallel nor comparable to any great extent.

I shall give the following meaning to two of the terms to be used. They will, no doubt, be unsatisfactory, the whole question of nomenclature being chaotic, but you will at least understand what I mean, even if you are not pleased with my definitions. By "gymnastics" is meant the movements, as such, with or without apparatus, usually selected for developing the body, eliminating games, contests, athletics, and sports. By "physical training" I refer to a comprehensive scheme of bodily development which includes gymnastics and all forms of rational sports and contests, games, and athletics, also a certain amount of theory.

A survey of our field shows a very noticeable lack of interest in gymnastics. We find the student ready to cut lessons; to "get out" of gymnastics; to speak in a disrespectful manner of the work and often of the teachers; to place a stigma upon the profession; to draw no lines, social or otherwise, between the athletic trainer and the director of the gymnasium. We find very few college graduates taking up the profession permanently. Some who do begin to teach use the work as a stepping-stone to other occupations, and not infrequently apologize for being in "the business."

We find optional classes in pure gymnastics small and rapidly dwindling away. The faculty classes in many of the colleges are few and far between. The opportunities for regular training in gymnastics are not eagerly grasped by higher-class men. Students who begin to take exercise in their rooms soon lose their interest and finally stop altogether. We find the freshmen breathing a sigh of relief when required gymnastics are over. You may say that the average college man tries to get out of all kinds of required work. That is true, but it does not vitiate the force of my statement. We find that in only a few colleges is unqualified credit given for required gymnastics. In a number the credit is negative, and in the majority no credit is allowed.

There is no trouble pointing out the knots in the skein; the difficulty

is in untangling them. We must study the cause before we can apply the remedy.

The first and prime cause is the student's ignorance of the real value of physical training. Another cause is the inaccurate statements and unqualified promises made by those interested in gymnastics. Were a business man to agree to sell another a certain parcel of goods for a stated sum of money, and then give much less than half the promised parcel for full value received, we would call the transaction dishonest. In gymnastics it is the custom to make very definite promises, and in a positive manner. These promises are seldom kept. I refer to the inducements held out to young men to take gymnastics (our catalogs even are not careful or accurate about these rewards), and to the promised changes that will take place in the growth of the body; the increase in weight, height, and girth; the attainment of grace, skill, and strength. It is not unusual for those who teach the subject to lack some of the essentials they readily promise their pupils. College men are impressionable; they are quick to notice and as quick to criticise.

If it is stated that gymnastics will produce certain results, and it is clearly seen that they do not either in pupil or teacher, the student will not believe. For a teacher to promise a student that exercising three times per week will produce decided changes in the carriage of the body, and not make it plain that the student must at all times be careful about the carriage of the body, does positive harm to physical training.

It is a mistake to promise good results in a short time. It is a mistake to promise noticeable changes after a few lessons. It is a grave mistake to make the development of muscles the first and important result of physical training.

There is a misunderstanding on the part of the student as to the practical value and limits of gymnastics and its relation to mental training. He does not know that exercise develops the brain as well as the muscle. He does not know of the existence of a mind-brain and a body-brain.

There is a languid response to calls for volunteer classes, and when these classes are organized, the teaching of gymnastics alone will soon cause a falling off in attendance. In few colleges are there gymnastic associations, and when they do exist the attendance is ridiculously small. Last winter at Yale there were over seven hundred men in training with the athletic teams, attendance being voluntary, while there were less than fifteen men with the Yale gymnastic team. There is not a lack of interest on the part of the student in the welfare of his body. This subject appeals strongly to him. It appeals to all men. The existence of the correspondence schools proves this. Some of our students join these "get-strong-while-you-wait" institutions, and it must be said they stick to their work quite well. The promises made by the said schools are very allur-

ing, but very seldom fulfilled. What a man pays for he respects; the student pays for the correspondence work; that which is thrust upon or given him he does not respect.

The college man is ignorant so far as the true results of physical training go. His knowledge of physiology is poor, and his knowledge of applied and practical physiology is worse. This is not entirely his fault. It is due to poor text-books, or inadequate teaching. To associate with gymnastics such subjects as anatomy, physiology, pedagogy, or psychology neither enters his mind nor that of many college and preparatory school teachers. The student is handicapped at the outset by prejudice, by a wrong understanding of the limits of physical training, and by unsatisfactory preparation in secondary schools for the conditions that will be found later in the colleges he will enter. I am not inclined to blame the student so much as I am those who teach the student, whether this tuition be in the home, school, or college. The student is as he has been made by preliminary education, and his attitude toward physical training is a result of his previous education. He certainly has given no thought to gymnastics, altho he may have been a closer student of athletics than of mental branches.

Anything that we compel a student to do he generally objects to in one way or another, and when gymnastics are made compulsory and no attempt is made to reason with the student, and no real credit given for work, the result is obvious.

To epitomize: There is small interest because —

1. The promises are rash and inaccurate.
2. The promises made are not fulfilled.
3. The correlation between gymnastics and the training of the brain is not understood.
4. The correct value and place of gymnastics in the college curriculum is not appreciated by the student.
5. Physical training has no academic standing.
6. The director does not come into continued personal contact with the student as he should, but leaves much important work to assistants who are not always educated.

That which appeals to a student in a practical manner he will do. He will not seek gymnastics because they do not appeal to him. He gets no obvious results from them; they are not pleasant, and he does not take an interest in them; hence, if left to himself, he will not go to the gymnasium for that purpose.

The modern educational tendency is toward the practical. The attitude of Harvard and Yale toward cutting down the four years to three shows this. The dropping of Greek as an entrance requirement, and the greater growth of the scientific schools over the classical schools are significant. The attention to manual schools, to trades, etc., are tell-tale straws. Now a man can secure two degrees in six years where it once required eight. The college man educated along so-called practical lines is more

in demand than one who is trained only in the classics. The elective systems in our universities and the tendency to introduce them into the secondary schools show the trend of thought. The object of the modern college is to prepare a man for complete living.

President Jordan says:

> The business of a university is to train men to think, know, and do. Wisdom is knowing what to do next; skill is knowing how to do it; virtue is doing it. It is the duty of a university, among other things, to take hold of the fragments of human possibilities and arrange them so as to fit them for achievement.
>
> Not abstract thought, not lifelong investigation of minute data, not separation from men of lower fortune, but the power to bring about results, is the characteristic of the American scholar of today.

The worth of physical training in such preparation is plain to you and to me, but not to the student. It is our duty to make this plain to him. It will never be made plain by gymnastics alone.

Today competition is very keen. The man who gets ahead is more than ever in need of good working tools, and his body is the sum total of these tools. The increase in nervous strain in business is marked, and even in college a balanced life is more essential than it has been. Let the college man know this, and he will work in the gymnasium. But the telling of these things in a general way will not impress him longer than it takes him to get away from the gymnasium, when he at once forgets it.

I am aware that gymnastics are uninteresting to nearly all concerned. The history of the apparatus bought for the home, the dislike that business men have for exercising alone, the comparatively new condition of the apparatus in many of our fine athletic club gymnasia, show this. In a general way we can dismiss the question with the answer: There are no apparent results. If there were, the one who exercises would keep it up.

The great problems that confront me at Yale are: how to create an incentive, how to convince the student that he needs exercise; how to create an atmosphere of respect for gymnastics and a sentiment in favor of physical training. I suggest as a partial solution of these problems that we teach less gymnastics and more physical training, and that we connect with the muscular movements which constitute gymnastics enough reasoning to show the student that there is much more to the subject than he has ever imagined.

Appeal to the instincts of the healthy youth, and introduce that which he likes, namely games and contests. Let the youth know that to win distinction in any of the fields of life which he will later enter he must use his body, and that there is no occupation in life that will be done better if the body is weak. For that student who has inherited a poor physique, whether it is slight or badly formed, and who is naturally weak, there must be some hope held out, or he will not enter with spirit into the work of the gymnasium.

The one who is to be a public speaker will exercise with increasing interest if he knows that by so doing he will add to his power as a public man. I have seldom found this argument to fail. The man may not become strong, but he certainly will acquire a self-control that is helpful. If the hard student believes that by developing muscular centers in the brain the mental centers used in study will be made better, he will exercise with renewed energy.

I notice a growing interest in gymnastics so taught. The interest is more due to the talks than to the exercises. I would be as willing to take the greater part of two hours per week and devote them to talks and experiments, and abide the issue, as to devote most of the time to gymnastics. This method takes time and calls for preparation on the part of the teacher, but it brings the pupil and the head of the gymnasium in more direct contact with each other. That director of a gymnasium who does not come into personal contact with the men on the main floor will lose a place in their respect sooner or later. Moreover, if the teaching is left entirely to assistants, some of whom are not well educated, our cause suffers.

May I present in detail some of the methods we have tried and will continue to try with the men at Yale? To illustrate strength of muscles I have taken the gastrocnemius of the frog and shown the great pulling power of this little contractile band. A student who sees a small glistening bit of muscle tissue sustaining a weight two thousand times greater than its own is impressed.

That exercise produces some marked effects upon the brain and mind may be illustrated by some of the tests in cross-education. For instance: The development of one hand will produce development of the other hand which is not trained. The strengthening of one hand will strengthen the other which may not be used at all. If movements are learned on one side of the body, they are learned on the other side in less than one-third of the time, and may even be learned without practice. Movements may be learned by thinking of them, and not necessarily doing them. Of course, there are degrees of perfection in these matters; but what I say is true in the main. Moreover, the student should know that—

1. The powers of attention are educated by ear-teaching.
2. That more than muscles are developed by gymnastics and physical training.
3. That there are three factors to be developed—the muscles, the central nervous system, and the mind.
4. That physical conditions affect the activities of the mind.
5. That a tired body will vitiate the activity of the mental faculties.
6. That the best effect of exercise, although invisible, is the establishing of a good physical basis for psychic activity.

There is another practical side of the question, which appeals quickly to the student. It is the effect of movement upon blood supply to parts of the body; the stimulation of the functioning of the vegetative organs,

the liver, pancreas, etc., by the presence of fresh arterial blood; the relation between proper nutrition and blood supply; or the bad effects of interference with the circulation of the fluid tissue at the appropriate time. Dr. Seaver found 30 per cent. of a certain class suffering from some form of indigestion, malassimilation, or poor nutrition. These men readily came to understand the necessity of care in eating, the danger of eating rapidly, and the need of physical and mental rest after eating, from simple experiments made in the gymnasium; and, moreover, they associated this knowledge with the department of physical development. The general knowledge of dietetics as gained from the preparatory school had made little effect upon them, but illustrative experiments left more permanent tracings on their minds.

The effects of exercise in quickened lung and heart movements, of aspiration of the thorax upon the circulation of lymph, were listened to with understanding and interest. I used Dr. Hough's simple explanations and drawings. To show the increased blood supply when movements are interesting I used a balance table before the students. The difference between the effect of reflex or mechanical movements and highly voluntary movements upon blood supply were thus explained and understood by the men. The men readily grasped the relation between mentality and muscularity, as found in Dr. Mosso's article read at Clark University. I consider such information of great importance to college students.

The average student will go thru monotonous and unvaried gymnastic exercises adopted by the track teams and the crew, and never murmur, simply on account of the associations; but let me give these same exercises to men who do not thus associate them with the possible glory of being connected with the teams, and they will openly rebel.

I have taught dancing at Yale, stage dancing, and thus won converts to gymnastics. I have permitted the men to elect boxing, swimming, fencing, wrestling, hand-ball, baseball, football, track events, basket-ball, and bowling, instead of required gymnastics; and I find these men using the building more than those who elect the straight class work. I do not believe in sugar-coating, but I do believe in making the development of the body interesting. I believe we can "knit on" the disagreeable with the agreeable. As between no gymnastics and compulsory gymnastics, I favor required attendance; but between the mechanical and artificial movements of the gymnasium and the agreeable and spontaneous movements of the competitive order, I prefer the latter.

Under the present conditions and with our present knowledge, in order to add dignity to the work, to create renewed and permanent interest in physical training on the part of all concerned, to establish academic recognition for physical training, we must present the subject and its possible results in the true and broadest light. We must so plan that the student comes in contact in the gymnasium and on the field with educated

men and with men whom he will respect both in and out of the gymnasium.

We must associate with physical training the applied subjects of anatomy, physiology, personal hygiene, psychology, and such subjects as will better establish in the mind of the student a permanent belief in the physical basis of psychic activity, the correlation of mind and body, and the relation between muscularity and mentality.

We must secure college graduates, especially physicians, as directors of all forms of physical training. In the past the work of physical training has been directed toward muscular development alone, hence its limited and slow growth. The direction of physical training to the development of the body and all that constitutes the physical machinery of the mind will place our work upon a more dignified and satisfactory basis. President Hyde has well said:

> The work required of the students in physical training should be as systematic and dignified in proportion to its amount as that in other departments. Enlist the enthusiasm of the student under the guidance of an interested faculty, combine the ardor of youth with the wisdom of maturity, and . . . . . it is perfectly possible to maintain a course of physical education which will give to every student who is not handicapped hopelessly by heredity or dissipation, a sound and healthy body to be the support of a vigorous intellect and the instrument of a resolute will.

II

F. N. WHITTIER, DIRECTOR OF SARGENT GYMNASIUM, BOWDOIN COLLEGE, BRUNSWICK, ME.

Physical training in our schools has been somewhat of a disappointment. For years we have had in mind an ideal system which has been described often, but rarely put in practice. We have looked forward to scientific gymnastics combined with regulated and supervised athletics. Here and there schools have attained something of this ideal, but oftener have fallen victims to the Scylla of monotonous gymnastic drill or the Charybdis of unrestrained, over-strenuous, competitive athletics.

The secret of these failures is not hard to find. Often they were due to attempts to introduce into American schools foreign systems of athletics or gymnastics. For a generation this country has been made the arena of a contest between the athletics of England and the gymnastics of Germany or Sweden. It has been difficult to harmonize these systems and adapt them to American temperaments and conditions.

Yet to the American visiting Europe the foreign methods and results were likely to seem faultless. At Harrow, the famous English public school, on a fine June afternoon, I saw three hundred flanneled boys troop down to the great school playgrounds to practice cricket on their dozen fields. The vigorous forms of the players, the healthy-looking faces, the

evident interest in the sport, the absence of anything like shirking, all combined to give the impression of an ideal plan. At Berlin or Stockholm the sight of hundreds of school children taking their daily gymnastic training was no less interesting and inspiring.

But when America attempted to copy these systems of physical training, difficulties at once arose. The games and exercises were foreign, not national. Parents and children had little interest in them. They were not interwoven with our country's story and tradition. It was necessary to Americanize physical training before it could take its rightful place in our school system. For a full generation this process has been going on, and at last the end is in sight. America now has her own gymnastic systems and her own national games.

Besides originating new systems of gymnastic exercises, this country has done much toward developing the modern gymnasium and the scientific side of its work. Our normal schools for teachers of physical training are unsurpassed by any in the world. A visit to one of these schools gives some idea of the advance of physical training upon its gymnasium side. The summer course at Harvard under Dr. Sargent has this year a corps of forty lecturers and instructors, and an attendance of nearly two hundred students.

The development of athletic sports has been no less marked. The present generation has seen the rise of two great games, baseball and American football. Around these the interest of American youth appears to be centered. Much attention is given to basket-ball, another American game of recent origin. Many English games have been adopted, notably golf, tennis, and cricket. From small beginnings, athletics have so grown in interest and influence that they seem to many to overshadow the land like the genii of the fable. Gymnastics is now often secondary to athletics. The athlete practices gymnastic exercises to obtain strength and endurance that he may excel in his chosen sport. Indeed, some of the warmest friends of physical training feel that the spectacular side of athletics is carried too far; that our school athletics are sacrificed to an amusement-loving public; that, while schools spend hundreds of dollars to train an overdeveloped athlete, they may neglect the pale-faced student who is getting a spinal curvature. Certainly there is no doubt of the great growth of interest in things athletic. A Yale-Harvard football game occupies about as much newspaper space as a presidential election.

As educators we must not lose sight of the true significance of these developments. The so-called craze for athletics and gymnastics has paved the way for making physical training a part of the school curriculum. It has given us what we lacked before — American gymnastics and a general interest in national sports.

Already plans of physical training are being worked out in many schools. Perhaps the small college offers one of the best opportunities

for such work. My own experience has been obtained at Bowdoin College, where for seventeen years I have held the office of director of the gymnasium. As Bowdoin was one of the first colleges to enter this field, it may not be out of place to give a brief account of her plan, the result of many years of experimenting and development.

At the beginning of the college year the director of the gymnasium gives each new student a thoro medical and physical examination, ascertaining, as far as possible, the family history, the mode of life followed before coming to college, the kinds of exercise that have been taken, and the nature of any physical deformities or defects that may exist. All the information thus gained is made a matter of record. Next, nearly fifty measurements are taken, and the strength of the different sets of muscles tested by dynamometers designed for this purpose. Special attention is given to the examination of heart and lungs, testing the capacity and the expiratory power of the lungs, and also noticing the character of the heart's action both before and after exercise. Urine and sputum may be examined in suspicious cases. X-ray examinations have given valuable aid in cases of injury or deformity. Vision and hearing are tested superficially and abnormal cases referred to a specialist.

From the measurements and strength tests taken a chart is made out for each student, showing him how he stands as regards size, strength, or symmetry in comparison with the average or mean. It also shows what parts of the body are defective, either in size or development.

The director then prescribes a course of training, including the specific exercises needed in each case to correct the weakness or defects shown by the examination. This course of training is indicated by marking the exercises prescribed in an illustrated handbook which is given to each student. This handbook also contains directions in regard to matters of personal hygiene, as bathing, diet, clothing, and ventilation. Such of these directions are marked as have special reference to the physical condition of the student to whom the handbook is given.

Thus far we follow closely the plan devised by Dr. Sargent, of Harvard University. The handbooks and charts used are those of Dr. Sargent. Indeed, Bowdoin claims a certain proprietary interest in them, for Dr. Sargent is a graduate of Bowdoin and for six years was director of her gymnasium, where he worked out many of the principles of his now famous system.

Each freshman class at Bowdoin receives general instruction in personal hygiene. This instruction is given in the form of lectures by the director of the gymnasium, and occupies one hour a week during the fall term.

The plan of prescribed exercise is supplemented by a graded course of class gymnasium work and by athletic sports and games. During the winter term each college class is required to exercise three hours a week

in the Sargent Gymnasium. The courses given consist of class exercises and squad exercises. For the latter, each class is divided into several squads, each under the direction of a student assistant. The courses for the four classes are as follows :

Freshmen.—Class exercises : military drill, setting-up drill, and Indian-club swinging. Squad exercises : indoor athletics, chest weights, and heavy gymnastics ; the indoor athletics includes such exercises as jumping, hurdling, pole-vaulting, and relay-racing ; the heavy gymnastics includes tumbling and exercises on horizontal bar, parallel bars and flying rings.

Sophomores.—Class exercises : dumb-bell movements and boxing. Squad exercises : indoor athletics and wrestling.

Juniors.—Class exercises : fencing with single-sticks and broadswords. Squad exercise : indoor athletics.

Seniors.—Class exercise : fencing with foils. Squad exercise : indoor athletics.

As a part of the required work, opportunity is given to each student to learn something of the out-of-door sports. During the winter term training squads are maintained for football, baseball, and tennis. These squads are under special instructors and receive valuable training. During the fall and spring terms the required class work gives place to out-of-door sports, such as football, baseball, track athletics, golf, and tennis. The director of the gymnasium has a general oversight of the games, with authority to forbid participation in them to students who are physically unfit. At present nearly every student in college engages regularly in one or more of these sports. The training for college and class contests is carried on regularly and systematically, and proves a valuable adjunct to the required course.

Bowdoin College was one of the first institutions to put physical training on an equal footing with other work. Courses in physical training bring the same credit in rank as courses in Latin or Greek. Each of the four required courses counts as one study during the winter term. The four together count as one-fifteenth of the work leading to the A. B. degree. I believe that to this giving of credit for gymnasium work is due in great measure whatever success has been achieved.

There is no claim that the above plan is ideal. It is, however, measurably successful. It brings interest in physical training to the mass of students. It brings the whole college to the gymnasium, athletic fields, golf links, or tennis courts.

There can be no perfected system that will fit all times and places, but we must all press on in making physical training mean more than gymnastic exercises or competitive athletics, and in giving it its true place in the curriculum of schools.

DEPARTMENT OF SCIENCE INSTRUCTION

SECRETARY'S MINUTES

FIRST SESSION.—THURSDAY, JULY 9, 1903

The department met in the Arlington Street Church, and was called to order at 9:30 A. M. by President C. W. Hall. A committee on nominations was appointed as follows:

T. A. Mott, of Indiana. A. G. Clement, of New York.
Irving O. Palmer, of Massachusetts.

The following was the program of the session:

"Practical Methods in the Teaching of Geology," by N. S. Shaler, professor of geology, Harvard University, Cambridge, Mass.

"The Proper Scope of Geological Teaching in the High School and Academy," by William North Rice, professor of geology, Wesleyan University, Middletown, Conn.

"Out-of-Door Class Work in Geography," by F. P. Gulliver, teacher of geography, St. Mark's School, Southboro, Mass.

"The Teaching of Biology in High Schools," by A. S. Pearse, head of department of biology, High School, Omaha, Neb.

After adjourning to the lecture-room of the Harvard Medical School, the program was continued as follows:

"Laboratory Teaching of Physiology," by W. T. Porter, associate professor of physiology, Harvard Medical School, Boston, Mass.

"Laboratory Work in High-School Physiology," by James E. Peabody, head of department of biology, Morris High School, New York city.

The department then adjourned until Friday, July 10.

SECOND SESSION.—FRIDAY, JULY 10

The meeting was called to order by President Hall at 9:30 A. M., in the Arlington Street Church. The report of the Committee on Nominations was read and adopted, and the following officers were elected for the ensuing year:

President—W. A. Fiske, Richmond, Ind.
Vice-President—Frank M. Gilley, Chelsea, Mass.
Secretary—A. S. Pearse, Omaha, Neb.

The following papers were then read:

"College Chemistry and its Relation to Work Preparatory to It," by Ira Remsen, president of Johns Hopkins University, Baltimore, Md.

"High-School Chemistry in its Relation to the Work of a College Course," by Rufus P. Williams, teacher of chemistry, English High School, Boston, Mass.

Discussion of this topic was opened by H. P. Talbot, professor of analytical chemistry, Massachusetts Institute of Technology, Boston, who was followed by Lyman G. Smith, president of the New England Association of Chemistry Teachers; William F. Kunze, superintendent of schools, Red Wing, Minn.; Lyman C. Newell, instructor in chemistry and physics, State Normal School, Lowell, Mass. The discussion was closed by A. S. Perkins, Dorchester High School, Boston, Mass.

The following papers were then presented:

"Physics for Boys and Girls: An Introductory Course," by John C. Packard, Brookline, Mass.

"The High-School Course in Physics," by Irving O. Palmer, Newtonville, Mass.

"The High-School Phase of Physics Teaching — Aims and Methods," by George R. Twiss, head of department of science, Central High School, Cleveland, O.

"A Course in Physics for Technical Schools," by Charles F. Warner, principal of Mechanics Arts High School, Springfield, Mass.

The discussion was led by Professor Edwin H. Hall, of Harvard University, Cambridge, Mass., and Professor C. R. Mann, of the University of Chicago.

Professor Edwin H. Hall moved that a committee be appointed to request the National Council to consider the advisability of appointing a committee to discuss the subject of physics teaching in high schools which prepare few pupils for college, and to formulate a course of physics for such schools.

The motion was carried. It was further voted that the committee consist of—

C. W. Hall, of Minnesota. Willbur A. Fiske, of Indiana.
Frank M. Gilley, of Massachusetts. Edwin H. Hall, of Massachusetts.
C. R. Mann, of Illinois.

The department then adjourned.

FRANK M. GILLEY, *Secretary*.

PAPERS AND DISCUSSIONS

PRACTICAL METHODS OF TEACHING GEOLOGY

N. S. SHALER, PROFESSOR OF GEOLOGY, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

In considering the methods of teaching geology it is essential to begin by determining the scope of the instruction which is to be given and the grade of students who are to receive it. At the outset it should be noted that geologic science is not like astronomy, geography, chemistry, physics, botany, or the other clearly limited sciences, each with a definite group of considerations. It is a congeries of all these which relate to the physical realm, with no central problems except that of succession in time and no boundaries save the limits of this sphere. Thus when we teach geology we have to follow one or another of these discreet sciences over or in the earth to show how it has determined actions or conditions. It is thus evident that to be profitable any instruction whatever in geology should come after some preliminary training in one or more of the sciences which have to be used in interpreting the earth.

The fact that geology is not a distinct science, but a congeries of sciences, makes it evident that it has no fit place in any stage of education which can be termed elementary. The further fact that the considerations which are proper to it are those relating to successions of events, and to the interaction of various celestial and terrestial forces in the evolution of

this planet, affords other reasons why no effort should be made to teach this subject in any connected way to immature minds. I am aware of the disposition of the teacher in each of the natural sciences, except mathematics, to insist that the pupils shall come to their instruction with a training in some or all the other fields of inquiry save his own, and of the patent impossibility of gratifying this desire. So, too, I am aware of the evil which arises from the overclassification of natural actions whereby this composite realm of nature where all actions are blended is presented to youths as if it were really divided and accurately pigeon-holed. Yet it is only by such division that a presentation of this complex can be attained. After that is accomplished it is well to show the synthesis as it is shown in the so-called science of geology. It is, indeed, from the point of view of education that it can most profitably be set before the mind.

Assuming, then, that geology is to afford the student some sense of the integration of natural actions, it follows that it should be taught, not to young children, but to those who have gained some of the simpler concepts of astronomy, physics, and biology. In astronomy they need to know the elements of the solar system and the action of the sun's heat upon the planet; in physics, something of the common phenomena and relations of heat and the action of dynamic forces; in biology, so much of organic life as shows the succession of life, and the patent relation of planets and animals to each other, and of both to the inorganic realm. Further, they need to have the simple concepts of solid geometry, so that they can think in three dimensions. It is well, tho less essential, that they bring certain understandings of chemical action, such, for instance, as will enable them to comprehend the rôle of CO_2 in the air — how it passes into organic station in the plants, how it is appropriated from the plants by the animals, going thence to the rocks or back to the air.

The above-noted preliminaries to the study of geology, strictly so called, inevitably mean that youths shall not fairly enter on this field until they have attained the age of puberty. It is fit that the beginning should be made this late, for not until that age does the mind begin to open to the large thinking the subject requires. I know this by personal experience. As a lad of about thirteen I became deeply interested in reading books on geology and in childish efforts to study the world within my limited views, but it was all puerile. The concepts then formed were so grossly inadequate that they had, so far as possible, to be cast away. Some of the relics of those misunderstandings remain as memories in the background of my mind to this day. Fifty years of better seeing have not sufficed to clear them away.

Where the schools are well graded and the youths fairly advanced, the beginnings of the study of geology, strictly so called, may be made in the last year of the secondary school. If the contributary sciences have been fully taught, some reference will have been made in that teaching to the

application of these principles to the interpretation of the earth. Thus in physics, when stresses are considered, it will have been noted that mountains are in part due to such action; and when and where botany and zoölogy are taught, it will be noted that the coals and limestones are of organic origin; etc.; so that in beginning geology the student will feel that he is entering on ground that is not altogether strange to him, a field where he knows there are large things to be known.

In my experience the best door by which to enter on geology is that of the action of water. There are enough facts in the field of ordinary experience to make a beginning easy, and the instruction in physics should help much in making the simpler laws plain. Begun with a study of the action of the rain, the essential nature of the work should at first be made plain. The student should be brought to see that the processes of erosion and transportation are all set in action by solar energy. It is well here to show that the amount of this energy which comes each day upon the earth is what for convenience is stated in terms of the frozen water it would melt, and that this heat is sufficient to liquefy about eight thousand cubic miles of ice *per diem*.

At this point the student should be brought to see how the atmosphere serves, particularly by the vapor of water it contains, to retain a portion of the tide of solar energy and set it to work. The matter is simple and easily understood, yet the concept had from it is one of the largest and most enlarging to be obtained in the science. The history of solar action thru water should be followed in the surface streams and the deeper movements of the fluid, its relations to organic life shown, and the simpler chemical processes due to it made clear. Then, in contrast to the action of fluid water should be set that of ice in the forms of snow and glaciers. Attention should be called to the fact that the mighty differences between these two modes of action are due to an infinitesimal variation of temperature: that water above the freezing-point plays one rôle, and at an infinitely small diminution of heat enters on a totally different mode of action. We thus show the student the value of a critical point in natural actions. In the discussion of these matters I have found it very useful to compare the conditions of the earth and the moon, showing that the lunar sphere lacks all physical life because it is not subjected to water action. It receives as much solar energy per unit of area as the earth, but that energy is not retained and set to work as on our planet.

After the history of water in the form of rain or snow has been traced, its work in the seas and lakes should be followed, showing that there again it is solar energy which is acting in the waves and marine currents. The way in which this energy is stored in the wave and applied by its stroke against the land should be made plain. It is, of course, best seen on the main coasts, but it is evident on the shores of even a small pool or

a little river. It may be experimentally illustrated by blowing with the breath upon a hand basin of water.

In further setting forth the solar action on this planet, the history of the movements of the air may be explained. In practice I take up this matter before treating of the rain, but with younger people than I have to deal with it may not be easy to make the phenomena of the winds clear enough to be interesting. Yet with a little address, and by the use of familiar illustrations, I believe the normal child of fifteen can be led to a clear understanding of the important facts. If this is undertaken, the geologic effects of the winds in erosion and definition should be carefully set forth. Such phenomena as those of sand dunes, wind-carried pebbles, and the dust deposits of western China make this action plain.

As a part of the history of solar energy on the planet the organic processes should be set forth. Here is a field of much difficulty, for the reason that the pupils can know but little of animals and plants, and the succession of species to the amount of a hundred million or more is to them, as to us, inconceivable. The adult has to learn in many ways to fence with inconceivables, but it is not well to hurl them at young people. I cannot tell you how to do this task so as to give the student valuable concepts, but there is one caution I may give, which is, not to afflict them with the categoric names of fossils. The series of animals such as those which led from the five-toed mammalia to the single-toed horse will interest beginners, but the technical names will put them out of sympathy with the story. If but a limited amount of geology be taught, say that which can be compassed in three months with three periods a week, it seems to me best to devote the greater part of it to the above-noted effects of solar energy.

Passing from the field of surface actions to the phenomena of the earth's crust, we enter on a realm where the subject-matter is more recondite and affords less enlarging concepts. The whole group of stress actions, such as those exhibited in faults and foldings of the rocks, should be shortly dealt with and with the intent of showing the simpler aspects of the earth's contraction, and combined with it the effects of loading and unloading of various parts of the surface, and also the generally slow growth of mountains and the coincident erosion by streams and glaciers. All these subjects should be treated in a general manner; the details are for professional geologists. The phenomena of earthquakes and volcanoes are particularly interesting because they are vivid and picturesque. The conception of the interior of the earth as a seat of power may be had from this field as from none other; so, too, from earthquakes the notion that the crust is not a dead mass, but exceedingly elastic.

The nature of ore deposits — in fact, the conditions of occurrence of all earth materials contributive to the arts — is a matter of curious interest

to young people, especially when taught in relation to the wealth of various nations. In general, it may be said that so long as the teacher can relate the matter to the interests of man he is sure to have the attention of his pupils. I have found that, when I could show how the shape of the earth affected the history of a great battle or other human action, I had the basis for teaching that would stay.

As for the method of teaching, each teacher has to fit it to his capacities, with the limitation that the text-book, if used at all, should be no more than the basis for the instruction, and the absolute requirement that there must be some kind of field study to give life and body to the subject. One of the advantages of beginning with the action of water is that everywhere, even in the greater cities, some illustration of this, if it be only in a gutter, can be had. A teacher who knows the subject can in a few Saturdays afield give his pupils some sense of the actual earth and of the effects of solar energy on its surface. Almost everywhere he can show them something of the characteristics of rocks. If there be fossiliferous deposits, he has yet another and excellent means of awakening interest, for there is nothing else that so quickens the interest of the pupil.

As for the apparatus needed in teaching the elements of geology, it may be what the conditions permit. If there is a good field for outdoor study, none whatever is absolutely required. It is well, very well indeed, to have a lantern and a few score slides showing features that are not to be seen near the school. A collection of models illustrating geological structures is useful — much better than diagrams, for the reason that they have the solid quality. A collection of rocks and minerals has its value, tho they give but little to the beginners. Geological maps are not to be recommended, for the reason that the interpretation of such delineations is exceeding difficult, and they tend to give the pupil the idea that the matter is beyond his comprehension.

Altho I have been teaching geology for nearly forty years, I find myself unable to set down any rules for such instruction which are likely to be of much help to another person. What success I have had has been due, so far as I can see, to the fact that the subject has been in my mind for all my active life, and that I have shaped my work to suit my own nature, not modeling it on that of any master. It may, furthermore, be said that I have awakened interest by keeping my elementary instruction as far as possible in fields that concerned man. So far as I have been able to observe, the failures of instructors in this and other sciences are generally due to the mistaken supposition that beginners in the subject come to it with the interest which the expert alone has. To attain the end here, as elsewhere, it is well to humanize the matter as far as is consistent with sound work.

THE PROPER SCOPE OF GEOLOGICAL TEACHING IN THE HIGH SCHOOL AND ACADEMY

WILLIAM NORTH RICE, PROFESSOR OF GEOLOGY, WESLEYAN UNIVERSITY, MIDDLETOWN, CONN.

[AN ABSTRACT]

The Committee of Ten placed in all four of its secondary-school programs a course in physical geography in the first year, and in all except the classical program a course in geology or physiography in the fourth year. The report of the Committee on Physical Geography, included in the report of the Committee on College Entrance Requirements presented at the meeting of the National Educational Association in 1899, recommends a course in physical geography in the first or second year, the majority of the committee preferring the first year; and a course in geology late in the curriculum, preferably in the fourth year. A committee of the Connecticut Association of Classical and High School Teachers, in formulating a model high-school curriculum, put a required course in physical geography in the first year, and an elective course in geology in the fourth year. These recent reports seem to indicate something like a consensus of educational opinion.

I believe that there should be a required course in physical geography in the first year of the high-school curriculum. This course would accordingly precede the bifurcation of the curriculum necessitated by the fact that in most cases the classical students must begin Greek in the second year. The importance of an intelligent general view of the world in which we live, to all pupils, whatever may be their subsequent educational advantages or their business in life, amply justifies making this a required course. That it should become a part of the requirement for admission to all college courses is a consummation devoutly to be wished. A course in geology in the fourth year of the curriculum is a most desirable elective.

The required course in physical geography should include sections on the earth as a planet, the atmosphere, the ocean, the land, and life. I deem it unnecessary to discuss that course, as I am in substantial agreement with the views of the report on physical geography presented to the National Educational Association in 1899. The only important point in which I would wish to express dissent from that report is that, in my opinion, the amount of time allotted to the geography of the land is proportionally too great.

A course in geology will be in an important sense an amplification of the part of the course in physical geography relating to the land. While, to a considerable extent, the subjects treated in physical geography and geology are identical, there is always a difference in the point of view. Geography

has been said to be the study of the earth's present in the light of its past; geology, the study of its past in the light of its present. The recognition of the earth as having had a history is incidental in geography, essential in geology. Geography looks primarily at the present condition of the earth as man's dwelling-place; tho there can be no intelligent contemplation of existing forms without reference to their cause, or of current processes without reference to the history which they imply. But in geology the idea of the earth as having had a history—as being a product of evolution—is all-important. Dynamical and structural geology gives the key to the alphabet in which the earth's monumental inscriptions are written. Historical geology reads those inscriptions themselves. Something of dynamical geology must, of course, be implied in any other than a purely phenomenal description of geographical facts. But the dynamics of the globe, which can be treated only superficially with the knowledge at command of high-school pupils in the first year, can be treated much more thoroly after they have acquired in the second and third years some knowledge of physics and chemistry, and perhaps of other sciences. In the first year's course in physical geography, the action of the atmosphere and rain in reducing rocks from a condition of comparatively firm consolidation to a more or less advanced state of disintegration can be recognized in a general way. In a fourth year's course in dynamical geology, the student will be prepared to recognize specifically the chemical actions of oxygen and water and carbon dioxide upon the various elements and compounds of which the earth's crust consists. In the first year's course there can be a general recognition of the action of rivers, in erosion, transportation, and deposition, and of the effect of varying velocity upon these processes; but the fourth-year student, who has learned something of physics, can understand that the energy of a river is the energy of a falling body, is measured by the product of mass into height of fall, and is used up chiefly in overcoming friction and in uplifting transported sediment in opposition to gravitation. He can thus gain a far more complete and comprehensive knowledge of the dynamics of river action.

If an elective in geology is provided in the fourth year, it should be chiefly a course in dynamical and structural geology. It must, indeed, be recognized that no one course in geology is best in all schools. Something must depend upon local conditions, something upon the qualifications and idiosyncrasies of the teacher, something upon the extent to which other sciences have been previously introduced in the curriculum of particular schools. In a school whose teachers and pupils have easy access to a series of fossiliferous formations, obviously much more attention should be given to the study of fossils and their teaching than would be wise in a school located in the middle of an expanse of crystalline rocks of uncertain origin and of unknown age. Schools situated within the

glaciated region should obviously give special attention to glacial geology. Historical geology and paleontology can be dealt with somewhat fully in schools where the curriculum is such that the members of the class have already had a somewhat extended course in zoölogy. But, in general, those who will take a course in geology in the fourth year of the high school will not have had enough of zoölogy and botany to appreciate a thoro or detailed presentation of the succession of life in geological time. Mineralogy and lithology cannot be studied with any degree of thoroness without crystallography or without more of chemistry than high-school pupils can be expected to know. In general, a non-technical description of a mineral is an incorrect description. Practically all that can be done with minerals and rocks is to show the student specimens of a few of the most important, and give him some vague idea of their ordinary macroscopic characters.

In general, then, and apart from exceptional conditions, the main part of the work in geology must be the study of structural and dynamical geology. The peculiar and characteristic educational value of such a course is as a training in scientific reasoning. The question which should always be emphasized is: How do we know that the earth has had a history? What are the signs by which past changes are inferred, and what is the ground of validity of the inference? This point of view requires, of course, considerable reflective capacity on the part of the student. Hence this course should not come before the fourth year of the curriculum. There has been difference of usage among lecturers and authors of text-books; some making the dynamical geology precede the structural, others *vice versa*. Of these two arrangements, the former seems better adapted to initiate the student into the mental habitude of interpreting the phenomena of the earth's crust as evidences of former changes. In my own lectures, I have followed what seems to me a still better plan in taking dynamical and structural geology together, so that each particular class of rocks or of rock structures is studied in immediate connection with the discussion of the particular agencies to which it is due. I believe that a text-book constructed on that plan would make it easier for the teacher to develop in the student's mind some just conception of the logic of geology.

In closing, a word may properly be said in regard to means of illustration. Besides maps, models, and pictures, every school should have at least a small collection of geological specimens; and a small collection well selected is far more useful than a great mass of miscellaneous curios. There should be, of course, typical specimens of the principal rock-forming minerals and of the principal rocks. A small collection of fossils typical of the different eras will be useful. Most important for the teaching of geology, but usually entirely overlooked in fitting up a high-school museum, is material illustrative of dynamical geology; such as

specimens illustrating rock-weathering and decomposition, bowlders of disintegration, water-worn pebbles and bowlders, ripple-marks, rain-drop impressions, mud-cracks, glaciated bowlders and glaciated rock surfaces, scoria, pumice, volcanic ashes and lapilli, specimens of miniature veins, dikes, and faults, slickensides, slaty cleavage, contorted lamination, stalactites and stalagmites. And it must never be forgotten that the laboratory of the geologist is out of doors. Many geological phenomena can be illustrated very imperfectly or not at all by specimens or by pictures. Much of the reasoning of geological science can be duly appreciated only by the student who has seen stratigraphical relations and topographical forms in the field. Of course, the character of the excursions that will be practicable, and the particular geological phenomena to be studied in the field, must vary with the location of the school. But there is, happily, no place on this earth where features of geological interest cannot be found accessible in an excursion of a single day or even of a half-day; and the true teacher of geology will never be satisfied unless he can get his pupils out of doors and show them geological phenomena on a broad scale at first hand.

OUT-OF-DOOR CLASS WORK IN GEOGRAPHY

F. P. GULLIVER, ST. MARK'S SCHOOL, SOUTHBORO, MASS.

[AN ABSTRACT]

There are two methods of conducting science classes out of doors. One of these methods is the field excursion, and the other the field exercise. A large number of pupils may go on an excursion, but only a small number, from ten to fifteen, may profitably take part in the field exercise.

Both methods tend to increase the observational faculties of the pupil. On an excursion the instructor may point out many geographic features, and thus show the pupils what to see and how to choose from the many the more important things to be seen. On an excursion the forms which have been studied in the class-room may be pointed out to the pupil, and other forms shown which may be taken up later in class. As many pupils as can hear the instructor may gain information from this method of field work.

In a field exercise, on the other hand, only a few may take part. The instructor must see that each student takes each step in the exercise before the next is shown. A few facts are given, and the pupils must work out others from their individual observation. This is the laboratory method carried into field work. The pupil is taught to observe, record, reason, explain, and predict.

The first method must be used almost exclusively where the number of field trips is very limited or the number of pupils is large. Where

small sections are possible, the method of field exercises is much more profitable and of very much greater educational value. More facts may be shown on excursions, but greater real knowledge is gained by field exercises. The writer would not decry field excursions, but rather point out the greater value of field exercises. Teachers will find that an occasional excursion often increases the value of a well-planned series of exercises.

An example will make this difference clearer. An excursion into the region of the New England glacial deposits may be so planned as to show nearly all of the following features: glaciated rock surface, weathering since glaciation, grooves and striæ, till, bowlders, clay, drumlin, esker, sand plain, kame, bowlder moraine, lakes, kettle holes, sections showing difference in structure between till and water-laid deposits, and the many kinds of rock which make up glacial rock waste. The leader of the excursion must point out, describe, and explain each feature to the pupils, and they will be able to retain more or less of them according to their training and ability.

A series of field exercises may be planned to study the glacial deposits, and so arranged as to bring out all the above-named features, and at the same time allow the pupils to work out for themselves many of the more important facts which have been established in regard to the action of glaciers and their deposits.

After a study of the New England upland and the valleys cut beneath its nearly even skyline, pupils may be told something of the action of glaciers and the suggestion made that some of the already observed irregularities of surface form may be explained by the deposit made by an ice-sheet. A good place to begin is with a section of a drumlin. Many boys will have noticed the "football hills" which lie on the upland or in the valleys. Could these be formed by ice? How? Set them all to thinking. Now get facts, draw a section, study materials, find proportion of sand to clay, etc. Now study the form of rock fragments, flat sides, some edges sharper than others, sharper on some kinds of rock than others. How does ice smooth rock? How does it make grooves and scratches? Many such questions will be asked, and when the work is completed, the pupils will have a fairly clear idea of how glaciers act.

Where are drumlins placed? Does the direction of the axis accord with the ice movement? Let some boys take one and some another, and determine compass bearing, height, length, breadth; or make a contour map of a drumlin showing all these points.

Next make a study of a gravel ridge; map its meandering course, compare with the river, show high and low portions, find the general direction of ridge, study materials and structures. When river action and ice action are clearly perceived, ask which came first. Note the rounding of glaciated pebbles. If the gravel ridge represents the bed

of a stream, the banks must have been ice, which was later melted; therefore between two stream courses one would expect to find a kettle hole; if the glacial stream ran into standing water, predict a delta, which may be visited later. After a gravel ridge is studied and understood, give the name, *esker*. If given too soon, some boy will be sure to say: "Oh, yes; I can find out all about that in the book."

Glacial lake deposits may be studied in the same way, and deltas, terraces, cliff and beach cut into drumlins, sand bars, islands, etc., worked out. All thru this study the value to man of the several deposits must be shown—the contrast of sand and clay soil: sand for filters and concrete, road material; clay for dams, bricks, etc.

For those who may take their classes to the seashore there are many good exercises showing sea action, cutting of the land, building sand and gravel, filling in marshes, etc. In a similar manner field exercises may be planned for other classes of land forms.

THE TEACHING OF BIOLOGY IN HIGH SCHOOLS

A. S. PEARSE, HEAD OF THE DEPARTMENT OF BIOLOGY, HIGH SCHOOL, OMAHA, NEB.

The biological work is almost invariably assigned to the second year in the high-school course. It usually follows physical geography, and serves as a preparation for the courses in physics and chemistry which follow. The nature and extent of this course have been so well and so recently canvassed by this Association that this phase of the subject could well be omitted from the present discussion.[1] Nevertheless, the writer feels that a brief statement of his views on such a course will not be out of place, in that it will, perhaps, make clearer the discussion of the methods of handling it, which follows.

Both on account of the age of the students and because the majority of them will have no education of this nature after leaving the high school, it is desirable that the work be of varied nature and cover as much of the plant and animal kingdoms as possible. The course offered should consist largely of laboratory work, thus enabling the student to come in contact with the actual things themselves. The courses in botany and zoölogy may be offered separately or in a single course. After considerable experience with both methods, the best results have been obtained with the latter by alternating the plant and animal work on the first four days of the week and using Friday for a general review of the ground covered during the week. The work in this case was con-

1 (*a*) *Report of the Committee on College Entrance Requirements*, National Educational Association, 1889; (*b*) "Syllabus of Work in Biology in High Schools (New York)," *Journal of Applied Microscopy and Laboratory Methods*, Vol. VI, No. 4, p. 2277.

fined to five class periods of forty-five minutes each, and, if the work conforms to the time generally allowed to studies in the high school, the teacher will have about this time to devote to class work. The writer has been accustomed to devote most of the first four periods of the week to pure laboratory work, giving only a short quiz on the lesson assigned for outside study at the beginning of the hour.

As a guide for the laboratory work any of the excellent laboratory manuals now on the market may be used. These, however, will not in every case suit the available laboratory material, and a much better method is for the teacher to make a set of laboratory guides, following the model of any good manual. These may be mimeographed on heavy manilla cardboard and kept in the laboratory. These guides have the advantage of being elastic, and, if new points are to be inserted with the acquisition of new material, or if the material is poor in a certain season and it seems advisable to treat a form briefly, a change is easily accomplished.

It is well to use simple names when they fit, but it is doubtful whether it is advisable to invent common names in order to make the work more easy, or to avoid the use of scientific terms when they are most suitable. If schedules like those recommended are used, they should cover, more or less completely, every branch of the plant and animal kingdom. It is also advisable to use as many forms as possible in each group. Then the evidence on that group is not limited to a single specimen. For example, the nervous system may be worked out in one form and the circulatory system in another of the same group.

It has been demonstrated that high-school pupils can, with care, use the compound microscope and other delicate pieces of apparatus with success; and the use of these daily becomes more necessary to a true grasp of the subject. Measuring scales, graduated to millimeters and centimeters, and printed on durable cardboard, can be obtained at a very reasonable price. These are a valuable aid in the hands of the students for making measurements, and also in making them familiar with the metric system.

Field expeditions, when the specimens are studied in their actual habitats, are invaluable both to teacher and student. And even better than these are collecting expeditions by the students themselves. For example, a student learns in the laboratory the characteristics of a planarian and perhaps even examines a living specimen. But even with this knowledge it is not improbable that, after a year's time, many students would not recognize a planarian if they saw one. But if half a day has been spent looking for a specimen, and it has been preserved in alcohol, the student has a lasting impression. The value for the pupil in a required collection lies more in learning to recognize and distinguish plants or animals in the field than in the specimens collected. A

collection of this kind makes each pupil an investigator, and he takes a great amount of interest and pride in his work. The writer has been accustomed to require both a plant and an animal collection, giving the choice of two or three, as shown by the following examples:

Animal collection.—Fresh-water sponge or hydra (1), planarian (1), earthworm (1), leech (1), crayfish (1), myriapod (1), orthoptera (1), neuroptera (1), hemiptera (2), diptera (1), lepidoptera (2 of each suborder), coleoptera (4), hymonoptera (2), arachnida (2), gastropoda (1). These should be placed in a bottle—a fruit jar answers the purpose—filled with alcohol or formol, except the fragile insects, which are to be mounted on pins in a cigar box. In connection with this collection learn to recognize at sight the following different (specified) native forms of batrachia (3), reptilia (4), birds (15), and mammals (3).

Botany collection, No. 1.—Protophyta (1), green algæ (3), sac-fungi (3), puff-ball (1), toadstool (1), bracket-fungus (1), stonewort (1), bryophyta (1 of each class), pteridophyta (2), gymnosperms (2), monocotyledons (8), dicotyledons (12). These specimens to be pressed and mounted (or preserved in alcohol when that is impracticable) and labeled, giving the common name, family, genus, species, locality, date, and collector.

Botany collection, No. 2.—Thirty-five native woods, pieces to be 1 by 4 inches, and cut out to show the grain; sand-papered, polished, and varnished.

Botany collection, No. 3.—One hundred leaves. These to be pressed, mounted, and named as in collection No. 1.

These collections, aside from their value to the student, furnish the teacher an incentive to keep up to date, and also supply abundant laboratory material for the next year.

Laboratory or field work is most valuable when the results are kept in permanent form. The notebooks, in addition to being neatly and carefully made, should be kept on a uniform plan. This renders examination by the teacher much more easy. Of course, they should be looked over frequently, and it is a good plan to have all drawings presented to the teacher for approval as soon as they are completed. Mistaken impressions are avoided in this way. As to the notebook, the ordinary loose leaves of note and drawing paper, placed inside a cover and held by a string, give excellent satisfaction, when the student has a locker, drawer, or other suitable place to keep them. But if there is no such receptacle, the leaves are apt to become soiled, and a book about 8 by 10 inches, bound in board covers, has in this case been found to give better satisfaction. The latter form will stand the wear and tear of being carried around by the students, and can be obtained from a bookmaker at a cost of about twenty-five cents.

When the time allotted for class work consists of five periods a week, the work should consist of laboratory work for the most part; no great difficulty will be encountered in presenting this work in the manner suggested above or by some better method. It is the problem of keeping the students profitably employed outside the class-room that offers the greatest difficulty. We have numerous excellent biological text-books accessible at the present time, and the difficulty may be met by assigning

lessons, supplementary to the laboratory work, from one of these. For the teacher who has a limited knowledge of the subject, or who does not expect to continue the work of teaching biology, this is probably the most satisfactory way. But the books available may be behind the times, and, while a book may be satisfactory in most respects, it is never without some fault, in the eyes of the teacher. It may completely satisfy the ideas of the author under the conditions for which it was written, but there is no text which will meet every requirement in any part of the country. For example, the specimen on which the illustration is based in the text may not be available for laboratory study.

Every teacher has felt that if the good in one book or the theories of one author could be combined with one or two others, an ideal textbook would result. A professor in a college attains this ideal by combining the knowledge he gleans from various sources in his lectures. But it is doubtful whether pupils of the second year of the high school are able to take profitable lecture notes without making the lecture a tedious dictation and a great waste of time. The student expects and needs a textbook, and it is probably not advisable to withhold it. If each teacher could make a text of his own, in which he could combine the good in all the works to which he has access, and if the hobbies of some authors could be eliminated, and the teacher could incorporate a few of his own, and if the text need never get behind the times, the arrangement would be most agreeable and satisfactory. The writer has been able to accomplish this with results, satisfactory to himself at least, by a series of mimeographed schedules which are given out, a sheet at a time, and written in the books with the laboratory notes. Of course, a part of these schedules consists of information which is merely copied. Things like the history of biological science or the theories of the mechanical nature of protoplasm can be presented in no other way. But the major part is composed of questions on the laboratory, lecture, or field work, which are intended to bring out the relationships of the forms studied and the general biological laws or facts. The following are two examples which will illustrate the point better than an explanation:

Botany study schedule No. 1.—(Answer in the form of a continuous essay in the notebooks on the left side of the page.) Will there be a greater difference between the plants of two different branches than between those of two different classes of the same branch? Why must this be true? Between what two divisions will there be the least difference? Of what does the scientific name of every plant or animal consist? Where do the lowest plants of the plant kingdom live? What conditions are found in such places? Warm air causes water to evaporate, whether it be in ponds or in the bodies of plants. If the water in a plant evaporates faster than it can be replaced, the plant wilts and dies. What do land plants, trees for example, possess which prevents the water in them from evaporating too rapidly? Why must gloeocapsa live in a moist place? etc.

Zoölogy study schedule No. 39.—Development of the nervous system. What was the first animal we studied that had a nervous system? Describe this system. Of what two essential parts does the system in this case consist? What is the characteristic and

peculiar form of a nerve-cell? What is the function of each part? Of what is a so-called nerve-fiber composed? What was the form of the nervous system in the nemathelminthes? What is the position of the nerve cords? etc., etc.

These study schedules are mimeographed on sheets of white paper about 7 by 10 inches, and one of this size can be used for the assignment of lessons for about two weeks.

By the use of such a system as the above not only does the teacher work with his own text-book, but the pupils, in answering the questions, must depend upon their own laboratory work and the notes they have taken. This makes the accuracy of the notebook an important detail, and this fact the students are not slow to see. They feel that the book is their own work, and with the greater interest that this thought brings they are more careful about the material that goes into it.

If both the laboratory course and the work outside the class are offered by means of schedules, we have a perfectly elastic system, which may be modified from year to year, and is easily expanded in one place or cut down in another to fit the scarcity or abundance of laboratory material. It may also be used as supplementary to a text-book. The teacher need not necessarily be able to use a typewriter to get out sheets of the kind mentioned, as there are persons in every city who are willing to do this work at a nominal sum.

SUMMARY

The writer advocates the following plan for the course in high-school biology:

1. Laboratory work upon the fauna and flora of the locality in which the course is offered, and the specimens in the laboratory. This is to be supplemented by (*a*) field expeditions, and (*b*) collections by the student.

2. Work done outside the class. This is to be guided by schedules which consist of (*a*) general information, and (*b*) questions based on the field and laboratory work.

3. The keeping of careful notes on both the above divisions of work.

Such a course encourages independent thought on the part of the student, and tends to keep the teacher from becoming narrow thru the use of a single text. The greatest disadvantage attending its use is the amount of work involved. This labor, however, decreases each year, and even during the first year it does not amount to much more than that which the adoption of a new text-book involves.

A NEW METHOD OF TEACHING PHYSIOLOGY

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No profession is older than medicine and none more new. In the medical schools subjects taught three thousand years ago stand by the side of those unknown in the youth of men still active. Anatomy is more

ancient than the obelisks; embryology and bacteriology are children of today. Physiology, too, is of recent origin. It has broken away from anatomy. Dr. Oliver Wendell Holmes taught both subjects in the same course of lectures. The teaching of physiology has naturally been greatly influenced by methods employed in the teaching of anatomy. Descriptive anatomy became the most conspicuous discipline in medicine at a time when the chief mental training was obtained from books. Joined to the powerful example of the most liberal education of that period was the difficulty of obtaining material for dissection. Thus necessity supported the mistaken theory that natural science could be learned from verbal description. To this day in many schools most of the instruction in anatomy remains didactic and consists of books, diagrams, and more or less misleading models.

Practical necessity and false theory have kept the teaching of physiology also upon the wrong path. Physiology, it is true, does not need the cadaver, but it needs much that seemed impossible. It is even yet believed that the cost of apparatus and other materials is prohibitory, that students cannot master the details of exact experimentation, that delicate apparatus cannot be trusted in their hands, and that instruction to the extent required cannot be given to large classes because the course will become too complicated to be carried out. So, in physiology as in anatomy, an apparently unavoidable makeshift has supported incorrect theory. Nature is studied apart from nature—by reading or hearing descriptions at second hand of what some third person saw. This error has been strengthened by the example of teachers of the law. The fundamental difference between the natural sciences and other disciplines, such as the law, has been forgotten. The material of the law is in books. Words give with accuracy the principles and rulings which constitute the law. It is not so in natural phenomena. These cannot be well described. If words would serve, the blind would see. You cannot know a man's voice until you have heard it. No one would willingly employ a physician who had never examined a patient. Yet there are many books that describe as well as books can the symptoms of disease. Disease is the abnormal action of living organs; physiology treats of their normal action. If their abnormal action cannot be learned from books, neither can their normal action.

Efforts have been made to better the hearsay method of teaching physiology. In most schools of medicine the lectures in physiology are enlivened by occasional demonstrations. In a few schools certain experiments are performed by the students themselves. Yet the mediæval tradition still holds. The stress is upon the didactic teaching. The student rests on the authority of the professor and the text-book. The experiments follow the lecture and attempt to verify its statements. The weakness of this method is easily perceived. A natural phenomenon cannot be understood without personal experience, either of the phe-

nomenon itself or of other phenomena so closely related that the memory of them will combine in the mind to form a sense-image of the new phenomenon. If there has been no personal experience, there will be no memories to rouse and words will fail. Many of the phenomena in physiology — for example, the peristalsis of hollow viscera — are entirely unlike anything else in nature; they must be personally sensed. Other physiological phenomena are so complicated as to defy reproduction in the mind by combination of the memories of their many constituents. These are unanswerable arguments. It is well, however, to submit to actual experiment the reactions of the student to the stimuli of education. I have made such observations on the students in the Harvard Medical School during the past ten years. From the first to the sixth year of this period what I have called the traditional method of teaching physiology was employed. The examination of students taught in this way showed, as was inevitable, an undeniable lack of comprehension of physiological phenomena lying outside the student's own experience. Moreover, these students treated physiology as a descriptive and not as a rational science. Their point of view was wrong. In this they were undoubtedly influenced by their study of anatomy. Anatomy is a descriptive science; it deals with units, and these units are at rest. The student aims at visual memory; often he satisfies himself with the memory of a diagram or a model. Physiology deals chiefly with units in action; each influencing the others. The circulation of the blood, for example, is not a fixed state, to be memorized, but is, at any given moment, an equilibrium resulting from the interaction of many shifting factors. The factors must be severally known and the result of their interaction be reasoned out. If the factors have not been acquired largely by personal observation, the mind will not grasp them with sufficient clearness to enable their subsequent combination. The truth of these remarks is borne out by the failure of students to answer certain questions even when they had known for weeks that these questions would be asked at the examination. For the most part, physiology cannot be memorized, but must be understood. The final test of the undergraduate is comparison with a strong professional. The quality of sound learning is the same the world over. Students taught physiology by the didactic method cannot meet this test.

Moved by these observations, I proposed in 1898 a new method of teaching physiology, and this method has been four years in use in the Harvard Medical School. In the new method, the fundamental experiments and observations which form the solid ground in every field of physiology are divided into sufficiently small groups and arranged in the most instructive sequence. With the fundamental experiment of each group are placed the accessory data. The meaning of this term will be clear from the following example. Consider the function of the roots of spinal nerves. The fundamental experiment here is Johannes Müller's

well-known section and stimulation of the nerve-roots. The accessory data are such of the observations and opinions of his successors as are necessary to give a clear picture of the present state of knowledge of this subject. The Harvard student makes for himself the fundamental observation, and immediately afterward considers the accessory data provided in text-book and lecture. He proceeds systematically from the fundamental experiment and accessory data of one group to those of the next, in an ordered and logical series.

The fundamental experiment and the accessory data are taken as directly as possible from the original sources, and (for university students) the reference should be given in each case.

It will be obvious that the new method is not an extension of the old. It is, in fact, an exactly opposite process. The old method is chiefly didactic. The new is a systematic course of experiment and observation by the student himself. In the old the student rests on the professor and the text-book; in the new he relies on the fundamental experiments done with his own hands. In the old his experiments follow the lecture and attempt to verify its statements; in the new his experiments precede the lecture and are discussed by the lecturer in relation to the work of other observers. In the old the stress is upon the didactic teaching; in the new the stress is upon observation. Under the old method students in the Harvard Medical School used to ask: "Who is the authority for that statement?" Under the new they ask: "What is the experimental evidence?" The old method insensibly teaches men to depend upon authority, but the new directs them to nature.

It should be observed that this new method serves for the instruction of all students, from beginners to those engaged in research. The beginner performs the fundamental experiment in each group and studies the accessory data. The advanced student performs the fundamental experiments and as many of the accessory experiments as may give him the special training he desires. The research student has before him the classical observations and the original sources of the problem he has chosen.

It should be noticed also that the new need not violently push aside the old method of instruction, but may replace it chapter by chapter, as the means and the energy of the instructors shall permit.

It has been urged against the new method that there are fundamental experiments which require more time than the student can possibly give, or which are too complicated to be successfully performed by him. The number of these has certainly been much exaggerated, and is daily lessened by inventions that secure simplicity without loss of accuracy. Pending such labor-saving inventions, the experiments which consume much time are done (in the Harvard Medical School) by committees of students, and the results reported to the entire class.

The question of "ways and means" should now be considered. The new method requires:

1. Printed accounts of the fundamental experiments and observations in physiology, taken from the original sources, and arranged in the most instructive sequence. For university students the reference to the original source should be given in each case.

2. Accessory data grouped about the fundamental experiments. The accessory data should also be taken as directly as possible from the original source, and the reference given in each case.

3. Apparatus of precision designed with the utmost simplicity upon lines that permit its manufacture in large quantities at small cost.

Especial consideration should be given to this apparatus for the laboratory teaching of large numbers of students. The making of physiological apparatus distinguished by simplicity of design, sound workmanship, and low cost is of high importance to the development of physiology. The ordinary student of physiology is essentially a book man, while the professional physiologist is essentially a laboratory man. Student and professor should go the same path — the only road that ever has led or ever will lead to a sound knowledge of a natural science. Few steps can be taken along this road without apparatus of precision. Physiological apparatus has hitherto been made upon the "model" plan, each piece for itself, without regard to the number of mechanical "operations" required, and with little or no thought as to the subsequent maintenance of the apparatus in good condition. The individual laboratory instruction of each student with apparatus made on the old lines would be beyond the means of any large school. Hence, the sound training of large classes in physiology depends absolutely upon the invention of apparatus that shall serve for exact experimentation, i. e., the repetition of classical experiments, and that shall also be designed with reference (1) to its "manufacture," (2) to its storage and issue, and (3) to its maintenance in good condition. By "manufacture" is meant technically the making of a number of pieces of the same apparatus consecutively, by preference upon special lathes and with special tools. For economy the number of steps or "operations" should be the fewest possible, as each operation must be repeated many times. The labor of setting a "turret lathe" which will make eight consecutive operations upon the same piece of metal is as great for one piece as for a thousand. Astonishing economies may also be secured by the use of special automatic tools.

Further, it is essential that the apparatus be compact, and that important parts be protected so that they may not be injured when the apparatus is handled rapidly by persons of small experience. Storage and issue must be carefully studied to prevent hopeless confusion and the rapid deterioration of the plant.

Finally, the apparatus should be designed with especial reference to durability and cleanliness; otherwise there will be a heavy charge for maintenance.

The supply of apparatus of this type bears the same relation to the advance of physiology that the commissariat bears to the advance of an army.

It is obvious that the above conditions cannot be fully met without prolonged labor, but it has already been pointed out that the new may replace the old method chapter by chapter, as the means of the instructor shall permit. This has been done in the Harvard Medical School. Thus the two methods have been compared in practice upon the same students. The superiority of the new method is beyond question.

The new method may be applied without change in universities and colleges, and perhaps in high schools. Its essential feature—namely, personal acquaintance with at least one phenomenon in each group before that group is discussed—should be the basis of instruction in the lower schools. It is the foundation of all true knowledge in the natural sciences.[1]

LABORATORY WORK IN HIGH-SCHOOL PHYSIOLOGY

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[AN ABSTRACT]

Physiology has not hitherto had an honored place in the school curriculum, because anatomical details or the dry rules of hygiene have been too frequently emphasized, rather than the interesting and profitable principles of physiology; the subject has often been taught by teachers who have not made a specialty of biology, and physiology, in the minds of too many pupils, is synonymous with instruction as to the effects of alcohol and narcotics.

It is easy to interest boys and girls in the functions carried on in their own bodies. It is important for their health and happiness that they know how to care intelligently for the organs of these bodies. An intelligent public sentiment respecting sanitation, street-cleaning, and the work of boards of health can be best developed by a proper teaching of physiology, and this subject, when taught by the laboratory method, has real educational value.

At the outset it is important to emphasize the fact that physiological processes can never be understood unless the pupil is given some idea of at least the simpler principles of chemistry. He must become more or less familiar with carbon, hydrogen, oxygen, and nitrogen; he must know how to test for carbon dioxide, for acids, and for alkalis; and he must learn something of the common processes of oxidation, neutralization,

[1] In the preparation of this address the writer has drawn to some extent upon his former publications, "The Teaching of Physiology," *Philadelphia Medical Journal*, September 1, 1900, and *Physiology at Harvard*, second edition, Cambridge University Press, 1903.

and evaporation. For unless these lessons are taught early in the course and taught by experiment, the boy will find his foundation weak when he attacks the more difficult processes involved in digestion, respiration, and excretion. Most of these simple lessons can be taught with common matches, a few chemicals, and some pieces of glassware. If a pupil once gets clearly in his mind the nature of elements, compounds, and process of oxidation, an immense amount of subsequent labor and disappointment will be saved.

In the important subject of foods, the pupil should first familiarize himself by laboratory experiment with the five or six nutrients that are found most commonly in foods. For the starch tests a quart of iodine solution can be made for a small sum, and this, put into small bottles, will supply a large class. Most of the experiments in food analysis can be carried on successfully at home, the only real difficulty being that the pupil is likely to get so interested in his experiments that he forgets to learn his other lessons. When he has followed the simple directions given him, has tested ten to twenty foods, and has been called upon to defend his results in the class-room, a boy is not likely to forget that cereals usually contain a large amount of starch, and that this nutrient is absent in foods of animal origin. Instead of relying on text-book authority, he has demonstrated beyond a doubt that potatoes and flour contain a large amount of starch, and that peas and beans commonly have less of this nutrient. The conflicting results derived from the testing of spices furnish a good text for a discussion of food adulterations. The Fehling's solution test for grape sugar can be performed at home, the necessary chemicals and test-tubes being furnished the pupil. The presence or absence of proteids, fats, mineral matters, and water should likewise be experimentally determined at home or in the class by the individual pupil, and a comparison made of the results obtained. Each pupil has now a concrete idea of some of the most important compounds he is to meet continually as ingredients of his food, as components of the blood, or as essential constituents of his body.

It is impossible, of course, to demonstrate by experiment the uses of the various nutrients, and so with laboratory study there must be combined a considerable amount of class-room instruction. Indeed, we should bear in mind that laboratory work must always be followed with and supplemented by vigorous questioning — a process which keeps clear in the mind of the pupil the essential points in each experiment and the relations of the various facts that have been learned.

The uses of foods, proper methods of cooking, and the study of food economy are, to my mind, among the most important of the topics connected with human physiology. These topics are treated more or less inadequately in most school text-books, but fortunately the publications of the United States Department of Agriculture are availiable even in the

large quantities required for individual study. The best bulletins for high-school use are *Foods: Nutritive Value and Cost*, and *Meats: Composition and Cooking*. The colored food charts which are so useful in class recitations are unfortunately out of print, but the charts and tables in the bulletins named above can be used to almost as good a purpose.

A study of half a dozen of the common tissues should next be undertaken, because these tissues are met with again and again in considering the processes of digestion, circulation, and respiration. Get a butcher to saw in halves the leg bones of a sheep, and supply each pupil with half a bone and a dissecting knife. At the close of fifty minutes of laboratory work he should have learned the essential characteristics of bone, cartilage, connective tissue, and fatty tissue. Another laboratory period spent in studying pieces of beefsteak will fix in mind muscle tissue, and will serve to review fat and connective tissue. It is perhaps best to reserve the discussion of glandular tissue, nerve tissue, and respiratory tissue until a later time.

The study of cell structure and cell functions should now be introduced, and two or three days may be well spent at this time on amœba and paramecium. The pupil should be led to see that these single-celled animals carry on processes essentially the same in kind as those performed by the highest animals. It is perhaps well to consider in the following order the ten most important functions carried on by animal cells: (1) locomotion, (2) taking in of food, (3) digestion, (4) circulation, (5) assimilation, (6) taking in of oxygen, (7) oxidation or metabolism, (8) excretion, (9) sensation, and (10) reproduction.

While it is not impossible to do this kind of work, even when the teacher has to go from room to room, school principals should be led to see the enormous advantage, both to pupil and teacher, of the single laboratory. The room for this subject need not be equipped with special furniture, for ordinary desks will answer almost as well for the work in physiology. One essential condition, however, is an adequate supply of fresh material, which can be furnished by any local butcher who has access to a slaughter-house. These supplies are, of course, to be paid for out of the public funds, just as are text-books and chemicals. After the laboratory has been equipped with permanent apparatus, the total expense of the course ought not to aggregate more than eight or ten cents per pupil.

Suppose our topic is muscle, and we are aiming to lead the pupil to get first-hand clear ideas of its structure. Pieces about the size of one's thumb, cut from the leg muscle of a cow, should be placed on each desk, together with a dissecting needle. In small classes it may be best to allow each pupil to discover what he can and to report his observations orally.

One can easily feel thru the flesh and determine that the skeleton of the upper arm is formed of one long bone which has an enlargement at

either end. The two bones of the forearm can also be distinguished and described. We cannot, of course, count the small bones of the wrist, but the range of motion between them can easily be shown. In the palm and fingers the position and shape of the bones can be determined almost as well as by studying a prepared skeleton. Having learned all that is possible from his own arm, the pupil's attention should be directed to a study of an articulated skeleton. Before any text-book lesson is assigned on a given set of bones, the bones should be pointed out by the pupil either on his own body or on the skeleton, and their form and use studied.

The position and action of the muscles of the arm are even more easily determined. Why should a boy learn from a book that his biceps muscle on contracting becomes harder, thicker, and shorter, when by a few laboratory directions he can so clearly demonstrate the fact? He can make out, too, that the lower tendon of this muscle is attached in the region of the forearm, and, after grasping this tendon between the thumb and forefinger, he can by turning the forearm satisfy himself that this muscle is joined to the radius and not to the ulna. A similar study of the fleshy part of the forearm reveals to the pupil that the muscles of the fingers are located in this region. By closing and opening the fingers the long tendons which pull on the fingers can be traced from the forearm, along the wrist and the palm or back of the hand, to the bones of the digits. One can easily see how clumsy would be the hand were all the flexor muscles of the fingers located in the palm, as are the flexors of the thumb.

The essential points in the structure of the skin, of the nails and hair, of the action of the blood-vessels, sweat glands, and nerves in the hand, can also be found out by the individual pupil. It may seem to take longer to acquire these facts by observation than from text-book lessons; but that the laboratory method of study is far the better is clear from the interest manifested by the pupil in carrying on his work, from the greater clearness with which he can describe what he has learned, and from the fact that he can in a moment's time, even when writing an examination paper, test the accuracy of his statements by a repetition of his original observations. It is amusing at times to watch a class while taking its final test in physiology. If anyone who had not watched the laboratory work thru the term were to enter the examination room, he would be at a loss to interpret the apparent contortions of the muscles, joints, and other organs of the pupil's body.

There is no time to suggest some of the interesting and instructive laboratory experiments which can be used to make clear the processes of digestion, circulation, respiration, and sensation. When possible, these experiments should be performed by each pupil on his own body. If models and pieces of apparatus are to be used instead, they should be as simple in their action as possible, and attention should always be called to the

fact that no model can be made to work exactly like the living organs and tissues.

Boys and girls are by instinct comparative anatomists and physiologists, and the study of the human body offers rare opportunities to develop this instinct. Suppose your class has been studying the skeleton. If there is a natural-history museum within an hour's ride, take them there, give them a set of questions which will apply to the skeleton of any vertebrate, and set them at work on the skeleton of a giraffe, a horse, or an elephant. Unless your experience is exceptional, you will find an excited group of boys and girls plying the skeletons and you with questions as to the position and use in the specimen before them of the various bones they have studied in class.

Teeth, too, are wonderfully interesting when studied comparatively and in relation to the food which the animal eats. The school museum should contain at least the skull of a horse, a cow, a dog, and a rat or a squirrel, for these can easily be procured by the teachers or pupils. These are common animals with which every boy is familiar, and he is thoroly interested in making a study of the machinery by which these animals grind, tear, or gnaw their food. Other profitable subjects for comparative study are the various methods of locomotion employed by vertebrates and invertebrates, their methods of getting their food, the ways in which they are protected, and the sense-organs which they possess. Much of this observation can be done at home, or afield, or in zoölogical parks by the individual pupil, if once he acquires the habit of noting resemblances and differences.

If you wish to teach cleanliness most effectively, devote a half-dozen lessons to the study of bacteria. Let the pupils experiment at home with milk and with a hay infusion. Expose culture dishes containing nutrient agar to the air in the corridors before and after sweeping, and let the pupils note the growth of the colonies of bacteria day by day. Teach the boys and girls the principles of inoculation and sterilization, and if possible show them with high-power lenses the living germs under the microscope. Emphasize the filthiness and the danger of expectoration (better call it spitting) in public places, and call attention to the splendid work done by boards of health and by such men as our New York Waring and Woodbury.

Physiology, then, need not be uninteresting and unprofitable. If taught by laboratory methods, it is replete with interest. From an educational point of view it well deserves consideration as an inductive science, and in its practical bearings it is even more useful than the other sciences which are now honored in the school curriculum. As physiology teachers, however, we have much to do along the lines of choosing our subject-matter and of developing our pedagogics. When we have done this and are able to point to years of successful experience, this subject in which we are interested will be given the place in the school curriculum which it so richly deserves.

COLLEGE CHEMISTRY, AND ITS RELATION TO WORK PREPARATORY TO IT

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[AN ABSTRACT]

College courses should be elementary even in the case of those students who have had a preparatory course in the high school, for it is impossible to give the student clear ideas without going over the subject, no matter how good the student or how good the teacher. It is with chemistry as with other subjects—repetition is necessary. How much English or Latin, or any other language, can be taught in a year one hour a day?

One reason why language courses are so valuable pedagogically is that they involve so much drill. Day after day, year after year, the same general conceptions are dealt with and illustrated by new examples, until finally these conceptions become a part of the mental equipment of the student. The mind has received lasting benefit. On the other hand, in chemistry every day brings something entirely new and not clearly connected with what has gone before. The student cannot take any clear ideas with him. If my experience is worth anything, he rarely does, even after a year's work. He has had too many impressions. He knows about as much of chemistry or chemical phenomena as he would of a language if he had spent a year in studying its grammar and had tried to read a passage from a different author every day. No matter who the student, or who the teacher, a year's course in chemistry cannot do very much for a student. Most of the work will have to be done over again in some way, if clear ideas are to be gained. Nevertheless, this work is valuable, as it prepares the mind for subsequent work.

The ideal course in chemistry has not yet been worked out. Indeed, I am not sure that there is an ideally correct course. I fancy that it would be well for a student to follow different kinds of courses, so that he may look at the facts and the principles from different points of view.

In an elementary course, whether in high school or in college, I should like to see the facts emphasized, and I should always try to connect the work of the day with the experiences of everyday life. This is, I believe, sound pedagogics. It is certainly sound sense.

Theory, in my opinion, should play a subordinate part in elementary instruction, tho I do not feel that it should be excluded. The atomic theory is meaningless to one who knows nothing of the facts, and it means little to one who knows little of these facts.

Professor Agassiz said, and I am sure thinking teachers will agree with him: "One can see no farther into a generalization than just so far as one's previous acquaintance with particulars enables him to take it in."

HIGH-SCHOOL CHEMISTRY IN ITS RELATION TO THE WORK OF A COLLEGE COURSE

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[AN ABSTRACT]

Many of our high schools give a fairly good course in general chemistry—experiments, theory, and principles—some taking two years and including qualitative analysis and a little quantitative work. Yet in a great majority of the higher institutions the work must be repeated.

To be obliged to go over again in college the preparation of oxygen, the properties of sulphur, the compounds of iron, which he has already studied experimentally and theoretically, the student regards as a useless waste of time, and reasons that if he must take the subject in college, he would better spend his time in the preparatory school on some other branch, the rudiments of which will not be repeated. Thus high-school chemistry is placed at a disadvantage in comparison with other elective subjects.

Two sets of reasons are advanced for this failure of the colleges to recognize preparatory chemistry from the fitting school. The first and chief of these is the fact that in a majority of such schools the student does not go deep enough into general chemistry to warrant his taking up at once the higher branches—quantitative or even qualitative analysis. He has not had theory enough nor practice enough. A second reason is that some students offer chemistry for admission, others do not. Hence there must be an elementary course in college for those who have not had the subject prior to entering. Into this class are also put those who have studied chemistry in the schools. Thus, side by side in the laboratory, taking also the same lecture notes, are those who do not know an element from a compound, and those who have passed the searching college-entrance examination.

Wishing to know what is the actual practice in the higher institutions, I sent to each of the twenty-three colleges and universities contributing to the College Entrance Examination Board the following among other questions: "Are those students who have passed elementary chemistry on entrance obliged to take general chemistry again if they continue the subject, or may they go on at once with more advanced work?" The colleges belonging to this board were selected because they are united on a definite object, and are supposed to allow candidates for admission to offer chemistry. The result would probably not vary much if other colleges had been interviewed. Of twenty-three replies to this question (for everyone answered it), seventeen are to the effect that the subject must be repeated, tho a few say that, if the course has been as thoro in the high school as it

is in the particular college, the student may go on, implying at the same time that this rarely, if ever, happens. In two cases chemistry was not allowed as an entrance elective. One states unqualifiedly that students may go on; another, that they may, but that very few continue the subject. Thus the almost unanimous verdict is: *Repeat.* And the offense with which the high school is charged is *inadequate preparation.*

Wishing to get at the evidence which weighed in the minds of the judges, I put to the same twenty-three institutions this question: "In what part of the work do you find those offering chemistry most deficient?" To this question fifteen direct answers were given, and as they form the important evidence on which my client is convicted, I quote them:

ANSWERS

1. Elementary general principles.

2. A comprehension of underlying principles. Pupils acquire facts, but do not understand their relation to general principles.

3. Want of application.

4. Work is not thoro; mostly taught from books. Ground covered too great for time devoted to it.

5. Elementary logic. Students coming to college are very deficient in reasoning.

6. Equations and laboratory work.

7. Making, putting up, and using apparatus; a thoro knowledge of the non-metals; quantitative experiments.

8. Their failings will vary with the instruction they have received.

9. In general.

10. Perhaps theoretical more than descriptive.

11. Have generally "done" a large number of experiments, but are sadly deficient in chemical laws.

12. In theory and in knowledge of metals.

13. Equations and familiarity with fundamental principles. Three-fourths of the time at high schools is wasted in trying to cover too much ground.

14. They fail because they will not study, and I think in many cases they were never taught how to study.

15. The fifteenth and last is a venomous arraignment of high schools, untrue as it is unkind. Its author says: "The preparatory schools are not in a position to give students anything like the comprehensive instructon in elementary chemistry. In the first place, they can rarely afford to hire a chemist to give the instruction. They only get a school-teacher who has a smattering of chemistry, and not a real chemist. In the second place, they never have much apparatus, so at best preparatory chemistry does not amount to much. The student does not get enough of it to amount to a row of pins. Now, on the other hand, the university professor begins at the beginning. He cannot skip oxygen or hydrogen or nitrogen or water or the atmosphere because the students have heard these names once or twice in school;" etc.

Such a scathing anathema, besides degrading the high-school teacher's work, and elevating to the pedestal the university professor's, shows ignorance of high-school chemistry as taught today. Hundreds of these schools have as teachers graduates in chemistry from colleges and technological schools, and scores have degree men from German and American universities who are "real chemists," and whose work compares

favorably with that done in college. Again, it is the exception that high schools now building and recently built are not well equipped with laboratories. Within ten miles of this spot there is a high-school chemical laboratory on which there was laid out for repairs alone last year more than $10,000, and another high-school plant in the same city whose original cost more than thirty years ago was $40,000. Two weeks ago, happening to be in a city of only 25,000 people, in another state, I visited a high-school laboratory better equipped than any college laboratory doing the same grade of work that it has been my fortune to examine.

This statement might have been true twenty-five years ago; it is probably true now of some remote country high schools. That it is made by only one out of twenty-three shows that most colleges recognize the improved conditions in high-school work.

Yet from these replies of representative higher institutions there seems no doubt that preparatory schools are trying to do too much and are really doing too little. Where is the fault, and what is the remedy?

A majority of the replies state distinctly that the deficiency is in laws and general principles; that students cannot sufficiently correlate facts and theories. The teaching of laws, general principles, and chemical theory assumes, therefore, paramount importance and constitutes the great desideratum. Elsewhere I have dwelt upon the importance of theory teaching, and the verdict of these colleges is a convincing corroboration.

While the inculcation of principles and laws is acknowledged by every instructor to be the most difficult part of his work, something to be avoid d by the easy-going teacher and slothful student, yet it is recognized as the only thing that can give a broad grasp of the subject, and, with requisite experiments, yield the largest results. The tendency in some quarters to omit the application of these broad principles, to abolish the text-book, to abuse the laboratory by excessive use to the exclusion of recitation and lecture, should be viewed with only temporary alarm, for such abnormalities will finally right themselves when the ideal course is adopted.

Entering college on chemistry is a comparatively recent thing. The colleges are the pacemakers, and the high schools are trying their best to keep up.

In the elective system that subject must take the place of so much mathematics, or some ancient or modern language. To be the equivalent of any of these, a great deal of ground must be covered — the non-metals and the chief metals; laws and general principles; the chemical theory, including nomenclature, symbolization, etc. The fitting schools have tried to cover all this extensive ground, and, as most of these schools give but one year of three to five hours per week to chemistry, the result has been — to borrow Mr. Morgan's phrase of "undigested securities" — a vast amount of *undigested facts*. Little wonder the students are

deficient in "elementary logic," in power of "application," and that "their failures vary with the instruction they have received," or failed to receive. The colleges, on the other hand, have set examinations to fit a one-year crammed course, and have admitted students that were confessedly unable to go on with the higher branches of the subject, and were thus forced to repeat in a more thoro manner the work of the preparatory school.

This unnatural loss of time and energy cannot long continue in a quickened educational atmosphere. Two roads lead out of the woods. Let the authorities explicitly state that thoro preparation in the entire field of general chemistry cannot be had in less than two years of five hours per week in a well-equipped laboratory. Make the examination rigid enough to meet this demand, and when the student has entered college, do not require him to repeat his work, but give him advanced standing, as he would have in Latin or mathematics. This is one road. The other, and I believe better, one is: Limit the requirement to one year's work; cut out the consideration of metals, except as they incidentally appear in salts and acid radicals; demand a thoro course in the non-metals, the chemical theory, laws, and general principles. Then, as in the other case, do not ask the student to waste another year or half-year in repetition, but give him advanced work, beginning with metals.

Either of these plans would relegate the rudiments of the science to the high schools, as is fitting. Why should the college teach high-school chemistry any more than high-school English or high-school algebra? I believe it is almost, if not altogether, as important that every high-school graduate should know something of the composition of the air he breathes, the constituents of the food that nourishes him, and the reactions of the fuel that keeps him warm, as to know the binomial theorem or the proof of the *pons asinorum*. Why require the latter as a prerequisite to entrance upon a liberal education, and omit the former? When colleges take the same stand concerning the fundamentals of chemistry which they assume in English and in mathematics, a great advance will have been made. As Cæsar is read in a preparatory Latin course, and not again studied in college, let oxygen, carbon, and silica be relegated to the secondary schools, and the college course begin with metals, analysis, etc. This division line is purely arbitrary, but it serves my purpose of illustration. Any other division mutually agreed upon by conference of representatives of the two classes of institutions would serve equally well. I believe it to be entirely practicable for a conference of college and high-school men to lay out a course with experiments to cover the required ground so satisfactorily that no repetition shall be needed.

I believe this matter is worthy the most serious consideration from an economic standpoint. Last year President Butler gave an address before

this Association on the waste of time between the primary school and the university, and this week the discussion has been renewed under another form by the college presidents. Right here is our chance for contribution. Save a year in chemistry. I believe it to be the plain duty of colleges and high schools to co-operate in formulating such a plan. Especially it seems to me that a strong point can be scored by the examination board that has undertaken the task of unifying entrance examinations and preparatory work, of setting a model which the high schools shall attain unto, in order that a year of school life be not lost, that the student may begin in college where he leaves off in the high school, with preliminary work reasonably complete and satisfactory.

DISCUSSION

CHEMISTRY FROM THE COLLEGE STANDPOINT

HENRY P. TALBOT, PROFESSOR OF ANALYTICAL CHEMISTRY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, BOSTON, MASS.

The increase in numbers in the secondary schools renders it more and more difficult to provide adequately for pupils with varying aims. Since the majority of the pupils of such schools is made up of those who will not enter upon college work, the question may fairly be raised as to what sort of instruction is best for this large class of students, and whether such a course may also be found suitable as a preparation for college work.

For the pupil who will not pursue the study of chemistry farther, that course may be assumed to be best which will contribute most to his general information and culture by acquainting him with a wide range of chemical facts, while at the same time it trains, by means of laboratory practice, his power of observation and his capacity to associate conclusions drawn from a given set of observations or data with those already within his knowledge. Such a course should include the fundamental principles of the science, but not the more complex principles or theoretical conceptions. It demands a teacher who is well informed, who takes pains to discourage the mere memorizing of facts, and at the same time stimulates curiosity and interest, guides the student in the laboratory, correlates the various parts of his instruction, and emphasizes the principles which he teaches by copious applications.

With such a teacher in command this course should also serve acceptably as a foundation for college work. The college instructor can, with this as a basis, and with the advantage of added maturity of the student, develop the more advanced principles and theories of the science, with confidence that the student will be capable of drawing upon his own fund of knowledge for instances in which these abstract conceptions find application. It is not contended that no differentiation should be made between the work of pupils destined for college and those less fortunate, but rather that this differentiation need not be so marked as it often is at present, nor go so far as to entail a decided burden upon the teachers.

The teaching of chemistry in the secondary schools has a tendency to include too much, especially of "theory," when the mental immaturity of the the pupil is taken into consideration, together with the time allotted to the subject. Every teacher should make all possible effort to keep himself well and broadly informed, but should be sure to limit his instruction to the capacity of his class, holding himself ready, however, to stimulate and instruct the exceptionally thoughtful and progressive pupil.

THE LABORATORY THE PLACE TO TEACH FUNDAMENTAL PRINCIPLES

LYMAN G. SMITH, PRESIDENT OF NEW ENGLAND ASSOCIATION OF CHEMISTRY TEACHERS, BOSTON, MASS.

Chemistry has become a very important study in high schools, because laboratory work is both agreeable and profitable, and above all because it teaches pupils to think. The subject should be learned mainly in the laboratory, and a careful record of all experiments should be made as a part of the pupil's laboratory work. Encourage him to make every possible effort on his own part, and lead him, but never push him. Keen power of observation, ability to judge wisely, and habits of scientific honesty are the main points to be emphasized. The teacher can best accomplish these ends by keeping as much as possible at the pupil's elbow and making necessary suggestions.

Text-books are not essential. Pupils need more hours for laboratory work and less home study of chemistry. Quantitative experiments and the principles of chemical theory, including some work in the simpler problems of physical chemistry, are more profitable for the beginner than is qualitative analysis. Teach the pupil to respect the balance. Use industrial and sanitary science only so far as it illustrates chemistry. Give additional instruction in these subjects, for they are valuable.

Inductive teaching must not be confounded with research, where all the aids of teaching are lacking. Exploring new fields is an entirely different matter. All education must be specific, and the chemistry course must be well defined and carried out with perseverance. Train boys for the responsibilities of democracy, where intelligence, discriminating judgment, deliberate action, and sturdy integrity mean liberty.

HIGH-SCHOOL CHEMISTRY: FROM THE CITY SUPERINTENDENT'S POINT OF VIEW

W. F. KUNZE, SUPERINTENDENT OF SCHOOLS, RED WING, MINN.

The high school has for its object the preparing of its pupils for the activities of life and for the higher institutions of learning. To arrange the high-school course so as to articulate with the needs of active life and the entrance requirements of colleges is the problem of the city superintendent of schools.

Chemistry has now been universally conceded a place and rank in the high-school curriculum, but its limitations and mode of presentation are still much-mooted questions; consequently there is a deplorable lack of unity in the aim and method of teaching chemistry. This is a state of affairs due very largely to the colleges and universities. Their courses of instruction are widely divergent, and their entrance requirements are far from uniform. The instruction given in the colleges to those who expect to teach chemistry in high schools is in most cases identical with that given to those who intend to become analysts. The teacher of chemistry needs less technical knowledge, but a more thoro understanding of general chemistry. He must be imbued with a spirit of investigation. Furthermore, he should be able to point out the far-reaching relation of chemistry to commerce, industry, and daily life. In short, he should see to it that chemistry is the means of making the school life touch the real life of the pupil at as many points as possible. Superintendents are hampered in not being able to secure properly qualified teachers of chemistry. The colleges and universities must come to the rescue, not by fixing uniform or hard and fast entrance requirements, but by devoting their energies to the task of furnishing well-qualified teachers for our high schools. With a supply of good teachers the city superintendents will soon solve the problem as to what should constitute a high-school course in chemistry, and when that has been accomplished, the matter of entrance requirements will take care of itself; but until that is done, we will continue to waste the time of our boys and girls in the high school under the pretext of teaching them chemistry.

THE NORMAL-SCHOOL VIEW OF CHEMISTRY TEACHING

LYMAN C. NEWELL, INSTRUCTOR OF CHEMISTRY AND PHYSICS, STATE NORMAL SCHOOL, LOWELL, MASS.

The function of the normal school is to prepare its students for work as teachers in the public schools. In some normal schools the instruction anticipates teaching in the high school, but the majority of normal schools confine their instruction to students who eventually teach in the primary and grammar grades. It is this type of school that the speaker has in mind.

Chemistry occupies a unique position in the curriculum of the normal school. Like algebra, geometry, and psychology, it is seldom taught as a distinct subject in the grammar schools, but, unlike mathematics and psychology, it has a direct bearing on several subjects which have a fixed place in the course of study of the grade schools. Such subjects are physical and commercial geography, physiology, hygiene, and nature study. Indeed, certain parts of these subjects are chemistry pure and simple, while the interpretation and application of other parts are largely measured by the teacher's knowledge of chemical facts and principles.

Sufficiently pursued and properly supervised, chemistry provides a large share of that element so essential in successful teaching, namely, an inherent tendency to observe and consider all the facts before pronouncing a final judgment. Too often the teacher confuses fact and theory, simply because no opportunity has been taken to learn to discriminate between the two. This contribution of chemistry to the equipment of a teacher is so intangible that it is often overlooked in normal-school work, but its vital importance can scarcely be overestimated. To see the truth and be convinced by it, to distinguish with certainty the best in the midst of the inaccurate and to draw unerring judgments — these are invaluable adjuncts to the qualifications of a teacher.

The problem of the normal-school teacher of chemistry is to furnish material which shall not only contribute the needed information, but also provide that training needful for the success of the future teacher. The work to be effective must be a combination of utility and scientific training. It is wrong to assume that if a young teacher only has facts, she will in some mysterious way speedily acquire the ability to use them efficiently; or, on the other hand, if she is only subjected to training, it is of little moment when, where, or how she secures facts. Both assumptions are pernicious. The aim in all normal-school instruction, particularly in experimental science, is to provide work which will yield information and training simultaneously.

An effective course in chemistry in the normal school will center around certain broad topics; namely, air, water, carbon, acids, alkalies, salts, sulphur, and the important metals. These topics, with their numerous subdivisions, furnish abundant material for work in both class-room and laboratory. An experience of several years shows that it is possible to include in such a course a study of the elements oxygen, hydrogen, nitrogen, carbon, sulphur, chlorine, sodium, potassium, iron, lead, copper, zinc, and their important compounds. A course of this kind can be so arranged as to cover such important topics as the function of air and of water in nature, the cycle of carbon, the manufacture of acetic acid, alcohol, soap, sugar, starch, sulphuric acid, lime, common salt, and ammonia, the iron and steel industry, the rôle of carbon dioxide, the decay of animal, vegetable, and mineral matter, and the manufacture of metals from their ores.

It is the speaker's conviction that laboratory work should occupy the greater part of the time devoted to chemistry. Facts gleaned from books are fleeting, but when they are driven home by actual verification, they become permanent knowledge. Take, for example, the composition of air: The student reads in a book that it contains one-fifth oxygen and four-fifths nitrogen, but these proportions are apt to be transposed; indeed, they often are in examination papers. But when the student finds in the laboratory by personal labor that a given volume of air actually does consist of one-fifth oxygen and

four-fifths nitrogen, the proportions will not be forgotten, especially if the experiment has involved arithmetical calculation. This experiment, often regarded as too difficult, can be accurately and readily performed with simple apparatus.

The laboratory work in chemistry must undergo constant inspection by the normal teacher, so that the student will unconsciously acquire a willingness to observe all the facts with patience and precision, and to accept as truth only those conclusions which are the outcome of logical deduction from facts.

HIGH-SCHOOL CHEMISTRY IN ITS RELATION TO THE WORK OF A COLLEGE COURSE

ALBERT S. PERKINS, DORCHESTER HIGH SCHOOL, DORCHESTER, MASS.

Whatever is best for the non-college pupil is best also for the college pupil. Not only the high school of today, but of the future as well, is to be considered. It is by no means improbable that the German system may prevail, in our country, the high school taking the place of the *Gymnasium*.

The condition most humiliating which confronts the high-school chemistry teacher is that practically no higher institutions provide a second course for those who have studied chemistry in the high school.

There is a lack of harmony among teachers of chemistry in secondary schools as to what subjects should be taught; there is also a lack of thoroness and too great conservatism in adopting modern ideas. The old high-school chemistry was too simple both in its subject-matter and in its methods. It is not enough to commit to memory facts, no matter how important, and illustrate these by individual laboratory work and lecture demonstration.

The aim and scope of high-school chemistry is: First, the work should not require repetition in the college. Secondly, the course should be inductive, everything beginning with the pupil's own work in the laboratory, supplemented by lecture demonstrations, quizzes, recitation, text-book, and reference-book work. Thirdly, receptiveness on the part of the teacher to modern thought. The law of mass action and the electrolytic theory are fundamental principles of the course. The pupil will understand modern ideas, if the teacher understands them clearly himself. Both qualitative and quantitative experiments should be performed according to the subject studied.

The sole aim of such a course is to teach boys and girls to think along scientific lines, but many facts are incidentally acquired. The high-school pupil is amply able to begin qualitative analysis, which should constitute the second course.

This course is best for the non-college boy, for the college boy, and also for those entering technological and medical schools, since its purpose is to make pupils think along scientific lines, and since in the accomplishment of this purpose the most important facts and principles of the science are acquired.

PHYSICS FOR THE BOYS AND GIRLS: AN INTRODUCTORY COURSE

JOHN C. PACKARD, DEPARTMENT OF SCIENCE, HIGH SCHOOL, BROOKLINE, MASS.

We are living in an age of applied science. What effect is this tremendous fact producing, at the present moment, upon the courses of study in our schools and colleges? Our institutes of technology are flourishing

as never before. Manual-training schools are springing up with the greatest rapidity all over the country. The number of students enrolled in the scientific and technical courses of our correspondence schools is reckoned by the hundred thousand. But—and this is the significant fact—the physics of our secondary schools, to say nothing of the chemistry and the biology, is steadily giving way to such old-time subjects as Latin and algebra. What does it all mean? I can only hint at a partial reply.

The miracles of science are all about us. The schoolboy, intensely interested, comes to our laboratories with a thousand eager questions about dynamos, motors, X-rays, telephones, electric lights, wireless telegraphy, submarine boats, automobiles, and a host of similar things, pressing for an answer. What is the result? In too many cases he is introduced at once to the difficult subject of exact measurement, required to make immediate use of such unfamiliar instruments as the diagonal scale, the vernier caliper, and the balance sensitive to a centigram; to report his results in terms of the metric system; to discuss errors, sources of error, percentages of error, averages, and probabilities; to deduce laws, many of which he knew before, from data that cannot be made to prove anything, and to apply these laws to a set of problems that have no apparent relation to his immediate scientific environment, or to the questions that he is so anxious to have answered. What wonder that under such a régime the boy so often becomes discouraged, and that physics ceases to be supremely attractive!

We must teach principles, but we must keep these principles in close touch with their applications. Illustrated lectures upon the applied science to be found in our schools, our streets, our houses, and our factories, with just as much of the human element as can possibly be introduced, together with extracts from periodicals containing bits of the latest scientific news, should be a vital part of every course for beginners in physics. The method of research is not the method for the immature mind. Skill in manipulation of apparatus, with a development of the "habit of mind" belonging to the "scientific method," may be the primary objects of instruction in our own mind, but they are side issues when viewed from the standpoint of the average boy. We must be content to attain these higher ends gradually as a final, not an immediate, result. We must remember, moreover, thru it all that interest is our greatest lever.

Applications of fundamental principles which are so evident to us are not so easily related to those principles by the immature mind. We must keep up the connection if we would maintain interest. A course in optics should lead to the care of the eyes, to the manipulation of the camera, to a study of the compound microscope, with a hint at the wonders revealed by it, and to the analysis of the celestial telescope, achromatic lenses, eyepieces; and all with special reference, emphasized by a few slides, to the great universe of worlds overhead. A course in electricity

should teach a boy how to wire a building properly, the cost of electric lights, the adjustment of the telephone, and the theory of wireless telegraphy, as well as the resistance of a wire and the electromotive force of a Daniell cell. A course in heat should cover ventilation, and the heating of buildings, with a discussion of the relative values of various kinds of fuel treated from an economical standpoint. A course in sound should include the testing of the ear as well as the elaboration of the theory of longitudinal waves in the air.

With these ideas in view, we have introduced into our own school a course of applied physics, in which the laboratory waits upon the lecture and the discussion. It is intended for the average boy and girl who does not expect to go to college. Pupils preparing for Harvard pursue a distinct course by themselves. The arrangement has worked well. We should be glad if each pupil could be given an opportunity to take both courses, but this is impossible in the present crowded state of our curriculum.

This *general course* differs from the *college preparatory course* of our own school in these respects at least:

1. Less attention is paid to mathematical problems, except to such as naturally arise in connection with the lesson in the laboratory or in the discussion concerning affairs of daily life. A problem in connection with the readings of a water-meter, for instance, would be likely to receive more attention than one concerning the pressure of water in a closed vessel supplied with a pipe rising from a hole in the cover.

2. Greater stress is placed upon purely qualitative work, including the display of many illustrative experiments upon the lecture table.

3. Keenness of thinking is exalted far above skill in manipulation, tho the latter is by no means neglected.

4. The text-book is subordinated to the notebook and the reference library.

5. Far more attention is given to the subject of applied electricity, rendered possible by the prominence of the qualitative element in the design of the course.

These points of difference have arisen partly from the fact that many of the pupils taking this course are less mature, and in some respects less able, certainly along mathematical lines, than their more fortunate college preparatory associates. The majority could doubtless accomplish the senior work in one year more.

The course is required of the juniors, except the classicals, and occupies four periods a week for one year upon the school program, about half of the time being given to laboratory work.

The greatest difficulties with which we have had to contend are these:

1. The labor involved in reviewing so much paper-work. This has been met to some extent by requiring the pupils to report by means of sketches and brief notes rather than by "much English."

2. The "making up" of lessons missed on account of absence. This difficulty has been partly overcome by the assignment of topics in a suitable text-book provided for the purpose, to be reported upon in writing by the absentee.

3. The heterogeneous nature of an average class in a general high school provided for boys and girls. This is our hardest problem. It may lead at sometime or other to a still further subdivision of classes.

In conclusion let me say that nothing in this article should be construed as reflecting in any way upon the college preparatory course as outlined so ably by one of our leading eastern colleges. I am only contending that this particular course, as usually interpreted, is not adapted to all, and that in general it should be preceded by a more elementary qualitative course of applied science.

PHYSICS IN THE SECONDARY SCHOOL

IRVING O. PALMER, TEACHER OF PHYSICS, HIGH SCHOOL, NEWTON, MASS.

Physics, because of its value for training, for culture, for ethical instruction, should receive much greater attention than is now accorded it by organizers of secondary-school curricula. Trite tho it be to say it, I conceive that the most important function of any instruction at the secondary-school age must be to prepare the instructed for future usefulness and happiness; that is, for best citizenship. While the character and personality of the teacher are of prime importance in this preparatory work, the subject-matter taught and the method of teaching are of scarcely less moment. Physics, by virtue of the character of its subject-matter, and more especially because of the method of treatment appropriate for those portions of it which are of secondary-school grade, furnishes material and method valuable in the preparation for "complete living." The teacher of physics should no more allow himself to forget this phase of his work than does the teacher of history or literature. He is primarily engaged in helping to prepare young men and young women for life; secondarily, in teaching his subject. So much in passing with reference to some of the more general and larger questions with which physics-teaching in secondary schools is directly or indirectly connected. My chief concern at present is with the more limited question of matter and method of instruction in the subject itself.

This brings me at once to the consideration of the laboratory; for I believe the equipment and use of the laboratory to be the most important factor in the work, and I consider this to be true for the instruction of pupils fresh from the elementary school at twelve or thirteen years of age, as well as for those of eighteen, in their senior year; true for students

who are preparing to meet examinations for admission to college or a scientific school; true for those who are studying physics as a part of a general education, and for those who take it because it chances to be in the course; true for the boy who studies physics only one year, as well as for those who are permitted to continue the subject thru a large part of the secondary-school course.

The time allotment for the subject should be such that the pupil may have laboratory practice, numerical problems, recitations, and lectures. The share of time devoted to each of the four will be dependent somewhat upon the age and maturity of the class. In general, the younger the pupils, the larger the proportion of time spent in the laboratory—more time being needed for the discussion and assimilation of a single experiment, as well as a greater variety of experiments bearing on a single subject. Except in case of boys of unusual natural qualifications, or those who are in the last year of a stiff high-school program, laboratory work should not be in the nature of a course on physical measurements. I would hardly even mention significant figures, and would place slight emphasis on percentage error; nor yet should we go to the opposite extreme of giving simple qualitative experiments which merely illustrate, if they illustrate anything, principles with which the twelve-year-old boy has for some time been more or less familiar. It is undesirable to insult the intelligence of the boy, even tho he may not be able to return the compliment. The following is an example of an experiment of the type to which I refer—recently in use in some quarters, I believe:

Experiment: Carefully examine your pencil; drop it on the floor; pick it up. Has it suffered any change?

We select rather for the pupil's laboratory work fundamental experiments which are quantitative in character and demand care, skill, and strict attention on the part of the worker, yet are not beyond his ability. There are plenty such. The place for the purely qualitative illustrative experiment is the teacher's lecture or the demonstration table.

In the actual arrangement of laboratory work, we believe in and practice the duplication of apparatus, in case of most experiments, to equal the number of workers in a class, especially emphasizing this with the younger sections. This means working always with practically an even front and giving all the members of the class the benefit of all discussions which follow the laboratory exercise. We have no more use for the rotative plan than for the crazy quilt or the patchwork of the New England grandmothers. We supplement laboratory work with numerical problems, not too difficult, for the purpose of clarifying pupils' ideas and aiding in fixing the principles involved in the laboratory exercises. Incidentally these problems furnish a practical and satisfactory basis for correlation with elementary mathematics—a subject on which much yet remains to be said and done.

The recitation fosters exactness of statement and facility of expression. The lecture arouses interest and enthusiasm, and helps to vitalize and humanize the subject. Designedly following chronologically the other phases of the work, one of its most important features is the treatment of the practical application of the principles already dealt with in laboratory and quiz. When the boy has an elementary knowledge of the principles involved, it is of some value to him to "see the wheels go 'round" of very little use without this knowledge. Further, the continuous performance at a variety show costs less money in the end. When he knows the principle of conjugate foci, he is ready properly to appreciate the magic of the lantern. When he has fully learned that steam does work, falls in temperature, loses energy in expanding against pressure, the steam engine is something more than the plaything of an hour. He must take his sweets as dessert, not before meat.

I have briefly outlined some of the matter and the methods which we employ, and believe in employing, in the school which I represent. Thruout the course we try to avoid two extremes—one that of making the subject too scientific; the other, the too utilitarian point of view. We do not wish to make physics, like the theory of numbers, the favorite subject of a certain mathematician because "it has never been prostituted to any practical use," nor do we care to have the pupil mistake the laboratory for a toy shop. A satisfactory foundation is laid for later college work in the subject, and excellent preparation given those whose formal education ends with the secondary school.

I believe I shall be well within the limits of the truth if I say that in my city the powers that be, educationally speaking, are convinced that the more than two hundred pupils who study physics in the high school are satisfactorily employing their time and justifying the use of the five thousand square feet of floor space given over to their work. If these people are correct in their views, it is because the laboratory is an instrument for training in the highest type of honesty; because the course gives greater breadth of view and a better attitude toward life; because the pupils are trained to think and to do.

THE HIGH-SCHOOL PHASE OF PHYSICS TEACHING: AIMS AND METHODS

GEORGE R. TWISS, HEAD OF THE DEPARTMENT OF SCIENCE, CENTRAL HIGH SCHOOL, CLEVELAND, O.

[AN ABSTRACT]

John Tyndall, that prince among teachers, insisted that physics should be used, not as a branch, but as a means of education. This means, it seems to me, that, instead of trying merely to teach physics, we ought to

try, thru the teaching of physics, to help in educating boys and girls into a broad and efficient manhood and womanhood. Experience shows that the study of physics can develop the power to observe conditions and phenomena; to compare, contrast, and classify them; to discriminate relations and facts; to reason from the known to the unknown; to judge conclusions; to use the hands and senses with promptness and skill; to express facts and relations with clearness, conciseness, and precision. Experience shows also that the training and discipline afforded by physics, as well as the knowledge that it gives of world-wide principles and universal laws, contribute largely to that sense of balance and proportion, that ability to rate ideas, which goes by the name of culture, and was defined by Matthew Arnold as knowing one's self and the world.

There exists a consensus of opinion among leading teachers that the purposes in view are best accomplished by the use of three methods in close correlation. These have been termed the lecture method, the recitation method, and the laboratory method. Each of the kinds of instruction has its place, and they should supplement one another in such a way that the pupils may always progress by a series of firm steps from familiar ground to new and higher standpoints from which they can get wider views of the field and prepare themselves for the next advance.

The nature of the lesson to be unfolded, the attending circumstances, the mental condition and attitude of the class at the time — all conspire to determine which of these methods of instruction is best for a given portion of the work. In any method also the same conditions will determine whether it is better to apply inductive or deductive reasoning in developing the topic. Usually both should be used correlatively.

In proceeding from facts and laws that already are part of the mental property of the pupils, to facts, laws, and theories that they have not yet acquired, the best training is given and the greatest interest excited by guiding them thru the same kind of mental operations as those by which the great discoverers have progressed. The skilled scientist marshalls all the observed phenomena and all the known laws related to the subject under investigation. He seeks to discover a general statement or law that includes all the particular phenomena, or endeavors to frame a hypothesis that explains all the facts. Having stated the law or enunciated the hypothesis, he reasons from the general statement to particular cases not already observed or studied, deduces the facts or phenomena that should follow as necessary consequences of the law or hypothesis, and immediately proceeds to test his conclusions by careful experiments. In these experiments he eliminates as many as possible of the errors, and makes careful corrections for those which he cannot eliminate. This is the deductive method; and by its rigid tests, as time and study go on, the hypothesis may rise to take rank with recognized theory or established truth, or it may fall into limbo with those that have been weighed and found wanting.

Of course, the student cannot go over the entire ground that had to be investigated by the original discoverers of the truths he is to learn. It is the business of the teacher, who knows beforehand the conclusions to be reached, to eliminate from the discussion all that is irrelevant or unprofitable for teaching purposes, so that the student may acquire in a few hours the results of years of patient, scientific investigation. Thus he not only acquires it, but he acquires it by the same sort of mental processes that originally brought it to light. In doing so he is trained in the mental operations thru which all conclusions of value in the material world are reached. When the student thru this training begins to feel that he is accumulating power to solve practical problems and to produce results thru the operation of the laws of nature upon matter, there will no longer be any need of urging him to work and study. *The acquisition of conscious power is the strongest incentive to effort.*

The lecture method may well cover the whole subject in its broader outlines, and, besides indicating the logical connection of the different phenomena, laws, and theories, should show the relation of physical laws to everyday life.

Experiments should be made by the teacher at the lecture table whenever they are needed. Great care should be taken to use only those that are sufficiently simple and direct to make the conclusion clear and convincing. An experiment made with complicated apparatus and involving intricate reasoning is worse than none.

The pupils should take notes on the lecture and in this work should receive careful direction and some supervision. Important facts and conclusions should be stated slowly in order to give time for recording them. Often the notes may be omitted, but when they are required they should be made in proper form. The teacher should avoid too great formality in the lecture, encouraging all pertinent questions, and sometimes allowing the members of the class to adduce evidence from their own experience and to state conclusions. Thus he can hold their attention and make sure that they follow him. They should always be free to approach the lecture table in order that they may see well. It is a good plan to let some of them assist in the experiment wherever they can really help.

The recitation is perhaps the most important means of instruction. The development of topics in logical sequence and in their relations to one another should be guided and controlled by the teacher, who plans the recitation beforehand, and so gauges the amount of ground to be covered that the lesson can be completed, rounded out, and summed up in the hour.

The attention of the class should be kept strictly upon the subject and the principle of unity preserved. Minor questions should be asked at random and volunteer answers encouraged in order to keep all minds

active and prevent the flagging of attention. The pupil should always be required to make his statements to the teacher and class in clear, grammatical English, and loud enough to be heard by all.

The purpose of the cross-examination or quiz is to clear up obscure points and fortify conclusions. It compels the student to examine the grounds for his opinions and test the logical correctness of his thought-processes, so as to eliminate unwarranted assumptions, hasty inductions, and false steps in deduction. The teacher should keep the minds moving rapidly, but not so fast that they cannot hold the pace. When a pupil makes a hasty induction, he should be compelled to check it by a further examination of observed facts and previously established theory. When he makes careless deductions, he should be thrown back upon himself in order to make him prove his steps. In effect the quiz should be constructive, not destructive, positive not negative. If badly conducted, the quiz will discourage the pupils and destroy their confidence in their ability to form opinions of worth, so that impatience and abandonment of effort are likely to result. This is particularly true of girls. If skillfully and tactfully conducted, the quiz will leave the pupil possessed of stronger confidence in the uniformity of nature's laws and processes, and in his own ability to judge facts and draw conclusions. Having gone successfully thru the ordeal, or having failed himself and seen another go successfully thru it, he will come to feel that he has critically examined the grounds for his opinions, and that, having ruled out the fallacious and the inadequate, he has proved all things and is holding fast to that which is good.

Besides testing the progress of the pupils and ascertaining their needs, the recitation may be used to develop new topics, either inductively or deductively, by leading questions, thus substituting the self-activity of the pupils for the passive condition which they often assume under the lecture method. In all the recitation work, impertinent questions and quibbling should be promptly checked; while, on the other hand, pertinent questions and candid argument by the pupil, even tho fallacious, should be treated with respect, for this encourages independent thinking.

In planning the recitation a little time should be allowed for the incidental enlargement of subtopics, when unusual interest is excited. Sometimes the pupils will get to thinking with great activity and enthusiasm on some subsidiary line, and the skillful teacher will be prompt to take advantage of this profitable mental condition. The unity of the recitation plan, however, must be preserved. It is a great mistake to allow the association of ideas to lead the pupils so far away from the main line of thought that they do not return to it to sum up at the end. The association of ideas is a good servant, but a bad master.

Laboratory exercises should be most carefully chosen in accordance with the purposes in view. Each exercise ought to possess certain

essential characteristics. First, it should compel close observation and discrimination, and develop in the experimenter some skill and self-reliance. Second, there must not be so many things to observe as to cause mental confusion. Third, it ought to contain the basis for the development of a generalization, or it should verify a principle already deduced. Fourth, the reasoning involved in reaching the conclusion must be simple and direct enough to be made by the student himself with very little assistance. Fifth, it must be so easy of manipulation that the poorest of the qualified students can do the work with fair success. Sixth, it must be susceptible of a respectable degree of accuracy; else the student will have no faith in it nor in what it is intended to teach. Wherever practicable, the parts should be arranged so that the results reached may check each other, thus enabling the students to judge their accuracy by the agreement of results themselves, instead of by comparison with the results given in the books. Seventh, it must involve no more operations than the ordinary worker can finish without bustle or hurry in the allotted time. If this be but forty-five minutes, the operations can, in some cases, be divided between two periods; in others the operations may be divided among the students of a group and the results collated in order to reach the results or conclusions. Eighth, there ought to be a sufficient number of these experiments so that, when supplemented by those made at the lecture table, the main outlines of the subject shall rest back upon them, or upon deductions which can be shown to rest back upon experiments and observations of a similar kind.

The number of pupils in a laboratory division should not exceed fifteen for one teacher. With long experience more can be handled, but all the conditions are difficult and unfavorable. The best results are reached by having all the pupils work simultaneously upon the same problem. In most experiments it is better to provide each with the requisite apparatus, and let him work singly; in a few experiments, two, three, or four may work together with advantage. Each pupil should keep in a laboratory notebook a complete record of the experiments, under the headings: purpose, apparatus, operations, observations and numerical results, sources of error, and lessons learned. The aim should be to make this record neat and systematic in form, and also accurate, clear, concise, and simple in expression. The notebooks should be inspected by the teacher often enough to secure reasonable compliance with these requirements.

DISCUSSION

PROFESSOR E. H. HALL, of Harvard Univeristy.—I am glad to hear a discussion regarding a course of study in physics for those who are not going to college. In the famous conference of ten years ago, all agreed that there should be the same courses of study for those who are and those who are not fitting for college. It seems time to raise again the question, especially regarding different courses for boys and girls. Many pupils

are invited into the high school by courses in shorthand, typewriting, and manual training — pupils who would and did not go ten years ago. They have different interests and should be educated in a different way from college pupils. I hope Mr. Packard will write a book describing his course, altho I do not accept his selection as the best. But there should be publicity. The fact that his course works well with him is no proof that it will work well elsewhere. It should be published and tried by a dozen teachers. The proof of the pudding is in the eating, and not in the recommendation of the cook. If anything, his course keeps the interest a little too much at fever heat. Fever heat is not health. The course is too much like some of the features of the Sunday newspaper. As to the order of physics and chemistry, I have noticed that where chemistry is taught the third year and physics the fourth, the subject-matter given under the head of chemistry is largely physics.

PROFESSOR C. R. MANN, of the University of Chicago, favored the outline of physics-teaching given by Mr. Twiss, and agreed with Professor Hall that the time had come to take formal steps to settle the question of a different course of physics for those not preparing for college.

A COURSE IN PHYSICS FOR TECHNICAL HIGH SCHOOLS

CHARLES F. WARNER, PRINCIPAL OF THE MECHANIC ARTS HIGH SCHOOL, SPRINGFIELD, MASS.

The subject assigned to me implies that there are some distinctive features in the independent manual-training high school — or technical high school, if the latter name be preferred — which should naturally have a controlling, or at least a modifying, influence upon the instruction in physics in such schools. Our first business, therefore, is to settle what these distinctive features are.

The most obvious characteristic of technical high schools is found in that which gives them their name and their right to a distinct place in our educational system. Whatever else they may teach, they must always make the manipulation of materials their specialty. In such schools constant attention is given to the expression of constructive processes at the drawing table, and to the practical working out of these processes at the bench, the forge, and the lathe. This brings, or should bring, the boy, during his high-school days, into constant contact with many fundamental industrial methods, compelling him — or perhaps it would be better to say inviting him — to learn the use of hand and machine tools, and to become familiar with the appliances for generating and distributing power. It is for him a schooling in applied science or, better still, applied physics, for he is constantly employed in operations which involve fundamental physical properties and laws. For the girl, when similar educational opportunities are open to her, practical methods imply constant practice of the same general character, tho along different, because for her more appropriate, lines. In high schools where mechanical work is required of all pupils it cannot be questioned that there is for both boys and girls, but especially for boys, immediate and constant application of the fundamental principles of physics.

Two important consequences follow from thus recognizing the importance of physics as related to the distinctive work of technical high schools. In the first place, there arises in the mechanical departments a demand that the teaching of physics should be thoro and practical. In the second place, the science department, not unwilling to respond, but realizing that the enlarged opportunity to enforce its teachings thru practical applications means increased responsibility and more work, demands, in its turn, a chance to meet this responsibility and to effect a closer correlation of its work with that of other departments, especially with drawing, shop-work, and mathematics.

To meet these two natural and most reasonable demands, the first requirement is more time, much more time, than is commonly given to physics. The second requirement is that the study of physics should be begun early — the first year, if possible — and not delayed till the third year, when more than half of the rich opportunities for illustration and application afforded by the mechanical departments of the school have been left behind. The third requirement is that the course of study in physics, the method of instruction, and the equipment in books, apparatus, and teaching force should be planned, so far as practicable, upon a technical basis, and without much reference to the practice which obtains in other high schools, where a single text-book and simple illustrative apparatus, made for that purpose alone, will suffice. In the technical high school several text-books and a good reference library of modern scientific and technical books are indispensable, and the student should be taught the use of measuring instruments of the commercial type, and be made familiar with other scientific apparatus of the kind actually found in use in the arts and industries.

A second peculiarity of the technical high school may be found in the character of its membership. They are often schools for boys only; and even when open to both sexes, the proportion of boys is larger than in other high schools. Last year, in Cambridge, the Manual Training High School registered over 53 per cent. of the boys entering the three high schools; and when we examine into the tastes and capacity of these boys, we find that a statistical percentage understates the effective proportion of the boy element that inclines toward mechanical training; for excepting the small number of boys who, for good reasons, elect classical studies which are the specialties of other schools, it is, generally speaking, the lazy, indifferent, good-for-nothing boy who avoids the manual-training high school. There is too much work for him there. Naturally it attracts the active, inquiring, normal boy. It probably gets three-fourths of the boys of this kind who enter high schools. Such a majority of boys in the technical school means much in determining the extent and character of the course in physics, which is pre-eminently a study for boys.

A third characteristic remains to be noted, and perhaps it should be

considered as the most important. It may be described as the stirring, life-giving atmosphere which pervades all departments of a school designed to emphasize the practical element in all its teaching. Such schools, more faithfully than all others, reflect the spirit of the age—an age of wonderful achievement in the application of natural forces to the service of man, an age of applied science. These schools came into existence in answer to the demand for a method of secondary education which should give the touch of modern life to the work of the schoolroom, so that there should be a vital connection between the information and training gained, and the associations and activities in the world outside the school. All the studies of a technical high school should feel the inspiration of this new idea, and it is the glory of a school of this kind that all its lines of work *can* take on more or less of a practical tone. Instruction in mathematics is enriched by practical applications found in the shop tools and machines. The English department finds in the mechanical work a wealth of subjects for theme-writing. The study of economic history and commerce is greatly helped by a knowledge of industrial processes. But no study can match physics in the ability to establish vital relations, not only with the various mechanical departments of a technical high school, but with all other lines of work. Physics gives a living purpose to much of the teaching of algebra and geometry, and receives in turn incalculable assistance in the solution of its problems and formulas. In its higher phases physics is a mathematical quite as much as it is an experimental subject. It touches the subject of language in demanding that accurate and adequate expression be employed in the statement of its principles and laws, both in oral and in written English, and in the preparation of notes and papers. Physics has played an important part in many of the great epochs of history; it has won its decisive battles, and can claim its share of saints and martyrs and heroes who, thru their devotion to this branch of science, have contributed to the advance of civilization. It occupies a place of honor in history and biography. In the world at large physics is acknowledged to be the center on which hangs our knowledge of natural forces, the foundation on which have been laid the most characteristic achievements of the age, whether it be called the age of steam, of machinery, of transportation, of steel, of electricity. Among all the sciences that deal with material things physics stands first. In a school, therefore, which recognizes in its work, so far as a school can, the activities of modern life, physics should take the position which the world has assigned to it as its rightful place among the natural sciences. If such schools do their full duty by physics, they may compensate for the loss of popular interest in the science, as shown by the constantly diminishing numbers electing this study in the ordinary high schools. It has been crowded out by wrong methods of presentation, by the temptation of easy studies, by lack of time, by failure to

appreciate its usefulness. The technical high school can remove all these difficulties.

I have prepared a chart outlining the course of study in physics as planned for the Mechanic Arts High School of Springfield. It will be noticed that an attempt has been made here to meet the peculiar conditions which obtain in schools of this character and to fulfill the requirements of a complete course in physics—perhaps the most complete yet attempted in secondary schools. It is a four-year course. During the first two years the entire subject is covered as thoroly as possible; and so far it is a required study for all students. During the third year physics is made almost entirely a laboratory subject, and the work is largely quantitative. The fourth year the same method is continued in electricity for those who elect it, and optional courses are offered in some of the most common practical applications of physics. The last two years of this course are not required for all students.

The topics given in this outline are not intended to be complete, but simply to indicate the range and quality of the work. Much depends upon the method of presentation. The methods of exact measurement and mathematical reasoning are avoided as much as is wisely possible during the first two years. This is when boys are interested in dynamics —in how and why things go—how boilers, engines, motors, dynamos, telephones, and scores of other things are made, and how they work. It is not the right time for methods of scientific research; and these must be used sparingly even in the advanced years. The boy's natural zeal for this study from his own point of view must not be killed; neither should he be allowed to fritter away his time in playing with scientific toys and gimcracks. He should be put to work—he may think he is playing—upon apparatus and machines of life-size and of real dynamic value. The great usefulness of physics, its countless applications, the stories of its discoveries and inventions, its fascinating theories, and its promises of future development, if rightly presented, will sustain the natural interest of any live boy thru a course in physics as complete as the length of his school days will permit.

THE OUTLINE

FIRST YEAR: Four periods (forty-five minutes each) weekly for thirty-eight weeks.

Topics.—(*a*) Elementary conceptions of matter, motion, force, work, power, and energy. The general law of machines and applications in simple machines. Pressure in liquids, with problems in computing liquid pressure due to gravity; buoyancy and application in specific gravity; atmospheric pressure and the barometer; Boyle's law in simple form; pumps, siphons, and other hydraulic and pneumatic appliances. Transmission of pressure, with problems in computing interior pressure.

(*b*) Magnets and their influence upon magnetic bodies; terrestrial magnetism; magnetic charts and instruments. Electrostatics. The simple voltaic cell and typical varieties. Important effects of the electric current, with common applications. Measurement of resistance by the method of substitution. Arrangement of voltaic cells, electric

bells, and incandescent lamps in series and in parallel (including special grouping), with illustrative problems. Divided circuits, with practical problems. The principles of current induction; induction coils and transformers; the telephone; the dynamo and the motor. The thermopile.

Method.—A combination of text-book lessons with laboratory instruction and a limited number of lecture table demonstrations. The laboratory exercises are qualitative, quantitative, or constructive, as best suits the topic under consideration, and they require about one-third the total time given to the year's course.

Correlative work.—Problems in algebra, drawing, wood-work, and iron-work.

SECOND YEAR: (*a*) Three periods weekly for thirty-eight weeks on *heat, light,* and *sound;* and (*b*) five periods weekly for sixteen weeks on mechanics; (*c*) college preparatory physics (elective).

Topics.—(*a*) Discussion of the nature and sources of heat; temperature; the effects of changes of temperature; common applications and laws. Determination of coefficients of expansion. Conduction, convection, radiation, absorption, and reflection. Cooling by radiation, dew-point, and humidity. Quantity of heat and its measurement. Specific heat and its determination. Latent heat and its determination for water and steam. Applications.

Discussion of the nature of light and its propagation; the principles of photometry; shadows; the pinhole camera. The laws of reflection; images in plane, concave, and convex mirrors; parallel mirrors and mirrors at an angle of 90° or less. Refraction and the index of refraction; common applications. Prisms and lenses; measurement of focal length of lens. Optical instruments. The eye. The spectroscope and spectrum analysis. Fluorescence and phosphorescence. Polarization of light.

The nature and origin of sound; sound waves; velocity in different media. Loudness, pitch, and timbre. Measurement of tuning-fork vibrations; wave-length; resonance. Discussion of musical instruments and the musical scale. The human voice; the ear; the phonograph; the telephone.

Method.—Text-book lessons and discussion, with lecture table demonstration and quantitative laboratory work, requiring about one-third the total time given to the year's course.

(*b*) Theoretical mechanics and its fundamental terms — force, stress, tension, pressure, strain, equilibrium, acceleration — explained. Discussion of motion, inertia, momentum, the moment of any force, the composition and resolution of motions and forces, the conditions of equilibrium. Work and energy, and reduction to formulas.

The elements of applied mechanics outlined in the explanation of the mechanical advantage and the true use of machines. The elementary machines recognized, and their law verified experimentally. Study of the applications of the principles of applied mechanics in the shop tools and machines.

Method.—Text-book study (Lodge's *Elementary Mechanics*) and class-room discussion, with much mathematical work. Measurements of school tools and machines, with papers assigned to be carefully prepared and presented in class.

Correlative work.—Problems in geometry, drawing, pattern-making, and forging.

(*c*) College preparatory physics.—The laboratory course required for admission to Harvard University.

THIRD YEAR: Physical measurements (elective)—four periods (forty-five minutes each) weekly for thirty-eight weeks.

Topics.—Measurement of the fundamental units, length, mass, and time, according to both British and metric systems, and computations based on these measurements. Accurate measurements of dimensions of six brass solids, and computations of surface and volume. Discussion of errors and significant figures. Exercises in ruling scales on both paper and steel. Determination of sensitiveness of balance; methods of weighing;

accurate determinations of density; determination of the length of the seconds pendulum and the value of *G*. — Calibration of the thermometer, and accurate determinations of specific heat, latent heat, and coefficient of expansion. Measurement of curvature and focal length of lenses; angular prism; index or refraction; magnifying power of lenses, and the study of the spectra.

Measuring instruments used. — Meter rod; steel scale; diagonal scale; vernier caliper; micrometer caliper; graduated tube; spherometer; dividing engine; beam balance (sensitive to 1/100 gm. for kilo load); specific gravity flask; Jolly's balance; Atwood's machine; Kater's pendulum; thermometer; calorimeter; standard barometer; and spectrometer.

Method. — Quantitative laboratory work, with strict requirements as to laboratory notebook, and class-room discussion.

Correlative work. — Chemistry; college preparatory algebra and geometry; machine-shop practice; and the elements of machine design.

FOURTH YEAR: A choice of four electives—(*a*) electrical measurements; (*b*) electrical construction; (*c*) applied mechanics; (*d*) power-plant practice — steam and electrical. Six periods (forty-five minutes each) weekly for thirty-eight weeks.

(*a*) *Electrical measurements.* — Magnetic lines of force; determination of H and M; use of tangent galvanometer; measurement of resistance by various bridge methods and also by direct measuring instruments; determination of specific resistance; verification of laws of divided circuits; measurement of electromotive force and current strength.

Method. — Laboratory, notebook, and class-room discussion.

Correlative work. — Trigonometry; use of trigonometric tables and logarithms.

(*b*, *c*, and *d*) Application of principles already learned to practical work, with such new rules and formulas as may develop by practice in each of the three lines of applied science.

DEPARTMENT OF SCHOOL ADMINISTRATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 8, 1903

The department was called to order in the Normal Art School at 9:30 A. M. by President Harlan P. French, Albany, N. Y.

After the secretary had reported the names of school boards which expressed their willingness to attend, the chair introduced Calvin W. Edwards, president of the board of education, Albany, N. Y., who read a paper on "School Boards: Number of Members, Terms of Service, Mode of Selection."

Grafton D. Cushing, president of the school committee of Boston, opened the discussion. He was followed by W. W. Chalmers, Toledo, O.; Calvin M. Woodward, St. Louis, Mo.; E. A. Donelan, St. Joseph, Mo.; and J. E. Armstrong, Chicago, Ill.

B. F. Hunsicker, president of the board of education of Reading, Pa., then read a paper on "School Boards—Their Functions: Legislative, Executive, and Judicial."

Discussion followed by Superintendent Thomas M. Balliet, Springfield, Mass.; Albert Gehring, Cleveland, O.; Mr. Freeman, Washington, D. C.; and Mr. Armstrong, Chicago, Ill. The chair then appointed the following committees:

COMMITTEE ON NOMINATIONS

Oscar B. Wetherhold, Reading, Pa. Calvin W. Edwards, Albany, N. Y.
J. H. Thiry, Long Island City, N. Y.

COMMITTEE ON RESOLUTIONS

Miss Sarah J. Wilmarth, Malden, Mass. B. F. Hunsicker, Reading, Pa.
William George Bruce, Milwaukee, Wis.

Adjournment.

SECOND SESSION.—THURSDAY, JULY 9

The department convened at 9:30 A. M., President French in the chair.

The president called for the report of the special committee appointed last year on School Savings Banks.

Dr. E. A. Donelan, chairman of the committee, reported the following:

Resolved, That the penny savings bank system should be established in our schools.

Your committee to whom the foregoing resolution was referred, having had the same under consideration, would respectfully recommend its adoption for the following reasons:

Many children form habits of spending their change, or money received, for articles that are not only injurious to health, but lead to extravagant habits.

Economy and frugality should be inculcated in children while young, that they may not become spendthrifts, and come to want in after-years. In youth good habits must be fixed.

Adopted.

The discussion preceding the adoption was participated in by Mrs. Josephine Ahnefeldt Goss, Grand Rapids, Mich., and J. H. Thiry, Long Island City, N. Y., the "father of the school savings bank system in the United States."

Hon. Charles Holden, member of the board of education of Grand Rapids, Mich., then read a paper on "New Departures in School Administration."

"Consolidation of Rural Schools" was the subject of papers read by Hon. William K. Fowler, state superintendent of public instruction of Nebraska, and John T. Prince, agent for Massachusetts state board of education.

Alfred Bayliss, state superintendent of public instruction of Illinois, and Lewis D. Bonebrake, state school commissioner of Ohio, participated in the discussion.

B. F. Hunsicker, of the Committee on Resolutions, then submitted the following report:

WHEREAS, This year's meeting of the Department of School Administration has revealed a strong interest in the subject of school-board organization, and more particularly as to the mode and manner of selection, number of members, and representation; be it

Resolved, That the president be, and he is hereby, instructed to appoint a committee of five, representing various sections of the country, who shall gather and formulate the necessary statistics and present the same with their conclusions at next year's meetings; and be it further

Resolved, That said conclusions shall embody, as far as possible, definite recommendations as to the question of large or small school boards, ward or representation at large, long or short terms, appointive or elective systems, etc.

(Signed) MISS SARAH J. WILMARTH.
B. F. HUNSICKER.
W. G. BRUCE.

Adopted.

The Committee on Nominations reported the following list of officers to serve the ensuing year:

For *President*—B. F. Hunsicker, Reading, Pa.
For *Vice-President*—Grafton D. Cushing, Boston, Mass.
For *Secretary*—William George Bruce, Milwaukee, Wis.
For *Executive Committee*—Harlan P. French, Albany, N. Y.; Albert Gehring, Cleveland, O.; Israel H. Peres, Memphis, Tenn.; Charles Holden, Grand Rapids, Mich.

A. E. Donelan then introduced the following resolution:

WHEREAS, Manual-training schools or industrial education, is approved by our best educators;

Resolved, That in order to secure greater results and give all classes an opportunity to share in its advantages, children in the seventh and eighth grades should spend an hour each day in educating the hand in some practical art that will serve them in after life.

The resolution was referred to the Executive Committee, with recommendation that a report be submitted next year.

The president-elect of the department, Hon. B. F. Hunsicker, of Reading, Pa., was then introduced to the meeting.

After a brief address, he declared the department adjourned.

WILLIAM GEORGE BRUCE, *Secretary*.

PAPERS AND DISCUSSIONS

SCHOOL BOARDS. NUMBER OF MEMBERS, TERMS OF SERVICE, AND MODE OF SELECTION

I

CALVIN W. EDWARDS, PRESIDENT OF BOARD OF EDUCATION, ALBANY, N. Y.

Some boards are large, and others are larger. Some are elected by wards and some at large. In some cities they are elected at the same time with other city officials, while in others special elections are held for the members of their boards of education. In some places only those

who are voters can vote for members of the board; in others, all taxpayers can vote for them; while in still others the fair sex can exercise the voting prerogative, provided they are taxpayers or have children in the schools. A law of Georgia provides that in the city of Savannah nine men shall constitute the board of education, and that "they are created a body politic and corporate, with perpetual succession of members, for the purpose aforesaid," etc. In other words, if one of the members should die or resign, the remaining members of the board elect his successor. Some boards are appointed by the mayor; others, by the common council; still others, by the judges; and in one case at least the governor of the state appoints a portion of the board. Usually boards of education are considered city officials, but in New York state the highest court has decided that they are state officials.

There are probably other methods than those already quoted for the creating or constituting of boards of education, but enough have been cited to show that there is great diversity in this direction, as there also appears to be in the number of members considered necessary to administer the school affairs of a municipality.

NUMBER OF MEMBERS

It is not necessary to go into details to show the varying size of boards in different cities, but, so far as I know, the smallest boards consist of three members. I have no means of knowing which city now has the largest membership in its board, but I was amused to learn that "one New England town had originally two hundred school trustees — one for the direction and supervision of each school-teacher in the public-school system." I also learn that in 1875 the membership of the Boston School Committee was 116.

This great diversity in the manner of constituting school boards, and the difference in the number of their members, which have existed for many years, show clearly that the American people have been simply experimenting in this direction in order to discover, if possible, the best system. It has remained for Albany, however — which was the first city in the world to establish a telephone system, the first to establish electric street lighting, the first to run electric cars, and the first in many other things — to take the lead also in this and establish the ideal system — a small board, a long term of service, with members selected by the mayor. I am not prepared to say that a board consisting of three members is large enough properly to care for the interests of the schools in such cities as Boston, New York, and Chicago; but I do contend that in cities of less than 250,000 three members will accomplish more for the good of the schools, and work with less friction, than a larger board, and that limiting the number of members in the large cities to the smallest number possible will materially increase the usefulness of such boards.

Speaking now of the cities of the second class, I shall be met with the objection that it would be impossible for a board of three members to attend to all the manifold details connected with the government of the schools, repairs to buildings, building new schools, transferring of teachers and pupils, and so forth, unless they gave up all other business and devoted their whole time to it. That would be a valid objection, under the laws governing a large majority of the school boards of this country, but my answer to that objection would be: Change the laws and relieve the boards from all these details by putting them where they belong, under the charge of the paid officials of the board or city.

I can perhaps better illustrate my idea on this phase of the subject by stating some of the provisions of the law under which the present board of three members was appointed at Albany, N. Y.; and my point may be made clearer by showing the practical working rather than by quoting the text of the law. Under the old law, all transfers of teachers and pupils from one school to another were passed upon either by the whole board or by a committee. Under the new law, the matter of transfers is placed in the hands of the superintendent of schools, who is a paid officer of the board. Under the old law, the matter of repairs of school buildings and the erection of new schoolhouses came entirely under the charge of the board, and it was obliged to get out plans and specifications, advertise for bids, let contracts, and supervise the work generally. Under the present law, in the case of repairs, ordinary or general, the superintendent of buildings — another paid officer of the board — examines what is to be done and makes his report, giving estimated cost of such repairs as are necessary. In the case of extensive repairs of any kind, the board visits the schools to examine as to the necessity of such repairs, and, when satisfied that the repairs should be made, simply passes a resolution to that effect and sends a letter to the city engineer asking him to see that the work is done. The city engineer, who is a paid city official, draws the plans and specifications, advertises for bids, lets the contracts, and supervises the work. When the work is completed, he reports the same to the board, and, if the work is satisfactory, the president of the board approves the bill and the incident is closed.

The appointment of teachers is equally free from detail. The board has the appointment of all the teachers in the high school, and the principals of all grammar and primary schools; but for the assistant teachers a merit list is made up once a year by the superintendent from reports of the training-school principal and teachers, and from the state department. This merit list is submitted to the board and, when approved, remains unchanged for a year, and whenever there is a vacancy, the person at the head of the list is chosen; and the rule to take the name from the head of the list is absolute.

The transferring of these details to others does not in any sense

diminish the power or the responsibility of the board, while the concentration of power in a small membership gives the board larger importance and better ability to accomplish good results. All the officers of the board, as well as all the principals and teachers, are under its immediate control to the same extent as they were under the old law, when a larger board was expected to attend to all these matters of detail. The city engineer and the board of control simply carry out the recommendation of the board as to repairs and kindred expenditures, and have no power to authorize any expense in connection with the schools, except on such recommendation.

It will be seen from this brief illustration that, while under the law the duties of the board are largely legislative rather than administrative, at the same time the power and responsibility are concentrated and not taken away from them; and this is in direct line with the best thought of the day, which demands concentrated, rather than divided, responsibility in official action.

The tendency for the past few years, so far as the number of members is concerned, has been from the greater to the less, rather than from the less to the greater. Mr. Donald L. Merrill, in 1899 writing in regard to a proposed reduction in the Chicago school board, says: "I am strongly of the opinion, based upon a long experience in school work, that the public interests will be better served if the membership of the board of education is reduced in number." President Nicholas Murray Butler writes: "The school committee should be small, because a small one is more efficient, less talkative, cannot cut itself up into small committees, and cannot apportion out patronage." President Andrew S. Draper says: "It should not be so large in number as to become a public debating school." George Morris Phillips, principal of the State Normal School at West Chester, Pa., in writing on this subject, said: "The smaller the school board the better. We have had a good deal of experience in Pennsylvania, and large boards invariably work badly." Other testimony could be given in this direction by those who have studied the subject, but this is sufficient to show the tendency.

No one will dispute the fact that when a committee of twelve or more is appointed in a church or society to do any specific work, such work, in nineteen cases out of twenty, is done almost entirely by about three members of such committee. When this same thing is not true as to the workings of a large school board, it may be inferred that such progress as is made comes about very largely thru a series of compromises. This is no reflection on the individual members of such boards, but is merely evidence of the varying phases of human nature. We are so constituted that, while our own road to a desired object seems perfectly clear and plain, we are utterly unable to see that the other fellow's road to the same object is equally good, or perhaps better. Neither is this to be con-

sidered an insinuation that large boards have not done, or are not doing good work in the cause of education. They have done and are doing a noble work for the children of our country, as the results all over our great land will show, but they have done it rather in spite of their size, and not because of it; and I contend that the same, or better, results could have been obtained by a much smaller number of members on the average board.

But, you will say, if five members can do better work and accomplish more than nine or twelve or fifteen, and if a board of three members can do even better work than one of five, why not carry the principle out to its logical conclusion and appoint a board of one member and give him the entire charge of the schools? I would answer by saying that I would advocate that plan, provided a man could be found in the community who possessed the necessary qualifications for such a position and was willing to accept it. A person, in order to fill a place of that kind successfully and for the best interests of the schools, should have the judicial temperament in a marked degree. He should be without prejudice, and would also need to be very deeply interested in the cause of education. You and I might say, "Of course, I could fill a position of that kind, for I am broad-minded, and would be perfectly fair in all my decisions. I would have no prejudices, and if I disliked an officer of the board, a principal, or a teacher, it would only be because there was a good reason for it." But if we were to attempt to select one of our friends for the position, doubts would begin to arise in our minds. This one would lack one qualification and that one another. One would be too hasty in his decisions, and the next one would allow his likes and dislikes to influence his actions. In fact, it would be practically impossible to find a man in any community in whom the people would have sufficient confidence to trust him with responsibilities so great and varied.

In a board of three members any two act as a balance wheel for the other one, and if they are carefully selected by the appointing power, there will be no danger that the work of the board will not be carefully and expeditiously attended to.

An argument not to be overlooked in favor of the small board is the fact that, as it brings greater power and responsibilities, so also it brings greater honor to the members. For that reason, the position becomes more attractive to the leading professional or business man, who would not care to accept membership in a large board, with the necessary attention to detail and the divided responsibility.

Without saying anything as to the qualifications of the members of our board in Albany, further than that they have the reputation of having managed the business of the schools successfully, I think I can safely say that not one of those appointed under the new law would have cared to accept membership in a large board under the old law, altho Albany was

exceptionally favored even under the old law, as its membership was composed of leading business and professional men of the city. This, however, I think, was somewhat exceptional, and I believe the large boards generally have not attracted the best business and professional men of the community.

TERMS OF SERVICE

It seems to me there is only one valid reason for a short term for a member of a school board, and that is that if, by any possibility, a member should be appointed who proved himself thoroly incompetent, you could get rid of him more quickly; but that objection falls to the ground if the appointing power is sufficiently careful in making selections.

The bright boy who goes into a business office is more valuable to his employer the second year than he is the first, and still more valuable the third than the second. The young man who starts in to learn a trade, or the young professional man who hangs out his shingle, becomes more valuable to himself and others as he gains experience. The same rule applies to members of a school board.

The term of service in our board is six years, and the term of one of the members expires every two years, so that when the law is in full operation, if a member retires at the end of his term and a new member is appointed to his place, there still remains one member who has had two years' and another who has had four years' experience on the board. Six years is none too long, and it is long enough, for a good many men who compose our school board are doing the work as much because of civic pride and interest in the education of the young as for any honor that may come to them thru their position; and if such men feel at the end of their term that they have borne their share of this particular burden, they should be allowed to retire, and their work should be taken by other equally public-spirited citizens.

MODE OF SELECTION

Much has been said and written as to the best method of choosing school boards. I have already mentioned a number of the methods employed in different states and cities, and wish to call particular attention to the one method which I consider the most objectionable, and that is the election of members either by wards or at large.

When a person is elected as a member of the board from his ward, it is not always because he is the best man for the place, but because he belongs to the political party which happens to poll the most votes in that particular ward; and the tendency is to make him feel that his duty is to see not so much what he can do for the schools as what he can do for his ward; and it has been known to happen that what he does for his constituents turns out to be a very bad thing for the schools.

The same objection applies when members of the school board are

elected at large at the same time other city officials are chosen. One writer, in commenting on this mode of selection, expresses this idea very forcibly when he says:

> When men are elected on a general ticket, it is almost always the case that school-board positions are looked upon as the tail end of the ticket. Men who fail to receive nominations for other positions, regarded by party managers as more responsible or more lucrative, are given school-board nominations as a consolation prize. Then, in the board, members play for partisan advantage continually, while the school suffers.

I believe thoroly that the appointment by the mayor, no matter what his party affiliations may be, will tend to the best results in the administration of the schools of our cities, and that it will do more to remove our schools from politics than any system of election that can be devised.

The *Report of the Educational Commission of the City of Chicago* for 1899 contained a recommendation which I should like to quote:

> If, however, the board of education is not to be directly elected by the people, the experience of other cities as well as the history of the public-school system of this city justify the appointment of the board of education by the mayor. This plan, moreover, is in harmony with the principle of concentration of authority and responsibility. The mayor, above all, represents the entire city, and nowhere, if not in his hands, can this duty be placed with full expectation that his action will meet the general sentiment and desires of the people. He may be held strictly responsible for the appointments he makes; and since the citizens are on no point more sensitive than in regard to the administration of the school system, the mayor can be reasonably relied upon to act in this matter both conscientiously and intelligently. It is safe to say that no city administration, however strongly intrenched in public esteem, would act in any manner prejudicial to the schools without incurring quick and sure condemnation.
>
> The objection has been raised that the plan here proposed might result in a partisan board of education. The peculiar sensitiveness, however, of the American people in regard to their school system is more than a counterbalance to the natural inclination of a mayor to appoint the school trustees solely from among his political friends. The advantages that he might gain for himself or for his party by such appointments would certainly prove only temporary, if the action of the board should show anything but a disinterested desire for the good of the public schools.
>
> It is with confidence in the truth of these considerations that your commission recommends giving the mayor the appointment of the board of education.

One who knew the conditions might easily have been pardoned for believing that, however true these statements might be, as far as other cities were concerned, they would not apply to Albany. In the first place, Albany is the capital of the state, and it is a common remark that there is more politics to the square inch in that city than in any other city in the state. The deduction would be that in such a political center it would be impossible to divorce such appointments from politics. In the next place, it has been the custom for years for men of prominence in business and professional life to interest themselves in educational matters and serve as members of the board, so that it was not a question of getting better men, but of changing the law so that it would be possible to concentrate the power and responsibility in a small board, and in that way do better work

and do it more expeditiously. The result has fully justified the recommendation which I have quoted.

At the time the law was under discussion, it was claimed that it was a political move, but I am happy to say that even those men who feared the change would lead to the introduction of partisan politics into the school system, and those newspapers who opposed the passage of the law for the same reason, are now cordial supporters of the board; and I have yet to hear the first word of criticism of any official act of the board. I am also glad to be able to state that no question of politics or political expediency has ever come before us, and altho the board consists of two members of one party and one of another, there has never been the slightest hint of a division along political lines on any question that has come before the board. Any opposition there may have been to a small board has disappeared, and I believe that if the matter were put to a vote in Albany today, the vote for a small board would be simply overwhelming.

The attainment of this result in a political storm center like Albany shows that the people, and the political leaders as well, are imbued with the American idea in regard to schools, and will do their utmost to advance their best interests. It also shows that if the idea of "small boards, with a long term of service and appointment by the mayor," can be made to work successfully in a city like Albany, it should be even more successful in cities where the conditions are different, and where perhaps the members of the large boards are not so able or so deeply interested in the cause of education as were the members of our large board under the old law.

II

GRAFTON D. CUSHING, PRESIDENT OF THE SCHOOL COMMITTEE, BOSTON, MASS.

The number of members on school boards in this country varies from three to forty-six. In Boston the school committee had, before 1895, 114 members. It now has twenty-four members.

There can be no doubt about the general proposition that a small body of men can work more quickly and more harmoniously than a large one. Witness the fact that the average number of directors in a corporation is small—seven perhaps. Some corporations have more directors, some less. Harvard has five, for instance. Boards of trustees are rarely large. The president of the United States has a small cabinet. It seems, therefore, a fair deduction that the business sense of the American people has taught them that the board which directs the policy of a large undertaking shall be small enough to allow of informal discussion. When a board is so large that it is necessary to introduce formal parliamentary procedure, you have lost, to a certain degree, the personal

relationship which smooths over differences of opinion. Parliamentary procedure arouses antagonism, excites party feeling, awakens distrust; personal attacks are made and are answered; some new measure is introduced, and members of the board find themselves suddenly violently arrayed on one side or the other, where an informal discussion of the subject might have led to a satisfactory compromise. Set rules are necessary to a large board, and rules are destructive of good feeling. Points of order are made; parliamentary tactics are resorted to; and the result is a general feeling of bitterness. Men who would treat each other with great civility in private intercourse do not hesitate to put the worst construction on an opponent's motives in a formal meeting, and the pacifying effect of personal contact is lost. Put these same men around a table and let them talk things over, and the chances are that the question will be settled amicably.

The chief duty of a school board is, I take it—or ought to be—to direct the general policy which is to be followed. The details should be left to paid officials. All appointments of teachers should be made by the superintendent of schools, subject only to the approval of the board, and should be made, as far as possible, from a classified list. The method of appointments from a classified list is not ideal; it is, however, the one best suited to our human failings. I know of nothing more mischievous than interference by individual members of school boards in the appointment of teachers. It is subversive of all discipline and system, and can only lead to favoritism and a disorganization of the service. The carrying out of all other details should be left to the permanent officials, subject to the general control of the board, both on the physical and on the educational side. Unfortunately, school boards often insist on caring for the details themselves. They do not know how to delegate power. This is another unhappy result of too large boards. Members create unnecessary work for themselves, partly under the impression that they are fulfilling a duty, partly in order to exercise authority. In a small board members find their general duties of supervision all that they can attend to.

If this definition of the proper duties of a school board is a correct one—namely, that a school board should only lay down the general lines of policy and exercise general supervision, leaving the execution of the details to permanent officials—it follows that a school board is very like a board of directors, a board of trustees, or the president's cabinet. If a small body of men can wisely and without undue waste of time administer vast affairs, it is not unreasonable to suppose that our educational system can best be administered in the same way. Indeed, wherever small boards have been established they have, I believe, worked better than larger ones. It must be remembered that a school board is not a representative body in the same sense that a legislature is. A city

is a whole, and is not, certainly as regards its school system, divided up into districts with conflicting interests. The school system should be administered as a whole, and this can be done more wisely by a small number of men.

Terms of service in the principal cities of this country are three, four, or six years. Three years seems to me a satisfactory term. A busy man does not like to bind himself for too long a period. It is unwise to elect a new man for too long a term, as he may prove unreliable. Less than three years is too short a time to enable a man to acquaint himself with a complicated system. There is not the objection to a second term that one often hears advanced in the case of a governor of a state or of the president. It is in the nature of things almost impossible for a member of a school board to use his official position to secure for himself a re-election, unless indeed the city is entirely dominated by a political machine; and in that case the board would probably be made up of corrupt men, whether the term was long or short.

One finds in this country almost every conceivable method of election and appointment to school boards. Where school boards are elective, the preliminary step of the nomination of candidates is quite as important as the final step of their election. In Boston the two great political parties nominate candidates for the school board in the city convention. As this body is too large to make nominations expeditiously, the power is delegated to a committee of twenty-five, one from each ward. It is easy to see that such a system cannot reasonably be expected to work well. A committee so composed is a fertile field for political manipulation, and the choice of candidates is the result of a series of compromises among the representatives of the different wards. The school committees nominated by the political parties in Boston gradually became worse and worse until a number of public-spirited citizens felt obliged to take some action. They formed a nonpartisan, nonsectarian association, known as the Public School Association. The movement has been very successful. The Republican city convention has, for the last few years, accepted all the nominees of the association. The Democratic city convention has accepted such of them as were Democrats. The general result has been a distinct improvement in the membership of the school board.

It must not be supposed that the work of an association of this kind can be done in a year or two. It takes a long time to educate public opinion, and it takes perhaps a still longer time to persuade the well-disposed that it is necessary for them to come out and be counted at the polls. The principal reason for our failure to govern ourselves wisely in our cities may be attributed largely to the indifference of those who look upon politics as an occupation beneath them and unworthy of any effort on their part. This indifference must be met for the present, until a time when the public conscience is more thoroly awakened to the duties as

well as to the privileges of self-government, by the activity of some organization of men whose motives are above reproach. It is the only direction in which I can see any immediate hope of improvement in our municipal government. Such an organization has, I understand, been successful in city politics in Chicago, and we are to try the experiment in Boston before long. The Public School Association has limited its activity to the nomination and election of members of the school board, and has become, within its limited sphere, a political party. It enrolls voters, distributes literature, holds meetings, sends checkers to the polls, and routs out on election day negligent voters. All this requires work, money, organization.

Besides nomination for the school board by political parties and by a private association, there are two other methods of nomination. In one city a nominating committee is selected by the judges; in another, candidates are nominated on a petition signed by 200 householders.

One finds in the United States almost every conceivable method of appointment and election to school boards: appointment by the mayor, with and without the approval of the city council; appointment by the judges of one of the courts; appointment by the city council; appointment of a part of the board by the governor and election of the remainder by the city council; appointment of a part of the board by the governor and election of the remainder by the people; appointment by the aldermen, subject to confirmation by the city council; appointment of a large board by the mayor, which board elects an executive committee; election by districts of a large board, which in turn elects a smaller central board; election in town meeting; and, lastly, election to vacancies by the board itself, which is thus a self-perpetuating, close corporation.

Of all these various methods we can, I think, dismiss all except election at large and appointment by a mayor, a court, or a governor. Election by districts is so notoriously bad that it is not worth discussing here. Our municipal governments are so often corrupt that no one can wish to see a closer connection between them and the schools, and therefore any system in which a city council has a voice is bad. Appointment, however, by individuals holding high office, to whom responsibility for an unworthy appointment may be brought, or appointment by a body like the bench which should be free from any suspicion of undue influence, is of course reasonable and defensible. But for myself I must confess that an elected school board seems more consistent with our institutions and our traditions. I do not mean that I do not believe in appointive positions. I most distinctly believe in an appointive judiciary and mistrust an elective one. I believe that many, if not all, commissions should be appointive. I believe in giving the chief executive power to appoint heads of departments. But I draw a distinction between different classes of positions.

In one class, I put those offices which need not respond directly to the wishes of the people, as, for instance, the judicial offices. We have a traditional body of laws which must be applied and interpreted in a consistent and unvarying manner. Sudden changes of interpretation following a popular election would be fatal to a proper administration of justice. A judge must give his decisions in accordance with definite legal principles. The *vox populi* has no place in a court, and a judge should not be subjected to having his decisions reviewed at the polls. In the same class I would place permanent commissions, such as park commissions and commissions whose duty is continuous investigation or inquiry. In the same class, tho for different reasons, I would put heads of departments. The chief executive of a city or nation is an elective officer, and as such is supposed to represent the will of the people. In order that he may carry out his policy he should be allowed to appoint the men who are to direct the various branches of his administration, so that his policy may be worked out as a consistent whole.

In the second class I would put all offices which should respond to the will of the people—mayors, governors, legislatures, city councils, and school boards. The schools touch the life of the people more intimately than any other department of government, and it seems to me only reasonable that the people should be able to express directly their wishes in the management of their schools. Now, I am quite prepared to admit that at any given time or in any given city an appointive school board may be better than an elective one, just as I am willing to grant that an autocratic government may, at any given period, be wiser and more liberal than a popular one. A people may be happy and prosperous under a benovelent despotism, and greater individual liberty may exist than in a democracy. That is not the question. It is possible to sacrifice future development for improved conditions in the present. It is conceivable that an autocratic government may impose on a people a measure that is wise and for their good, but which the people would not have consented to voluntarily without a long period of education. Let me give an illustration. The Russian government introduced the single gold standard by a decree. The rulers were convinced of the wisdom of the measure; the people were not consulted. Compare our American method of procedure with the Russian. The gold standard was adopted only after a long struggle and a severe process of self-education attended by material loss. But our people had in the meantime fought their way to a higher stage of intellectual development. I would not sacrifice this self-education for any amount of present gain. I am aware that the schools are the most important factor in this process of self-education, and that any influence which hampers the schools retards our development. Hence it may be argued that it is important to secure the best school boards irrespective of any other consideration. I admit

the importance of good school boards, but I feel that it is more developing to learn to govern ourselves wisely than to have good school boards provided for us by an appointing power. The schools touch us too closely in our daily lives to allow us to neglect their management as we neglect other departments of our government. The practice of self-government is essential if we are to preserve our liberties. The education we need most today is political. We are educating ourselves politically when we see the necessity of exerting ourselves to get good men for our school boards and go out and do it. Having once accustomed ourselves to do it in one department, we shall learn to do it in all departments. Not until then can we boast that we are an intelligent, self-governing community.

SCHOOL BOARDS—THEIR FUNCTIONS: LEGISLATIVE, EXECUTIVE, AND JUDICIAL

B. F. HUNSICKER, PRESIDENT OF THE BOARD OF EDUCATION, READING, PA.

Much has been said and written in the past few years about the typical school board; but as yet we have neither the typical school board nor have we agreed upon any one plan of school-board organization as the ideal. Opinions differ widely, and it is only remotely possible that there may be a uniform plan in school government in this country.

Some believe in centralizing in the school board almost unlimited powers, with detailed duties for the individual members of such board; and perhaps equally as many think that the school board should be a passive body, merely ratifying—and often not that—what has been done by paid officials, especially the superintendent, making him the educational expert and the executive head of the professional factors, and practically the executive head of the whole school system.

My opinion is that the school board is not a clerical bureau, empowered to appoint a few officials, pass upon bills, vote away its duties, and congratulate itself that it has so little to do. A typical school board, as I understand it, is a creation of the law-making power; its members are elected by the suffrages of the people; it has granted to it the power to establish, maintain, and control free public schools, and these powers should not be shirked nor entirely delegated to officials.

The officials should not be hampered by unnecessary red tape, yet the school board, representing as it does the people, should be a vital factor in a school system, and it and its committees should fully consider all matters of sufficient importance to effect the entire school system or any important part of it. The life of our public schools depends on the interest and co-operation of the people, and this can best be maintained

by keeping directors in touch with the work and the people in touch with the directors.

A review of several school systems will help little in reaching a conclusion as to what functions a school board should retain and what it should delegate to officials, nor are we likely to evolve from the numerous perplexing and complex systems anything like the model school board suited to all. It is perhaps, after all, a local question, and one which each community must settle for itself. Nevertheless, it is an interesting topic, and all can at least be helped by an exchange of opinion.

The number of members that compose a board is an unimportant factor in the question now under consideration. New York has twenty-one members in its school board; Pittsburg has thirty-seven members in a central board and over two hundred in local boards; Minneapolis has seven; Reading, sixty-four. As far as I can ascertain, the number of members has little effect on the functional policy of the board. In some instances large school boards retain little power, in others small school boards retain much power, and *vice versa*. Hence the solution of the problem does not lie in the number of members a board may have.

It has been suggested that the method of selecting a school board would settle the question of efficiency; but school boards, whether elected by the people or appointed by mayors, judges, or governors, have alike been good and bad, have alike had little or much power; hence the solution does not lie there.

It is not within the province of this paper to deal with the mode of creating school boards, nor to determine the number of members that should compose a board; but since the people, in either the appointive or elective system, are responsible for the school board, indirectly if appointed, directly if elected, its powers should be liberal.

An investigation of the functions of boards in several cities, however, is not always encouraging toward this end. In Cleveland, under what is called the federal system, one man is the school board, exercising all the functions. This plan seems to meet with some approval, but whether a centralization of all power in one man is wise is still a doubtful question. In many western cities the school boards are vested with all powers, administrative, judicial, legislative. They owe no allegiance to any other local authority in school matters. As a rule, there are six members. This plan has been successful. Here in Boston, I understand, the school board has been gradually getting more power. Before 1875 the board, I believe, had not the authority even to determine the location of a schoolhouse, that power being in the hands of the city council. In some cities the mayor is *ex officio* member of the board, in others he is president, and in a few he has the veto power. In Buffalo there is no school board; the city council transacts all school business; and the superintendent is an officer elected by the people, and is the head of the

department of education. In many cities, notably Atlanta, the school board can do nothing without the consent of the council. While the tendency is is to give enlarged powers to such school boards, yet almost invariably councils retain the power of appropriating money. In Baltimore many of the acts of the board are subject to the decision of the council. Minneapolis and St. Paul, the twin cities of the Northwest, represent a marked contrast. In the former the board has virtually absolute power and levies its own taxes; in the latter the board cannot even hold its property and is subject to the dictates of the council. It is clear, then, that there is a medley of plans as well as a diversity in the powers of functions of individual boards.

School boards have little real power, and their duties are more or less perfunctory unless they have absolute control of their finances. If compelled to prepare estimates to be approved by city councils, their functions become a nonentity. The board can plan nothing with any degree of certainty. In many western cities, such as St. Louis, Denver, and Minneapolis, the board levies and collects taxes. In Milwaukee the same plan prevails, unless the city council decides otherwise by a two-thirds vote. In Detroit a fixed sum per pupil must be granted by the council. Beyond this the council has absolute power to appropriate or to withhold. In Philadelphia councils make the appropriations. In Reading the school board levies the school tax, and collects and expends the money, as it may deem proper.

The method of electing the superintendent varies much. San Francisco, Buffalo, and several other cities elect by popular vote. The Cleveland superintendent is appointed by the one school director, and is, perhaps, the most powerful of school superintendents. He has not only absolute power over all that relates to instruction, but he examines, appoints, and removes teachers. His appointment must be confirmed by the council. In Washington the school board does not appoint its superintendent; therefore, as has once been the case, the board may be defied and ignored.

Another point is the selection of teachers. Examinations are only a help in the selection of teachers. Many who pass good examinations are poor teachers, and *vice versa*. In most instances the judgment of the superintendent should prevail, but the power of confirmation should lie with the board.

In all this multiplicity of systems and plans it is, as I have said, a difficult matter to decide upon a typical plan, and I suppose that will never be done. Personally, I feel that the school board should be a legislative, an executive, and a judicial body. It is more than a body of directors of a large corporation that employs a superintendent, and only inspects the monthly, quarterly, and annual reports. A system which is constantly in touch with the people will, on the whole, result in the greatest good to

the people. Public opinion may at times be at fault, but when any proposition must run the gauntlet of a superintendent, a school board, and practically the whole community, there is less liability to error and abuse.

In my opinion, the legislative functions of school boards should be unhampered. They should have power to levy tax, to collect and disburse money. If the school board is to be held responsible for the successful administration of the school system, it must have discretionary power both as to the amount of money required, as well as to the disposition of the same. Councils and school boards should be independent bodies, each attending to the duties in its own sphere. Will this lead to extravagance? If the people are alert, it will not. On the contrary, if a board has not this power, it is helpless and really cannot be made responsible for the condition of the schools. It should make its own estimates and be held strictly responsible for the money it expends. Briefly put, it should have complete control of the revenues. To make a city council a dictator, to whom the school boards must bow, is a perversion of responsibilities and a misinterpretation of the functions of a school board in its fullest sense. The board should elect its superintendent; if it does not, he is not responsible to it. In small places it might be impossible to find a suitable candidate, if the superintendent were elected by the people. In some New Jersey cities it is said superintendents are elected who do not even claim to be school men. Where the superintendent is appointed by one man, it is easier for him to convince that one man than a body of men of the wisdom of a certain policy.

The school board, too, should elect its teachers, altho in this particular it should be chiefly guided by the superintendent, who alone, I think, should examine the teachers.

In its executive function the school board, while delegating much to a secretary, much to committees, much to the superintendent, should be the body to approve or disapprove the acts of its officers and committees. When a superintendent issues a course of study, it should have the stamp of authority from the board. Before the secretary or treasurer pays a bill, it should be approved by the board. These officials may then feel that what they are doing is also the will of the executive over them.

The question where the authority of the board should end and that of the superintendent begin is, perhaps, the most mooted question in school affairs. How much power should the board retain? How much should it delegate to a superintendent? Should the board be purely a legislative body and the superintendent an executive head? In my opinion, the board is the executive head of the school system. The superintendent is the educational expert and head of professional factors, and an advisor to the board in other matters.

In its judicial capacity, perhaps, the board should have least to do. But there comes the time when superintendents and other officers are

unable to reconcile jarring factors in a school system; then the board should step in and say emphatically what must be done. The organization of the board at Reading, Pa., is satisfactory in many respects. While it does not hamper its officials and generally votes "yes" on all recommendations, yet it is well understood that, unless the recommendations are worthy, it will not hesitate to turn them down. Another admirable feature of the Reading board is that it is nonpartisan. It is a large body, it is true, and yet this has its advantageous side, because it keeps more people interested in the welfare of the schools. Since 1864 Reading has been acting under a special charter, and so satisfactory is it that again and again has the board refused to accept the general state law making the board a political body and appointing the city treasurer the receiver of school taxes. Under this special charter all school property is the common property of the school district, and the members of the board have power to levy and collect taxes. The latter duty is delegated to a school treasurer. Various committees make recommendations, but all matters must receive the sanction of the board. In fact, the board retains its executive, legislative, and judicial functions, being governed in a large measure by the recommendations of its officials. While perhaps not an ideal or model plan, it seems to be a satisfactory one for the conditions which environ us.

NEW DEPARTURES IN SCHOOL ADMINISTRATION

CHARLES HOLDEN, MEMBER OF BOARD OF EDUCATION, GRAND RAPIDS, MICH.

No other public institution in the world has had such marvelous development as the common-school system of the United States. From the log schoolhouse, with its primitive furniture, scanty equipment, and curriculum of three R's, to the frame building, with its accessories, was a great advance. The growth of academies, union schools, high schools, and universities for classical and original research has been easy and natural, owing to the ever-increasing, unsatisfied craving for knowledge which has been characteristic of men thru every age.

The aim of education is to develop boys and girls, physically, intellectually, morally, and spiritually, that they may meet life's duties and problems with success.

Citizenship is the ideal which is constantly held before the pupils in our public schools. Every effort is put forth by intellectual men and women to promote the welfare of the public schools. Many of America's brightest minds have been centered on this problem; yet from the most obscure personages in the country districts to men of national prominence we have complaints that there are flaws in the great educational structure; not that these men agree as to what the flaws are, for each one

has his individual hobby to which the system does not conform. On the other hand, these men, like all good American citizens, have in their heart a just sense and pride of ownership in the public schools. The children form a bond of union between the home and the school, as nothing else does or can, causing the people to feel that the schools belong to them.

There have been many changes in the administration of schools since the days of our grandfathers. This is especially true in the West, where in two generations cities large and small have replaced the forest with its roving Indians and beasts of prey.

In dealing with my subject it is not my purpose to attempt the introduction of original or novel suggestions as to new methods in school administration. There are some methods now being tried which might be more universally adopted to make the schools more effective. Much has been said about the "everyday church." Why not more universally urge the adoption of the everyday school, and make every school building that can be so utilized the very center of higher educational and social life in city and country districts thruout the land?

Men have begun to see the reasonableness of the idea, and are working to that end. Hoping to convince scoffers, we began in a small way with two playgrounds in the most congested part of our city; we now have six, and more will follow. Since the experiment has proved successful, the idea will continue to grow. Those of you who are residents of this historic Boston may be proud that your city has the honor of being first in proving the efficiency of the playground idea. Some cities may have been somewhat slow to follow your example, but these are awakening to the necessity of playgrounds, which will soon be recognized as a universal need. In every town which is large enough to make street cars a necessity there will be found those who have no place to play except in the street, with its temptations and dangers.

The teachers are seeking to inculcate the sense of ownership in the school lawns and yards, by getting the children interested in beautifying the grounds. This has been successful in Grand Rapids to the degree that owners of large factories have caught the spirit and have ornamented their grounds with plants, shrubs, and flowers, in some instances creating veritable miniature parks, pleasing and restful to the eye of the workmen at the bench or forge. More than this, our board of trade is now contemplating a beautiful parkway or boulevard driveway which shall link together all our city parks and continue into the suburban districts *via* the river road. I speak of this only to illustrate how far-reaching the working out of an idea may become, eventually encompassing an entire community. There would be fewer poor fences and unpainted houses in the country if school superintendents and trustees would co-operate with teachers and pupils in making school buildings and grounds attractive. In many localities this is being attempted.

Following out the idea of making the school stand for more in the social and economic life of our home city, we have had lectures by citizens who spoke with authority on some topic which would interest the children. Local musicians have tendered their services, and, following the example of other cities, we have had May festivals—seasons of song—in which the children heard the best classical music rendered by the most talented local musicians. The children who could sing were formed into choruses and trained to sing classical selections, thus learning to love and appreciate the best that composers have written. To have sung in one such chorus must be a character-making experience in the life of any boy or girl. Such good results have been obtained from these experiments that there followed the introduction of the following resolution by our committee on schools, which was adopted:

To the Honorable Board of Education of the City of Grand Rapids:

Your Committee on Schools to which was referred the resolution relative to extending the use of the school buildings, finds as follows:

That for the past fourteen years in New York city, under the direction of the school board, evening lectures and entertainments have been given in many of the school buildings. The last year there were three thousand such lectures at one hundred different centers, and the total attendance was almost a million people. They were found to be especially valuable in that they increased the interest of the people in the schools and that they made it possible for many people to complete an otherwise imperfect education. The appeal is almost exclusively to youths and adults, and the character and extent of the reading of the people are greatly effected.

Your committee sees no reason why some such work cannot be done here, and we recommend that a trial of it be made next year in four of our school buildings.

The number of evenings to be devoted to this work should be eighteen, beginning Nov. 2 and continuing to March 26, giving two evenings a week to each building. The work may be divided somewhat as follows: two evenings, called parents' evenings, devoted to the exhibition of the work of the pupils and also of pictures; two musical evenings, one largely vocal and the other instrumental, with some running talk upon musical compositions or composers; the remaining fourteen to be devoted, three to science, four to American history, two to municipal art, three to literature, and two to travel. Your committee believes that there are many persons in the city who are competent to speak on these subjects entertainingly, and who will welcome the opportunity of assisting the board of education in so good a work.

We believe that it is conservative to estimate an attendance of at least one hundred for each of these evenings, so that such a plan as this would reach more than seven thousand people, chiefly adults, and largely the fathers and mothers of the children under our care.

This work we hope to see successfully and permanently established.

The subject of vacation schools appeals most strongly to those of you who are from the larger and more congested cities, where their real necessity has been thoroly demonstrated. It is a shame, however, that the great need in some places seems so tardy of recognition when there are so many eager little ones, hundreds of whom are blind or deaf or lame. They want to see the lake and the green fields and the sparkling brooks. They have no way to play and nothing with which to play at home amid

the slums. This emphasizes the value of teaching the children how to play during the recreation hours. "I want a hammer," "I want a saw," is the appeal of empty hands for tools and training. "I have no mamma, and papa is away all day," measures the length of the vacation day, not only to the child in the home without equipment, but in a neigborhood without a playground.

Parents and children to whom a summer vacation means joyous freedom under the open sky, by shore or bank, in the woods, in the valleys, or on the mountains, should share with their less favored but more needy neighbors such summer privileges as these bookless nature schools benignly afford. The practical demonstration of the necessity for vacation schools and the successful results which follow their establishment should warrant their provision and management. In doing this we cannot be too thoughtful of the growing, developing children, who are to make this nation what it shall be when we of this day and age are no more.

Thoreau says: "It is the art of mankind to polish the world, and everyone who works is scrubbing in some part." Manual training does not aim primarily to teach the boy to make a joint or the girl to make a loaf of bread; these are incidental. The real aim is to teach the child to translate the work of the mind into useful action. Let the child get the idea of the world's work on a large scale. See to it that he understands that all honest work is God's work. Let him be instructed that all work is assisting in the process of polishing the world, and that "cleaning with the hands" is just as honorable as "scrubbing with the head." The sooner young people come to this knowledge, the better it will be for the world and the individual alike.

Learning how to do things and how to make things is becoming a more important element in the educational effort in this country each year. The tendency is a hopeful sign in education, not only because it dignifies and ennobles handicraft, but because it represents an effort to meet the demands of what is certain to be an age of great industrial activity. "Manual training" is a gradually growing term, and is assuming a broader and deeper meaning in its unfoldment. Its purpose is to train the hand to be the complement of the mind.

The kindergarten and manual-training school should be the ideal school of complete impression and of complete expression; a perfect school of civilization, confined not alone to the lowest grades, but to every grade.

Hand- and mind-training should accompany each other in the same class, in the lesson, in the same moment thruout the entire school life, if we would develop better men and women; thus developing better houses, farms, factories and shops, better edifices of all kinds, and better art to adorn them.

Purposeful and universal manual training will give our children new ideas of social relations; it will develop useful citizenship, thru a knowledge of the value of the state to the citizen and of the value of the citizen to the state. It will produce more men capable of thinking and expressing great thoughts. Such men will be of eminently greater value to society because of their ability, not only to think, but to express great thoughts.

Colleges might do more to prepare students for public life. Let me add my indorsement of what Andrew D. White said at the recent reunion of his class at Yale. He suggested the establishment of chairs of instruction in "comparative legislation," the purpose being to teach, not only what laws are, but what they ought to be. Another line suggested was that of "comparative administration," teaching what kind of administration exists, and also what should exist. He would amplify the teaching of international law, and emphasize the history of civilization with political ethics in view as an end and an aim of instruction. He would revise the teaching of United States history with a view "to promote a deep feeling of enlightened patriotism and stimulate a desire to join high political activities for noble ends." He would get away from the theoretical and into the practical ideas of life, which, followed out from the beginning by means of manual training, would be a sensible conclusion of a college course in this most practical age.

We are justly proud of our reputation for material prosperity; but this must be more than a name in order that a foundation may be established upon which a higher life may be built. The possession of mighty qualities made the men of early days great, and the men of the future will not be great unless they show the same courage, resolution, tenacity, fertility in resource, and hardihood which men of old have shown. We must abhor that which is evil, clinging to the good, and insisting upon self-restraint, self-mastery, and regard for the rights of others. If we and our children utilize the opportunities to develop these traits which are being constantly presented, in the future we shall, as President Roosevelt predicts, "make of this republic the freest and most orderly, the most just and most mighty nation."

One of the strongest features for the development of the natural prosperity of the future is the school savings banks, designed as they are to cultivate thrift and economy. All boards of education should encourage their establishment. They were first introduced into Michigan in our Grand Rapids school in 1894, and have proved a great success from the very beginning. At the close of the second year the deposits were nearly $25,000—an increase of $4,500 over the previous year. The parochial schools have introduced the savings-bank system, and with them the results have been equally successful. Many cities have made inquiry of us as to the system; it is growing in favor thruout the country, and its use promises to be general.

Believing that the museum is a necessary educational adjunct to the public school, we have established, under the care of a competent committee and curator, a well-assorted collection of specimens in natural history, comprising stuffed and embalmed animals, birds, reptiles, and fish; minerals, fossils, shells, and entomological specimens. These we have placed at the disposal, not only of the pupils of the schools, but also of the citizens in general. Our ultimate purpose is to develop a museum which shall be, not alone a free exhibition of antiquities, but illustrative of the development of modern industry, giving representation to all forms of applied arts which are worthy of a space therein; for example, textiles of various weaves from primitive life to modern times, showing the progress made in their manufacture. We aim to keep ever before the pupil practical illustrations of man's advancement toward the higher life. The museum becomes the natural center for the more extended use of the stereopticon which is coming to render such large service in the teaching of many subjects, especially geography, history, literature, nature study, and art. It is also the basis of illustrative material for evening lectures in the neighborhood centers.

In closing, let me say just a word regarding the selection of teachers. Too much care cannot be exercised in appointing teachers who understand and appreciate child-life thru a knowledge of the laws of psychology. We should be diligent lest a teacher incapable of understanding your child or mine attempts its guidance. It would seem the part of wisdom to promote the expansion of the functions of boards of education as guardians of the educational needs of the community and of all agencies that make for social betterment.

CONSOLIDATION OF RURAL SCHOOLS

I

WILLIAM K. FOWLER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, LINCOLN, NEB.

This subject is variously expressed as the "consolidation of school districts," the "centralization of rural schools," and the "transportation of pupils at public expense."

The ideal plan contemplates the discontinuance of the small schools within a given area, say a congressional township, and the maintenance instead of one graded school at some point near the center of the township. To illustrate: Suppose a township is divided into nine rural-school districts, each comprising four square miles of territory, with a low assessed valuation, a high tax levy, a small, neglected, and dilapidated frame schoolhouse varying from 16×24 feet to 24×30 feet, with three windows on each side, one window and a door in one end, and a stove;

and without basement and interior closets. This schoolhouse, if located at the center of this school district of four square miles, will be two miles by section-line roads from the homes at the corners of the district. School is maintained six, seven, or eight months during the year, under the jurisdiction of a board of three, and in our busy western section of the country is usually taught by a young woman under twenty-one years of age, who is paid $30 a month for teaching school, building fires, and sweeping out. In this school we may find an average daily attendance of sixteen pupils — a high estimate by the way — representing all ages from five to twenty years, all grades from the primary to the grammar school, occasionally with two or three high-school branches crowded in, and from thirty to forty daily recitations. The attendance is irregular and spasmodic, and tardiness is often the rule, children continuing to arrive until ten o'clock. Pupils are "put back" term after term by the "new" teacher, as records are usually destroyed or lost. Apparatus is either unknown or out of date, blackboard scanty, and furniture rickety. This is the good old-fashioned "deestrict skule" taught by the new woman of twenty, who has succeeded and supplanted the old man of forty — and of forty years ago.

Consolidation or centralization proposes to discontinue these small districts as separate organizations, and these rural schools and schoolhouses, and to establish in lieu thereof one central graded school for the township — say a four-room frame or brick schoolhouse, well constructed, correctly lighted, heated, ventilated, and seated; with basement and interior closets; a janitor, a principal, and three other teachers; thirty-six pupils, and three grades to the room; twelve to fifteen recitations daily; and provisions for transporting the pupils by public conveyance to and from the schoolhouse daily. We should then have a township board of education of five or seven members; would and could pay the principal $60 to $70 a month, and the three assistants about $45 a month each. With reference to the attendance of pupils: nine times sixteen is equal to four times thirty-six. But the attendance would be better, larger, more regular; pupils would be more punctual, and their progress provided for systematically. Their health would be better and better cared for, and their happiness would be greater.

This is the ideal plan. Conditions in many rural communities may be vastly improved by consolidating and centralizing in part, by discontinuing permanently or temporarily a school district and uniting it to an adjoining one.

ARGUMENTS FOR CONSOLIDATION

1. Insures a much larger percentage of enumerated pupils enrolled.

2. Prevents tardiness among transported pupils.

3. Reduces irregular attendance, the percentage of transported pupils from two subdistricts being each 94, the highest in the township (Lake county, Ohio).

4. Pupils can be better classified and graded.

5. No wet feet or clothing, nor colds resulting therefrom.

6. No quarreling, improper language, or improper conduct on the way to and from school.

7. Pupils are under the care of responsible persons from the time they leave home in the morning until they return at night.

8. Pupils can have the advantage of better schoolrooms, better heated, better ventilated, and better supplied with apparatus, etc.

9. Pupils have the advantage of that interest, enthusiasm, and confidence which large classes always bring.

10. Better teachers can be employed; hence better schools.

11. The plan insures more thoro and more complete supervision.

12. It is more economical. Under the new plan the cost of tuition per pupil, on the basis of total enrollment, has been reduced from $16 to $10.48; on the basis of average daily attendance, from $26.66 to $16.07. This statement is for the pupils in subdistricts Nos. 10 and 13, Lake county, Ohio.

13. It permits a better grading of the schools and classification of pupils. Consolidation allows pupils to be placed where they can work to the best advantage, the various subjects of study to be wisely selected and correlated, and more time to be given to recitations. Pupils work in graded schools, and both teachers and pupils are under systematic and closer supervision.

14. It affords an opportunity for thoro work in special branches, such as drawing, music, and nature study. It also allows an enrichment in other lines.

15. It opens the door to more weeks of schooling and to schools of a higher grade. The people in villages almost invariably lengthen the school year and support a high school for advanced pupils.

16. It affords the broader companionship and culture that come from association.

17. It quickens public interest in the schools. Pride in the quality of work done secures a greater sympathy and better fellowship thruout the township. The whole community is drawn together.

18. Public barges used for children in the daytime may be used to transport their parents to public gatherings in the evenings, to lecture courses, etc.

19. Transportation makes possible the distribution of mail thruout the whole township daily.

20. By transportation the farm again, as of old, becomes the ideal place in which to bring up children, enabling them to secure the advantages of centers of population and spend their evenings and holiday time in contact with nature and plenty of work, instead of idly loafing about town.

21. The teacher's work is so well organized that the average recitation period is trebled.

22. One or two large families cannot "freeze out" the teacher.

23. The farmer and his family are more content with their self-sustaining occupation.

24. Ethical culture, free from the dissipations of social life as manifested in cities.

25. Parents who are observant say that the cost of shoes worn out in walking to the separate schools and the cost of medicine and doctor bills more than pay for the transportation.

26. Transportation makes it easier to maintain a quarantine in case of disease and prevent the spread of contagion.

27. By centralization there will be fewer and better teachers in our schools. It will be a case of the survival of the fittest. Better salaries will be paid those who do teach, thus enabling a person to make it possible to acquire a high school and normal training before attempting to teach.

28. By centralization all the children of the township have the same chance for higher educational advantages, which under the present plan only five or ten persons are able to get by leaving home and going to the city.

29. By centralization we go a long way toward the solution of the problem "how to keep the boys on the farm." We bring to the farm that which he goes to the city and town to secure. Such a school may become the social and intellectual center of the community. With a library room, music, debating club, etc., our boys and girls will hesitate to leave home and such a school for the uncertainties of city life.

ARGUMENTS AGAINST CONSOLIDATION

1. Depreciation of property; decreased valuation of farms in districts where schools are closed.

2. Dislike of sending young children to school far from home, away from the oversight of parents; and of providing a cold lunch for them rather than a warm dinner.

3. Danger to health and morals. Children obliged to travel too far in cold and stormy weather; obliged to walk a portion of the way to meet the team, and then to ride in damp clothing and with wet feet; unsuitable conveyance and uncertain drivers; association with so many children of all classes and conditions; lack of proper oversight during the noon hour.

4. Insufficient and unsuitable clothing; expense to parents of properly clothing their children.

5. Difficulty of securing a proper conveyance on reasonable terms, or, if the parent is allowed compensation, of agreeing upon terms satisfactory to both parents and school officials.

6. Local jealousy; an acknowledgment that some one section of the township has greater advantages and is outstripping any other locality.

7. Natural proneness of some people to object to the removal of any ancient landmark or to any innovation, however worthy the measure or however well received elsewhere.

8. Less freedom of the individual pupil to advance at a rate best suited to him.

9. Saloon at the center.

10. Too long distances; bad roads, blocked in winter for weeks.

11. Invasion of individual rights.

12. If fatal diseases are carried to or start in these schools, then most all of the children of the township are exposed to them.

We are in the midst of an industrial revolution. The principle of concentration has touched our farming, our manufacturing, our mining, and our commerce. There are those who greatly fear the outcome. There are those who prophesied disaster and even the destruction of society on the introduction of labor-saving machinery. We have adjusted ourselves to the new conditions thus introduced. Most of us believe that we shall again adjust ourselves to the new industrial conditions. The changes in industrial and social conditions make necessary similiar changes in educational affairs. The watchword of today is "concentration," the dominant force is centripetal. Not only for the saving of expense, but for the better quality of the work, must we bring our pupils together. No manufacturing business could endure a year run on a plan so extravagant as the district system of schools.

In answer to an inquiry for the latest phase or condition of the consolidation of rural schools, the state department of public instruction of the several states sent the following brief expressions of opinion, in addition to the printed matter hereafter referred to:

ARIZONA.—There has never been any concerted action in Arizona in the matter of consolidation of rural schools. In such a sparsely settled country, the districts being in many instances several miles apart, the consolidation plan cannot be satisfactorily worked to any extent.

CALIFORNIA.—There was a measure enacted at the recent session of the legislature authorizing consolidation (Assembly Bill No. 532). As yet it is only an experiment in California, but we anticipate good results from it when it shall have been tried. Of course, we think it adapted only to those sections of the state where there are good roads and well-populated communities.

COLORADO.—Conditions are such in Colorado that we have practically done nothing in this line, but interest is now being awakened.

GEORGIA.—Consolidation has gradually been going on in this state, altho there have been no laws passed on this subject. The matter is left largely with county boards of education. In most cases they have proceeded very slowly in the matter, but have obtained good results.

ILLINOIS.—There seems to be a widespread interest in this state concerning the matter of consolidation of rural schools. There was no legislation passed during the last session of the general assembly. It is probable, however, that by the next biennial session the sentiment will be so strong that the legislature will be disposed to act.

IOWA.—The work of consolidation goes forward merrily in this state.

KANSAS.—Consolidation is rapidly gaining favor in this state. Where it has been tried there is no fault found with it.

MICHIGAN.—We have just secured the necessary legislation by which we are now able to centralize schools, using a portion of the public money for the transportation of pupils. That was all that was necessary, and we are now in shape to begin an active campaign and to reach some definite practical results.

MINNESOTA.—There are but three or four consolidated districts in Minnesota as yet, but in about a dozen places schools are temporarily suspended and the pupils are being transported at public expense to adjoining districts. This plan was authorized by the last legislature.

MISSOURI.—Not much has been done in Missouri along the line of consolidation of rural schools. There is a law authorizing it, but the people have taken action in only four places, and in two only of these have the schools been consolidated; in the other two it is simply district combination.

NORTH DAKOTA.—Consolidation has been tried in several of the counties in this state, and the reports which are on file indicate that this plan is entirely satisfactory and a great improvement over the old system.

OHIO.—The plan of consolidation gives general satisfaction in this state where the conditions are at all favorable. It is the solution of the question of better schools in rural districts.

OKLAHOMA.—We are just beginning the plan in Oklahoma. It is being discussed in every county. We are having trouble, however, because most of the districts have issued bonds and can not lose their identity.

OREGON.—We are urging the consolidation idea and are meeting with very much encouragement, altho we have not as yet any consolidated districts. It takes time to overcome the inertia of long-settled customs. We are particularly anxious that no districts consolidate unless they make a success of it. We find the best way to get it before the

people is to present it in mass-meetings, where we bring before the people maps showing the boundaries of the districts, roads, residences, etc.

SOUTH DAKOTA.—So far the work in consolidated schools has been superior to that in the single district system and has been a saving to the people of about one-fourth. The attendance has also been better. Especially is this true of students of the higher grades.

TEXAS.—Very little has been done in this state in the way of consolidating rural schools. There are perhaps one or two counties which have during the past year to some extent tried the consolidation plan, but these few cases have not been sufficient for a test. Much has been done in public addresses and in letters from the state department to encourage the consolidation of schools.

UTAH.—A bill to provide for the consolidation of the school districts was introduced in the last legislature, but it failed to pass. Consolidation is being effected in many of our counties, however, on a small scale. Central schools are steadily increasing in numbers. Utah's rural districts are somewhat different from the rural districts of most states. Towns have sprung up at the mouths of cañon streams. There the people live, while the farms are from one to ten miles from their homes.

VERMONT.—Vermont is making some progress in the matter of consolidation of rural schools. The hilly nature of the state is a very grave difficulty in the extension of this movement. The people of Vermont are always conservative but make assured, tho moderate, progress.

I append herewith for reference a list of printed articles on the consolidation of school districts, centralization of schools, and transportation of pupils:

CALIFORNIA.—Assembly Bill No. 532, or Senate Bill No. 482: "An Act Providing for the Formation of Union School Districts and the Maintenance therein of Union Schools," 1903.

CONNECTICUT.—Report of the Board of Education, together with the Report of the Secretary of the Board, 1900. Laws Relating to Education; chap. ix, "Consolidation of School Districts," pp. 52–60; "Conveyance of Children," pp. 267–71. Report for 1902, "Conveyance of Children," pp. 186–88; "Consolidation of Schools," pp. 332–35.

FLORIDA.—Biennial Report of the Superintendent of Public Instruction for the two years ending June 3, 1900: "Reports of County Superintendents," pp. 331, 341, 352, 379, 391, 412; summary, p. 19.

GEORGIA.—Thirtieth Annual Report from the Department of Education for 1901: "Consolidation of Districts and Transportation of Pupils," pp. 21–23; "Consolidation of Rural Schools and the Transportation of Children," pp. 98–106.

HAWAII.—Report of Inspectors of the Department of Public Instruction, December 31, 1902: "Consolidated Schools," p. 23.

IDAHO.—Biennial Report of the State Superintendent of Public Instruction, 1900: "Rural School Districts," pp. 6, 7.

ILLINOIS.—Twenty-fourth Biennial Report of the Superintendent of Public Instruction, July 1, 1900, to June 30, 1902: "Consolidation of the Small Districts," pp. 11–14.

INDIANA.—Twentieth Biennial Report of the State Superintendent of Public Instruction for the school years ending July 31, 1899, and July 31, 1900: "The Rural School—(*a*) The Small School, (*b*) Transportation of Pupils," pp. 520–87. Twenty-first Biennial Report for years ending July 31, 1901, and July 31, 1902: "School Economy—(*a*) The Small School, (*b*) A New Organization in the Country," pp. 155–61; "Consolidated Schools," pp. 727–62.

IOWA.—Biennial Report of the Department of Public Instruction for the period ending September, 30, 1901: chap. ii, "Consolidation of Schools and Transportation of Children," pp. 29–97 (issued also in pamphlet form).

KANSAS.—Thirteenth Biennial Report of the Department of Public Instruction for the years ending June 30, 1901, and June 30, 1902: "The Consolidation of Rural Schools," pp. 38–48. Circular of Information Regarding Consolidation of Rural Schools, March 1, 1902.

LOUISIANA.—Biennial Report of the State Superintendent of Public Education, 1900–1901: "Attendance," pp. 6–8.

MARYLAND.—Thirty-sixth Annual Report of the State Board of Education for the year ending July 31, 1902. Minutes of the Association of School Commissioners of Maryland, session of 1902: "Resolution of State Superintendent Commending Consolidation of Rural Schools," p. xliii.

MASSACHUSETTS.—Sixty-second Annual Report of the Board of Education, together with the Sixty-second Annual Report of the Secretary of the Board, 1897–98: "The Consolidation of Schools and the Conveyance of Children," by G. T. Fletcher, agent of the Massachusetts Board of Education, pp. 435–59. Sixty-third Annual Report, 1898–99: "Expense of Conveying Children," pp. 155–59. Sixty-sixth Annual Report, 1902: "Conveyance of Pupils," pp. 101–4.

MICHIGAN.—Sixty-fifth Annual Report of the Superintendent of Public Instruction for the year 1901: "The Rural High School," pp. 5–11; "An Investigation of the Centralized Schools of Ohio," pp. 12–30; "Transportation of Pupils," pp. 31–34 (issued also in pamphlet form).

MINNESOTA.—Twelfth Biennial Report of the Superintendent of Public Instruction for the school years ending July 31, 1901–1902: "Bulletin No. 1, Consolidation of Rural Schools and Transportation of Pupils at Public Expense," pp. 271–90 (issued also in pamphlet form).

MISSOURI.—Fifty-third Report of the Public Schools for the year ending June 30, 1902: "The Rural School Problem," pp. 4–11.

MONTANA.—Circular Letter of the State Superintendent on "The Consolidation of Schools."

NEBRASKA.—Sixteenth Biennial Report of the State Superintendent of Public Instruction, January, 1901: "Transportation of Pupils and Instruction in Neighboring District," pp. 40–42. Seventeenth Biennial Report, January, 1903: "The Rural School Problem: A solution, Consolidation of School Districts, Centralization of Schools, and Public Transportation of Pupils," pp. 400–409; "School Buildings and Grounds in Nebraska," pp. 228–65.

NEW HAMPSHIRE.—Fifty-second Report of the Superintendent of Public Instruction, 1902: "Consolidation," pp. 278, 279.

NEW JERSEY.—Annual Report of the State Board of Education and of the Superintendent of Public Instruction for the school year ending June 30, 1902: "Reports from County Superintendents on the Transportation of Pupils," pp. 59, 84.

NEW YORK.—Forty-second Annual Report of the State Superintendent for the school year ending July 31, 1895: "The Consolidation of School Districts," p. lxxxvii. Forty-fourth Report, 1897: "The Rural School Problem," p. xi. Forty-sixth Report, 1899: "Consolidation of School Districts," pp. 55, 56. Forty-seventh Report, 1900: "Consolidation of School Districts," p. 11; "Contract with Adjoining Districts," p. 13. Forty-ninth Report, 1902: "Consolidation of Weak Districts," p. lxix.

NORTH CAROLINA.—Biennial Report of the Superintendent of Public Instruction for the school years 1900–1901 and 1901–1902: "School Districts," pp. xviii–xxvi; "The Rural Schools," p. lviii; "Signs of Hope and Evidences of Progress," p. lx, third paragraph; "Consolidation of Districts," pp. 365–73 (Educational Bulletin No. 1).

NORTH DAKOTA.—Seventh Biennial Report of the Superintendent of Public Instruction for the two years ending June 30, 1902: "Consolidation of Rural Schools," pp. 24–28 (issued also in pamphlet form); 291, 300, 303.

NOVA SCOTIA.—Annual Report of the Superintendent of Education for the year ending July 31, 1902: "Consolidation of Sections," p. xi.

OHIO.—Forty-seventh Annual Report of the State Commissioner of Common Schools for the year ending August 31, 1900: "Centralization Law," pp. 12–15. Forty-eighth Annual Report, 1901: "Centralization of Schools," pp. 18, 19.

ONTARIO.—Report of the Minister of Education for the year 1902: "The Consolidation of Schools and Transportation of Pupils," pp. xxii–xxvii.

OREGON.—Fifteenth Biennial Report of the Superintendent of Public Instruction, 1902: "General Survey of Educational Work," pp. 233–36.

PENNSYLVANIA.—Report of the Superintendent of Public Instruction for the year ending June 3, 1901: "Centralization of Schools," pp. vi–vii. School Laws of Pennsylvania, 1902: "Consolidated Districts," pp. 2–4.

RHODE ISLAND.—Fifty-seventh Annual Report of the Commissioner of Public Schools for the year ending April 30, 1901: "Size of Schools," p. 73; "Extracts from Reports on Consolidation and Transportation," Appendix, pp. 27, 29, 33–35, 37, 64, 101, 129–131. Public Laws Pertaining to Education, 1903: chap. 1101, "An Act Providing for the Better Management of the Public Schools in the State" (in pamphlet form).

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VERMONT.—Thirty-seventh School Report of the State Superintendent of Education, October, 1902: "Union of Schools and Conveyance of Pupils," pp. 22–24; "Educational Thought and Effort," p. 56; "Statistics on Transportation," p. 134; "County Reports," pp. 146, 194, 219, 222.

VIRGINIA.—Biennial Report of the Superintendent of Public Instruction, 1900–1901: "The Rural School," p. xxvi; "Consolidation and Transportation," pp. xxvii–xxviii.

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II

JOHN T. PRINCE, AGENT OF MASSACHUSETTS STATE BOARD OF EDUCATION, BOSTON, MASS.

In 1869 the legislature of Massachusetts passed a law authorizing towns to raise and appropriate money for the conveyance of pupils to and from the public schools. At the same session in which this law was passed, it was voted for a second time to abolish the district system. There may be no connection between these two events, but behind them both was a spirit of unrest. The people of the country towns had at last come to realize that a too close adherence to the principle of local self-government in education was working an injury to the smaller towns, and that the remedy lay in adopting a policy by which the town at large would share the obligations and privileges of school control. The rapid depopulation of country towns, and the increasing inability of these towns to support their schools, helped to encourage the movement of consolidating the schools, and thereby of making the rural schools share in some degree the privileges of a graded system.

There is no record available to show how much the rural schools were immediately affected by the passage of the transportation law just referred to. We only know that within twenty years after the law was passed upwards of two hundred towns had, to a greater or less degree, availed themselves of the provisions of the law and were spending in the aggregate more than twenty thousand dollars annually for the conveyance of

pupils. From that time to the present the idea of consolidating the schools has been constantly kept in mind by the people, as shown by the increased amount appropriated each year for the transportation of pupils. The total expenditure for this purpose last year was $165,596, which exceeded the expenditure of the previous year by $13,823, showing that the conveyance of pupils to and from school at public expense is still going on. The extent of the practice is shown by the fact that only fifty-nine of the 353 towns and cities of the commonwealth reported no expenditures for the conveyance of pupils last year, and that a good proportion of these fifty-nine towns neither have rural schools nor are likely to have them. It should be said that not all the money reported as appropriated for the conveyance of pupils was expended for carrying pupils from closed schools; but the sum expended for any other purpose is comparatively small, and therefore the amounts given are an approximate measure of the extent to which the schools have been brought together.

No statistics have been gathered as to the exact number of rural schools which have been consolidated thus far, but a careful estimate indicates that at least 10 per cent. of the so-called ungraded schools have been discontinued, and that the pupils of the discontinued schools are being carried at public expense either to central graded schools or to other ungraded schools.

There is yet another way of ascertaining the strength of the present movement in the consolidation of rural schools, and that is thru the testimony of persons who have tried the plan or who have seen the effects of a fair trial of it. In a special inquiry made a few years ago by an agent of the Massachusetts state board of education, the fact was brought out that in a large majority of the places where the experiment of consolidation had been tried there was a pronounced sentiment in favor of its continuance. Several reasons were given for this opinion, among which were increase in the regularity and punctuality of pupils, an improved character of school buildings and equipment, enhanced interest on the part of pupils, and a reduction in the cost of school maintenance. The inquiry brought out another fact, altho it was an incidental one, and that was the evident need of making the educational conditions in the state at large more nearly equal — a need which has been recently met, in part at least, by a substantial increase of the state grant to the more needy towns of the commonwealth.

In view of all these facts, it is fair to conclude that in Massachusetts at least the plan of the consolidation of rural schools is no longer an experiment, but is recognized in most of the towns of the commonwealth as a helpful means of raising the standard of education in rural communities.

What is true of Massachusetts is doubtless true of several of the twenty states which are reported as having adopted in one form or another the plan of consolidation. In Iowa the plan which has been in operation for

some time is favored by 95 per cent. of the county superintendents and by the state superintendent. In Connecticut the law permitting the closing of schools and transportation of pupils, as reported by the state superintendent, "has been immensely advantageous to the state." In Ohio the state commissioner is loud in his commendation of the plan which has been in operation several years. In Vermont over seven hundred schools were closed in a single year, and the amount expended for the conveyance of pupils more than doubled in six years. In New Hampshire the advantages enumerated in favor of discontinuing small schools and conveying the pupils are: (1) economy, (2) better teachers and equipment, (3) better supervision, (4) regularity of pupils' attendance, and (5) a better educational spirit.

Commissioner Harris in his last report, in speaking of the consolidation of rural schools, says:

> Upon the success of this movement rests the chief hope for the improvement of the rural school. It is fortunate that a device which changes the ungraded school into a graded school involves a saving of expense. The improvement is well worth trial, even were it to double the cost of the rural school; but, as will be seen by statistics, it is secured with an actual saving of expenditure. Better teachers, more sanitary buildings, less personal exposure on the part of the pupils, better classification, and many lesser advantages are commending this reform over the country.

Added to the advantages enumerated above may be mentioned the improved facilities for breadth and fineness of social culture. Life in many rural communities is circumscribed by unavoidable limitations, which may in part be overcome by extending the associations of the children and so enriching their lives. The dangers, of course, of a too great extension of associations must be recognized, but it is assumed that in any plan of union the conditions of contact will be carefully guarded in the interests of all. Experience has shown, however, that the dangers of certain kinds of contamination are far greater in small country schools than in the larger graded schools, where there is protection in numbers.

Being assured of the possibilities for good in the consolidation of rural schools, we have next to inquire how best it may be accomplished. Shall the local school board, as in Massachusetts, Ohio, and New Jersey, be given full authority to consolidate the schools and to transport the pupils; or shall it be subject to certain legal restrictions, such, for example, as exist in Indiana, where the trustees of a school district may act only upon petition of a majority of the voters; or as in New Hampshire, where only a certain percentage of the school money may be expended for the conveyance of pupils; or as in Rhode Island, where schools only may be closed that have an average membership of less than twelve; or as in Iowa, where the boards are limited in their appropriation for transportation to five dollars for each person of school age? Shall the law governing the transportation of pupils designate the minimum

distance at which pupils may be carried to school, as in Vermont and Kansas? Or shall the township or district be allowed, as in some states, to offer a mileage to pupils living at a distance from the school as an alternative to free transportation?

However meritorious some of these features of consolidation may be in themselves considered, it is a matter of grave doubt whether they should be made subjects of legislation even upon the basis of suggestion or permission. The conditions of a single state, even of the smallest state, are so varied that no general policy or line of action can be defined by law, without doing a possible injury in special localities. Take, for example, the designation by law of the minimum distance at which pupils may be conveyed to school. Everyone knows that what is a proper distance for pupils to walk to school under some conditions is quite too great under others. The circumstances of companionship, of the character of the roadway, and of the age and sex of the pupils all help to determine what the maximum walking distance for pupils should be. The designation of two miles as the minimum distance for free transportation of pupils, as in Kansas, would work a severe hardship in the case of young girls, who might be obliged under the law to walk a mile or a mile and a half over a lonely road; while, on the other hand, the offer of free rides for all pupils living over three-fourths of a mile from the school, as is done in Ohio and Pennsylvania in certain districts, might have a somewhat demoralizing influence upon healthy boys of twelve or fifteen years of age.

Again, the designation of a minimum sum, as in Iowa, for the transportation of each pupil must work an injury in certain cases, quite as much when the sum named is too great as when it is too small. In the one case there would be the temptation to extravagance and excess; in the other, to discomfort and neglect. The danger is especially manifest when school boards find it necessary to strike a bargain with the carriers. The smallness of the amount which the driver or proprietor of a school carriage is sometimes forced to accept is an indication of the possible meagerness of service rendered in the form of unfit carriages and poor oversight. Such bargaining and results are a reminder of the old-time practice of auctioning off the teacher's board to the lowest bidder.

But perhaps the saddest results of sharp bargaining come from the practice followed in some places of paying a small sum for each pupil or family living at a distance from the school, with the understanding that the father may or may not perform the service of transportation for which he is paid. In too many cases it is feared the children are forced by the parsimony of the father to endure much hardship and perhaps loss of school privileges—a result of small moment compared to the pauperizing influence of the transaction upon all concerned. These are some of the conditions of the consolidation of schools which the state may well

avoid, at least by any specification of statutory requirement. There may be others equally objectionable. The point that I would urge is that few specifications of organization should be made in the law providing for the consolidation beyond the giving of large and reponsible duties to local boards.

Among the first questions to be decided in considering a possible scheme of legislation in relation to the consolidation of schools is whether it is best to make the plan universal and obligatory. While it must be admitted that great good has been accomplished in the past by the closing of small schools and the transportation of the pupils to other schools, and while the testimony seems to favor an extension of such a plan, it may well be questioned whether it is desirable for all the rural schools, even for all the small rural schools, to be consolidated. In this age of reform we must not insist upon making the number of schools fewer only for the purpose of making the number of pupils in each school larger or of decreasing the expense of school maintenance. The truth is that our schools will be more rather than less expensive in the future, and they will also be smaller rather than larger. While we are urging that our graded schools of forty and fifty pupils must be reduced to twenty and thirty, that better individual work may be done, we can hardly agree with some superintendents in the assumption that country ungraded schools of fifteen and twenty, or even ten, pupils are too small, or that on account of their size alone they should be closed. And when we get over the notion that a plan is good because it is cheap, we shall not make so much of the argument of economy. The only or chief determining factor of any plan of organization is efficiency. Judged by that standard, a school of twelve or fifteen pupils, who are under twelve years of age and who live within a mile of the school, may possibly do better service for the children than could be done under some conditions of consolidation.

In such a comparision of conditions, it must be understood that the teachers in both classes of schools are equally good. One weak point in our comparision of ungraded and graded schools has been that we have had in mind a teacher for one class of schools who is dear at six dollars a week, and a teacher for the other class who is cheap at six hundred a year. The test of our argument in favor of transportation will appear when we think of the six-dollar teacher in the central school, or better when we think of the six-hundred-dollar teacher in the small isolated one.

Be it remembered that I am not now arguing in favor of the ungraded over the graded school; much less am I urging the wisdom of keeping the rural schools as they are. I am trying only to show that the principle of consolidation should not be applied to all ungraded schools, and that therefore no general law should be passed by any state enforcing its adoption. The most that I would urge is the passage of a law permitting schools to be closed and the pupils conveyed at public expense

whenever, in the estimation of the township or county board, it is desirable to do so. I would put few restrictions upon the action of this board, believing that an elective body to which is given large powers will act wisely in the interests of the people.

In the law authorizing boards to carry pupils to and from school, the provision may be made that all precautions shall be taken to protect the pupils from harm or injury of any kind. It might be well also to give all persons who have a grievance of any kind the right of appeal to the state board of education. In placing so much power and latitude of action in the hands of township or county boards, the assumption is that there are no small district boards, or, if there are such boards, that they will be abolished. If the state is not yet ready to abolish the district system and must for a time endure its blighting effects, the better course perhaps is for each district or district board to arrange for the transportation of the pupils in case the school is closed, each board to retain its organization.

With few requirements and restrictions beyond what I have named, and with ample means at its command, the local school board will have the opportunity of generously meeting the educational needs and wants of the more sparsely settled sections. It will recognize the limited social and educational opportunities of the children of these sections, and will do all in its power to overcome those limitations by providing the best service and the most ample accommodations possible. Whenever it is seen to be best for the social and educational well-being of the children of a neighborhood to close a school, the safest and most convenient arrangements for the conveyance of the pupils should be made. As far as possible, the plan should be followed of taking the children from their homes to the central school. The vehicle provided for the conveyance of the children should be safe and comfortable, and the driver should be carefully selected. So important is the matter of a proper care and oversight of the children in transit that the entire project of consolidation and conveyance ought to depend upon whether a suitable person may be found for the service. Provision should be made for caring for the pupils during the noon intermission,—a precaution, by the way, which should be taken in any school where the pupils remain at noon.

In some neighborhoods and towns it may seem wise to apply the principle of consolidation only to the older pupils, the younger pupils being left in small ungraded schools. In such cases the possible increase of expense attending the transportation of pupils should not stand in the way of efficiently meeting the needs of the pupils.

What has been said thus far applies especially to the elementary schools. The practice of consolidation may be quite as wisely followed in high schools. Whenever circumstances seem to make it desirable or feasible to close the small high schools of two or more towns, and to pro-

vide for the transportation of pupils to a strong central school, it should be done. This may be done by placing the management of the central school in the hands of one or more representatives of each local board, each board to provide for the transportation of its own pupils.

I have endeavored in this paper to make clear the following points:

1. That the advantages attending the consolidation of rural schools have been shown by experience to be so great that the plan should be extended to all communities where it can be conveniently carried out.

2. That the consolidation of schools should not be uniform or compulsory thruout all sections of a state, but should depend upon local needs and conditions.

3. That in the law providing for the consolidation of rural schools few specifications of organization should be made, beyond the giving of large and responsible duties to local boards.

4. That in any plan of consolidation especial attention should be given to arrangements which will insure the greatest degree of convenience, safety, and freedom from contamination.

LIBRARY DEPARTMENT

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 8, 1903

The Library Department met in the Second Church of Boston at 9 : 30 A. M., and was called to order by the president, Dr. James H. Canfield, librarian of Columbia University, New York city.

The meeting was opened by an address by Dr. W. T. Harris, United States Commissioner of Education, who gave a greeting from the older library interests to the new.

The president, Dr. Canfield, gave a brief opening address.

The first paper of the morning was presented by Alfred Bayliss, state superintendent of public instruction of Illinois, on "Some Co-operative Suggestions."

The second paper was presented by Miss Electra C. Doren, librarian, Public Library, Dayton, O., on "Public-Library Work for Public Schools."

Charles B. Gilbert, New York city, followed with an address on "From the School to the Library."

C. G. Leland, director of school libraries, New York city, read a paper on "Class Libraries."

N. D. C. Hodges, librarian, Public Library, Cincinnati, O., presented a paper on the topic, "Is the Public Library a Promptuary of the Public School?"

General discussion was opened by F. W. Nichols, superintendent of schools, Evanston, Ill., followed by Principal William C. Hess, of New York city.

A committee on resolutions was appointed, with Martin Hensel, Columbus, O., as chairman.

A committee on nominations was appointed, with W. C. Lane, of Harvard University, as chairman.

The session adjourned.

SECOND SESSION.—FRIDAY, JULY 10

The department met in the assembly room of the Boston Public Library at 9 : 30 A. M., and was called to order by the president, Dr. Canfield.

The meeting was opened by a paper, "The Library as an Adjunct to the Secondary School," by O. E. Holland, of the Male High School, Louisville, Ky.

The second paper was presented by Miss Clara B. Mason, principal of the Clifton High School, Omaha, Neb., on "Some Experiments in Nebraska."

At the close of the paper Dr. Canfield called on Mr. Horace G. Wadlin, librarian of the Boston Public Library, who gave the department a very cordial welcome to Boston and to the library. Mr. Wadlin outlined briefly the work that is done in Boston by the public library for the public schools.

The next paper was presented by William H. Brett, librarian of the Public Library, Cleveland, O., on "Library Instruction in the Normal Schools."

The last formal paper of the morning was presented by Miss Mary Eileen Ahern, editor of *Public Libraries*, Chicago, Ill., on "What May Be Accomplished by Definite Instruction in the Normal Schools."

The president was obliged to leave at the close of the paper and invited Mr. Melvil Dewey, state library director of New York, to take the chair.

The theme for general discussion was: "The Relation of the Normal Schools to Library Work," opened by James M. Green, principal of the State Normal School, Trenton, N. J., who was followed by E. Oram Lyte, principal of the State Normal School, Millersville, Pa., and J. N. Wilkinson, president of the State Normal School, Emporia, Kan.

The Committee on Nominations, thru its chairman, W. C. Lane, of Harvard University, reported the names of the following persons, who were elected as officers for the ensuing year:

For *President*—Reuben Post Halleck, superintendent of Boys' High School, Louisville, Ky.
For *Vice-President*—Nathan C. Schaeffer, state superintendent of Public Instruction, Pennsylvania.
For *Secretary*—Miss Mary Eileen Ahern, editor of *Public Libraries*, Chicago, Ill.

The Committee on Resolutions, thru its chairman, Martin Hensel, reported the following:

I

WHEREAS, A library post bill has been introduced in Congress by Hon. Henry Cabot Lodge and Hon. G. P. Lawrence, providing for the mail carriage at rates now granted to magazines and newspapers, of bo ks from libraries supported wholly or in part by taxation or tax exemption; and

WHEREAS, The legislatures of Massachusetts and California, the American Library Association, the Massachusetts State Teachers' Association and Library Club, and many other bodies and prominent persons in all parts of the country, have indorsed said bill; and

WHEREAS, A library post, as above, is believed to be economic and promotive of library and educational co-operation, and social progress;

Resolved, That the Library Department of the National Educational Association hereby commends said bill to the favorable consideration of Congress, the President, and the postmaster-general of the United States.

Resolved, That a committee of three be appointed by this Association to co-operate with the Library Post Committee of Boston, the American Library Association Committee, and others interested in the above postal readjustment.

Resolved, That a copy of these resolutions be sent to the President and the postmaster-general of the United States, and to the Committee on Post-Offices and Post Roads of the next Congress.

II

Resolved, That the thanks of the Library Department be extended to the city of Boston and the various associations, institutions, and individuals who have contributed so generously to the success and pleasure of its meeting.

The first resolution was discussed by W. C. Lane, Melvil Dewey, and others, and both resolutions were unanimously adopted.

A committee, composed of James H. Canfield, of New York, Miss M. E. Ahern, of Illinois, and Reuben Post Halleck, of Kentucky, was appointed to co-operate with other associations interested in the postal readjustment.

The department then adjourned.

MARY EILEEN AHERN, *Secretary*.

PAPERS AND DISCUSSIONS

SOME CO-OPERATIVE SUGGESTIONS

ALFRED BAYLISS, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, SPRINGFIELD, ILL.

In the processes of the schools the book has long appeared to be the sole instrument. To recognize the value of motor activity, rightly directed, as an agency in education is not to undervalue books. Manual training puts the growing youth into primary relations with things. It

supplies a physical basis for spiritual accomplishments. It diminishes the distance between the man who acquires wealth and the man who inherits it. It exhibits the relation of an estate to the labor which created it. Mr. Emerson somewhere alludes to the fable that the gods in the beginning divided man into men, that he might be more useful to himself; just as the hand was divided into fingers, the better to answer the end. So the functions of society are parceled out to groups of men, who perform various services. In the last analysis the services of the section hand who keeps the track in order are as essential to the safety of the traveler as those of the president of the road. A great building is the product of the architect's idea, the builder's skill, and the sweat of the hod-carrier's brow. Into all this manual training gives insight, and thus justifies itself as an elementary educational force. But it does not diminish the value of books. On the other hand, it tends to set them in right relations to education as tools to be used, rather than infallible sources of light and guidance.

We are in a fair way to become a bookish people. While our territory has increased fourfold and our population sixteenfold, libraries have become as a hundred to one, and books in libraries as a thousand to one. Every little red schoolhouse even has *its* library, or suffers the consequence of diminished self-respect and a lower rating in its class. Libraries, once for the use of the learned only, have become common. There is a characteristic architecture, so that the stranger within the gates may as readily find the free library as the free school. The training school for librarians is duly recognized. We are thus committed to the free-library idea. There have even appeared advocates of compulsory free libraries. If quantity were all, if every printed and bound volume were a book, the visible supply is not inadequate. To the dwellers in cities and towns, at least, the common provisions for the self-education obtainable thru the reading and study of books are, or soon will be, fairly commensurate with the provisions for common education in the free schools.

Since the school and the library are both common educational agencies, they should work together. This they are doing to an extent almost unthought of a few years ago. To fix the reading habit, to give it right direction, thru such a knowledge of books as will give the power to discriminate, the will to choose, and mastery to use and enjoy, has become the common problem of teacher and librarian. What task could better combine duty and pleasure? What partnership could be more delightful?

Two or three concrete Illinois cases may serve to illustrate methods of school and library co-operation.

1. A football captain was graduated from the young normal school at Charleston the year before last. Not finding an opportunity to

"accept a position" as principal of a town school, he very sensibly "hired out" to teach in the country. The neighborhood in which he found himself was not tributary to a library, but the children, he soon found, were very hungry for books. Having been an all-around student, indoors as well as out, and a good mixer, he had friends back at the normal school; among the rest, the accomplished professor of music, the entire membership of the orchestra, the glee club, and the librarian. By means of his relations with his musical friends he found it easy to give his people such a concert as many of them had never heard before. It goes without saying that the athletes went along and paid their way in. The net appreciation was a little more than sixty dollars. On the morrow of the concert there was a protracted conference with his friend the librarian, the result of which was an order for a real little *library*, in lieu of the heterogeneous bundle of books which so often follows equally well-intended efforts. Now, this much has been done many hundred times in Illinois within the last ten calendar months. The point to this instance is that when the library went forward to that school there went with it, for good measure, *a complete card catalog*, with all the necessary suggestions for its use. This was merely a manifestation of the genuine librarian's instinct. But it supplemented that energy and initiative of the young athlete most admirably.

2. The public library at Rockford has long been an intelligent ally of the public schools in that city. Traveling cases of books for the grade schools are an established part of its work. It has lately added a feature, less conventional, but more generous, because its benefits are not confined to the city limits. During the week of the county institute the county superintendent is made a sort of preferred creditor on a large scale. The rules are suspended, and he is permitted to use books in and for the institute practically without restriction as to number. The limits of this paper do not permit a detailed account of the working out of this plan, but the better acquaintance with books and how to use them is of great value to the schools of that county. Think of the discontent produced in the mind of a young teacher who had qualified for the examination in United States history, for example, by the study of *one* text-book — even the best published — after but a single week of such reading under judicious guidance! This experiment has led to the purchase of hundreds of books by the teachers for their own use, as well as a distinct improvement of the quality of the school libraries, and much insight into the manner of relating them to the school work.

3. I have lately seen an illustration of co-operation between a public library and the common schools which combines more of the current practical suggestions to that end than can often be found in a single city. The population of Galesburg is well within the limits beyond which Bishop Spalding tells us it would be better if cities did not grow. It is the seat

of two colleges and a free kindergarten. There is a high school with excellent manual training and domestic economy departments, a principal who can lead a chorus, push a jackplane, umpire a ball game, and, if need be, do a stint in the class-room. His last graduating class numbered 106. Several of the schools have lately taken to planting flowers. People come from a distance to see them. These signs all point to a good public library.

The gift of Mr. Carnegie to Galesburg was fifty thousand dollars. The city added a like sum. The building is worth the full hundred thousand, and could not be bought or rebuilt for a cent less. The location is ideal. Across the way is the largest graded school. On the same block is the high school. Less than two blocks away is Knox College. As one enters the library building, the office of the superintendent of schools is the first door to the right and the children's room the first to the left. The assistant librarian in charge is a teacher in the public schools, detailed for this duty by the board of education. She is both a trained teacher and a trained librarian, and works under the eye of the head of the schools and the head of the library; to some extent under the direction, and entirely to the satisfaction, of both. The size of the children's room is about thirty by sixty feet. The cases extend all around the room, and the highest are within easy reach. The tables and chairs are of suitable height and size. The books are accessioned and cataloged and distributed exactly as in the main library, except that the children go to the cases instead of the finding list or catalog to select their books. They carry both books to the librarian who makes the necessary entries on the card, and the children then put the returned book on its proper shelf. In this way they have learned not a little about classification and library methods. The librarian thinks this one advantage over the more usual way of sending books to the schools on the traveling plan. I was told that the children enjoy the sense of proprietorship in their room, and go to it much more freely than they could be induced to go to the library before the division was made. The circulation in the whole library from October 3, 1902, to May 1, 1903, was 49,354 volumes. The number of books taken out from the children's department was 17,985, or almost 36½ per cent. of the whole circulation.

Among the advantages of this plan the following impressed me most:

a) The head librarian is not without interest in the children. She joined forces with the superintendent of schools in providing for the children's room and the segregation of the children's books, and in overcoming the inertia of that element in the building committee which could not quite "see the use." She now finds that there are times when the separate delivery is a great convenience. It gives the older readers more room.

b) The assistant in charge of the children's library, being also a teacher, keeps in touch with the schools both by reason of her special

knowledge and her affiliations. A teacher says: "Have you read *Heidi?*" "No." "Read it, then; and I think you will want a copy or two." As a result a book that proves as attractive as *Water Babies*, or *A Dog of Flanders*, finds its way to the shelves—and "is out all the time." Or a teacher reads to the children a chapter from a book, and sends it back to the library. Or the librarian lets a book lie on her table without note or comment; the children understand. There is little or no direct advertising of "good" books. The children browse among the cases and find what they want. They are allowed to select.

c) The librarian becomes a specialist. She learns children's tastes and tendencies. Like older people, beginning to read, they choose the "evergreen tree of diabolical knowledge" (fiction) first. Then they take to nature books, books of birds and animals. Thompson-Seton and Mr. Long, notwithstanding Mr. Burrough's objections, are very popular. So are Kipling's "Jungle Books." Then the girls want books of travel, and the boys of adventure. Then comes a demand for biography, and later science and history. The librarian had noticed this much, as well as a general tendency to better reading, and not a little concerning individual tastes.

d) The children's library room is a convenient place for preliminary provisions for special days. Two or three large bulletins and the tops of the cases all around the room were covered with bird pictures. One of the professors in Knox College had talked to the children and teachers about the birds of the locality. The pictures could not come down for weeks; the children were not thru with them. A bulletin of all the bird books in both libraries had to be prepared.

e) Special bulletins illustrating the biographies are sent from the library to a school. The librarian knows just how to make them, and material accumulates very rapidly after the children learn that they may help supply it. An Indian week developed unusual interest, and called out unsolicited loans from many people to whom it had never before occured that there was anything for them to get or to give in any department of the public library. It was found that there were baskets, blankets, pottery, arrow-heads, tomahawks, and other stone implements enough in Galesburg partly to restore the Smithsonian Institution in case of emergency. There is an inlet to the universal child mind thru the mind of the papoose.

One of the very best Illinois county superintendents certifies that he believes that, whenever he can place a good library in a school, there will follow a noticeable improvement in the conduct of the children. A teacher in Rockford, soon after the traveling libraries began to go out from the public library to the schools, told the president of the library board that one of the little fellows in her room said to her: "These books beat a curfew law for me; I haven't been down town a night since

they began to come." I commented upon the easy, natural behavior of the Galesburg children. Miss Stone said it was partly acquired in the library, tho she had never said anything about it. She thought books had an influence upon manners. There was a little street Arab in one of the schools who was the despair of the teachers, but since he had begun to read, the teacher took occasion, when the signs were foreboding, to make an errand for him to the library. He always returned happy, and the "spells" seemed to become less frequent.

Whatever the devices or terms of the co-operation between the library and the school, these things go right to the merits of the question. If to the conduct which is three-fourths of life we can add the manners which are the color of life, let the critics make such list of our shortcomings as they can in truth, and we shall still be doing the main thing in education for which both schools and libraries are instituted and books are written.

Co-operation between the librarian and teacher—in the Galesburg spirit—means a very great deal in this direction. We must, I think, in carrying it out, make little use of set courses of reading, or any other form of rigidity. It is not the office of books to think for us. They should inspire thought. We see the material world with our own eyes. We ought to see and feel the spiritual with our own minds. The books should illumine, animate, and exalt, but not enslave us. Mere book-learning is in just disrepute among men of affairs. They have observed that book-worms and bibliomaniacs are not, therefore, educated. Subjection to the book means arrested development. We are dead, or, what is worse, dying, when growth ceases. But books, rightly chosen and rightly used, furnish the knowledge which illuminates, the companionship which cheers, and the ideals which, transmuted into action, cause the continuing growth by which alone a man may reach his full stature.

PUBLIC-LIBRARY WORK FOR PUBLIC SCHOOLS

ELECTRA COLLINS DOREN, LIBRARIAN, PUBLIC LIBRARY, DAYTON, O.

We shall speak of public-library work for public schools as it has been developed since 1878 and as it is now going on in the average city and town of today, where the two have grown side by side for a space of some years. However important the lines of work which have been undertaken, their significance is even greater in respect to what is indicated than in respect to what has been accomplished. These main lines will be reviewed with the intent to show tendency in development, needs, and possibilities. They may be brought under four general heads; namely, extra illustrative, bibliographic, reference, and circulation.

The cloistering of books by public libraries did not really begin to give way until more than one book at a time was allowed to be taken out for a longer period than a fortnight, and this happened first to the public-school teacher. It was done by allowing the privilege of a teacher's card whereby any teacher could draw a number of books, for schoolroom use, the number varying, according to the means and liberality of the library, from five volumes to fifty for a period varying from a month to a school year. It was begun twenty-five years ago in Massachusetts. Where the time limit is long the library carries a number of duplicates. In most libraries this arrangement has developed into the collection of school duplicates, or a school department of the library, operated much as a traveling-library system, sending books to schoolrooms. In five or six instances these have further developed into branch libraries for neighborhoods.

Parallel with the liberalizing of the circulation of books outside of the library has risen the freer use of them within the walls. The needs of the students have called forth the reference librarian, have made necessary rooms for class use in the library, and have brought about the system of special reserves of circulating books where a whole class of students must use them at the same time.

In all of these changes the teacher will recognize the reflection by the library of the methods of instruction in the school, but it must be acknowledged that, for the most part, the library has had to work out its relation to the school from its own view of the needs of the situation.

Bibliographic aids have been specialized from the old classified finding list. Among the most widely useful things done for the schools has been the publication of graded and annotated lists of the school libraries of Pittsburg, Evanston, Brooklyn, Buffalo, and the state of Wisconsin. For current books, the lists of the New York State Library and of the Wisconsin, Iowa, and Minnesota library commissions will be found especially helpful. The American Civic League makes a practice of collecting and lending such aids to libraries. Almost all libraries prepare and post occasional book lists in connection with picture bulletins on school subjects, such as are offered by the celebration of holidays, authors' birthdays, or the life of a hero or artist; in nature work, by the noting of the birds, flowers, or insects of the season; in history, in connection with some notable current event. The publication of such lists, the books of which are necessarily limited to the local library's collection, is usually in the current issue of the library's bulletin. A collection of these is often a great help to the librarian or teacher, but the number, the variety of arrangement, repetition, and lack of selection make them, at best, a burden to handle. The relief for this is a card index catalog, elastic and capable of being kept to date, on school subjects. This analytic cataloging has not only the advantage of being a permanent tabulation of the

library's resources upon subjects of frequent call, but, as often happens in school work where many want to use the same material at the same time, it meets to some extent the need of duplicates. The publication upon cards of the catalog of a selected list of one thousand children's books in the Cleveland and Pittsburg libraries is to be hailed as a special aid, particularly since this is to be kept up for current issues. The minute analysis of the books considered, based upon the actual call from the school side under simplified subject entries, and the giving of contents and annotations, make it the liveliest bibliographic guide to teachers which has yet been offered for the field of children's books. These cards can be procured at a nominal cost.

"Extra illustrative matter" is the happy term invented by Mr. Edwin White Gaillard for designating such adjuncts to the use of books as the picture bulletin, special exhibits, collections of photographs, lantern slides, specimens in natural history, ethnology, geology, etc. It is, in fact, the enlivening of words thru objects, whether real or pictorial. The placing of a selected collection of objects with the books of the library which relate to them is the special feature and the latest application of the museum idea, and a most important development of public-library work for public schools.

Upon this point I cannot do better than to cite you the "Museum Number" of *Public Libraries* (January, 1903). In it is an instructive account of the institution and growth of one of the first public-library museums in the country by Dr. W. J. Conklin, president of the Dayton Library and Museum Board. How to make best use of such collections is brilliantly suggested in Mr. Gaillard's article on his work in the Webster Free Library, New York city. Other valuable suggestive material will be found in the bulletins of the Children's Museum, Brooklyn Institute, and from the reports of the Smithsonian Children's Museum. It is gratifying to note that in most of the new libraries now erected, however modest as to size, provision is made for a museum. The usefulness of such collections is enhanced by the posting of informing labels, accompanied by references to books. Excellent examples of such treatment are to be found in the Smithsonian report above referred to. A subject card catalog of the museum, filed side by side with the public card catalog of books, is also of great value in relating the material to be found in each.

The collection, storage, and filing of lantern slides — an inspiration to the modern recitation — has already been pointed out as another field in which the public library may serve the school. In almost every library of any size, photographs are kept for reference and loan, a notable collection of this kind being that of the Buffalo Public Library.

The work with picture bulletins is already so well known as hardly to need mention, except to say that it is an idea susceptible of many and useful variations, as, for instance, reciprocal exhibits between library and

school. In Dayton, Pittsburg, and one or two other places an experiment of this kind, in which the exhibits of the school work by grades were placed in the library beside parallel material on the same lines from books, proved successful not only in drawing children to see their own and each other's work, but in bringing to the library many parents who had never before visited it.

Of seventy-one of the larger public libraries of the country, but twenty-four do not report special work with public schools. Forty-seven report work in one or more lines as described above. Of this number, thirty-nine have school duplicate collections. Buffalo has 27,000 volumes; Pittsburgh, 15,000 volumes; a number have from 3,000 to 5,000 volumes in these school collections. Fourteen have published lists for school use; thirteen attempt exposition, more or less formal and systematic, of library methods in the schools; and six have museum collections in direct connection with the library.

Probably further development in library work for schools will for some time to come be in the direction of more intensive work in the lines already opened. Granting that the general work of grading and annotating books for schools is disposed of by the lists which have already been published, and these need only to be kept to date, are our bibliographies of school subjects sufficiently explicit and specific for the day-to-day work of the class-room? Are they brought within a fortnight of the latest that is available from the library in magazine articles as well as books? Supposing our analytic cataloging to be thus complete and promptly filed, does the teacher use it? Are the magazine references selected and collated? Is such matter sent to the teachers interested? Do they know that they can depend absolutely upon the library for such collating? Clearly there is work for a new kind of specialist — one who shall know day by day what are the subjects of instruction, even the particular portions of them to be presented in all the grades, to which such supplementary matter will be pertinent. Should the teacher be asked to do this for herself? And, if so, *can* she do it? In the direction of insuring ability for such research, both bibliothecal and pedagogic ability, much is to be hoped from library instruction to normal-school students and a normal-school course for library students, such as is projected by the Cleveland Public Library. Thru the reciprocal training of librarian and teacher must come the really vital relation between library and school.

But we must consider the town to which such things have not yet come. How may we bring about the necessary intimacy between library and schools? For tools — that is, book lists, catalogs, and indexes — cannot take the place of persons in the sense of making relationship. Probably the most practical thing at present will be the interchange of visits between librarians and teachers to look over each other's work. There may be occasional conferences to consider books and school courses

and extra illustrative material. The librarian may be invited to parents' meetings at the schools, and in return can personally invite parents and pupils to the library. When there is such occasional, extra, or substitute work needed at the library, as for instance in vacation libraries in schools, graduates from the normal school having had some previous instruction in library methods can be employed for certain kinds of work. Thus they may get a very practical view of the inner workings of the library and gain an impression of sources to draw from for their future work. In some such way frequent contact will lend light to the work of each of us. For instance, in Dayton we have a course in the "short story" from the head of the English department in the high school, and a brief library course in children's literature for normal-school students and teachers who have indicated an interest in it. All that we need for such things is a desire for them, plenty of books, and a room to meet in.

There are a few things which each public library may do for each school district of the city in the way of bringing children's literature and the possibilities of the children's museum to notice. Copies of the Smithsonian "Children's Museum Report" and of the Brooklyn Institute "Children's Museum," and copies of the N. E. A. library handbook may be distributed by them. The above mentioned annotated and graded lists of school duplicate collections might be made to serve as catalogs to the schools by sending a copy to each with the local library's call number written in. A traveling museum in the sense of "extra illustrative material" is possible, given two things: a person and a place for the work. There should be in a public library, if not space for exhibit, at least a place for storing, sorting, mounting, labeling, and distributing such material. The person should be a kind of teaching curator who can train schoolboys as helpers in his work; one who will collect, select, exclude, exchange; who will supplement for the school course both books and teachers.

The library may be made a uniting social influence between the school and its immediate neighborhood. For at least ten weeks of every year the school buildings are unoccupied. Where they are at a distance from the main library they would, at a slight expense for fitting a room with outside entrance, shelves, etc., provide an easily accessible branch, a neighborhood library where the near-by people could find a pleasant retreat from uninteresting, perhaps crowded and noisy, surroundings. This would be a useful summering of school duplicate collections, and thus might be carried over the children's interest thru the dangerously disintegrating effects of the long vacation. Introduce a magazine reading-room for adults, the weekly story hour for the little ones, and a reading hour for the older children. This neighborhood library could, because small, express in itself a wholesome ideal of the home and, less formal in its workings than the larger main library, do much for socializing the finer

elements of life. Thus in the movement for the larger use of school buildings the public library can be made to play a useful part.

If there is one criticism to be made of the school, it is that there is not a sufficient demand upon the library from that source, nor is it, when it does come, always sufficiently explicit to enable the library to do its best. Some teachers — excellent ones, too — fear the encroachment of outside reading upon the school routine, because it is a diversion from the teaching, dissipates attention, etc. We believe there is good ground for such objection, but if the library's work is more intimately correlated with the school course, and the "looking up" done for the teacher, it should give him time to choose from this selection, and thus to minimize the tendency of pupils "to scatter." The great secret, of course, is to know how to use books as a power; and for this there is no specific but the knowledge and love of books themselves.

But to consider the institutional side only, it is, after all, the freedom with which the library may work in any direction that gives to it its greatest influence. Perhaps in no other institution of a city do more diverse or important streams of community interest meet and mingle, without jostling or limiting one another, than upon the neutral ground common to them all — the public library; and perhaps no better service is rendered to a community than the furnishing of just such a place for the interplay of ideas and the freeing of those agencies which make for the spiritualizing of social interests. That it may be in any degree true of a library must be due to its accessibility in the center of the city and its extension thru schools and branches; to the openness, the freedom within its walls; to the catholicity displayed in book selection, and the certain witness to the many-sidedness of life thereby affirmed. It has been well said by a writer in a recent number of the *Outlook*:

> Material America needs no stimulus; its triumph is already at hand. It is spiritual America that needs constant revelation and definition; and it is to be the high service of the literature of the future, as it has been of the literature of the past, to hold the ideals of the nobler American clear and beautiful above the dust and tumult of a vast and powerful community.

And is it not equally true that by a finer, more intimate union of library and school the literature both of inspiration and of information is to be brought into the relations where it can and must influence the people?

THE PUBLIC LIBRARY AND THE PUBLIC SCHOOL

CHARLES B. GILBERT, NEW YORK, N. Y.

Education is a continuous, vital process. It begins with the first dawn of consciousness, and ends, if ever, only with the cessation of conscious life. The great educative force which, plus that very uncertain

quantity known as heredity, really determines what each person is and shall be, is environment. This, however, is vague, general, a matter of chance, and may be good or evil, so that even the least civilized human beings do not depend entirely upon its effects, but seek to direct educative influences during the period of infancy at least.

To reinforce the vague education of environment, civilization has found it wise very carefully and specifically to direct education in childhood to the end that it may be good and not evil. Usually the directed education has stopped with childhood. It has aimed to send forth into life the young reasonably well equipped to meet its problems, with a comfortable, but foolish, faith that environment will then take care of them. But environment is a dangerously erratic and unreliable foster-parent, and efficiency in life seems to have been determined by the law of the survival of the fittest, rather than by the education of all to their best. So the question has arisen: Cannot some educational means be devised thru which the child's interests in higher things, aroused in school, may be made continuous; may serve as a guiding thread in that educational labyrinth known as environment?

The movement now so strong, and growing in force so rapidly, is one of the most significant and promising educational movements of this educational age. The followers of the comparatively new profession of the librarian are accomplishing no greater good than thru the intelligent and earnest support and direction they are giving to this department of their work; and the teachers, tho somewhat slowly, are awaking to its importance. The librarians rightly regard their work as educational, and as a twin-sister of that of the teacher. It is gradually dawning upon the other twin that she is not an only child.

Indeed, when we recall that of the years of legal infancy less than one-third are school years for the average child, and that the school years consist of little more than one-half of the days, and that the school days are composed of only about one-fifth of the hours, we see how very small a fraction of the time of the average child is devoted to school work; and the rest of the time, if possibly we except the hours of sleep, is all education, so that the little sister, School, appears very little indeed compared with the great stepmother, Environment. And it is possible that the other twin, Library, may, with proper direction, come to be really of more consequence than School. If the library can be so co-ordinated with the school as to direct the reading out of school hours, the influence upon the life of each child will be beyond computation.

Let us take for granted that the library and school must work together, and consider briefly in a very practical way some of the things that may be done.

In the first place, their work must be differentiated. They do not cover the same territory, and to attempt to do so is sheer waste of time.

Libraries should not furnish schoolbooks, nor should schools, if libraries are available, attempt to supply children with general literature. I do not think it wise even for schools and libraries to be under the same legal management, but the two must co-operate, must supplement each other.

Granting, then, that the library should not in any way transgress the recognized and established work of the school, what can it do to supplement that work? That is, what should the children get from the public library?

1. They should get an acquaintance with an abundance of good books. Such books should be easily accessible, carefully selected, but not too minutely selected.

2. The children should get from the public library, thru this abundant supply of accessible books, a love for books; a sufficient love to prompt them to make an effort to get them, and discriminating judgment leading them to choose and read good books.

3. They should get familiarity with the library itself. They should acquire the library habit; it should become easy and natural for them to go to the library for the supplying of their various intellectual wants. They should know where different desirable things are, and what the processes are by which access to them may be obtained. A canvass of the intelligent citizens of any community would show a most surprising ignorance of the uses of a public library; of how to get books; of how to look up matters that are obscure; of how to satisfy intellectual and æsthetic wants when the means are at hand and plentiful. This prevailing ignorance should all be removed thru the co-operation of the public school and the public library, so that to the next generation the use of the public library shall be perfectly simple and natural.

Now, how are these desirable things to be accomplished? There seem to be two prevalent methods advocated by prominent librarians who are interested in this particular subject. One is what I believe may fairly be called the "Buffalo method"—that of taking books from the libraries to the schools and supplying the needs of the children there, making the teachers assistant librarians. This certainly has some advantages: it is easier to direct the reading of children into specific channels and to see that they have the books they need, and it saves the children the trouble of going to the library, which would doubtless keep some of them from getting the books at all. But it has a very grave disadvantage, it seems to me, and that is that the children, while getting the reading habit, are not getting the library habit. They come to look upon the school as not only an institution for giving them instruction in various subjects, but as a source of supply of certain specific wants which really are supplied by another agency. There is danger that many of the children who have become interested in reading the books furnished by the librarians thru the teachers, when they leave school, will find the

embarrassment attendant upon making the acquaintance of the public library great enough to deter them from going often, and that the reading habit already formed will decline; or that the boys and girls will take up the poorer literature that is available in cheap forms, and not go on, as they should, to better things.

Thus the library, while, with the best motives in the world, it is supplying the wants of the children and cultivating taste, is doing too much, and is in reality interfering with the success of its own work later. What we want as the result of the co-operation of the library is not merely the children in the schools reading many books, but boys and girls who have left school still reading many books, and regarding the library as the legitimate successor of the school as a source of intellectual and spiritual supply.

The other plan, which is, so far as I can gather, more general, is that of supplying the schools with library cards which are distributed to the children, the teachers acting as friends and advisers in the selection of books. The furnishing of these cards is supplemented in various ways by bulletins giving the names of books and descriptions of the working of libraries, so that the children are in every way encouraged from the very start to use the library to supply their need for books. This has the advantage that it is cultivating the library habit. The children come to look upon the library as a friend; are made familiar with it and its various departments, and know how to get their wants supplied; and when they leave school they are pretty likely to continue to use the library; and so perhaps the greatest good is done, at least to some.

The plan suffers from this disadvantage that the children will not always get all the books they want or need. The distance to the library from their homes is so great in many cases, necessitating the cost at least of car-fare, that many children will go without books rather than bear this expense; and often the special need for certain books to illustrate and amplify the work of the class will have passed before the children have secured the books. All this is discouraging. Undoubtedly, if the books could be furnished directly in the schoolroom, children would read more. The teacher could say to the children of a class, when studying a certain subject: "You will find further matter on this subject in these books here;" and the children would take them and read them.

There is, in connection with this, a still greater disadvantage: The earnest children, those who are already fond of reading, will, in most cases, overcome the obstacles and will get the books from the library; they will become fond of going to the library and will avail themselves of the larger selection there possible; but the children who most need the stimulus will go without the books rather than persist in the effort until the taste has been formed. The most important work, perhaps, in schools as well as in libraries, is to be done with the children whose homes furnish

no incentives to reading or study, and whose intellectual caliber is not very large. These are the people who will never acquire the reading habit and will never learn to use the library, unless they learn in school; and these are the ones who are discouraged by the distance and the cost.

How shall these difficulties be obviated? I believe by a combination of the two plans. They must be combined in proper and varying proportions. For quite young children, and especially for children who have not yet become much interested in reading, there should be libraries furnished to the schools, as is done in Buffalo—books supplied to every room which the child can take home; books carefully selected by the teacher and the librarian, interesting and stimulating and helpful to the rest of the work in the schools.

But this is a mere beginning. Stopping here is stopping too soon. Gradually, in connection with the use of the various methods of which I have spoken, the children should become accustomed to go to the library. Their wants should not all be met by the books furnished to the school. More and more, as they advance in grade and become interested in reading, they should be sent to get what they want from the library. It is very important, when this is done, that the library people meet them properly and see that their wants are supplied, so that they will come again.

I believe that by a combination of the two methods—furnishing books when necessary and gradually persuading children to go to the library for their books—the two objects can be accomplished. Of course, it is taken for granted that every school should contain a large supply of what we commonly called "reference" books; but there are many of these that are expensive and cannot be furnished to each school, so that every library should have rooms especially devoted to children, where teachers can take classes for the study of particular subjects from rare and expensive books, pictures, and atlases, or where the children can go by themselves and find able and willing assistants to help them in the use of these more elaborate appliances.

The children's room of every library is coming to be regarded as the most important room, and rightly. It should be an attractive place, where the children live a comparatively free life among books, where they "actually smell leather." The assistants should not be too officious, but should be helpful. Children should be left to mouse for themselves, so long as they do no harm, or unless they are evidently wasting time to such an extent as to lose interest or really feel the need of help. The assistants should merely watch for the psychological moment and give the needed help.

No definite instructions can be given regarding this point; it is a matter of sense and sensitiveness. Children who have no definite wish need sometimes to be guided to something by skillful questioning; and

children who know what they want should have it, unless it is bad, and then sometimes a skillful librarian can turn the child's fancy, which is a mere whim, into a better channel.

The essential things to bear in mind are that children who go to the library should be made welcome; should learn to like the place; should find that some definite wants are supplied there, and yet should realize that it is a place of business. They should never leave feeling disappointed, but should often go away with a better choice and a better book than last time.

The relation of teachers to librarians is a very important matter. It is needless to say that they should be on good terms, and more—they should be mutually complementary. It is not necessary for teachers to become trained librarians, nor for librarians to take courses in a normal school; but each should know something of the work of the other and should feel that reference may be made to the other with entire confidence. Teachers should attempt to create an appetite for books furnished only by the library, and librarians should seek to gratify the appetite created by the teachers. Librarians should endeavor to ascertain what the schools need, and the teachers should be anxious to tell them. If they work together in this way, the amount of technical work to be done by each can be greatly reduced, and yet the effect secured. Children will be supplied with the books that they need to supplement their school work, and also to fill in the spare time devoted to reading. Thus the schools will be helped in their work of helping children, and at the same time the children will be gradually acquiring the habit of going to the library for what they want, so that by the end of the grammar grades they will have become library habitués, and the necessity for taking books to school in considerable quantities for distribution shall have entirely ceased; and thus the teacher will help the librarians in their work of helping the children.

THE MISSION OF THE CLASS LIBRARY

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We hear much nowadays from our own prophets, and noticeably since the so-called American invasion of Europe much has been written on the other side, concerning the human wear and tear in the States. All of which, if accepted, would go to prove beyond a doubt that the vital force of the nation is rapidly being consumed.

We may scoff at birds of ill omen and at the anxiety of our cousins who resent being shot thru underground tubes of American steel or whirled over the surface on American trolleys. We may well be proud of our captains of industry, and enthusiastic and hopeful over the marvelous

industrial progress and development which these latter years have brought. But there must come to the most optimistic at times certain doubts and misgivings.

Speed, energy, decision are not the only qualities worthy of emulation, "In quietness and confidence shall be your strength," said a wise old writer; and surely the world owes much to its contemplative races and those who, in the words of a great teacher of the last century, "feed the mind in a wise passiveness."

That we have not added materially to the world's great literature is a pertinent fact often brought to our notice.

Our schools may crown every hill, and there may be few places left which do not boast a public library; but these libraries are full of books which never would have been written if material prosperity had so engrossed the world as it does today. At all costs, then, we must endeavor to relegate the material to its proper place. For this very purpose, to counterbalance these modern tendencies, all the reserve forces of education have taken the field, inspired by the same spirit of combination and co-operation which dominates the business world. By concentration of effort in this direction we have reason to expect great results.

Interest centers, however, not in the forlorn hope, but in the main attack conducted by the grade teacher in the common school, who faces her class of boys and girls for six hours every day. It is a well-known fact that the great majority of our school children leave the public school before they reach the higher classes; so the necessity of sowing early, if we would reap at all, is obvious. Says President Hyde:

> It is not of so much consequence what a boy knows when he leaves school, as what he loves. The greater part of what he knows he will speedily forget; what he loves he will feed on. Therefore a love of good literature . . . . is from every point of view the most valuable equipment with which the school can send its boys and girls into the world.

The great hopes, then, bound up in this movement to bring back that class of solid, cultured citizens who read thoughtfully and intelligently, who browse in the green fields of literature, who are the bone and sinew of the community, will be realized only when less time is spent in teaching the child how to find the gain percentage or the greatest common divisor, and more time in teaching him *what to read* after he has been taught how to read; when normal and training schools send out more graduates who are perhaps not so well equipped with methods and theories of teaching, but who have an intimate personal acquaintance with the world's best and greatest books; when courses of study shall not be so overcrowded as practically to prohibit the reading of books other than those required; and when there shall come with the few years of school training the inspiration to continue it, and a practical knowledge of how this may best be accomplished.

For this, the most essential phase of the work, the teaching corps has been strongly reinforced.

The public library may be comparatively a new factor in education, but it is by no means a secondary one. It shows no disposition to be placed in reserve, but strives for a position at the front, out on the firing line with the public school. The teacher touches elbows with the librarian; to the former's knowledge of the child, the latter brings his knowledge of the book, the book itself, and the association with that institution which is commonly known as the "people's university."

With branches and children's rooms the library draws many to its larger collections, but it can reach the greatest number of citizens only under the most favorable conditions in the school thru the medium of the class library. The plan of placing a small selection of books in each teacher's class-room for her pupils to draw and take home or use in school is not new. This system has been tried with success by many schools without library assistance or supervision. Its value is established in either event, but only thru systematic co-operation will far-reaching results be attained.

It is as reasonable to expect the teacher to bring the hornbook or the New England primer into active service as to expect her to make use of the old-type school library, which is so often only an accumulation of books. Even a well-organized central collection will not suffice at this period of the child's development. Bring the books to the children, and later on they will go to the books.

Consider for a moment an ideal state of affairs, but by no means an impossible one: We have a new school building, complete in every way, equipped thruout with all that is modern and approved, with one exception: the newly varnished library shelves contain no books. The principal and public librarian, however, are in accord. Neither seeks to magnify the importance of his work above that of his brother. It seems to them not so vital whether the library furnish the books or whether the school funds are drawn upon. The important point is to provide the pupils of this school with helpful and inspiring books at the most hopeful, impressionable time of their lives. Under such circumstances a plan is soon agreed upon, and the difficulties are met as follows:

Let the requirements be, first, books for twelve class-rooms — twelve libraries of about fifty books, at an average cost of thirty dollars per library; secondly, a small, carefully selected reference library, estimated at one hundred dollars. The librarian may draw on his limited resources for six class libraries for the higher grades, and the vacant places are filled in by school funds raised for this purpose. These required books are selected from a graded list of the best books for the different ages, prepared by the librarian, but in which the teacher has had a voice. They are purchased and cataloged for the school by the library. When

by the opening of school in the fall the twelve class libraries are ready to be installed, the children will of course be in no uncertain mood, but the teachers may be about equally divided between hope and fear. A staff meeting should be called and the plan gone over thoroly. The principal and the librarian may here be so eloquent over the possibilities that the professional pride will be touched, the doubting ones won over, and the hopeful ones filled with enthusiasm.

Each teacher is made librarian for her own room and given a free hand in regard to all details, with the exception of keeping a record of the use of the books. Such statistics should be collected and tabulated by an assistant from the library once a month. The new books and the new plan will not fail to produce an extraordinary interest at first, but this will become normal after the novelty has worn off. An assistant librarian, elected by the class or appointed by the teacher, will relieve her of much of the clerical part of the work. The boys of the manual-training classes in many instances will make cases for the library, as the matter of accommodating the books is often a serious one. In each class a special pride is taken in the library. Rules for conducting it are made and enforced. A community spirit is aroused. I have in mind one class which publishes a school paper to maintain and add to its class library and to purchase pictures for the room.

The teacher brings the books to play in her daily work, not only at the time of the story hour, but many a prosy recitation is brightened with a passage or poem of interest selected from the bookcase at her side. She takes advantage of the many opportunities to draw out the dull and listless boy with bright and attractive books, to find profitable occupation for the idle, to put the right book in the child's hand at the right moment. And for this most essential phase of school work she has not only her limited selection of fifty books, but back of it all the large collections of the library and the librarian's helping hand.

The school is by no means the sole beneficiary. The books drawn from the class libraries and taken home by the children arouse thruout the whole family an interest in reading and in libraries. Adults are reached in this way who could not be influenced in any other.

After all, it is the personal work which counts, and the librarian, in connection with his duties of visiting the teachers and changing and replenishing the libraries, has many opportunities.

There should be short talks on books of interest, on ways to use the public library, on reference-books and how to use them. Every graduating class which goes out from the school should be reminded of what the libraries of the country are doing to help every ambitious boy and girl to build on the foundation laid by the teacher in the grammar school. For, as has been said many times, the existence of the tax-supported institution, such as the school and the library, is justified only on the the ground that it makes better, happier, and more useful citizens.

IS THE PUBLIC LIBRARY A PROMPTUARY FOR THE PUBLIC SCHOOLS?

N. D. C. HODGES, LIBRARIAN, PUBLIC LIBRARY, CINCINNATI, O.

When asked to take part in the proceedings of this department, I felt much as must an aged bird when asked to join in the flight of migration of its kind. Loath to leave the comfort of his winter home, and remembering the ceaseless labor, the incessant whirring of wings, the shrill calls of the leaders, as now and then they think they see some guiding landmark; followed, to be sure, by a period of rejoicing in a new habitat; and then the return over the same path, only to be back again at the starting-point — who would blame the bird, after years of such experience, for letting his mates fly their cycle, while he lives a quiet life, lengthening his siestas, if need be, under the shade of luxuriant, tropical foliage?

Had I been guided by the dictates of reason, I should not be where I am; but, yielding to some higher law which I only half comprehend, I rose with the others. Content to follow, I hearkened for the occasional note of guidance or of warning. There were those who told of the books good for children and the books bad for children, of the ways in which children can be induced to read the good books which the "Adam" in them abhors, and to eschew the bad books which the same "Adam" craves. Then the teachers were taken to task by some for not working overtime to bring the children and the good books together, and praised by others who have found teachers more than ready to co-operate in library work. There were stray notes singing of bulletins, tho these were evanescent. And all the while there was the whirr and whirr of great numbers. I was not equal to the pace, grew weary, and dropped.

And what I lighted on was a dictionary of synonyms. I had regarded this book as a help invented by man for his own good, but it led me into such difficulties that for a time I was inclined to regard this special volume as an invention of the devil. The scholarly professors of our colleges, living just a little in the world of dollars and cents, but mostly in some other of which only glimpses are gained by less fortunate mortals, are shocked when they hear their haunts, their beloved halls, spoken of as "the plant." That word they would have applied only to a factory, but protest against its application to their college buildings, the more when these have ceased to be mere brick and motar, having with time absorbed something of the humanities, not from books, but from contact for generations with impulsive youth guided and molded by sympathetic teachers and itself. Who would call a library a storehouse? No one in this gathering surely. And yet it was of a library as a storehouse that I had mind to write.

It was in this way that I picked out of the dictionary of synonyms the term "promptuary," saying to myself: Ah! that has the right smack. It

all went very well until I had time to consider what I had swallowed. The word is properly pigeon-holed in our dictionaries, but it is labeled as coming from the Latin, and at first I could not find that Latin would acknowledge its offspring. Storehouses the Romans had, but they persisted in calling them *horrea*, and this for many centuries. In the last days of the empire, if it had any last days, the *horrea* may have become *promptuaria*, but of this I am not so certain. Anyway, the longer word is late Latin; and I am sorry we have it in English instead of its cousin of more ancient lineage.

Horrea, or *promptuaria*, the Romans had them, and had them to their injury, perhaps to their final downfall. They came into existence somewhat in this way, tho you may not have to travel far to find a historian who will give the story a different turn. Cornelia, daughter of Scipio Africanus the Elder, was mother of two boys, and, being ambitious for her children, and for herself, was constantly urging them to do something that she might be known as the mother of the Gracchi rather than as the daughter of Africanus.

This was in the second century before the birth of Christ. Rome had by far not reached the summit of her glory, but her conquests were already considerable, and with the changed economic conditions there were troubles in the land. The Roman freemen, frequently called away to the wars, found their farms slipping from their hands and falling into the possession of fewer and fewer wealthy landowners, who were working the fields with slave labor. The country was no longer attractive or possible as a place of abode for the common people, and they drifted to Rome, where they walked the streets with their hands in their empty pockets and with little more to do than attend to their sovereign duties at the meetings of the *comitia* in the market-place.

Under such conditions, if anything is done, it is as likely as not to be the wrong thing. And there were the Gracchi urged on by their mother to do something. If you read the pages of the historians, you will find a number of opinions about the Gracchi, of which each may choose that which best suits his temperament. For some the Gracchi were well-meaning reformers, for others they were demagogs; and then there are those who hold them as erratic individuals, mere dreamers, with cleverness enough to keep the confidence of the people for a time and with the audacity to do unlawful acts.

The Gracchi found their supporters in the unthinking mob, and they reasoned that this mob furnished the rank and file of the legions which had pushed the boundaries of the republic back and back toward the edges of the earth. Such labor should receive its wage, and this wage should come from the spoils and tributes of the conquered provinces. The Gracchi did several things to win the support of the freeman, but Caius Gracchus is responsible for beginning the distribution of corn at prices

fixed below those of the market, or even free, without charge. A business on such a basis grows, and there is no known limit to the sizes of the storehouses required for the largesses. To be sure, these men had received all the pay promised them for their services, but it was in their power to vote themselves more, and there was the leader to guide them to a course that proved destructive to the last remnant of their self-respect.

From the beginning of the world, or soon after, it has been only by hard labor that corn has been produced in quantity sufficient to fill the many mouths open for it. So conspicuous is this necessity of labor in human economy that it is a question whether the labor is not really an end in itself. We have no special concern at this hour with corn; we are here to talk books. We all think books, on the whole, excellent, and we give not a little thought to ways and means for administering to the public a larger and ever larger potion of books. With the intractable adult we do not concern ourselves so much. It is more the children, whom we have in our power, to whom we give our attention.

Books cost money, as does corn, and most parents, when they have bought the necessary corn, have little money left for buying books. It is only natural for them to retort, when urged to buy for their children heavier doses of books, that this they cannot do and that the books must be paid for by somebody else. Here is a danger. The gifts of corn to the people of Rome accelerated their deterioration into an abject and contemptible mob, bent only on procuring bread and amusements without the trouble of working. That the supplying of free books for the current consumption, as it were, of the people will have the same effect is too trite a statement to allow of any amplification. We all know it to be true, but some are tempted to use public money in this way; it is all so very easy. If it is for the welfare of the state that the rising generation shall be given a taste for the best in literature, granting that the forcing process is feasible, those responsible for the children should be obliged to supply the needed books. Until this necessity shall be made clear to the lawmakers, I would prefer the self-supporting families growing up in ignorance of the letters, which, after all is said, are only for the few who rise into the intellectual aristocracy.

The intellectual aristocracy, as I would constitute it, might not receive recognition at the hands of the four hundred. The mark of each member is, of course, brains, often enough oddly shaped brains. Some of the members are not great readers; still as a class they use books, and use them to the advantage of the community. The books they use are so numerous in these days that only here and there one with money in his pocket—of which most of the aristocracy I am considering have little or none—can buy those bearing on his special department of knowledge. The munificence of the wealthy has helped to furnish books, and buildings to range them in; and by the middle of the last century it had been made clear to

the lawmakers of England and America that the expenditure of public moneys for working libraries was justifiable. These working libraries, our public libraries, contain the books in which are recorded the literature of power and the literature of knowledge which the community should have at its elbow, as it were. It is this availability of literature which for fifty years and a little more has been recognized as a real necessity. The community cannot have in any other way than by purchase at public expense the great mass of literature of knowledge — a literature which is increasing so fast with the advances of the sciences. And that there may be something really interesting on the shelves, as our scientific men and women threatened with mental purblindness put it, there should be a liberal admixture of the literatures *par excellence*, or in time our race may be reduced to mere turners of stop-cocks and pressers of buttons.

It costs money, and considerable money, to place at the command of the community libraries with such multifarious resources, and any expenditure of library money which interferes with the building up of such libraries is a blow to the best library interests of the public. In some towns the library funds have been diverted for the purchase of schoolbooks. In one town of a hundred thousand people a thousand copies of a single book were bought. The only purpose of the public library in that town was as a storehouse, of which the librarian became the keeper. The dole of books from the storehouse corresponded to the corn dole to the Romans. Any dole weakens the giver by exhausting his resources, while it injures the recipient by undermining his vigor. I would have libraries which any intelligent reader would recognize as libraries, and not imagine them storehouses from their resemblance to the familiar cuts of publishers' warerooms.

But all this has been said before. There has not been so much damage from the introduction of book doles; still there has been some. I utter my cry simply that I may be counted with my mates. I utter it only as one note in the chorus, and I am content if the impulses of the *Zeitgeist* carry us sometimes here, sometimes there, or, as has happened to man as well as bird, back to some early starting-point.

GENERAL DISCUSSION

William C. Hess, principal of the East Side English High School, New York city, referred to the papers of the morning as a refreshing treat for any live school man. He emphasized the necessity of school people taking a larger interest in these library matters which were growing so rapidly, and getting a correct view of the progress of the work, so that they might not come in with second-hand suggestions on work that was already progressing beyond their knowledge. He called attention to the fact that the progressive work of the West, or of the middle West, showed to the disadvantage of the East as judged by the papers of the morning. If the co-operation between the libraries and schools had grown to the point shown in the discussion of the papers presented, one

must not wonder at the fact that the literary center had passed to Indiana. He wished to say, however, that all advancement had not been made within the past twenty-five years. Fifty years ago the state of New York had these school libraries, and he at that time was connected with a school having a library of ten thousand volumes. The reproach of Sydney Smith that no one read an American book was rendered nil by the works of Cooper and his class, before New England had produced Longfellow and Whittier and Bryant.

The speaker cautioned the school people against buying books in series. Library people were apt to be better acquainted with the books themselves than the busy teachers, and the conferences should be mutual that one might learn of the books and the other of the needs of the child. He mentioned several of the books in the Abbott series as not being suitable for young people. Books for children are to be treated warily. The life of the story is often lost in pruning it down to fit the childish intellect. While it is true that the majority will not read the classics in the original, or in great English, they will appreciate and understand such translators as Lamb and Sydney Lanier, and will afterward be attracted to the great wellsprings themselves. Teachers should be able to bring in lists of books treating of the topics under discussion in the schoolroom from a different point of view and in a different style from that presented in the text-books.

W. T. HARRIS, United States Commissioner of Education.—No other department of the National Educational Association, it seems to me, has a more important work to perform than the Library Department, in bringing about an intelligent and effective co-operation between the public schools and public libraries.

It is the province of the schools to teach its pupils how to read. The work of the schools will give only a slight knowledge of books, unless it is supplemented largely by the public library. The schools teach the field of knowledge as divided into groups. It is from the books which the students are induced to read that the full scope of the field of knowledge may be learned.

I would make a plea for more attention to literary art. I cannot agree with Spencer, who said that literary art belonged to leisure hours. The principal part of literary art is the work of the poets. Homer, Chaucer, Shakespeare, and Milton each contributed largely to the development of the human race and its government.

THE LIBRARY AS AN ADJUNCT TO THE SECONDARY SCHOOL

E. O. HOLLAND, HEAD OF ENGLISH DEPARTMENT, BOYS' HIGH SCHOOL, LOUISVILLE, KY.

Our great captains of industry have found it both expedient and profitable to combine forces in order to exercise economy in the conduct of business. The results have been increased trade, higher wages, and larger profits. Both employer and employee have been benefited by this co-operation, and today we find as a consequence that the business men of America have wrested the commercial supremacy from Europe. For several years we educators, both librarians and teachers, have realized how essential it is to join our forces. We know that both of us are important educational factors of a community, that one is not the superior of the other, and that whatever either one does to improve society is certain to be

of benefit to both. There is no jealousy to overcome. The only questions we are asking are: How can we assist each other? What can the libraries do to help the schools, and what can the schools do in their turn to aid the libraries in the splendid work they are doing? If someone will point the way, the desired results will quickly follow.

All accept the statement that the schools should dominate and direct the educational life of the schoolboy and the schoolgirl, while the library should direct and continue the mental growth of the mature person. But the success of the library in its more advanced work depends largely, if not entirely, upon the success of the schools. Consequently, my subject, "The Library as an Adjunct to the Secondary School," is as essential to the welfare of the library as it is to the progress of the schools themselves. If the library is to become in fact as well as in name the "peoples' university," it must assist the teachers in awakening in the pupils a desire for an educational life that will not be content with the meager results of the class-room, a demand for a mental horizon broader and brighter than that given by any school system of today, and a yearning for true and abiding culture, which cannot be realized except thru years of right living. President Eliot has truly said: "It is always thru the children that the best work is to be done for the uplifting of a community." If the high-school pupils do not learn to use the public library, the highest growth and culture of a community are impossible. Yet I do not mean to infer that this work should be postponed until the high-school period, for it should not. We know that considerably more than one-half the school children leave the schools before the age of twelve. As a consequence, if anything is to be done for these children it must be done before the end of their school days. Happily, the experience of many of our most prominent educators proves that from the third grade on a love for the best literature can be developed in the children. This experience is, indeed, comforting, for if these children, who must go out into the world and begin the struggle so early, can really be led to have a love for the best literature, we may be sure that the work of the library and the school has not been in vain.

But to the subject, "The Library as an Adjunct to the Secondary School." Today we find that our high-school graduates are poorly equipped in a number of particulars. I believe the public library can assist the high school in a great measure to overcome these deficiencies, but it is incumbent upon the high school to show the former how it can render this assistance.

To begin with, our graduates, as a rule, are unable to think accurately and rapidly.

This inability is due, first, to the fear or unwillingness of the high-school students to exercise their own powers of thought and expression; and, secondly, to the blind worship by both teacher and pupil of the

class-room text. Under this kind of teaching blind memory usurps the place of an active brain ready to react upon all educational stimuli. The modern library has helped to expose this fallacy, and the text-book is becoming a mere guide-post on the roadway of knowledge. A wiser use of books is to be found today in our public library under the laboratory method. But the first step in the newer educational process must come from the teacher; for elementary bibliographic training should be given in the high school proper. This means that the teacher must know what the library contains, so he may be able to explain how to use the student's tools — the library catalog, and such reference-books as *Poole's Index*, *Cumulative Index*, *References for Literary Workers*, *Dictionary of Names*, *Briefs for Debate*, and so forth. The best plan of all would be to have these compilations in the school building, so that references could be obtained at any time under the direction of the teacher. No additional study, however, need be added to the high-school curriculum, for a little time given to the work by the various instructors will produce excellent results. I do not believe there is a single subject in the secondary school that cannot be made more interesting and more valuable thru the assistance of the public library. Pupils taught to use the library are certain to have all their mental activities quickened; they are able to think more accurately and more rapidly. But we must look to the future for the best results. If the students catch the true spirit of inquiry and acquire the habit of using the library, they will continue their education for many years after their school days cease. For this alone co-operation between the school and the library is important.

Secondly, the great majority of our high-school students do not take an active, intelligent interest in the affairs of city and country.

This is likely due to the fact that little of the school work has any definite bearing upon the present. As a result many of our pupils upon the completion of their high-school course step into a new world, not the enchanted land where fairies tread, but into the midst of scenes of activity where the facts gleaned from text-books seem to have no bearing. They are temporarily lost. Their education appears to be a handicap. Yet this, of course, is not true, for as soon as high-school boys can find themselves, they forge ahead in their work. But is it necessary to drop our students into such a maelstrom? They should get a knowledge of the practical world thru the co-operation of school and library, both of which must be brought into actual touch with the everyday life of the community.

At first the high-school student is not expected to get much real information from his library work; his task at the beginning is to become skilled in the use of his tools, the many reference-books. Both librarians and teachers are agreed that at this time it is often dangerous to burden a boy or a girl with too much information. Yet I am certain that you can

get the students so interested in a subject that they will want all the information you can give them. Arouse the school over some practical question of today and notice the result. This year we arranged a debate with a neighboring school upon the question: "*Resolved*, That municipalities should own and operate their lighting, water, and street-railway systems." At once a large number of the students began to study the question, for all wanted to make the debating team. Each student soon realized that he must study his opponent's side as carefully as he did his own, and thus be able to anticipate many arguments offered by the opposition and to prepare a ready and, if possible, a final answer for them. No need then to insist that the students work, for they spent all of their leisure time in the public library getting arguments, and consulting authorities, and statistics. I am sure these students received more benefit from this work than they did from any single subject in the high-school curriculum during the past year. After more of such work, these students will go out into the world to take an active and intelligent interest in practical affairs. In a measure they have learned to stand upon their feet and play the game of life. Mobs are not composed of men who see different sides of a question, and false arguments fail to convince people who have learned to make their own deductions.

Thirdly, a large number of our secondary-school students fail to appreciate what is best in literature.

And we must not forget in our discussion that no one can impart that which he does not have. No teacher can bring a student to a real love for the best literature, unless the teacher himself has that love. I believe that in the past we have too often been content with knowing that a teacher could impart facts in history, literature, and the languages, while we have been indifferent to this other important qualification, which the teacher often lacked. What if the instructor does impart certain interesting and valuable facts? The truth is that the secondary school can do little more than give the student a smattering of knowledge, most of which he straightway forgets. But often the teacher, by becoming a friend and adviser of the pupil, can lead him to an appreciation of the best literature, which will have so much to do with his future growth and culture. This is especially worthy of our consideration when we realize that teachers thru definite experiments have discovered that boys and girls are most influenced by the books they read. In this work the librarian can render the teacher a great deal of assistance. He can send collections of books to the class-room; he can advise with the teacher when certain classics should be read; he can become acquainted with the students and encourage them, for he should remember that very soon he must assume entire control of their reading. Besides, both librarian and teacher can frequently prevent the high-school students from frittering away their time during the summer vacation, which of course should be a period of

relaxation, but certainly not of dissipation of energy and corruption of taste. Much good can be done in this work, if there is practical co-operation between teacher and librarian. Then, in addition, the librarian can aid the teacher in encouraging students to get a select library of their own. This will do a great deal to develop a true literary appreciation.

Fourthly, most of our high-school students are deficient in moral training as a result of insufficient study of the great moral qualities in literature.

But I am not advocating a course of ethics for the secondary school. I do believe, however, that the librarian can assist the teacher in getting the high-school boys and girls so well acquainted with the great characters in literature, history, and biography that they will be strongly influenced by them. And since psychologists assert that most of us must be imitators, we should accept the statement, remembering, however, that we can determine to a certain extent what characters we shall imitate. Hero-worship is natural to the high-school boy and girl, and we must see to it that these heroes are of the right kind. Imitation of bad characters in books has induced boys to hurry west to exterminate the poor Indian or to become a modern Jesse James; or, what is still worse in many respects, it has caused thousands of children to become incompetent citizens, lacking in principle, and devoid of honor. Imitation of good characters has led people to sacrifice their lives for their country, as did William the Silent; or to follow in the wake of an army, to repair the havoc wrought by war, as Miss Clara Barton and her noble sisters are doing today; or, better still in many ways, it has done much to develop thousands of vigorous, cultured men and sincere, refined women, who seek opportunities for public service. Imitation, generally unconscious, is very potent, and who can say how much good has been wrought by such characters as Jean Valjean or even David Harum and Peter Stirling? If we can get our students to admire and love the strong and true characters of a book, and to despise and even loathe the bad ones, we may rest assured that the future will justify our labor.

To sum up, then, both teacher and librarian should remember that, if they are to be of the greatest assistance to the boys and the girls of the secondary school, they must teach the students to do as definite laboratory work in the library as in the study of physics, botany, and chemistry; to spurn the poverty of the class-room text, and to demand a full share of the riches of the world's inexhaustible mine, the public library; they should make clear to the students that school life from its very beginning is a preparation for the world of practical affairs, and that graduates of the high school, as a result of their culture and education, should be able to improve the social and political conditions of the city and country. Both teacher and librarian should lead the students to a true appreciation of the world's best literature, combining with the practical mind, in keeping

with our materialistic world of today, an imagination capable of comprehending the beautiful imagery of our poets, and thereby insuring real growth and culture. And these two educators, realizing that moral training depends so much upon the imitation by the child of the lives of others, must see to it that the boys and the girls come to admire and love a number of the great characters of literature, history, and biography.

In concluding, let us, both teachers and librarians, ask ourselves this question: Do we understand and sympathize with the social conditions of the larger class of our population — the class that must be changed, if there is to be any perceptible improvement in the life of a community? Knowledge of books, fine education, great libraries, and splendid school buildings can never take the place of a heart beating in true sympathy with the life of the people. Material wealth and ingenious devices are worth while, but the moving force today, as it has been since the beginning of time, is the active, energetic men and women, who have true sympathy for childhood, real insight into human nature, and who are devoting their lives to the betterment of the world.

SOME LIBRARY EXPERIMENTS IN NEBRASKA

CLARA B. MASON, PRINCIPAL OF CLIFTON HILL SCHOOL, OMAHA, NEB.

The American people are rapidly solving the problems which concern the great mass of citizens. In the national standard of intelligence and culture there is unbounded interest, in the two most potent factors for the elevation of intellectual life, the public schools and the public libraries, interest them most deeply.

The lad who reads deeds of manliness, of bravery, and of noble daring feels the spirit of emulation grow within him, and the seed is planted which will bring forth fruit of heroic endeavor and exalted living. The life of the girl who reads books filled with kindly thoughts, generous sympathy, truth, and tenderness will be inspired and shaped by the pages she reads.

Training the child to read and love good literature is, then, the most important work to be done for him, as it is the one thing that continues to contribute to his education so long as he lives. For years we have taught him to read, but we have often lost sight of the fact that it is the use made of that ability which contributes to his weal or woe. Said Charles Dudley Warner: "A person who has learned how to read, but not what to read, is placed in a position of great danger." Says President Eliot: "The schooling which does not result in implanting a permanent taste for good reading has failed in the main end of democratic education." It is a work that begins with the mother at the story hour, and should never be lost

sight of by parents, teachers, and librarians until the taste for desirable reading has been formed and the student is in possession of the ability and means to secure it. In accordance with this idea, public libraries have been established, maintained, and justified on the same grounds as the public schools.

Twenty-seven years ago the "modern library movement" was born. It was then that the *Library Journal* came into existence, the American Library Association was founded, the government library reports were issued, and the first suggestion of the good to be derived from a possible co-operation between schools and libraries was made by Charles Francis Adams, Jr. Since then the tunneling of a passage way from the school to the library has gone steadily on. Not for a moment have the workmen put down their tools; not once have the two great factors in our educational system clashed. The librarian and the teacher have joined their knowledge of the book and the child, and the good results cannot be estimated, despite the theory advanced by some that the modern school and library methods will be directly responsible for the rearing of a generation of nervously overwrought intellectual dyspeptics.

Evidence of the increasing force of the public-library movement in the West is visible on all sides. Convinced that the important function of the library is to furnish means of self-culture without prescribing a course, meetings for the harmonizing of methods and the stimulation of those engaged in the work to united action are being held with great frequency.

As a matter of fact, there is more activity in these matters in the central West than in any other part of the country. Whether popular intelligence is higher than elsewhere or not, it is attested by the statistics that the western people stand higher in the percentage column of literacy than those of any other section of our country, Nebraska heading the list. Libraries take root and flourish only among people devoted to intellectual improvement, and interest in the library movement is one of the best gauges of popular culture and general educational progress.

It is, then, fitting and proper that the National Educational Association should wish to hear from that state in the Union which shows the smallest percentage of illiteracy; and I come to you today with the assurance that the teachers and librarians of Nebraska are fully alive to the possibilities of the library as an agency co-operating with the public schools; and now that uniform methods of classification and systems of card cataloging on a scientific basis have been adopted, the strides in the direction of use are rapid and almost bewildering. The teachers appreciate all the library offers them and ask for more. They are zealous to create the atmosphere from which the child breathes in love for good books, and are constantly pondering the twofold question, as to how the

library may be rendered the most serviceable to the schools, and how to order school work so as to give pupils command of the contents of good books in their subsequent careers.

It is not without interest and profit to review the growth of library work in Nebraska. While there have been a few libraries in the state for twenty years, the work is yet in its infancy, and those engaged in fostering the healthy growth of this infant are keenly awake to any signs of that larger development and wider usefulness which are certainly to be part of the library work in the state.

The material progress during one year has never been remarkable. There has been a steady and active interest in those communities where libraries are established, and an awakening interest yearly in many places which have not heretofore supported them. The six largest libraries are now the Omaha Public Library, the libraries of the University of Nebraska, the Nebraska State Normal School, the Peru Normal, the Omaha Creighton College, and the Lincoln city Library.

From a scanty collection of two thousand volumes in a dingy little room, the Omaha library has grown in twenty years into one of the finest collections in the West. The nucleus, made up of the off-scourings of private shelves, has come to such dignity that it can barely be contained in the commodious building dedicated to the purpose by the book-loving public, and made possible by the generous bequest of Byron Reed who gave to the city all the rare books, newspapers, periodicals, manuscripts, autographs, coins, and medals of his collection, together with the ground upon which the building stands. It is a great educational institution—at once a school, college, and university, which keeps open doors to every man, woman, and child who chooses to cross its threshold. It is a potent influence in the life of the town, an ornament, and a benefaction.

A spirit of co-operation and sympathy has ever existed between the library officials and the school authorities. Each teacher may have the privilege of holding more than one card, and practically every member of the corps makes use of it. Most generously does the library provide works bearing on the subjects pursued in the classes, and the children's library is the pride and boast of the city.

One of the most progressive features of the Omaha schools is the nature study, each grade being assigned a tree, a vegetable, a flower, and a bird for special study. This study is done by consulting various sources of information and opinion under guidance. Teachers and pupils gather information and material from books, from nature, from any source which yields help. This source method has done much toward turning the steps of students in the direction of the library and emphasizing the interdependence of the two great factors in our system of education.

The librarian and many of her assistants have been teachers. All are familiar with the course of study. When the nature work was introduced,

as if by magic the walls of the children's room were decorated with plates presenting all the birds in their natural colors, and as far as possible the trees and flowers studied, while upon tables were books bearing upon nature work. Then there were bird talks, and talks on trees and flowers, by those who had made special preparation.

A sixth grade studying Oliver W. Holmes was invited to a lecture on sea shells where the pupils saw the "Chambered Nautilus," heard the poem explained and beautifully recited, examined other curious shells, and were told of books in the library upon the subject.

A new development of the picture bulletin came last year. Bearing in mind the fact that the grades had for reading lessons extracts from *Gulliver's Travels*, a bulletin was prepared illustrating the volumes, with explanatory notes and references. Most successful did it prove. *Pilgrim's Progress*, *Canterbury Tales*, and *Don Quixote* followed. In every case it caused such a demand for the books that it was impossible to supply enough. These bulletins are often sent to the schools and circulated in the same manner as the books.

The Nebraska State Library is making very rapid growth, and is one of the largest law libraries in the United States. It has liberal appropriations, and is enabled to buy almost everything printed in English having to do with the subject of law.

It is a matter of pride to Nebraska that there is one library building in the state that even the most critical can recommend as a model; such is the new Carnegie Library at Lincoln, and its influence on the library architecture of the state is already noticeable.

The year just gone by has seen the establishment of several new public libraries in the smaller towns. This feature of work in Nebraska must necessarily be slow in developing. Cities in the state with a population of from four to twenty thousand are few, relatively—much fewer than in most western states—and it is hard to know just where to draw the line between one that can properly support a library and one that cannot.

Not alone in the larger cities is the spirit of co-operation growing. I quote a letter from the librarian at McCook, Neb.:

> There is a close intimacy between the schools and the library. We have many books of reference which are used in the science, literature, history, and geography classes. The teachers send classes to the reading-room, where, under supervision of the librarian, they are required to read and report on a given subject.
>
> In the juvenile department we have taken special pains to provide helps in the way of kindergarten and primary work, and the teachers take advantage of these.
>
> We had the Turner Art Exhibit for three days in December for the purpose of securing pictures for the schools and library. We secured fifteen good reproductions of the world's masterpieces, which we have placed in the various schoolrooms.
>
> We have a stereopticon for illustrated talks on tours to various places and the homes of noted men and women. This is under control of the library board, but will be used as an auxiliary to the class-room work.

This librarian has been a teacher. What a help to have come so closely in contact with the child-mind, and how fortunate the children and the teachers in that little city to have such intelligent service!

The Nebraska Library Association was organized in 1895. Its membership included a mere handful of people from the libraries of Lincoln and Omaha, with one or two from other places. In this handful were two library-school graduates, and several other educators who had been in touch with the movement in other states and were ambitious to have Nebraska awakened. A commission bill was drafted and introduced in the legislative session of 1897, and again two years later. The newspapers disseminated knowledge of traveling libraries and library commissions. But it was seen that stronger influence must be brought to bear. Thru the efforts of librarians and teachers, the interest of some of the members of the federations of clubs for women was enlisted, and these in turn brought the matter before their federation in such an effectual way that the fall of 1900 found the organization committed to the undertaking of securing the desired legislation. Thru the federation, the Library Association, and the teachers, the legislature of 1901 yielded to the now popular demand and made Nebraska the twentieth state to establish a public-library commission.

A close study of the law brings out the fact that its mandatory features contemplate chiefly the encouragement of the establishment of libraries where none exist, the improvement of those already established, and the collection and reporting of facts concerning libraries. The permissive feature of the law relates to traveling libraries.

In order to carry out their trust more worthily, members of the commission, at their own expense attend meetings of the American Library Association and consult with representatives of other states. Their plans have been based on the experience of other states. They have no evils to correct, no abuses to reform. The work is educational and constructive, and the aim is to make the state a better and more attractive one in which to live. These features show themselves in the spirit of the work done and the spirit with which it is met by the people of the state. Nothing has been paid to members of the commission, and almost the entire traveling expenses of the secretary in visiting towns has been paid by the communities visited, tho the law makes distinct provision for this payment from state funds.

Nebraska has about fifty collections, of forty volumes each, traveling about the state. They remain about three months in a place. As an economical way of getting the best books to the most readers at the least cost, the traveling library has no competitors. The books have been kept in drug stores, barber shops, post-offices, schoolhouses, and dwellings. The librarians, whether barbers, druggists, teachers, or housewives, have shown tact and intelligence with the libraries, and correspondence

with them gives proof of the important part they play in the educational development of the state.

Thus are the librarians, the public-school teachers, and others interested in general educational progress in Nebraska working together for the day when every person who wishes access to the storehouse of a free library will be able to have the demand satisfied, whether he lives in a great metropolis or in a city or town of moderate pretensions. The lawmakers are having the subject brought to their attention and are passing the necessary legislation. The field is full of promise, the state work being that of growth and adaptation to conditions, rather than a following of precedents. The teachers are interested in the library meetings, many of them appearing upon the programs. The librarians attend educational meetings and appreciate the efforts to further intimate relations between schools and libraries. Soon, very soon, will come the day when the people will insist that the numberless mechanical things that can well be left out of our school work be exchanged for the soul-uplifting work of getting literature into touch with young life. Let not the tired, overworked teacher and toiling librarian despair! We now know better, and we shall do better in time. Out ideals are growing luminously clear, and we will hold the light steady until the people are convinced as to what should be done, and then the best provisions will be made possible for all whose feet cross the threshold of our great public schools and libraries.

LIBRARY INSTRUCTION IN THE NORMAL SCHOOL

I

WILLIAM H. BRETT, LIBRARIAN OF THE PUBLIC LIBRARY, CLEVELAND, O.

My purpose in this paper is to emphasize a need which I know is urgent in our libraries, to indicate what I believe to be a similar need in our schools, to ask whether our normal schools may not furnish the means to supply this need in the schools and, at the same time, render a great service to the libraries, and to describe briefly one modest attempt which is being made to answer this question.

The need which I venture to suggest as existing in the schools is one which is due to the increasing use of the library by the schools, to its increasing importance as a factor in educational work—an importance which is more fully recognized than ever before, as the establishment of this department of the great National Educational Association and its successful meetings for several years past bear witness.

One of the most interesting panoramas on the continent is that from Morningside Heights, looking out as it does in one direction toward the broad Hudson, with its white sails and swift steamers, and in the other

thru the teeming streets and broad avenues of the great metropolis. On this height, amid these surroundings, stands a building which is at once a noble and a beautiful architectural creation, a monument of filial affection, and the home and laboratory of one of our greatest universities. Its central position in the magnificent group of university buildings, present and to come, appears to me not only to indicate the importance of this library as the center of the life and activity of the university to which it ministers, but to suggest the important place which the library is coming to fill in educational work generally.

The importance of the library in the college work has long been recognized. The library was the first department to be founded in our older universities. Its use has been greatly enlarged and systematized in the past four years, and the same period has seen a broader use of books introduced into our secondary and elementary schools. Modern work in composition, history, literature, and science, render necessary a wide range of reading outside of text-books and require a free use of the library. This need has been partly met. Teachers have made use of the library in preparing their work and have encouraged the use of books by their pupils. Librarians have very generally promoted this by granting special privileges to teachers, by the purchase of books with a special view to school use, by placing small collections in the schools, by co-operating in the supply and management of school libraries, and by the establishment of children's departments, with opportunities for club and class study.

This is all good but it does not meet the entire need. It is not altogether sufficient to bring a library within use of the schools, to bring the books and the pupils together. The pupils need to be taught how to use the books. This is important for the school work in hand. It is vastly more important, as a part of their equipment for whatever work they may do in life, that they be able to use books effectively, that they be able to reach promptly and certainly what they may need in books, to recognize it and estimate its value fairly. To do this requires a knowledge of the means and methods of using books, as well as a trained and critical judgment. This knowledge of means and methods may measurably be secured by proper instruction, and the critical ability and judgment will certainly improve in the process. The pupil needs this for his own work, and the teacher doubly for her own sake and that she may impart it. This would seem to indicate that, while such instruction may well be carried thru the school course, it should certainly be given in the normal school.

I have already spoken of the co-operation of the schools and libraries. An examination of the reports of about seventy American libraries shows that, with few exceptions, they are co-operating with the schools in various ways, and that, in a few of them, some attempt, usually rather

informal, is being made to give instruction in the use of the library. The great increase of libraries in America during the twenty years past, which corresponds in time with this increasing broader use of books in schools, has been accompanied by a remarkable development of library methods. The principal qualification of the librarian of the older days was that he should be a book lover and a reader, whose knowledge of the books should be the catalog of the library, and his love for them its principal safeguard. Then came the period when classification, cataloging, indexing, and the methods of housing and caring for books were being developed, and the importance of the technical was emphasized, unduly at times no doubt. Now the proper balance is being attained, and it is fully recognized that the equipment for library work should include a thoro, liberal education, extensive reading, a love for books, and an enthusiasm for their use, the whole based upon a thoro technical training. To secure such service is one of the great problems of the library today. There has been, however, a marked improvement in recent years. The increased use of our public libraries has not been merely an increase in volume, but in value, due largely to more efficient service.

An instance may illustrate. The library staff of one library which I have in mind did not include, a dozen years ago, anyone who had more than a high-school preparation, and a considerable number of them had even less. There was no college graduate, nor anyone who had special library training. Now on the staff of the same library the minimum preparation of all appointees during recent years is a high-school course; it has a considerable number of college graduates, several library-school graduates, and probably one-third of its number have technical training, to the extent at least of a summer-school course. The change which has taken place in this particular library is, I believe, fairly typical of that in many libraries thruout the country. While there are, as above indicated, a fair proportion of those having special preparation, the salaries in a majority of the positions are not sufficient to attract those who have added special technical training to a college course, and the public schools are, and must continue to be, the main source for supplying the workers in our libraries.

If the high-school graduate, taking a library position, has been a lover and a reader of books, her value is greatly increased; but at the best she comes into the library without any knowledge of library methods, and must begin a course of training at the expense of much time and care on the part of the senior assistants, and at the much more serious cost of delay, annoyance, and poor service to those whom she serves during the period of her apprenticeship. The college graduate must begin in the same way, and learn by the same experience, and at a similiar cost, altho her greater maturity and broader outlook should — and, other conditions being equal, do — enable her to make more rapid progress.

The public library, however, needs in those who enter the ranks of its

workers a greater maturity and a broader education than that of the average high-school graduate, together with at least an elementary technical training. This leads me to turn again to the normal school, with the question whether, in supplying the needs of the school, it cannot also supply the needs of the library.

My attempt to answer these questions both as to the school and the library shall be a brief account of some work which has been done along this line, and something further which is planned in the normal school at Cleveland, with whose work I am somewhat familiar, as I am not with the work elsewhere.

For several years past the junior class of this school has received special instruction in the use of the public library from one of its teachers, and, divided into sections, has spent an afternoon of each week for one term in the library. They were first instructed in the classification and in the arrangement of the classes on the shelves, and were required to draw from memory a plan of the library showing the location of the different classes. This exercise is particularly valuable as this library is arranged in open alcoves and rooms, and all users have the advantage of free access to the shelves for selections.

They were then instructed in the use of catalogs and bibliographies by which books are chosen and found, in the use of the individual volume by means of its index and table of contents, in the use of the various periodical and other indexes by which the files of periodicals and other miscellany are made available, and in the scope and use of the fundamental reference-books, such as dictionaries, general and special encyclopædias, biographicals, dictionaries, gazetteers, and atlases. With this as a basis, problems were assigned which were intended to give them practice in the use of the means for research already indicated and to train their judgment as to books.

A specimen problem may serve to illustrate this work. The subject was Robert Louis Stevenson, and it is assumed that the pupil has the preliminary preparation just indicated.

1. Use the biographical and other dictionaries for life and work. Observe and compare the kind of information given in each (i.e., that in the *International* with the *Century Book of Names*), and consider the circumstances under which either might be of use. In what encyclopædias would you expect to find an account of Stevenson? In what annual would you be likely to find him, and how refer to it?

2. From the catalog choose books on the life of Stevenson, say four. Give reasons for choice. (Should expect some of the reasons for choice to be: author a known authority or known intimate of Stevenson, contents of book as indicated by catalog entry; choice might also be influenced by time of publication, etc.) The chief aim is to have the student use the data in the library and observe.

3. From the books chosen, select one. Give reasons for selection. Selection here is made by cursory examination. A glance at the table of contents and index, and a rapid examination of the book as to style. Verbosity, for instance, and egotism betray themselves promptly in any book. Read the book selected, making notes.

4. Notes as made by the student to be read by the teacher. Object—a lesson in note-taking, which is also a lesson in reading discriminately. Points considered are:

Clearness: Would one unfamiliar with the subject understand?

Conciseness: Is there a waste of words?

Judgment: Are essentials and nonessentials considered?

(It is not necessary that the teacher should know all the books on Stevenson on which the notes are made, tho, of course, she should thoroly know the life of Stevenson. Internal evidence as to accuracy is worth a great deal, and the work of one student sheds light on that of another.)

5. Use of magazine articles, using indexes and articles as previously catalogs and books were used, and making notes similarly. Choice of articles likely to be useful from the known character of the magazine.

6. Critical articles, using the department of literature, essays, etc.

7. Work out material on hand, including juvenile books, to prepare lessons for ten-year-old children on Stevenson. Exercise one of section and adaptation. Intention to base it on the broader work already done.

Similar work was done along other lines, as, for instance, in American history, the students being required to examine the books in the library and to select one valuable as an original source, another as a work for general reading, another for younger readers, basing the choice on an examination of the book as to its scope and arrangement, the reputation of the author and his opportunities, critical notices, and other available sources of information, giving reasons for choice.

These are probably fair specimen problems, but serve only to suggest the scope and variety of the work which has been done during the past four years.

The work was planned and carried on, until recently, by an experienced teacher in the normal school, who has in many other ways during the past ten or twelve years done much to bring about a closer co-operation between the schools and the library. In the opinion of those who have followed it closely, the work is valuable, and the result fully as great as could be expected from the amount of time given to it.

At the beginning of the last term a special instructor was employed jointly by the library and the school with a view to enlargement. The work was carried on thru the last term of the year on the same general plan, but more time was given to it by the special instructor than had been possible heretofore.

Next year it is proposed to carry the same course of instruction in the use of books and collections of books thru the entire junior year, instead of confining it to one term as heretofore. This will make it possible to somewhat enlarge the scope of the instruction.

It is further planned to offer, in the normal school, as postgraduate work, a course of technical library training which will occupy about one-third of the school hours during the entire year. It will include alphabeting, classification, cataloging, accessioning, shelf-listing, and other strictly technical subjects. It will be open primarily to graduates of the

normal school, to those who are already in library work and wish to increase their technical skill, and to those who have passed the required examinations and are eligible to library appointments. If there is room in the class, others who seem qualified to profit by the instructions may be received. For the benefit of those who are not graduates of a normal school, an opportunity will be offered to elect studies from the normal course sufficient to fill up with the technical work the entire time for the year. The studies suggested are history and theory of education, ethics, composition, history, geography, and advanced German.

The work as planned in the junior year will clearly be for the benefit of the schools. The graduate work will be for the immediate benefit of the library, but that is the narrower view of its purposes. The school and the library are working together for the same ends. The library can do no more important or nobler work than to aid the schools, and everything which benefits either great institution eventually and certainly benefits both. My justification for presenting to you an account of the work which is still so tentative and immature must be the hope that a discussion of this subject may bring to light other efforts which are being made, or plans that are being formed along the same line, and that by such discussion the importance of the need may be emphasized.

II

MARY EILEEN AHERN, EDITOR OF "PUBLIC LIBRARIES," CHICAGO, ILL.

Since a normal school is a school whose students are taught to be leaders of others in educational effort, it is a legitimate question for a normal school to ask what it can do in the matter of giving library instruction. The normal school has a legitimate part in that work — a part that is distinctly its own, and in performing which it in no way infringes on the work of the regular library school. No one questions its place in dealing with handicraft — it does not assume, in so doing, to be a technical school in the broad sense.

There is a differentiation, however, to be made in the instruction to be given to one who is to take charge of a regular public library — a library that serves all the public under a trained librarian — and the instruction to be given one who is to be a teacher first, and whose library work is to be only a part, but an important part, of the regular school routine. To begin with, there should be a clear understanding in both cases that library training means more than learning to write backhand, or arranging catalog cards in logical order. Without entering into a discussion of just what is contained in the phrase "library training," let us try to find out what is to be expected from the teachers in the public schools on the library side, and point out, if possible, how the normal school may prepare them to meet the situation.

A prominent English writer on educational topics has this to say of the present situation in that country :

> While the libraries are by no means doing all they might, or all they will do in years to come, for the schools, we must not forget that all they do has been evolved from the inside ; neither the general public nor the teachers have given much assistance, at least not until within a very few years. All we know about the library comes from the staff. Is it not time we heard from the laity ? What sort of political parties should we have if all platforms were drawn up and all the nominations made by office holders only ? The teachers must come to the aid of the community here, and just as men of science are expected to instruct and elevate the public at large outside of the laboratory or the lecture room, so the teacher must assist in the cause of good books for those outside the schools as well as for her own pupils.

This statement is as true regarding our own conditions as it is of the situation in England.

It has seemed to me that definite instruction ought to be given to the students of the normal schools along two lines : first, regarding the place, power, scope, and necessity of the public library, an institution organized and administered with the purpose of entering into close relations with every effort of the community for advancement, among which may be placed the public and private educational institutions ; and, second, such definite instructions should be given to the students of the normal school as to give them a knowledge of the use of books as friends as well as tools, and of such part of library economy as will show them how to give intelligent instruction to their pupils in the use of the schoolroom library first, graduating them later into the public library.

Normal-school students should be brought to know the history, development, and functions of the public library. Such study will give them a broader conception of the field of books by the knowledge of the historical setting ; it will give them a greater respect for the necessary machinery, and the people who maintain and develop it, by the knowledge that it has a scientific basis and has had definite growth ; and the appreciation of the scope and aim of the library, as it has been so admirably expressed by Mrs. S. C. Fairchild — the function of a library as an institution of society is the development and enrichment of human life in the entire community by bringing to all the people the books that belong to them — will in itself make a broader thinker and better teacher in all lines as well as in the study of books.

If normal students go out with the definite purpose of co-operating with the public library in all its work, they will have an equipment that will work, not only for their own good, but also for the betterment of the community which they serve. The public library is going into every community, and the public needs to know how to use the institution to the best advantage. It should be the aim, then, of the normal school to instill in their students the idea that they are to co-operate with the public library as a co-ordinate branch of public instruction, co-operating practically and

definitely as teachers thru their pupils, and the work which their pupils are undertaking, and co-operating more generally as intelligent citizens in sustaining the library and putting back of it an aroused public sentiment.

The books worth considering may be divided into two classes — tools and friends. The first includes reference-books, bibliographies, etc. The second consists of literature, biography, and travels. It is necessary to know the best tools among the books, just as it is in any other calling; and no one will dispute the fact that as intelligent care should be exercised in choosing friends among books as among people.

Much has been said and written about the indiscriminate use of books, and public libraries are sometimes accused of being unmixed evils, because thru their offices people, and particularly young people, are doing so much purposeless reading. There is a ground, more or less ample, for the complaint. But where are these people, and particularly these young people, to learn how to use books, to grow into the habit of serious reading or reading for a purpose? We must leave the older ones to the tender mercies of the club workers and teach the teachers how to teach the use of books to the children. Emerson recognized the lack in this direction when he said that "colleges, while they provide us with libraries, furnish no professor of books, and I think no chair is so much needed." Colleges have more chairs now than they had in Emerson's day, but they are but little further advanced in establishing professorships of books.

The normal-school course should inculcate in the minds of the teachers who are going out a deeper sense of their responsibility in leading children to read thinkingly and with a purpose in mind. The teacher is the next nearest the child after the mother, and, if properly trained in the work, thru her he learns of many books and by her is influenced strongly in making them his friends. Just as children read too much and with too little reason for it, beyond the fact that they like to read, so do they like to eat, to play, to swim, and to do a dozen things which they are not allowed to do indiscriminately and at their own sweet will, until such a time as habits of self-restraint are established. This view of its duty of library instruction, will lead the normal school to give a place of importance to the study of children's literature. A teacher is expected to know how to judge of text-books, their value at certain periods of progress, or their place in the study of the subjects they contain. Of equal importance is the knowledge of the value of certain books and their place in the development of character. When the normal schools shall teach this, and to do it thoroly, the point will be lost of such remarks as those made by the New York *Post* last month, when it said:

> The normal and training schools have become so absorbed in the work of making teachers that they have neglected the equally necessary work of making cultivated men and women. During the years when the embryo teachers should have been reading, they have been studying methods. The energy that might have made them readers and thinkers has been expended in teaching them where to put straight lines neatly drawn in carmine ink.

When students in the normal school have realized their own power and responsibility to teach children to read as a delight, and not as a task, they will come to the study of the use of books as tools, and of the simplest parts of library economy, prepared and eager to grasp the details in its true relation — as an easy means to an important end.

A book as a book is not a thing for worship; it is only that for which the book stands that is to be reverenced; but this can come about only when the book in all its various phases and relations is understood. This begins with the study of the book itself — how it is made, what constitutes a well-made book, the influence of good paper, good type, good binding, beauty of cover design and illustrations, the title-page, prefaces, contents, index, etc. In a normal school where manual training is attempted, bookbinding is good as a handiwork, besides being practical.

The normal school — and colleges, too, for that matter — should give thoro instruction in the best general bibliographical helps. It would seem a part, and a very necessary part, in the instruction in these days of laboratory methods that the student should be familiar at least with the names of the best writers on the various subjects under discussion. The study of each subject as it comes up should develop a little bibliography of that subject. In the ordinary school library, and in many public libraries, the list of reference-books, always expensive items, will not be very long, and the normal-school students, thus familiar with the best general reference-books, will be able to tell the best sources of general information and give a reason for saying that one book is better for a particular purpose than another. I once saw a high-school teacher laboriously looking in the *Encyclopædia Britannica* for a sketch of General Grant; and I shall never forget the disgust on the face of another when she had come to the library expecting to find an article she wanted in Poole, and found, as she expressed it, a long list of titles instead. Children swarm to libraries in droves to get material for their essays, without a word of previous instruction as to where or how or when to obtain it. Teachers frankly admit that they do not know how to instruct them in library use, since they were not shown how to do the work themselves.

In some normal schools the power and helpfulness of the library are lessened by the place assigned it in the rank of its work. In the catalog of those schools one will see the heads of the various departments listed, followed by assistants and instructors, the librarian and janitor closing the list. A live librarian will dignify the office, no matter where it is ranked, and such an arrangement is pointed out only to call attention to the fact that its position in the printed list of instructors is indicative of the regard in which it is held and the extent to which its work is understood by the powers that be of the school. The librarian generally in such a case will be a keeper of books and the monitor of the study-room. There will be no attempt at library instruction, or, if there is, it will be an

elective, more or less intermittent, taken up perhaps in the senior year. From the first the normal student should feel that the library is the never-failing source of helpfulness, inspiration, and expansion to which he may turn when he will, freshman or graduate, and find that help or companionship that makes clear the path before him.

A saving of time and effort can be made by adding to the course of the study of books definite instruction as to the institutions and other sources which furnish aid and information of value to teachers and schools. This will include the scope of the various state publications bearing on school and library matters, the various publishing centers, the purpose of the Library Department of the National Educational Association, of the Children's Section of the American Library Association, of the library commissions, and of all agencies dealing with the dissemination of books among children particularly.

It is a matter of deep regret that the Executive Board of the National Educational Association did not take advantage of the permission given it by the Council last summer and have prepared and distributed the little handbook proposed by the American Library Association committee in co-operation with the National Educational Association, which should present an outline for normal-school library work. The outline was approved by forty of the leading normal schools of the country; and something of the kind must be provided before there is a definite betterment of the conditions, on account of so obvious a lack that is so little met. The outline is appended at the close of this paper.

Those who are to become teachers should have instruction in what books there are in the world, how to get them, and how to use them. The normal school, training the teacher to go out to teach the coming generation, is the most economic place to have this instruction given, and, having the training schools in connection with them, the adaptation of the books and work to the children can be tested and adjusted, at the least cost in time and effort. How long will it be until normal schools see the part that is theirs and do it as it should be done?

OUTLINE FOR NORMAL SCHOOL MANUAL

1. Bookmaking — including paper, type faces, composition, printing, and binding.
2. Difference between books as regards their making. Importance of well-made books. Care of books.
3. Book-buying — price lists, trade catalogs.
4. Book-handling — stamping, labeling, book pockets, book plates.
5. A lending system — book cards, students' cards, professors' cards, special privileges.
6. The library rooms — location, size, arrangement, furniture.
7. List of books essential in a normal-school library, reference-books especially.
8. Elements of reference work — dictionaries, encyclopædias, annuals, periodicals, indexes, and bibliographies.
9. English and American literature — best handbooks, books on method.

10. Books for young people — lists, prices, etc.; books and articles on the subject.

11. Books in the schoolroom — general works for teachers, books for children, different methods of using them: for reference, for reading, for lending.

12. Schoolroom collections, furnished by the school board or by the public library.

13. A general library in a school building — advantages, disadvantages, character, methods of use.

14. Relations of teachers with the public libraries.

15. Importance to teachers of collecting libraries of their own.

DISCUSSION

JAMES M. GREEN, principal, State Normal School, Trenton, N. J. — The normal schools, in the nature of things, cannot undertake to give special training in library work, consistent with their supposed function, viz., to prepare teachers for the common-school branches of the state. It is legitimate, however, and proper for the normal schools to furnish their students with a somewhat liberal catalog of the best bibliography on each of the branches in the course of study, and, so far as possible, to have these students consult these books in the library during their course in the normal school. Furthermore, the normal school should familiarize each of its graduates with a course in English adapted to the different grades of pupils in elementary and secondary schools, and reading supplementary to this course.

A course of study should in English have reference to psychology. That is, each master in any style of composition contributes to a certain phase of mental development especially; for instance, George Eliot to the metaphysical, Butler to the logical, Dickens to character. Such a notion of a course of reading would give definiteness in library work.

Each normal student could be taught to consult the card catalog and the simple principles of classification on which the catalog is based.

E. ORAM LYTE, principal, State Normal School, Millersville, Pa. — It is the duty of the normal school to prepare teachers for the schools of the country. As far as possible, every boy and girl should be taught to be at home in a library, with all that this means. Every child should be led to acquire a taste for good literature, and be taught where to look for good literature. He should be made to feel how precious a thing a good book is. He should be taught to love good books, how to care for them, and how to use them. Many of our children do not have the opportunity of acquiring these lessons at home, but must look to the school for them, if they are to be learned at all. It is evident, therefore, that some knowledge along the line here suggested should be part of the qualifications of every good teacher. The teacher has the right to demand of the normal school a certain amount of training to prepare him to give these lessons to children.

You will all agree with me that among the definite lessons that may be provided for in a library course in a normal school there should be included lessons in selecting books for pupils of various grades, in buying books, in caring for books, in using books, in teaching pupils the care and use of books, etc. These lessons include the more technical ones of classifying and accessioning books, shelf-listing and cataloging them, etc. Lessons should also be given in the use of magazines and newspapers, of pamphlets of various kinds, and of government publications.

Every normal-school library should contain lists of books for school libraries costing five dollars, ten dollars, twenty dollars, fifty dollars; or, what is better, the books themselves should be put in a library case, and properly arranged, for the normal-school student to examine. Normal-school students should be made acquainted with the travel-

ing library. If the normal school were to make itself the center of a system of traveling libraries for public schools — and this can be done — normal-school students could be practically taught the use of the system and would demand that the schools they teach after they leave the normal school should receive the great benefits to be derived from such a system.

In concluding let me say that the duty of the normal school with respect to definite library instruction is plain; the task is an easy one; and the public will welcome any steps we may take to bring the blessings of good literature into the hearts and lives of the children of the land.

PRESIDENT J. N. WILKINSON, State Normal School, Emporia, Kan.— The effort made at the State Normal School of Kansas for many years past to give training in using the library has seemed either too much or too little: too little, when students with only enough training given to them to show that everything must be in its place have not become as enthusiastic as they should be about library work, and have not cared to go among our open shelves, but rather to continue calling on the librarian to find their books; too much, because asking busy students to master a self-help that they do not see will help them in a region where they know of few well-organized libraries. We have thought it best to go to the length of giving a course of library instruction such as is offered by the best summer library schools. We are not pretending to do more in this line than we can do. We are not going to allow our students to believe that the instruction given here can rank with what is given in the regular library schools. We believe that the public-school teacher is the most effective agent for introducing good library management into our state. We have few public libraries in the ordinary sense; we have had for years provision for a library tax for the public schools. That money has been squandered because few teachers knew how to use it to the best advantage. The normal school is the agency for reaching the entire state on this subject. I have seen students there from every one of the more than one hundred counties of the state, and I want them to see work going on in our library course that will impress them with the possibilites in this direction. Our high schools and our small colleges are not able to secure the full time of library-school graduates, but they will seek teachers who know how to manage the small library as a side matter. There is no other way to make school libraries effective, and why should not the normal school give teachers the training for this part of their work? Thru such leading in the school libraries, our public libraries will be brought into recognition of the value of trained librarians. A normal school is like the voice of one crying in the wilderness: "Prepare ye the way!"

MELVIL DEWEY, director, New York State Library, Albany, N. Y.— We have from the beginning said that it is not worth while to spend too much time with the old people, for we might as well try to work plaster of paris after it is stiff as to try to shape the reading habits of those above thirty. Nothing is comparable with sending out a boy or girl with a taste for good reading. If he will read day by day thru life, he is doing the best thing. The majority of parents cannot train the children in this way; it is the work of the teachers. We have only recently gone to the normal school for this help. Education is in two halves, the home and the school. Tho both should go along together, we should also drive them tandem.

We in the libraries get those who choose to come. No one ever proposes a compulsory library attendance. You in the school must give a taste for the library, or the children will never come to the library. I do not believe anyone thinks the normal school should take the place of the library, but it should teach the use of the library by its own pupils, who are preparing themselves for teachers; and, secondly, it should train these students how to take care of their private libraries. Teach them how to handle wisely their own libraries, and they will be able to teach others to use books wisely.

Teachers are the best men and women to serve on library boards, and the normal schools should train students in this direction also. It is necessary to impress upon them what the scope and the functions of the public library are. They should be shown that a pile of books is no more a library than a heap of bricks is a building. Study clubs, traveling libraries, and traveling pictures, all center around the library, and are for use at home as well as in school. If we can impress their use on every teacher, we have done the greatest possible service. In my own time at Amherst, just across in Mount Holyoke was a turning of the motto, "not to be ministered unto, but to minister," into the saying, "not to be ministers, but ministers' wives." You are training students not to be librarians, but to be the librarians' most efficient allies.

DEPARTMENT OF SPECIAL EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 8, 1903

The department met in the First Baptist Church at 9:30 A. M., and was called to order by President Edward E. Allen.

The following program was carried out:

President's Address—Edward E. Allen, principal of the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Pa.

Topic I: "The Influence of the Study of the Unusual Child upon the Teaching of the Usual"—Frank H. Hall, ex-superintendent of the Institution for the Education of the Blind, Jacksonville, Ill.; George E. Johnson, dean of the Lower School, University School, Cleveland, O.

Discussion—Francis Burke Brandt, professor of pedagogy, Central High School, Philadelphia, Pa.; Charles F. F. Campbell, London, England.

Topic II: "Should the Scope of the Public-School System Be Broadened to Take in All Children Capable of Education? If so, How Should This Be Done?"—Mary C. Greene, ex-superintendent of special classes for the blind in the board schools, London, England.

Discussion—Thomas D. Wood, M.D., professor of physical education, Columbia University, New York city; Ellen Le Garde, director of physical training, including that of backward children, public schools, Providence, R. I.; John T. Prince, agent of Massachusetts Board of Education; Walter E. Fernald, M.D., superintendent of Massachusetts School for the Feeble-Minded, Waverly, Mass.; Mr. B. Pickman Mann, Washington, D. C.

The president appointed as committee on nominations:

A. L. E. Crouter. F. H. Hall.
E. A. Fay. G. E. Johnson.
W. E. Fernald.

SECOND SESSION.—FRIDAY, JULY 10

The department met at 9:30 A. M., President Allen in the chair.

The following program was presented:

Topic III: "How Can the Term 'Charitable' Be Justly Applied to the Education of Any Children?"—Edward A. Fay, vice-president of Gallaudet College, Washington, D.C., editor of *American Annals of the Deaf*.

Discussion by William B. Wait, principal of New York Institution for the Blind, New York city.

Topic IV: "What Teachers Need to Know about Sense Defects and Impediments: Messages Chiefly from Specialists in Medicine"—Clarence J. Blake, M.D., professor of otology, Harvard Medical School, Boston, Mass.; Myles Standish, M.D., instructor of ophthalmology, Harvard Medical School, Boston, Mass.; Allen Greenwood, M.D., ophthalmic surgeon, Boston City Hospital; Eugene A. Crockett, M.D., assistant in otology, Harvard Medical School, Boston, Mass.; Mrs. E. J. Ellery Thorpe, specialist on speech defects, Newton Centre, Mass.

Topic V: Report of committee on statistics relative to children in the public schools of the United States who need special methods of instruction.

The president appointed the following committee to continue the investigation into the number and conditions of pupils having defective faculties who attend the public schools, and to report at the next meeting of the department:

F. W. Booth, Mount Airy, Pa., *Chairman*.
Percival Hall, Washington, D. C. O. H. Burritt, Batavia, N. Y.
Clarence J. Blake, M.D., Boston, Mass. F. Parke Lewis, M.D., Buffalo, N. Y.

The following minute was presented by Dr. E. A. Fay, and adopted:

The Department of Special Education of the National Educational Association desires by this minute to express its high appreciation of the character and services of its late member and former president, Dr. Joseph Claybaugh Gordon, who died April 12, 1903. Dr. Gordon was active in the meeting of the Round Table of Teachers of the Deaf, held in connection with the meeting of the Association in Milwaukee in 1897, which resulted in the establishment of this department. He was elected the first president of the department, took a prominent part in all its meetings, and was a strong believer in the possibilities of its usefulness.

In his death we mourn the loss of one whose work as teacher, superintendent, writer, and speaker gave him a high place in our ranks, while his amiable disposition, attractive personality, and genuine friendship won our affection and esteem. We offer to his bereaved wife and children the assurance of our sincere and respectful sympathy.

Officers were elected for the ensuing year, as follows:

President—J. M. Jones, Columbus, O.
Vice-President—F. W. Booth, Mount Airy, Pa.
Secretary—Elizabeth Van Adestine, Detroit, Mich.

Upon motion, the department adjourned.

SARAH FULLER, *Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

EDWARD E. ALLEN, PRINCIPAL OF THE PENNSYLVANIA INSTITUTION FOR THE INSTRUCTION OF THE BLIND, OVERBROOK, PA.

When President Eliot last winter summoned the presidents of the departments of the National Educational Association to meet him in Boston, he stated that he wished each department to limit itself, if practicable, to four topics to be treated in two papers and four discussions each. He then called upon each president in turn for the subjects he wished to have discussed in his department. My turn came last. I then said that every topic or subject that had been mentioned by the presidents of the fifteen other departments had definite relation to some phase of our special work of educating and training children requiring, in some part of their schooling, special means of instruction. I brought forward about twenty topics suggested by our own work, every one of which could with just as much propriety be discussed in one or another of the other departments of the Association, thus showing that at one point or another our special work not merely touches their work, but is their work, as theirs is ours.

Now, if this be true, what need is there for a department of special education? My answer is, first, that if the work of teaching and training children hampered by defective faculties not merely presents questions of interest to general teachers, but can also help them solve certain difficult problems in their own work, then it is imperative that the best means be had for bringing these matters into full and proper notice, and neither a good nor a proper place can be found for them in departments where hosts of questions of much moment would certainly crowd out our ques-

tions; and, secondly, that any instrumentality, such as our department now is, which will offer to our special teachers a program sufficiently attractive to bring together from twenty to forty of them, and put them in more or less close touch with many thousand other teachers at a great convention like this one, is helpful and broadening to them, and has sufficient reason for being.

Against this second position it is sometimes urged that teachers of special classes cannot be expected to attend every year these conventions in the various sections of this great country. That is very true. But to my mind the very fact that the meetings are held so often and in such different parts of the land makes our departmental meetings all the more useful; for they thus reach different teachers each year, and so have a wider influence than if they reached the same ones over and over again.

The objects of this department are identical with those of any other department of the National Educational Association; viz., to afford an adequate opportunity for the discussion of topics relating to one special field of work, but interesting and instructive to all teachers; and to provide a means of affiliating this special work with general education.

As we are gathered here, we represent the education of children deficient in three distinct ways. The teachers of each one of these three kinds of children have different ways of gaining their ends, and have their meetings where these may be discussed with profit.

At these meetings of the National Educational Association there should be no intolerance, no exploiting of specialties, but the discussion of general subjects in the spirit of absolute good fellowship. The charitable side of our work is so patent to the outside public that the educational side is largely lost sight of. Here is a chance to emphasize this more important side of our work. If this department is to be a success, it seems to me that it must be conducted on the broadest possible lines.

INFLUENCE OF THE STUDY OF THE UNUSUAL CHILD UPON THE TEACHING OF THE USUAL

I

FRANK H. HALL, EX-SUPERINTENDENT OF THE INSTITUTION FOR THE TEACHING OF THE BLIND, AURORA, ILL.

The "unusual child" can be found in any community or in any group of half a dozen children. It may be true, as some have claimed, that there is no "usual child," no "average child." Each is in some important respect unlike every other. The study of any one of these is, of course, helpful in the teaching of any other. But there are classes of unusual children, made so by a common deprivation, whose study may

become a source of unmeasured helpfulness in the teaching of normal children. I refer to the blind, the deaf, and the deaf-blind.

The influence of the study of such children upon the teaching of the usual child has thus far been quite unimportant, for the reason that little attention has been given to this phase of educational research. We have relegated the teaching of these classes to specialists of supposed unusual skill and exceptional insight. Their work has been regarded as quite unlike that of the teacher of normal pupils and fraught with untold difficulties. These specialists have sometimes received undue praise for what they have accomplished. This is especially true of teachers of the blind. That which has happened as a result of enforced narrowness and consequent concentration has too often been attributed to the marvelous skill of the expert teacher. A sympathetic and admiring public has wasted much breath in such expressions as "wonderful," "marvelous," "astonishing beyond measure," without in the least degree realizing that that for which these people are praised, is the natural result of a narrowness on the part of their pupils which is not apparent to the casual observer.

It is certainly time for the student of educational psychology to begin a systematic study of the blind, the deaf, and the deaf-blind, with the hope of finding what may prove helpful to the teachers of normal pupils. Permit me to suggest a line of research that seems to give promise of valuable results; and pardon me if I yield to the temptation to predict the outcome of such investigation, coming to me, as it does, after many years of association with large numbers of blind people, some opportunity to observe the deaf, and the privilege of making a most careful study of two deaf-blind children.

The necessity of a sense-basis in the educational process is conceded by all. It is also well understood that thought does not deal mainly with things of sense, but first with the images of these and then with imaginative creations. Hence "emancipation from bondage to the things of sense" is a necessary concomitant of sense-training. It is the "emancipation" that is the difficult step in the educative process. Hence in the training of the usual child there may be greater danger of devoting too much time to sense-perception than too little.

With the normal child the securing of a sense-basis involves the action and interaction mainly of three senses—feeling, hearing, seeing. Just how much each of these contributes to the necessary working sense-basis constitutes thus far an undetermined and perhaps indeterminate problem. But here, as elsewhere in human indeterminates, approximation is doubtless possible.

A great side light upon this problem may come thru the study of the unusual child. If one desires to know what seeing contributes to a desirable working sense-basis, in no other way can one hope to accomplish so much as by a comparison of children educated in darkness with the usual

child. If one would know what hearing contributes, in no other way can one hope to accomplish so much as by comparing children educated in silence with the normal child. The comparision of the deaf with the blind furnishes another invaluable side light, while what has been accomplished with the deaf-blind invites the most careful and thoro research.

Let the following questions be answered by those who have had opportunity for knowledge upon this subject:

1. Are the congenitally blind more imaginative than the congenitally deaf?
2. Are the congenitally blind more imaginative than normal people?
3. Are the congenitally deaf less imaginative than normal people?
4. Are the congenitally blind more imaginative than those who have lost their sight after six years of age?
5. Are the congenitally deaf less imaginative than those whose hearing became impaired after they were six years of age?
6. Do the congenitally blind spend less time in sense-perception than normal people?
7. Do the congenitally deaf spend more time in "reveling in the endless panorama of sense-perception" than normal people?
8. Do the congenitally blind image, and think — see the relation of images in any field with which they are familiar — more quickly and easily than normal people?
9. Do the congenitally deaf image and think — see the relation of images in any field with which they are familiar — less quickly and easily than normal people?
10. Is the sense-perception basis for the mental operations of the congenitally blind narrower than the sense-perception basis of normal people?
11. Is the sense-perception basis for the mental operations of the congenitally deaf as broad and filled with a greater number of details than the sense-perception basis of normal people?
12. Are the deaf handicapped mainly in their thinking power — their power to image and see relation?
13. Are the blind handicapped mainly in their earning power — their power to use the results of their thinking in a way that will be helpful to other people?
14. Can the blind, if provided with the necessary book equipment, do the greater part of high-school work and of college work more easily by far than the deaf and almost as easily as normal people?
15. Can the deaf, if properly trained, contribute to the general good in much larger measure and in a greater variety of ways than the blind and almost as easily as normal people?

If, after due investigation, the foregoing questions are all answered in the affirmative, as I believe they must be, it will be apparent—

1. That while sense-perception gives a necessary thought-basis, within certain limits thought-power seems to be in inverse ratio to the amount of sense-perception.
2. That, while a large amount of sense-perception tends to dull the edge of the thought-power, it is not incompatible with good earning power; often, indeed, contributes to it.
3. That in the education of the blind a main effort should be to provide a broader sense-perception basis.
4. That in the education of the deaf a main effort should be to train in imaging and seeing relations.
5. That in the education of the usual child it is of the utmost importance that a proper balance be maintained between these two kinds of mental exercise.

Educated blind people have in a large measure what the world calls *culture*. They can think and enjoy many of the products of art and of civilization. Some of them have "poise, serenity, and contemplative delight." They are quite at home in literature, history, and music. If the main business of life were enjoyment of the intellectual and spiritual type, they would be well equipped. But, with the exception of the few, the very few, who are especially gifted, they find almost insurmountable obstacles in their efforts to take care of themselves; to provide for themselves food, clothing, shelter, books, musical instruments, and the thousand and one material things that are necessary to the enjoyments of the common life and of the higher life. The very fact that they have spent less time with the things of sense gives more time for the things of the intellect, the heart, and the spirit. If the education of blind people is mainly a matter of mental acquisition and personal enjoyment, as it sometimes is, their earning power is thereby diminished, and they go out into the world to be provided for, not by people who are grateful for valuable services performed, but by a more or less disguised charity at the hands of a spasmodically sympathetic public. The blind are handicapped by their defect in their power to do for others, and, sometimes by their education, in their disposition to do.

Educated deaf people are usually self-supporting. In many occupations their defect is not a serious handicap. In scholarship they are, as a class, far below the blind. In power and disposition to earn, they are the superiors of the blind. A colony of deaf people would succeed in caring for each other and for themselves much better than a colony of blind people. The deaf would have less poetry, but more bread and butter; fewer artists, but a greater number of useful artisans. The two classes might get along very well together, if the deaf would consent to do the physical labor for the community, and the blind attend to the intellectual and spiritual needs. "The ear," it is said, "is the avenue to the heart;" but eye and hand are necessary in making provision for the stomach.

The foregoing thoughts seem to point to conclusions which ought to influence and modify the work of the teacher of the "usual child." Too much time devoted to sense-perception, and too little time devoted to imaging and seeing the relations of mental images, will make the usual child too much like the deaf child — quick to see with the natural eye, and perhaps well able to take care of himself and to provide for his own physical necessities, but not profoundly thoughtful, not able to see quickly with the mind's eye, to image and see the relations of things not present to the senses, hence incapable of the higher appreciations and enjoyments.

Too little time devoted to sense-perception in the teaching of the usual child may result in making him like the blind, narrow — he may think himself very broad because of his familiarity with literature and history and bookish science, yet narrow and profound — but incapable of using his

knowledge for the good of other people, hence incapable of earning enough to provide for his own physical wants and for such material necessities as make the higher intellectual life desirable and possible.

The deaf, the blind, and the deaf-blind are unsymmetrical in their development. It should be the care of the teacher of the usual child to avoid the anomalous results that necessarily come from growth in darkness or in silence. To this end a proper balance must be maintained, particularly in the first years of school, between eye-training and ear-training.

In the early life of the normal child the eye and the hand give the chief part of the sense-basis necessary for thought. At this time of life the ear is the principal instrument for training the imaginative faculty. If these two kinds of training are mutually well balanced, the result will be a symmetry that can be expressed in terms of efficiency (and this is the only desirable symmetry). Increase the eye-training beyond the normal amount, and the result may be a moderate degree of efficiency on the material side of life, with serious and irreparable loss on the spiritual and intellectual side. Increase the ear-training, the training in responding to ear-symbols (and later to eye-symbols), beyond the normal amount, and the result may be inefficient intellectuality — particularly inefficient so far as peformance that will be useful to other people is concerned.

I have suggested what seems to me to be a most important lesson for the teacher of the usual child that comes to me from a study of the unusual child. It is quite possible that I am in error; that I have generalized on in sufficient or imaginative data. Be this as it may, I cannot be wrong in the assumption that the unusual child furnishes an unusual opportunity for most valuable psychological and pedagogical research.

In no other way can we be made to realize so fully the educative importance of sight as by a careful study of the blind. In no other way can we be made to realize so fully the educative importance of hearing as by a careful study of the deaf. It is believed that light will yet come out of the darkness and voices out of the silence that will help to illuminate and make clearer and plainer the path of the teacher of the usual child.

There is great work for Department XVI on the lines herein indicated. Neither can this be done by any one class of specialists, nor by combination of all classes that have specialized in the education of abnormal or subnormal children. But there should be associated with those who deal chiefly with subnormal mentality, others who are mainly interested in the broader and more important problem of determining educative values in the work of training normal pupils.

Let the evidence be brought forward and sifted, and the data collected for such generalization as may be helpful to all who are engaged in the great work of teaching, whether their pupils are normal, abnormal, or subnormal; whether they deal with the usual child or with the unusual child. The help of all is necessary, and the results will be helpful to all.

II

GEORGE E. JOHNSON, DEAN OF THE LOWER SCHOOL, UNIVERSITY SCHOOL, CLEVELAND, O.

When Dr. Hughlings Jackson formulated his "three-level" theory of the nervous system, and applied it successfully in the diagnosis of epilepsis and mental diseases, he made a valuable contribution to surgery and the knowledge of the physical causes of mental disorders, and also to psychology and education. The fact that the control of certain bodily movements and the seat of certain mental operations lie in definite regions of the brain, and that different areas of the brain come into complete functioning at different ages, is as applicable in education as in surgery.

What pathology has done for psychology, the study of unusual children can do for the understanding of the normal child. In the study of defectives we examine a section of the mind. Here mental defects are written in the large. Since knowledge of the external world comes mainly thru the three avenues of sight, hearing, and touch, by a process of subtraction we see what it is that the mind receives thru these avenues, and we understand more clearly the relations of sight, hearing, and touch in instruction and the acquisition of knowledge, and are enabled better to select and apply methods in school work.

Again, "evolution" and "physiological psychology" are the key-words to method in the new education. To the teachers of defectives we are most indebted for the theory and practice of physiological education, dictated first by Rousseau, Pestalozzi, and Froebel, and first successfully practiced by Perière, De l'Epée, Itard, and Seguin. To Perière we are indebted for the first formulation of the physiological method. He not only conceived the idea of substituting one sense for another, but also saw the physiological significance of sense-training. This is the first great contribution of the student of the unusual child to the teacher of the usual.

And I shall be pardoned for saying here that the world hardly yet knows its indebtedness to that man, by birth a Frenchman, by adoption an American, who has inspired hundreds of teachers of defectives by his zeal, devotion, and genius in teaching the idiotic eye to see and an idiotic hand to do — that man who more clearly than any other has set forth the need and the value of physiological education, Dr. Edward Seguin.

Because most so-called defectives are to a large extent normal, and most normal children approach in some degree or particular some type of the unusual child, we find great value in the study of defectives. But we are to keep in mind today particularly the three great classes of unusual children — the deaf, the blind, and the feeble-minded.

We have dropped the old idea of a child-mind as a weaker mind than

that of the adult, but altogether like it. We have learned that it is an organism passing rapidly thru stages of evolution — stages not as marked as those of the race in its progress by evolution, but distinct enough to serve as practical guides in many questions in education. For this reason, the causes which interfere with or modify the natural development of this organism are of great interest to us as showing more clearly the nature and mode of development of the perfectly healthy organism.

Now, what do we find peculiar in the manifestations and development of character and mind in an organism which has no contact with the external world thru sound? Many writers on the deaf claim that they are more apt than hearing children to be selfish, suspicious, clannish, untruthful, less emotional, less sympathetic; in short, less susceptible to social and altruistic ideals. They live by themselves and for themselves. Early writers, like De l'Epée and Sicard, placed the uneducated deaf intellectually in the class of idiots. Today many teachers of the deaf claim that the deaf are not a distinct class, asserting that they present the same individual variations as the normal.

I fear it would be presumptuous in me to attempt to decide between these conflicting statements. Yet I can but believe that the deaf do, as a class, present some differences from the normal, or at least tendencies to class peculiarities. To be sure, just to the extent that the education of the deaf is perfected and they are enabled to mingle in the world with other people, just to that extent the deaf will approach the normal. Granted that the soul-germ of the deaf child comes as fresh and pure from the hand of God as that of the hearing child, yet it is a very different world he lives in. Character and mind are the resultant of two forces — heredity and environment. Heredity may be the same, but the environment is very different, and the resultants cannot be the same. I believe that the thunderings and whisperings of nature, that voice and speech, that the music of nature and the symphonies of the masters, have exerted great influence in the development of the human race and of the individual. There is no other means of expression of the emotions of love and sympathy to compare with the human voice. It is not strange that the man who never heard the song of a bird, who never fell asleep at the lullaby of a mother, who never heard the story of another's love, or listened to a sob of a bleeding heart, should lack fullness of sympathy and devotion. I shall claim, then, that the great fundamental emotions of the soul — love and sympathy — which lead to our modern ideals of altruism and the brotherhood of man, are less easily developed in the deaf than in the hearing. This is a second important influence lesson which the study of the unusual child has for the teacher of the usual. The ear is of mighty importance in the development of the sensibilities. And the development and training of the sensibilities in its bearing upon character is one of the most important, but neglected, offices

of our public schools. The teacher of normal children too often neglects the opportunities of the voice and the ear.

Lack of contact with the external world thru the ear seems also to have a characteristic intellectual effect. But the records of biography seem to show a decided intellectual superiority of the blind over the deaf. Since the eye is the most important sense-organ, being the medium of the great majority of all our sense-impressions, and the organ most relied upon in the education of normal children, this fact seems rather startling. Doubtless whatever intellectual inferiority the deaf may have is due largely to deficiency in language power. Observe that language is the "vehicle of thought" and is essential to the development of a high degree of intelligence. Language is at once the means and the stimulus to accurate thinking. The deaf receive more sense-impressions than the blind, but make less of them. They have not, particularly during the early years, a convenient medium for thought and reflection. The blind have fewer sense-impressions, but make more of them. They are thrown back upon reflection.

These facts emphasize, in the teaching of normal children, the value of language in school work—not formal language study, but language as the means for thought and its expression. And the vast superiority of the young blind but hearing child over the deaf child in language power—having, it is even asserted, at the age of eight a greater command of language than the congenitally deaf child ever can have—proves that the ear is the natural organ for the acquisition of language. In our public schools language study has very generally miscarried. In the case of young children, it has had too much to do with formal language study, instead of the development of power and delight in thought and expression of thought. There should be more oral language work and less written language work with little children.

This importance of the ear in acquiring language is evidence enough that normal children should begin foreign languages thru the ear rather than thru the eye. On the other hand, it is a pointed question whether the study of the dead languages—which in most cases is not the acquisition of language, in the real sense, at all, but the study of the grammar of language—should not come later rather than earlier in the school course, and during the reflective period rather than the sensory.

Mr. William B. Wait has made a most interesting and suggestive study in "comparative education" at the New York Institution for the Blind. For a period of nine years the results of the Regents' examinations, according to a wholly impartial rating, have shown a superiority in general scholarship of the blind pupils over the normal pupils of other schools. How shall we account for this? Certainly we do not think it is an intellectual advantage to lose one's sight, as did the ancient philosopher Democritus, who inflicted blindness upon himself that he might the

more perfectly give himself up to reflection. No doubt it is partly due to superior teaching. The teachers of defectives are our best teachers, unquestionably. But there is more yet to be explained. Mr. Hall has just told us that the blind child digests his mental pabulum more perfectly than the seeing child. No doubt we have often, in our public schools, sacrificed depth to breadth. But I believe there is one element more to be taken into account in this matter, and Mr. Wait points it out. In our teaching of the young normal child we are relying too much upon the eye. And we are doing this at the very age when the ear should be predominant in instruction. In primary school work, the office of the eye, as compared to the ear, is accessory; of the ear, fundamental.

The foregoing facts seem to point clearly to the value of the ear in the training of the sensibilities, to the fact that the ear is the natural organ for the acquisition of language, and to the need of a convenient medium of expression and reflection in the development of a high degree of intelligence. A grave doubt arises as to whether there is not an excessive use of the eye in the training of normal children; whether we have not swung too far away from the use of the ear for the good of the child's intellect and the child's soul. And the question also arises as to whether the young deaf child should not be given every encouragement and aid in acquiring ability to express thought in whatsoever way. Since language is so important in the development of the intellect, it seems a great mistake to shut the flood gates of expression of the little deaf child in whatsoever direction nature may dictate them to open.

In the preparation of this paper I sent out *questionnaires* to teachers of the deaf and the blind. The returns were insufficient to warrant generalization, but they seemed to be mostly corroborative of what I have claimed here. A few other points brought out may be of interest and worth inserting without discussion. The claim of evolutionists that certain definite periods are most favorable for the development of certain powers seemed in general corroborated. The difficulties of education not only steadily increased with advancing age, but the difficulties in certain directions seemed to be conspicuous after certain ages. The molding of bodily habits and the correction of mannerisms are very difficult after the age of eight or nine. Dullness of touch is confirmed after fifteen or sixteen. The vocal organs of the deaf become stiffened before the end of the early teens. Imitation and perception in the deaf are less active after the age of eight. Interest in elementary work, so easy to arouse in the young deaf child, cannot be awakened after the age of ten or eleven, and apathy of mind sets in by the age of fifteen or sixteen. The general testimony was that the deaf learn to read with much more difficulty than the normal, but the blind learn as rapidly; that the deaf are better spellers than the blind or the normal; that the blind are more accurate in arithmetic, the deaf less so; that the blind remember better than the normal,

the deaf not so well; that the blind reason as well as, if not better than, the normal, the deaf do not; that the blind are more emotional, and the deaf less emotional, than the normal.

The study of feeble-minded children presents entirely new conditions. The difficulty here is one of centralization rather than one of avenues of approach. The whole organism of the feeble-minded is involved in the difficulty; not any particular part, as in the case of the deaf or the blind. Hence the teaching of the feeble-minded has necessarily been reduced to lowest terms. The teacher of the feeble-minded has to do with the very beginnings of mind. All of the avenues of approach are more or less closed. All must be opened. The very senses have to be taught before the child can be taught. The physiological method becomes, not merely an essential, but a necessity. All that is done must be done *in accord with established facts of evolution and in harmony with the laws of physiology*. Herein is the great influence that the study of the feeble-minded is exerting upon the teaching of the usual child.

One could not begin to give here even an outline of the lessons a teacher of normal children might gather from the physiological method — the object-lessons, use of play, training of the senses, attention to hygiene, and the study of the individual, displayed in the education of the feeble-minded. These things have been carried to a greater degree of perfection in schools for unusual children than elsewhere. It would be impossible to state how much the schools for defectives have advanced the cause of the kindergarten in this country. In these schools we find a higher and truer development, I believe, of kindergarten principles than elsewhere. Light is coming to the teachers of all children from the schools of these unfortunate, yet fortunate, children.

The study of the unusual child, then, has put the individual child in our midst; has made for sympathy; has disclosed the seat of the difficulty, showing that supposed stupidity was often the result of defect of eye or ear; has emphasized the value of play and spontaneity in education; has helped to fix the relative importance of the several senses in education; has emphasized the importance of sense-training; has practically created the physiological method; has made clearer the application of evolution to education; has kept in the foreground the social object of education, rendering the helpless helpful members of society. The schools for unusual children present the best object-lessons available to the teacher of normal children.

DISCUSSION

Dr. Francis Burke Brandt, professor of pedagogy, Central High School, Philadelphia, Pa.— Speaking from the point of view of the training of the normal child, I believe that the study of the unusual child has already produced an influence upon the teaching of the usual child that is illuminating, instructive, and inspiring.

In the first place, such study has demonstrated the almost infinite possibilities of education. Sometimes in our public schools we are in danger of turning away from children because they are dull or stupid or incapable of being taught. But one Laura Bridgman and one Helen Keller have taught us, more than all our child-study investigations put together, that there is an avenue to every soul. Such cases have taught, too, the larger lessons that the twentieth century must regret the nineteenth-century dictum of the survival of the fit, to put in its place the higher principles of fitting to survive.

In the second place, such study has demonstrated the supertor effectiveness of special methods and special teachers to accomplish ends which meet the individual needs of the child. In connection with this subject such studies as Superintendent Hall's point out the relative value of these senses, as well as the importance of ultimate emancipation from the senses, together with the necessity of training for some form of social service, that all this can be of incalculable worth in revising our methods in handling the normal child.

Again, such study has been highly illuminating as to the importance of right conditions in training a child. The favorable conditions which prevail in many institutions for the special training of special children, in the form of the fewness of pupils assigned to teachers, the assignment of special subjects to teachers, the adequacy and adaptability of equipment, and the respect, sympathy, and resources of trustees, have important lessons for those in authority who administer the training of the normal child.

Summed up, the study and training of the usual child have rendered the greatest service to the elevation of the individual and the progress of humanity, to the extent that it shows that there is no depth scarcely of physical, intellectual, and moral defect on the part of the individual which the impulse of Christian motive, the intelligence of modern science, and the energy of civilized society combined cannot reach.

CHARLES F. F. CAMPBELL, former inspector of the Royal Normal College and Academy of Music for the Blind, London, England.—The unusual child in this discussion is the blind child. With the blind it is necessary to begin at once to prepare for remunerative occupation. The normal child needs a similar system and has greater opportunity, having a larger field open to him. That he needs immediate training for all possible ends, not for higher education only, as at present given, is shown by the figures in the state school reports. Only an extreme minority continue higher education after the high school; indeed, a large percentage of grammar-school pupils do not enter the high school.

Example of a pupil at the Royal Normal College and Academy of Music for the Blind, London, England: With a blind child there, it is recognized at once that there is to be a struggle for a livelihood. The child starts his training with the assumption that he may ultimately go to Oxford or Cambridge, to be possibly a lawyer or a minister. Before ten years of age, however, he is started in music, for that profession offers the greatest opportunities for the blind. Thus the possibility of failure in one direction is provided for in another. Before the child is fourteen years of age it is generally clear whether a legal, ministerial, or musical profession is advisable; but all this time he has had the best of manual training, so that, if these more advanced mental professions do not promise, his attention is concentrated upon a calling requiring manual dexterity. Thus every contingency has been provided for and in ample season.

Application of this to the seeing child: The large majority, owing to family circumstances, must go to work in some factory or store by fourteen years of age. Since many must work thus early, the public schools should provide preparation for this, as well as for higher education. Clear thinking is needed in the best work, even of manual labor; for it is not human machines that are required, but artisans. If public schools offered such commercial and technical training, parents would strive to maintain their children longer in school, to avail themselves of an education having so practical a value.

The ideal should be held out to the pupils that because they cannot go to college a

great and useful career is not closed to them, but rather, by careful application to some congenial art or craft, they may become designers and creators. The supreme end of education will thus be to make them better citizens and, as President Eliot has said, more able to enjoy life.

SHOULD THE SCOPE OF THE PUBLIC-SCHOOL SYSTEM BE BROADENED SO AS TO TAKE IN ALL CHILDREN CAPABLE OF EDUCATION? IF SO, HOW SHOULD THIS BE DONE?

MARY C. GREENE, EX-SUPERINTENDENT OF SPECIAL CLASSES FOR THE BLIND IN THE BOARD SCHOOLS, LONDON, ENGLAND

I will answer the question in the topic of this paper by saying: Yes with qualifications which may or may not be applicable under existing conditions.

I assume that the public-school system implies residence at home, or under home conditions, with day attendance at a school. It does now provide for all children excepting cripples, epileptics, the mentally deficient, deaf-mutes, and the blind. Can all these unfortunate classes, or can any among them, obtain suitable education and training under the public-school system? Is it to the advantage (*a*) of the normal children, (*b*) of the defectives, that this should be undertaken? The number of defective children whose parents can provide satisfactory training in their own homes is so small that these need not come into the discussion—altho, with every advantage that money can secure, something is probably lost under wholly private instruction.

No argument is required to show that the children embraced in these five groups cannot be required to attend the ordinary schools, in continuous association with normal children, except to the disadvantage of all concerned. The cripple would suffer in body; the epileptic and the weak-minded would be unable to keep pace with their school-fellows, or would be a drag upon their progress; the deaf would profit hardly at all; the blind only by the spoken word. Since, then, they cannot be taught as units of the ordinary school, the customary, almost universal, practice is to provide for them in large boarding homes, equipped with everything needed for general care, and also for such elementary, higher, and technical training as may be adapted to the special needs of the several groups under consideration. The defective child is placed in such a boarding home for a term of years, usually including the entire period of childhood and youth, and extending into early manhood and womanhood, at the end of which period he is returned to his home and friends. In the best examples of such institutions, health, manners, morals, training of hand and brain, are all wisely and carefully looked after; and, in contrast with the life of a defective child in many families, the sympathetic visitor,

noting the well-clothed, well-cared-for little ones, can but regard institution life as the ideal for all such unfortunates.

Such conclusions may, however, be qualified by two considerations, deduced from long experience. First, the practical training of home life, which defective children in common with normal children need, is missed in an institution. It is true that valuable lessons in order and regularity are learned, and the motto "together," so well worth impressing, is deeply impressed upon them. Some such experience is useful to all. But these children are taken from home at a very early age. From that moment every need is supplied. Food and clothing, schooling, and care come to them as freely, as naturally, as the air they breathe. There is no question of cost—of sparing or saving. No committee of ways and means deliberates in their presence, as members of a family talk together of what can, or cannot, be afforded. At home there may be anxiety, struggle, hard work, privation. Of all this the little exile knows nothing. So pass the years till the youth leaves school. The institution, the artificial home, is left behind, and the youth comes forth to make use, or no use, of what he has learned in school and shop, with such help as friends or strangers can give. He must face life—and of life in the world he is profoundly ignorant. Already handicapped by his infirmity, the lack of all practical experience puts him still further at disadvantage, and it is hard, if not impossible, for him to get his bearings and adjust himself to his surroundings. Without knowing it, he may be selfish and exacting. This is my first qualifying consideration.

The second tendency to be deprecated is the inevitable result of exclusively institutional training in weakening home ties thru too protracted separation in early life. In the course of years, childish interests have been exchanged for those of maturer life, and the home-coming youth finds himself much of a stranger, having little in common with others of his family. The earlier habits of consideration, of tender pity, have lapsed thru disuse. Moreover, the limitations of his infirmity keep him more or less to one side, and he may be overlooked or forgotten, when he would gladly share the common interests and the common pleasures. If intelligent and sensitive, he may grow morbid in the feeling that he has come to be only a care and a burden.

Now, is it practicable so to enlarge the scope of the public-school system as to include any portion of the whole number grouped as defectives, and thus to secure a more practical training, while keeping them in closer touch with friends on whom they may, to a degree, be dependent in future years?

Without discriminating between that form of institution where all inmates are gathered into one great family and the institution organized on the cottage system, I concede its necessity in some form, except in large centers of population. In great cities the public-school system *can* be utilized to the advantage of many defective children.

Instead of leaving this statement as an unsupported assertion, it will be more definite to indicate what is actually done for defectives in one metropolitan area—that of London—in connection with its work of popular education.

From the problem are eliminated nearly all epileptics, and the lower grades of the mentally deficient, who, for such training as their condition allows, are better under the constant watchfulness of a permanent boarding home.

The census of the school population of London—that is, of all children between the ages of five and fourteen—is annually taken in house-to-house visitation by the school board visitors, each in his own area. When the excuse for non-attendance places the child in any one of the defective groups, it is so recorded, with age, address, and character of disability; and the respective lists, when complete, are sent to the three superintendents in charge of defectives, cripples and epileptics being assigned to the superintendent of the mentally deficient as a matter of convenience.

Not only at the annual scheduling, but thruout the year, it is the duty of the visitor to report at once to the superintendent each new case that comes to his notice. The age of compulsion for deaf-mutes is from seven to sixteen; for the blind, from five to sixteen. The superintendent, having received the data from the visitor, proceeds to amplify; and this can be done in no way so well as by friendly personal calls, wherein details of the cause and degree of disability, and the condition and history of the family so far as it has affected the child, are obtained. These are useful in establishing cordial relations as well as for information.

Three of the groups—viz., the blind, the deaf, and the mentally deficient—are gathered in centers under teachers specially trained to the work for each. Cripples, not requiring specially trained teachers, make a fourth group.

I wish to say just here that, next to thoro training in the special work which is undertaken, there must be, even more than in ordinary teaching, a real love for, and interest in, that special disability, and a rooted conviction that to a large degree it may be surmounted.

Not more than twenty feeble-minded, eight deaf, or sixteen blind are allotted to one teacher, tho, if numbers warrant, there may be two or more classes at one center. This permits satisfactory grading.

If possible, each center occupies a building of two or more rooms, detached from the main building if on the school premises, and having independent entrance from street and playground. When desirable to establish centers for two or more groups in the same or adjoining premises, it is important to provide for entire separation, both in and out of school hours. If cripples are of the number, their center is on the ground floor.

In considering how the children shall reach the center, one rule does not apply to the several disabilities. Usually speaking, no deaf or feeble-minded child is required to travel more than a mile to the center. For greater distance, or for weakly children, arrangements are made with public conveyances. The feeble-minded and the deaf are so nearly on the level of ordinary children in respect to attendance that the matter of their coming is commonly left to the parents. For cripples, a vehicle adapted to their needs collects and returns to their homes those who otherwise could not attend school with safety. In the case of the blind the problem is simplified if another child in the family capable of acting as guide can attend the school with which the center is associated. If there be none such, a trustworthy child is selected in the school, who for a small weekly payment will accompany the blind one.

The limit of distance mentioned in connection with the deaf and the feeble-minded may be considerably extended for both the cripples and the blind. For cripples, the time of man and horse is the only consideration, and, in practice, a blind child with guide, when once in a public conveyance, can travel three miles as easily as one.

When difficulties arising out of distance are too great, or where home conditions are morally or physically bad, the boarding-out system is adopted. Satisfactory families are sought near the center where the father and mother are willing to act the part of foster-parents to one or two of these little ones. It is preferred that these families be in somewhat similar position in life to the real parents; it is imperative that they be clean and honest, and able to supply proper food and lodging to their little boarders. To insure the faithful observance of all regulations, there is frequent careful inspection. If the parents of a boarding-out child fail, thru poverty or neglect, to provide needful and tidy clothing, an outfit is procured, and, in case of neglect, the cost is charged to the father.

In the bringing up of each group of defective children the necessity of rendering them, as far as possible, self-supporting is kept steadily in view. From kindergarten to manual training no effort is spared. From the several centers of each group the children, on appointed half-days, go for practical lessons to the cooking, laundry, or manual-training class most accessible. The selection of the children for the coveted privilege is made on the same lines adopted for normal children. It is needful for the deaf to be accompanied to such classes by one of their own teachers, to interpret in case of necessity. Manual training for the blind, including the use of tools in single cabinet-work and carpentry, is limited less by want of sight than would be supposed. They can, and do, learn to use readily all ordinary tools with benefit. Whatever is done for cripples in respect to manual training, is done at their own centers.

To the statement previously made, that defectives cannot be closely associated in the schoolroom with ordinary children, the blind are a partial

exception. After acquiring at the center facility in the use of their special apparatus for writing and arithmetic, it is found possible for them to do the work and profit by the instruction of the ordinary school for some part of each day, devoting the remainder of the day, under the guidance of their special teachers, to subjects and methods in which they, because of their lack of sight, require individual attention. A second divergence in the case of the blind from other defectives in their relations to the public-school system is this: Individuals of other groups may continue in the public school till they have exhausted its advantages; it is not so with the blind, except in a few cases where expense of later professional training is no consideration. They are restricted in the choice of callings for a livelihood, and must pass earlier from the public school to an institution adapted to prepare them for their life-work, as musicians, teachers, or workers at a handicraft. If the pupil has musical ability, that can be developed only by some years of residence in an institution provided with all that is necessary to thoro professional training. So, too, if talents and character point to success in any other profession, including that of teaching, the preparation for the normal school, or for the university, must be made under the conditions prevailing in an institution. The Royal Normal College for the Blind, near London, besides its elementary, higher, and technical departments, is accredited by the government as one of the authorized training colleges for teachers. Similarly with handicrafts available for the blind, including the art of tuning, in which they can compete on equal terms with the sighted, special teachers, longer time, and the aid of many devices, unknown in ordinary workshops, are required, and are only obtainable in a residential institution.

It is thus evident that the connection of the blind with the public school differs from that of the other groups of defectives. There is no vital relation between the ordinary school and the centers for cripples, for the deaf, or the feeble-minded; tho among the feeble-minded there are always individuals so classed who from adverse circumstances are simply backward, and who after a time of quiet progress can be transferred to the ordinary school. The centers for these three groups are selected without reference to the proximity of a public school; but because of the division of their time between the special class and the ordinary school, it is desirable that the centers for the blind should be in close connection with the public school and occupy room within its grounds.

I have now covered what appears to be the chief points of my subject, and will summarize as follows: (*a*) In large cities, cripples, deaf-mutes, and the mentally deficient, excluding the lower grades, may receive their whole education under the public-school system, each group by itself, in centers which may be quite apart from the ordinary public school, and, in the case of the deaf and the mentally deficient, under specially trained teachers. (*b*) The blind may be taught by a specially trained teacher, at a

center closely connected with a public school, in the instruction of which they can participate for a part of each day; but they must be transferred from the public school to an institution for the blind, at the age of twelve or thirteen years, to complete their training.

DISCUSSION

THOMAS D. WOOD, M.D., professor of physical education, Columbia University, New York city.—The idea of education has been enlarged until today we consider it rightly as the process by which the individual is prepared for life, for human society, for citizenship. It is the duty of the state as the agent of society to make sure that the individual is qualified as perfectly as may be for complete citizenship. In our country, this means that the state shall demand a certain minimum of intelligence and training of all, and beyond this provide generous opportunities for the young to improve themselves, in order to add to power and capacity in every possible way, without pauperizing anyone or decreasing individual responsibility and self-reliance. In our democracy, with the present standard of education among intelligent people, the well-to-do classes may be trusted to give their children, whether normal or defective, at least an equivalent of the benefits of free public schooling. Leaving out of account, then, those who prefer to educate their children at private expense, the public-school system is, or should be, better qualified than any other agency to set the standards of education for all children capable of education. This will be done most naturally and economically, where it is practicable at all, by the attendance of the deficient child, while living at home, upon the public school adapted to the needs of exceptional children.

The home is still the most fundamental and vital of human institutions. It is of great importance that the home do all that it can and will for the child, whether normal or deficient; important, again, that education stimulate the home in every way to a higher development and a more effective service in the care of the children. In many cases, of course, the state can provide better care and training for the child than he can get at home, and often the education of deficient children can be accomplished only in special institutions. But it is really important that, where feasible at all, the young child should remain at home, and that provision for instruction should exist within convenient distance for attendance upon school. This is not feasible, of course, for most defectives except in large communities.

The scope of public education, then, should be enlarged to include all children capable of education, capable of becoming self-supporting members of society; and facilities for the training of deficient children should be developed as rapidly as possible, and in close relation to the home.

The training of dull, backward, and moderately deficient children may best be accomplished by the ungraded room of the ordinary school under specially qualified teachers.

Those more deficient mentally, and often morally, who are yet capable of education, and many of whom may become independent members of society, even if of a low grade, should be kept away from the normal children in special schools, like the *Hilfsschulen* in some European cities. Here they may have the best available opportunities, and a further differentiation may be made between those educable and capable of life at home and in society, and those who should go permanently to institutions for defectives.

The deformed and crippled children should have their own more favorable conditions, with the instruction and training best adapted to their limitations and needs. The schools for crippled children in New York — some supported by philanthropy,

some by public funds — show strikingly how much can be done for these handicapped children.

The deaf and the blind should be trained in special schools or under special teachers. They should live at home when possible, at least up to the age of adolescence. The more advanced training of the blind and deaf may very reasonably be completed away from home in special institutions maintained by the state as part of the public-school system.

The instruction of all unfortunate and deficient children, whether carried on at public or private expense, should be under public supervision, or at least subject to inspection of officers of public institutions.

ELLEN LE GARDE, director of physical training, including that of backward children, public schools, Providence, R. I. — Feeble-mindedness — a state of arrested psychical development — will always be an interesting study to the physical director, who realizes that a mentally weak child is almost always defective physically, and that its physical education should precede its mental, and always progress with it. Feeble-minded children may be found in every school building, and should be trained by themselves.

In the proper education of this class of children, Germany, in 1863, was the pioneer. There such children have been gathered either in special ungraded schools or separate classes, which arrangement enables the classes of the normally endowed to progress at a more rapid rate in their studies. The German plan, making these schools a part of the school system, is that followed in Providence. Providence, in 1894, was the first city in the United States to support public day schools for mentally backward boys and girls. In 1899, similiar schools were opened in Boston, Chicago, and Philadelphia.

The methods of developing the arrested or weak mental and muscular powers are most interesting. Seldom do these children walk correctly; they have little sense of rhythm; hands and feet cannot move in unison. Exercises requiring at first little or no effort, but always training in time, in co-ordination, in balance, in grasp, in powers of concentration, in strength and memory, are all used, and gradually increased in power and velocity.

Lacking, as many of this class are, in powers of articulation, the ward, or marked system of reading, is used in the morning, and unmarked reading in the afternoon. Seat work for reading is taught by letter builders, one and a half inches long. Number is taught at first by large primary colored blocks eight inches long; later by various objects; all, however, larger than those in use in the ordinary primary school. The color sense in these children is often so deficient that this instruction is a part of every day's lesson. Geography and language are taught in games and talks, and the children are encouraged to express themselves freely and correctly. Singing it is possible to gain by number first, as in the regular grades, and by songs. Drawing is done upon the blackboard to illustrate all the reading lessons. Sewing, weaving, and basketry are employed for hand- and eye-training. I place great faith in the Swedish exercises in gymnastics for co-ordination, and in musical drills with wands and dumb-bells for rhythm and for gaining interest and attention. Many of these children tire of games, and lose patience and get excited, but are always devoted and constant to piano and dumb-bells. The drum and triangle are great aids. Lately we have tried dancing steps. The teachers consider the physical training the greatest aid to the greatest need of the children.

In what would appear apparently as a hopeless task, the teachers in these three schools for a-typical children are devotion itself. All have been graduates from our city schools and from our excellent city training schools. Each understands kindergarten methods and has served an apprenticeship as assistant in a disciplinary school.

Encouragement and praise are freely given; happiness of a right sort is ever present; and the animal affection, often a part of the character, is trained in habits of helpfulness for the teacher, for the schoolroom pet, in cat or dog, or for a weaker child needing constant aid.

It is safe to say that 80 per cent. of the children are cured. By "cured" one does not mean made into Edisons, Marconis, or Roosevelts, but lifted up to better things. Many are holding good positions. The future holds many plans for the betterment of these schools. They are under the care of a special supervisor, who visits them once in two weeks. It is hoped to concentrate them in one building in the center of the city, to pay transportation, and to provide lunch; for these children lack in nutrition, and any public-school system starting such schools should provide at once, with books and slates, either a lunch or mid-day meal. The superintendent desires medical inspection for them, in order to allay any objection on the part of the parent, when told his child should be placed in a school for pupils of arrested development. More attention can be given to physical exercises and manual training when we have a central school with proper work-rooms, gymnasium, etc. Philadelphia is in advance of Providence in its medical inspection of defectives and in their manual training, but Providence points with pride to the fact that the school funds pay for the cost, and that seven years of growth is one of progress and actual accomplishment in making a class of children of value to the community and to themselves, who might have been a drawback and a disgrace.

JOHN. T. PRINCE, agent of the Massachusetts Board of Education, Boston, Mass.— Public-school education is constructive in helping to create high ideals and intelligence, and preventive in helping to hinder pauperism and crime. It is a wise provision of statute law for the upbuilding of society, and for the happiness and usefulness of individuals, that every normal child shall be assured of a common-school education. It is no less the state's duty for its own protection to make obligatory the training of educable defectives and the care of those who are not capable of improvement. This training and care should be carried on either in institutions under the direction of the state, or directly in connection with the local public schools.

Those children only who do not need institutional treatment should be trained at home in separate groups. For the cities and large towns this will not be a difficult matter, as has been shown by experience. For country districts, provision may be made for carrying children to a central school, or for establishing small home schools in convenient localities. These schools should be under the charge and superintendence of the local public school authorities. In states like Massachusetts, where district supervision prevails, the schools may be under the direction of the superintendent and district committee, the expense of the schools being borne by the towns from which the pupils come. In country districts whose unit of government is the county, the schools may be organized and controlled by the county board and county superintendent, and the expense of carrying them on will be borne by the county.

It is therefore right and feasible for *all* educable children to be included in the scope of the public-school system, and to share in its benefits and obligations. It is also right and feasible for the state to place all educable children of a certain age under the statutory requirement of compulsory school attendance, to the end of giving all its citizens the benefits of intelligence and self-support, and of guarding itself and society against the dangers of ignorance and crime.

WALTER E. FERNALD, M.D., superintendent of Massachusetts School for Feeble-Minded, Waverly, Mass.— Until within a comparatively few years it was believed that feeble-minded children could be successfully educated only in special boarding schools or institutions. All such schools were recognized as strictly educational institutions. Dr. Howe said of his school: "It is a link in the chain of common schools, the last indeed, but still a necessary link in order to embrace all the children in the state."

The methods of training found necessary with the feeble-minded were radically different from those then used with normal children. Object-teaching, nature study, gymnastics, special sense-training, manual and industrial training, music, directed games, training in habits and morals, etc., were the sheet anchors of this work, years

before the era of the kindergarten and the dawn of the new education. Outside of these special schools suitably equipped teachers were not to be found.

Special public-school day classes for the feeble-minded have been in operation in various continental countries for more than twenty years. There are many reasons why such classes should be established as a part of the public-school system in large centers of population in this country.

Every American child has the right to be educated according to his need and capacity. It is a great hardship for the parents to send a child of tender years away from home to be educated. Parents with a comfortable home would naturally prefer a public-school class to an institute. Many defective children who now receive no training would be placed in these special classes. The special training would be begun much earlier than is now possible.

These special classes can be quickly and easily organized and increased in number, making a very flexible system of providing and extending facilities for training defectives. They do not involve the expenditure of large sums of money for construction of large institution plants. The actual expense of such training is largely assessed upon the local community receiving the benefit. The admirable special classes in London may well serve as models for classes in this country.

In organizing these special classes, the pupils should be selected under expert medical advice, and should be the merely "backward" or slightly feeble-minded, and not imbecile or idiotic, for the merely backward should not be classed with the actually feeble-minded.

The training and instruction of these children may begin on a much lower plane than with the lowest grades in the public school. It must begin with what the child already knows, and the successive steps should be made very gradual and progressive. The physiological education of the special senses and the training of the muscles to accurate response to directions must precede and prepare the way for so-called intellectual training.

Hand-work and manual training in great variety is of great importance. Object-lessons and familiar nature study should be emphasized. The beginnings of ordinary primary work should be based upon the best modern methods. The progress will be slower, and the pupil cannot be carried so far.

The study of the life-history of these persons has evolved some generalizations which must not be ignored in considering this subject. All degrees of congenital mental defect, from the merely feeble-minded child to the profound idiot, are the result of certain definite structural defects or inferiority of the brain, or the result of brain disease or injury. These brain abnormalities are permanent conditions. No really feeble-minded person ever was, or can be, entirely "cured." It is a question of how much improvement is possible in each individual case.

The hope of the pioneer teachers in this work that many of the slightly feeble-minded could be educated and developed to the point of supporting themselves, and of becoming desirable members of the community, has not been realized. A certain very small proportion do actually leave the schools and lead useful, harmless lives, supporting themselves in a precarious way by their own efforts. Of the great majority of these trained pupils it has been well said that they may become "self-supporting, but not self-controlling." By far the greater number need oversight and supervision as long as they live.

A very large proportion of the feeble minded persons, even the well-trained higher-grade cases, eventually become public charges in one way or another. No one familiar with the mental and physical limitations of this class believes that any plan of education can ever materially modify this fact. The brighter class of the feeble-minded, with their weak will-power and defective judgment, are easily influenced for evil, and are very likely to become prostitutes, vagrants, or petty criminals. They are powerless to resist the physical temptations of adult life, and should be protected from their own weakness and

the cupidity of others. Especially should they be prevented from marriage and the reproduction of their kind.

Feeble-minded children may be tolerated in the community, but it is a great responsibility to inaugurate any plan on a large scale which does not provide for withdrawing defective adults from the community.

HOW CAN THE TERM "CHARITABLE" BE JUSTLY APPLIED TO THE EDUCATION OF ANY CHILDREN?

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At the time, now nearly a hundred years ago, when the first schools for the education of special classes were established in America, such schools already existed in Great Britain. The British schools were generally called "institutions;" the largest and most important of them was styled an "asylum"—a title which it still retains; another bore and bears the name of "hospital."

These British schools were founded and maintained entirely by private charity, and were therefore classed as charitable institutions, tho their educational purpose was recognized. The same is true not only of special schools, but of all the English free schools of that time; they were known as "charity schools." In America, on the contrary, our free schools have always been supported by public taxation, and education in them has never been regarded as charitable, but as the birthright of every child.

The early founders of American schools for special classes in their preliminary steps followed English precedent. They contributed money, interested their friends, sought subscriptions, secured acts of incorporation from the state legislatures, and (most unfortunately) called their schools "asylums" or "institutions."

Long before that time, however, the duty of the state to provide for the education of all its children had been recognized in this country, and as soon as the special schools were established they applied to the legislatures for support on the ground that their pupils had the same right as other children to education at the public expense. The justice of this claim was generally recognized, and appropriations were made by the legislatures for that purpose. In a few of the older states this arrangement continues; the schools are under corporate management and have endowment funds resulting from former gifts and bequests, which the state supplements by paying a *per capita* rate for the pupils in attendance.

So far as the education of these pupils is paid for by the state, it cannot be called charitable, for the state cannot dispense charity. The state educates these children, as it does all its children, in its own interest; for educated they become self-supporting citizens, while left uneducated

they are liable to become criminals and paupers. The schools are sometimes spoken of as "institutions aided by the state;" it would be more correct to say that the state is aided by the institutions, for with the help of their endowment funds it is enabled to educate its children at less than cost.

If, however, we consider these early schools from the point of view of their origin, their corporate character, and their endowment, they may be classed, legally at least, as charitable institutions. The same is true of our incorporated colleges and universities; in the eye of the law they are charitable institutions. In the famous Dartmouth College case Chief Justice Marshall held that a college was an eleemosynary corporation; and the same opinion has been reaffirmed in a score of judicial decisions. The principle is well established that "a charity, in a legal sense, includes not only gifts for the benefit of the poor, but endowments for the advancement of learning, or institutions for the encouragement of science and art, without any particular reference to the poor;" and that "schools established by private donations and carried on for the benefit of the public, not with a view to profit, are institutions of charity."

In a legal sense, then, our endowed special schools must submit to be classed with all endowed schools, colleges, and universities as charitable institutions. But the legal sense is not the common sense; in the popular conception the idea of charity is not associated with ordinary schools, colleges, and universities; they are considered, not from the legal point of view of their endowment, but from the common-sense point of view of their purpose. Their purpose is educational; they are therefore universally regarded as educational institutions. The purpose of schools for special classes is also educational; should they not be regarded as educational institutions? There is not a student in Harvard or Yale the expenses of whose education are not paid in large part from endowment funds, irrespective of tuition fees; but no one ever thinks of applying the term "charitable" to the education of students at Harvard or Yale; why should it be applied to the education of pupils in the Perkins Institution or the Clarke School? This question was put to the Massachusetts legislature in 1875, and the result was that these schools were removed from the supervision of the state board of charities and placed, where they properly belong, under the supervision of the state board of education. But not all states are as enlightened as Massachusetts.

What has been said of the charitable character, from a legal point of view, of certain endowed and incorporated special schools applies only to a few schools in a few of our oldest states (Connecticut, District of Columbia, Maryland, Massachusetts, New York, and Pennsylvania). The great majority of our American schools for special classes are public schools; they have been established by the state legislatures, in some cases they have been provided for in the state constitutions; they are maintained

wholly by public taxation. There is no reason whatever for regarding them as charitable.

In some of the states the purely educational character of these schools, their entire dissociation from the idea of charity, is recognized; in others it is not. In ten states (Alabama, California, District of Columbia, Florida, Massachusetts, Minnesota, Montana, New Jersey, North Dakota, and Virginia) it has been clearly defined by legislative or constitutional action.[1] In two (Florida and New Jersey) the schools are under the direct control of the state board of education. In nine (Illinois, Kentucky, Maryland, Massachusetts, Mississippi, Montana, New York, Ohio, and Tennessee) they make reports to the state board of education or the state superintendent of public instruction. In seven (Alabama, Florida, Minnesota, New Mexico, Oregon, South Carolina, and Virginia) the superintendent of public instruction is *ex officio* a member of the board of trustees. In two (Michigan and New York) the schools are subject to the supervision or visitation of the superintendent of public instruction. In five (California, Illinois, Michigan, Ohio, and Wisconsin) provision is made for day schools for the deaf in various localities in addition to the large state school; there are also day schools in three cities (Boston, Chicago, and St. Louis) in other states. These day schools are all classed as part of the common-school system.

On the other hand, the special schools in two states (Kansas and South Dakota) are under the direct control of the state board of charities. In nine (Illinois, Indiana, Michigan, Missouri, New York, North Carolina, Ohio, Pennsylvania, and Tennessee) the board of charities has the right of inspection, recommendation, and suggestion. In one state (Kentucky) the committee of the legislature that has charge of the affairs of these schools is entitled "committee on charitable institutions;" in another (Mississippi) "committee on benevolent institutions;" and in a third (South Carolina), "committee on penal and charitable institutions." Probably a similar erroneous nomenclature is used by the legislatures of several other states.

On the whole, taking all the circumstances into consideration, the special schools in nineteen states (Alabama, California, Colorado, District of Columbia, Florida, Iowa, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New Mexico, North Dakota, Rhode Island, Utah, Virginia, and West Virginia) seem to be classed by the state authorities as purely educational, and in twenty-two states (Arkansas, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Michigan, Mississippi, Missouri, Nebraska, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas,

[1] Perhaps the most explicit legislative action is that of the Congress of the United States relating to the Columbia Institution for the Deaf and Dumb in the District of Columbia. After providing that the admission of pupils from the district shall be subject to the approval of the superintendent of public schools, the law adds: "And said institution shall not be regarded nor classified as an institution of charity."

Washington, and Wisconsin) as charitable, or partly charitable and partly educational.

When we consider that within our own memory these schools were universally classed as charitable institutions, it is certainly a gratifying sign of progress that in nineteen states their true character is now officially recognized. Probably the popular conception, however, even in those states lags somewhat behind the official recognition. While a little reflection will convince any reasonable man that the term "charitable" cannot justly be applied to the education of any children, the unthinking public everywhere are slow to realize it.

One reason why people are slow to comprehend the true character of our special schools is doubtless the unfortunate names of "asylum" and "institution"—especially "asylum"—which were given these schools in former years and which still cling to some of them. Another reason why some people regard our special schools as charitable is that food and shelter as well as instruction during the school term are provided by the state. They are willing to admit that free tuition and opportunity for self-development should not be called charitable, but they insist that free board should. The state, however, does not provide board for her children as an act of charity; she provides it as a necessary incident of their education. For ordinary children schooling is brought to their doors; in some cases, where they live at an inconvenient distance, the pupils are transported daily to school at public expense, because it costs less to bring the children to school than to bring the school to the children. On the same principle, it is found to be more economical, as well as productive of better results, to instruct the deaf and the blind in central schools, paying for their food and shelter during the term, than it would be to bring the school to their doors or bring them daily to the school.

The heads of schools generally insist that their work should be classed as educational and not charitable, but perhaps they themselves are sometimes responsible to some extent for the erroneous classification. It may happen that they have at their service a state board of charities composed of intelligent, sympathetic men who take an active interest in the welfare of the school, make valuable suggestions, support them in their endeavors to obtain needed appropriations, and defend their good name against unwarranted attacks and unjust criticism. On the other hand, the state superintendent of public instruction may be a man who cares nothing for the interests of the special classes, performs his duties in connection with their education in a perfunctory manner, or neglects them altogether. There is a state in which that officer is required by law to visit the state school for the deaf once a year, but, as a matter of fact, he has visited it only twice in ten years. It is not strange under such circumstances that the

authorities of the school should prefer the friendly visits, timely suggestions, and cordial support of the board of charities to the indifference of the department of education. As one head of a school writes: "In theory our connection with the Board of Charities is all wrong; in practice it could not be improved upon."

Again, the school authorities may lend countenance to the objectionable classification by resting their claims for the support of the school upon motives of charity rather than of justice. There is a strong temptation to do this, for an appeal to the feelings sometimes meets with a readier response than an appeal to the reason. The simple claim that the right of special classes to an education rests upon the same basis as that of ordinary children in public schools makes but a slight impression upon some legislators; while a stirring appeal to their humanity and compassion, presenting the education of the deaf or the blind as a work of benevolence and mercy, is likely to result in a "generous" appropriation.

It may sometimes be desirable to have the co-operation and support of the state board of charities as well as the department of education in the work of our special schools. There may be occasions when the simple declaration of the right of the children and the duty of the state does not suffice, and it seems as if the very existence of a school would be endangered unless the chord of sympathy in the heart of the legislator is touched; but we should never lose sight of the injurious effect produced upon the general public, upon the parents and friends of the children to be taught, and upon the children themselves, whenever their education is allowed to be classed as charitable. What is the effect upon the public? An erroneous impression of the character of the work and the nature of the schools is created and diffused. What is the effect upon the parents? It arouses a prejudice against the school, and sometimes deters them from sending their children. What is the effect upon the pupils—the "beneficiaries of the state," as they are sometimes called? If they realize the injustice and cruelty of the stigma thus placed upon them, it tends to humiliate and embitter them; if they do not realize it, or realizing, complaisantly accept it, it harms them still more by tending to degrade and demoralize them, discouraging self-activity, and leading to dependence and pauperism.

The latest state to place its schools for the deaf and the blind in the purely educational class is Virginia. This was done by the constitutional convention of 1902, after a full discussion of the merits of the case. The superintendent, Mr. William A. Bowles, reports that the effect of the change has been to increase the attendance, arouse the ambition of the pupils, elevate the tone of the school, and produce better work both in the schoolroom and in the workshop.

DISCUSSION

WILLIAM B. WAIT, principal of The New York Institution for the Blind, New York city.—"How can the term 'charitable' be properly applied to the education of any children?" This question presents three of the most important words in the English language: *children*, "for of such is the kingdom of heaven;" *education*, the salvation of children and the hope of mankind; *charity*, greater than hope and better than faith.

The basic idea presented is that of classification. Right classification is a condition necessary to good results. Wrong classification gives imperfect results. Right classification is necessarily scientific and helpful. Wrong classification is necessarily unscientific and harmful. Concretely, classification may be represented by the base of a right-angled triangle; method, by the altitude; and results by the hypothenuse. If classification be correctly extended and methods be poor, the side showing results will be disproportionate and inadequate; likewise, if we have wrong classification and our methods be absolutely correct, still the side showing results will also be disproportionate and inadequate. Furthermore, error in classification will inevitably produce error in method.

It should be observed that the proposition before us refers to no special class of children, but to all children: to those of the rich and of the poor; to the normal, abnormal, and subnormal; to the vagrant child and the idiotic child. Can the term "charitable" be properly applied to the education of any of these children?

If a certain stone be improperly classified as good building material, and be used in the construction of a house, it will make no difference to the stone, but may be of vital importance to the occupants of the house. If a farmer classifies his cow as a butter-maker, when its milk should go to the cheese factory, it is of no importance to the cow, but is of importance to the farmer, and to the butter or cheese factory. When, however, children of any class or condition are improperly classified, the inevitable resulting loss must first fall upon them; and, as both by nature and by law they are incapable of self-defense, it becomes the duty of parents, of teachers, and of the administrative agencies of the state, not merely to shield them from physical harm, but to protect them from self-negation, social disparagement, and degradation. It is unfortunate that any educational institution should ever have deemed it necessary to accept classification as charitable for the sake of money considerations. Educational institutions, if classed as charitable, may get more legacies than they otherwise would; but the cause of education cannot fail to be hindered and its standards lowered when money is received as charity. The education of all children is absolutely necessary to the well-being of the state, and they should be granted and should receive all things, whether directly essential or merely incidental to their education, as a matter of right and of sound public policy, and not as charity.

If a maximum of good results is dependent upon right classification and correct methods, what must be the effect on a child if he be classed as a recipient of charity, when he should be encouraged to put forth every effort to be self-respecting and self-reliant? If the word "charitable" were to be placed over every kindergarten, public school, and college in our land, the educational results would immediately be reduced to a minimum, and no claim or pretense of charity could prevent it.

Why, then, should children bereft of one sense be classed in this way? A gentleman once said to me: "Our charitable society is aiming to create the impression that we are using the term in the higher sense of 'good-will to men.'" The affections of love and good will, however, are exercised between persons whether of the same or of widely different situations in life, independent of those conditions of poverty and pecuniary need which are the sole basis for acts of charity. Moreover, a policy or system which incapacitates individuals for growth into true manhood is neither an expression of good-will nor of charity, and should have no recognition either in our statute or our common law.

In 1875 Dr. Samuel G. Howe, while principal of the Perkins Institution for the Blind and a member of the Massachusetts state board of charities, with great foresight secured the enactment by the Massachusetts Legislature of a statute recognizing the Perkins Institution for the Blind as a distinctly educational institution, and placing it entirely under the jurisdiction of the educational authorities of the state. Surely no one will question the wisdom or the authority of Dr. Howe in a matter of this kind.

It can safely be said that the only assurance of the largest success of the work of special schools, and the only hope for children who have been deprived of some of their faculties, rest upon the avoidance of this needless and false classification.

As has been so clearly pointed out in the admirable paper of Professor Fay, there can be but one right answer, which is: the term "charitable" cannot justly be applied to the education of children.

WHAT TEACHERS NEED TO KNOW ABOUT SENSE DEFECTS AND IMPEDIMENTS

I

THE IMPORTANCE OF HEARING TESTS IN PUBLIC SCHOOLS

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At the Medical Congress held in Philadelphia in 1876 there was made what was, so far as I am aware, the first public proposition in this country for the organized medical inspection of public schools; this proposition having in view, not merely protection from the contagious diseases incident to childhood, but also the determination of sense defects with reference to their amelioration or to the provision of compensatory education.

This form of supervision, since generally adopted, has opened up a much larger sociological service than was at first expected of it, for, where medical inspection has been fairly established, the examiners find themselves confronted with questions of the proper seating of school children, of the provision of school lunches, of proper lighting, ventilation, and sanitary accommodations, and of the detection and setting aside for compensatory educational advantages of children whose defective sight or hearing puts them below the average of their fellows: and I am glad to have the opportunity of urging before your representative body a still more extended availment of the special knowledge of members of a profession of which it may be safely said that it stands eagerly ready for public service.

The distinction between lack of perceptive capacity and lack of sense-transmission is frequently represented only by a thin and shadowy line, and the partition classification of dependent and imperfect children is often one of the most exacting of the moral responsibilities of the doctor. Children who are regarded as backward, or even idiotic, are sometimes found, on careful examination, to be merely creatures shut within themselves by the closure of normal channels of communication,

and the bringing of such children into touch with the human companionship which makes life worth living is worth far more than all it costs in time or effort.

As an example of the value of co-operative work on the part of the medical and the teaching professions may be cited the conjoint action of the American Otological Society and the National Association of Teachers of Speech to the Deaf in undertaking a systematic examination of all pupils in schools for the deaf thruout the United States. The purpose of this investigation is to provide, not for what might be called a census-taking, but for the establishment of continuous special medical examination of the pupils, first for their immediate advantage, and, secondly, to make records upon a uniform basis suitable for comparison and tabulation.

The work, already begun as a preliminary investigation in the Horace Mann School, shows that out of one hundred and fifty children set apart by their infirmity and specially educated, fully 8 per cent. are capable of being restored to an amount of hearing which will enable them, in some instances with the help of artificial aids to hearing, to take their places in the society of people of normal average hearing; while still others, to the extent of an additional 5 per cent., can be so far improved as to be materially aided in their power to acquire well-modulated articulation. Between 10 and 15 per cent. of these cases, in addition to those already mentioned, are found to illustrate the truth of the saying that disuse is abuse, for in them it is possible, by means of speaking-tubes and other appliances for the direct communication of sound to the perceptive organs, to awaken what may be called, for want of a better term, the latent hearing, and make it, if not a means of communication or consecutive thought, at least useful for improvement of the articulation.

With the continued prosecution of this investigation there is opened a large field for the study of the causes of high grades of deafness in young children, and one leading to better knowledge of possibilities of prevention. A pronounced need is more sure of being helpfully met than one which requires investigation for its detection, and it is precisely in this respect that the subject of sense-perception should be more carefully studied in our public schools; the peripheral is far more common than the central defect, and is, moreover, amenable to remedial measures.

The sense of hearing, in the normal individual, is so much a part of the involuntary perception system of the animal economy, and so little the subject of voluntary effort, except in the upper limit of overtone accommodation and in the determination of the direction of a sound source, that a moderate degree of diminution is liable to pass unnoticed. The bounty of nature provides us always with more than our actual need, and it is possible to lose nearly one-half of the normal hearing power, especially if this loss is so gradual as to permit of the formation of com-

pensatory sense-habits, before the practical, basal, normal average is reached. This loss, however, implies something more than subtraction from the working power of a single sense. That impairment of the hearing power should be an inconvenience is readily understandable; that it can make so large a demand upon the nervous energy as to be a source of fatigue needs personal experience or observation for its full appreciation.

Before birth the cavity of the middle ear, containing the sound-transmitting mechanism, almost as fully developed as in adult life, is filled by a protective cushion of tissue, which usually disappears with the first cry; and the human infant is apparently sensitive to sonorous vibrations within a few hours after its birth. The education of the brain thru the organ of hearing, therefore, begins at a very early period, and the habitual classification of sounds in reference to their cause, their indicative importance to the individual, and the location of the sound source is easily assured.

The establishment of a perceptive habit implies provision for the expenditure of nervous energy along a given line, deviation from which necessitates a further expenditure of energy proportionate to the degree of deviation from what was formerly the line of least resistance. Changes in the tension of the sound-transmitting apparatus of the middle ear, and in its sound transmission incident to disease, may so alter or decrease the sounds perceived as to make them unfamiliar and needing explanation by a mental process; and the total, or even partial, abolition of the hearing power of one ear, the other remaining intact, may so far interfere with the ability to appreciate the direction of a sound source, which is one of the habits of normal binaural audition, as to be not only a cause of embarrassment but a serious demand upon the nervous energy as well. To the individual possessed of a reasonably perfect machine, the working limitations incident to possible imperfections in that machine are with difficulty appreciable by any merely mental process, and it is therefore only by the sufferers themselves, or by those whose business it is to study imperfections, effect repairs, and suggest compensations, that the full cost in expenditure of nervous energy required to overcome an obstacle, either to perception or to expression, can be adequately understood. With the abolition or limitation of one or another of the channels of communication thru the human machine, a portion of that nervous energy which is constantly seeking peripheral expression must be expended in the adjustment to the new conditions, and to the utilization, in a compensatory way, of other channels of communication. Give, therefore, a limitation of sight, of hearing, or of tactile sense, an expenditure of energy, in what way may be termed the conversion of force, is required, which evidences itself in the individual as that complex of symptoms to which we give the name of fatigue.

That this fact should be better illustrated in children than in adults is readily understandable, and special examination of large numbers of children within the school age shows a greater percentage of cases of impairment of hearing, accompanied by fatigue symptoms, than might be supposed upon the basis of ordinary observation.

Of a large number of cases of partial deafness, ocurring in children under sixteen years of age, the causative diseases are amenable to treatment, with more or less improvement in hearing; while an examination into the etiology of partial deafness in children shows that the diseases of the middle ear are its most frequent cause, and, furthermore, that many cases of partial deafness are due either to sub-acute or chronic catarrhal inflammation of the middle ear, or to the purulent inflammation, accompanied by perforation of the drum head, which follows the simple acute inflammation, or occurs as one of the sequelæ of the exanthematous diseases of childhood.

This general rule is subject to certain differences, in differing classes of society. Among the wealthier classes, for instance, which perhaps merit our attention less in this connection, because their children are educated more frequently in private than in public schools, the diseases of the ear accompanied by partial deafness and more or less amenable to treatment, in children under sixteen years of age, amount to but 7.8 per cent. of the whole number of cases of ear disease in children and adults taken together. Of this number, making the 7.8 per cent. of the whole, 76 per cent. are traceable to the exanthematous diseases of childhood, especially scarlet fever, and in 56 per cent. there is found an existing purulent inflammation of the middle ear, requiring treatment, and causing a sufficient degree of deafness to interfere with the patient's participation in the ordinary school exercises, on equal terms with other children.

Among the middle and poorer classes the proportion of diseases of the ear in children is largely increased, and it is these classes which we have particularly to consider, since they more generally avail themselves of the advantages offered by public instruction. Out of a thousand cases of disease of the ear, examined in patients of this category, 24.95 per cent. ocurred in children under fourteen years of age. Of this number 49.8 per cent. were examples of purulent inflammation of the middle ear; 10.5 per cent., of the cases of purulent inflammation being due to scarlet fever. As many as 23. 6 per cent. of the cases of disease of the ear in children were examples of either acute or chronic catarrhal inflammation of the middle ear.

This brief analysis is sufficient to show the much greater prevalence of such diseases of the ear as are liable to induce partial deafness in the children belonging to those classes in society which depend for their instruction on the advantages offered by our public schools.

A more minute analysis of the material offered affords interesting

information as to the general causes, and the average course and results, of diseases of the ear in children. It may be remarked, however, that in the analysis given only those cases are included in which the deafness was not so decided as to interfere with the acquirement of articulation, or even with the use of the ear as a medium for instruction. The number of cases of positive deaf-mutism, and of cases in which, while there was a certain degree of hearing, it was so slight as to render instruction in articulation necessary, was 4.9 per cent. of all the cases in children examined. The average age of all the children examined was about nine years.

In addressing any audience, it is always noticeable that some individuals give evidence of imperfect hearing, either by turning one ear toward the speaker, by supplementing the receptive capacity of the auricle by means of the hand, or by an effort at strained attention in watching the lips of the speaker. Such evidence in a roomful of children would permit the selection of these individuals for more careful tests as to their hearing power, and for their further examination by a medical expert selected for that purpose and regularly appointed to the discharge of that duty. It should be the further duty of this officer to keep a careful record, preferably an indexed card record, of his examinations, of the reference of cases to hospitals or infirmaries, and of the result of treatment; for, since the public school is a secondary home, and in large community centers with a foreign population especially so, there is afforded an opportunity, in addition to that of moral and intellectual training, for the betterment of the machine in which the child lives and learns, and in which, as a citizen, it must wage its battle of life.

With the considerable and increasing demands made upon the teaching staff of our public schools, it is very plain that the burden of special examination into physical defects — except selectively — should not be placed upon the teacher. For selection purposes the tests may be of the simplest, and applicable, with but little addition, to the routine of classroom work.

As an example may be taken the rules for hearing tests formulated for the department of physical training of the Summer School of Harvard University, and already published. These rules lay special stress upon the value of the voice as a hearing test, and, while not an instrument of precision, it is, in the case of a school-teacher, the sound to which the children are expected to listen and by which they are largely trained as well as taught.

Human speech is made up of a series of vocal sounds, all within a short compass, which are modified, obstructed, or terminated by changes of position in the articulating apparatus, to the effect of which we give the name of consonant checks. A superficial study of these checks shows that some of them are formed in the front, some of them in the middle, and some in the back of the mouth; that they are, with few and

slight exceptions, accompanied by a greater or less degree of resonance in the nasal and pharyngeal cavity, and that they vary considerably in the amount of muscular energy required for their production; and, furthermore, that the principal distinction to the ear between such consonant sounds as are similar in character is due to the greater or less preponderance of a small number of qualitative overtones. Further than this, we are aware that the consonant sounds which nearly resemble each other, in both force and musical value, are produced by the co-ordinating operation of very nearly the same sets of muscles, and therefore are accompanied by very nearly the same facial expressions.

Given, therefore, an average case of marked impairment of hearing, the result of a slowly progressive middle-ear disease, the patient will hear most readily the consonant sounds which require most force in their production; these include four explodents—*t*, *d*, *p*, and *b*—which very nearly resemble each other in force and tone value; they are, however, formed in the front of the mouth, *p* and *b* being distinctly labial, and *t* and *d* as distinctly formed by the contact of the tip of the tongue with the upper incisors. From the position and formation of these consonants, and the necessity for distinguishing between them, it usually ensues that their differentiation makes the first step in that instinctive study of lip-reading which to the appreciably deaf person becomes eventually more or less habitual, and which offers another channel for the expenditure of nervous energy in the effort to see, as well as to hear, the spoken word.

The other consonant sounds having the greatest logographic or force value, *k* and *g* for instance, are those formed in the back of the mouth, and are accompanied by a lesser degree of recognizable facial expression than the front consonants; while the consonants having the least force value—*f*, *l*, *n*, *m*, for instance—very nearly resemble in the mechanism of their construction the harder consonant sounds of nearly the same musical value.

It thus comes about that the deaf person will, when a soft consonant occurs in a sentence, substitute for it, mentally, the hard consonant sound most nearly resembling it, which would have been heard had it been used. In any given sentence, therefore, there are to the very deaf, tho seeing, person certain consonant sounds which are distinctly heard, others which are imperfectly heard, others which are detected by sight, and still others which are merely inferred.

Bearing in mind rather the force value than the tone value of the consonant sounds, it is easy to select a list of words, preferably monosyllables, which shall fairly cover the range of the consonant checks, and this list may be varied, both in selection of words and in their order, to avoid the possibility of memorizing on the part of the children.

For the purpose of teachers' tests the use of the voice may be supplemented by that of the watch and the tuning-fork, it being understood

that the duty of the teacher, in this respect, is limited to the selection of the cases to be subsequently submitted to expert examination. The test methods here suggested demand but little time and are by no means a burdensome addition to the ordinary class-room work.

1. Stand before the children in the schoolroom in the position which you usually take in addressing them, and, speaking in the tone of voice which you commonly use, asking them to make some unusual gesture—for instance, raising the left hand with the fingers extended, or with the thumb pressed into the palm of the hand; note the children who do not respond, or who respond so slowly as to suggest imitation merely and bring them forward, repeating the above test, with variations in the wording, until a certain number of children with evidently imperfect hearing have been selected for individual examination.

2. In the individual test for the voice, test first binaurally: stand at a definite distance, ten feet for instance, behind the child, and pronounce selected monosyllabic words in a moderate tone of voice, the words to be repeated by the child as heard, and the result noted not only in the consonant sounds lost, but also in those substituted. Monaurally the word test should be repeated with the ear opposite the one tested tightly stopped by finger pressure.

The watch, used in testing monaurally, should first be held with its face close to the ear, the other ear being stopped, and gradually withdrawn until no longer heard, then, gradually approximated to the ear until again heard, when the distance of the watch from the ear should be measured and noted.

The tuning-fork set in vibration by pressing the tines together at the tips, with the fingers, and then suddenly releasing them, or by striking the fork upon the palm of the hand, should be held opposite, and close to, each ear in succession, the ear in which the sound of the fork is heard less, as determined by duration of hearing, being noted. In making this test the tuning-fork should not be held continuously opposite the ear because of the liability to memorization of the tone.[1]

A series of tests of this sort, adopted as a part of the ordinary school routine, would do much toward simplifying one of the problems with which the teacher has to deal in the determination of individual educational fitness; and I desire to bespeak your furtherance of the adoption of this, or of some similar method, as a part of your championship of the furtherance of that which has already proved itself useful—the participation of the medical profession in the advisory inspection of public schools.

[1] A convenient tuning-fork for this purpose is the clinical test-fork (physical C 512 v. s.), with slender tines and weighted tips, made by Queen, in Philadelphia, and Meyrowitz, in New York, and procurable thru surgical and philosophical instrument makers.

II

FACTS AND FALLACIES IN THE EXAMINATION OF SCHOOL CHILDREN'S EYES

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The importance of the care of the eyes of all school children has long been recognized, and attempts have been made to exercise a certain amount of supervision in many schools. Most of these attempts have been based on the examination of the children's vision by the use of test cards in the hands of the teachers themselves. The result has been that when a child's vision proved to be below the normal, he was referred to the physician, or his parents notified that he should have a proper examination. But when the child's vision proved to be normal, it has too often been assumed by the teacher that the eyes were "perfect," and that the teacher's duty with regard to the child's eyes ended there. To show that this is not the case is the object of this paper.

In order to make myself plain, it is necessary to occupy a few moments in a very simple description of the anatomy and physiology of refraction. The normal eye is so constructed that rays of light coming from the distance, entering the eye and passing thru the lens, are mechanically brought to a focus upon the retina; but when a near object is looked at from a distance of one, two, three feet, or more, the rays of light would necessarily be divergent and, passing thru the same lens, would necessarily come to a focus behind the retina. Therefore we have the mechanism of accommodation. This, reduced to its simplest terms, is the muscular arrangement within the eye whereby we are enabled, when looking at near objects, to increase the convexity of the lens to such an amount as is necessary to bring the rays of light to a focus upon the retina. This mechanism, you will note, is muscular and is governed in its action by nerves. Therefore, every act of accommodation implies an expenditure of nervous and muscular force. So much for the normal eye.

Many eyes are, however, abnormal. Either the distance from the anterior surface of the eye to the retina is longer than it should be, so that the rays of light come to a focus before they reach the retina, cross, and produce a blurred image; or it is too short, so that rays of light passing thru the lens reach the retina before they come to a focus, and thus also produce a blurred image. In the first instance, the so-called myopic or long eye, it is possible for the individual, when looking at near objects, to put the book at such a distance from the eye that the rays of light passing thru the lens will come to a focus mechanically upon the retina without the intervention of any muscular effort to render the lens more convex. It is evident that such a person reading without muscular action is able to continue without fatigue for a considerable length of time, and near-sighted people are wont to boast upon the "strength" of

their eyes on account of this fact. As our accommodative apparatus can make the lens more convex, but it is absolutely unable to make it less convex except by relaxation to its original convexity, it is evident that the near-sighted person cannot by any voluntary action see distant objects. By test-card examination, therefore, the near-sighted individual is always detected; but when the eye is hypermetropic, or too short, the child soon discovers that by making use of the accommodative apparatus he is able to make his lens more convex, and by this means bring the picture to a focus upon the retina, altho the length of the eye from the anterior surface to the retina is much too short.

In many people the shortness of the eye requires for its correction for distant vision as much expenditure of nervous and muscular force as the normal eye requires to be exerted for the act of reading. If anyone should place an open book fifteen inches from your eyes when you awoke in the morning, and keep it there the livelong day, requiring you to keep the letters sharply focused, and should repeat this experiment day after day and week after week, you can imagine what your mental and physical condition would be at the end of a comparatively short interval of time; yet the child with hypermetropic eyes who is doing this thing every day of its life, and is by this act enabled to read the highest line test type at a proper distance, is pronounced by the test-card examination normal. Of course, when such a child undertakes to read, he must not only exert the entire accommodative force required of him to see at a distance, but he must add thereto as much more nervous and muscular force as is exercised by the individual with normal eyes in order to read.

Every person has a certain amount of nervous reserve, much greater in some individuals than in others, but this expenditure of nervous force to control and make perfect vision during every working moment of a person's life soon exhausts the reservoir. The nervous mechanism loses its balance wheel, and various phenomena present themselves. In school children this nervous exhaustion generally expresses itself: (1) in headache coming on the latter part of the forenoon, or after any long-continued near work at any time of day; (2) in lack of muscular control, expressed in popular speech by the word "nervousness;" this lack of control may go to excess and produce muscular twitchings of the face, head, hands, arms, and legs; (3) in mental inability to grasp an idea which is presented thru the eyes; this in turn, from the mental fatigue, produces disinclination either to use the eyes or to give attention.

In the above statement I have avoided the use of the term "astigmatism," as all astigmatic conditions are either hypermetropic or myopic, and are included in the above general statements. But if a child has more error of refraction in one eye than in the other, or if the curvature of the eye or lens is such that either or both eyes have a higher refractive error in some meridians than in others, the burden of correction is greatly increased, even when the errors are small.

Again, we have two eyes, and for comfortable vision each eye must look at the same object at the same instant with mathematical accuracy, in order not to have double vision. This brings into action the external muscles of each eye, and these muscles may vary greatly in strength, so that single binocular vision is obtainable only by the use of constant semi-voluntary exertion, instead of being automatic, as is the case in normal eyes. This, again, is another source of nervous fatigue and, when combined with refractive errors, adds greatly to the burden. Such children in doing near work often bring to the aid of their ocular muscles the muscles of the lid and brow—in other words, they scowl, producing vertical furrows in the forehead above the nose.

The ultimate outcome of all this nervous strain is an apparent stupidity in undertaking the tasks imposed upon them, a disinclination to apply themselves, and, finally, a nervous breakdown which so impairs the general nutrition that the child has to be removed from school; when he promptly recovers—this recovery being variously attributed to relief from over-study or from the bad air of the schoolroom, or to the good offices of the physician, according to the mental predisposition of the parents.

All of this uncomfortable history can be avoided if due attention is paid to the headache, to the nervousness, to the twitching, to the mental irritability of the child; for from this picture a much more accurate estimate of the condition of the child's eyes can be formed than is in any way possible when examining the accuracy of his vision on the test card. All of this requires no special skill. It only requires that an intelligent interest in the welfare of the pupil shall be taken by the instructor.

But children with perfectly normal vision form vicious ocular habits. The young child is well aware that an object near by is more easily seen, and therefore more easily understood, than one that is a long distance away; hence when he first begins to use books and is puzzled as to the meaning of words or characters, he incorrectly applies the same reasoning, and instinctively feels that he can understand that which he is looking upon better if he approaches his eyes to the object. Young children have a great amount of accommodative power, much more than adults; therefore the burden is not so difficult to bear, and, if the faulty position is not corrected, may be maintained habitually. The ultimate result of this is disastrous. The plastic, developing eye is unable to stand the strain, and eventually the coats of the eye are stretched by this undue effort, and such an eye is converted from a normal eye rendered artificially myopic into an eye which is permanently myopic. From the point of view of an oculist, the teacher who permits children to place their eyes too near their work is guilty of a negligence which may cause permanent impairment of vision for distance thruout the rest of the pupil's life. Surely education should be a means of fitting pupils for their after-career, not a means of saddling them with a serious handicap.

Let us have the examinations by test cards continued. They are a useful survey of the ground, and the child who does not come up to the normal test in each eye should be referred to the medical inspector in charge of the school, or his parents promptly notified that his eyes are defective and should be examined. But I would most strenuously urge upon you that, having done this, your duties have but just begun. All dull and inattentive children should be carefully watched and questioned, and if a story can be elicited reciting headache, undue fatigue from the day's work, blurring of the letters when studying, and, especially, if the teacher has noticed muscular twitchings or scowling, or the child puts the head too near the book, the child should then be promptly referred to the medical inspector, or the parents notified as before. This can be done with as much safety with regard to an opinion of ocular defectiveness as if the child could read but half-way down the test card.

But teachers are not the only sinners against children's eyes. Architects and superintendents of public buildings are often much to blame. Every schoolroom should be so arranged that light shall fall on the pupil's desk from the left. The object of this is to throw the shadows away from the point of the pen, so that the child may clearly see that which he has written. And let it be incidentally remarked that light coming from the rear of the room does the children very little good and does the teacher's eyes much harm; and inasmuch as most of you have such windows in your rooms, accept herewith advice, and, if the room is otherwise well lighted, keep the shades of the windows in the back of the room always down. You will wrong no pupil, and you will benefit yourself. The walls of the room, if there is plenty of light, should be an exceedingly pale green or blue—never red, or brown, or chocolate color. If the building is in the city and the light is poor, buff or yellow is permissible. The desk should be so arranged that the book can be inclined at an angle which will enable the child to see without bending his head and cramping the vessels and muscles and the neck; it should also be so arranged that the child cannot lounge forward upon it and get his head too close to his work.

Attention to the few recommendations made above will not only lighten your tasks as teachers, but will save misery both in childhood and manhood to many of your pupils.

III

SOME EYE DEFECTS OF FEEBLE-MINDED AND BACKWARD CHILDREN

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The fact that congenitally feeble- and weak-minded children are prone to marked congenital malformations of the eyes is recognized by many observers. Marie and Bonnet, of Paris, together examined a large num-

ber of idiots and imbeciles, finding many with marked eye defects. The defects most frequently met were hypermetropia, astigmatism, and strabismus or squint. Many were found with amblyopia, which means partial blindness of one eye without apparent anatomical cause, with strabismus and nystagmus. Deficient power of accommodation was frequent. Anomalies of formation of the iris were found, including complete absence. The pupils were often oval, and they considered this and congenital cataract to be among the stigmata of degeneracy. The optic nerves were often found oval in shape, or showing atrophy with defects in the choroid.

Evidences of faulty development of the posterior occipital lobes of the brain, where the higher centers for sight-perception are located, were usually associated with an asymmetry of the skull, especially a flattening of the back. These posterior cerebral lobes are often much flattened, especially in the congenitally blind idiots, as shown by Monakow, Reinhard, and Benedikt. Kolliker has shown a correspondence between atrophy of the cerebral lobes and arrest of development of the optic vesicles. Measurements of the skulls of idiots with marked eye defects have shown the brachycephalic type to predominate. Sixty per cent. of the cases showing small or flattened skulls showed eye defects.

Marie and Bonnet found cases where there was defective color-perception. Red was shown to be the preferred color of idiots, and this is explained by Helmholtz by the fact that the red rays have the longest wave and the slowest vibration. The primitive eye has perception of color and light, but acquires vision from early perceptions. The education of the eye of the imbecile is compared to that of children. The acquisition of ideas of form and distance implies the use of the powers of accommodation and convergence, and mental operations.

Idiots and imbeciles who are content with what they see and with what the eye furnishes them do not realize relative size and distance. These are rather cerebral defects than ocular. Idiots form only incomplete and defective judgments of their visual perceptions. With them the image does not suggest an idea. They lack voluntary attention, and the more they can be brought to pay attention, the more will they improve. *Sight is by far the most important sense in its relation to the development of the intellect*, and of all idiots those with congenital blindness are the least susceptible to moral and intellectual improvement.

Many of these defects do not interest us at this time, because not remediable. The most frequent malformations, as shown above, are those of shape, which, causing more or less remediable errors of refraction, interest us particularly. Of these by far the most common are the short, or hypermetropic, eye, and the eye where one meridian of the corneal curvature has a much longer radius than the one at right angles to it, or the astigmatic eye.

The word "astigmatism" is one of mystery to most laymen, so I

will tell you how you can easily illustrate to anyone what the term means. If you take a hen's egg and hold it so as to show the large round end, you will find that lines drawn thru the center of this end will create curves having practically the same radius of curvature in all meridians. This would represent the normally curved cornea. If, now, the egg be placed upright, it is easy to demonstrate that a line drawn horizontally around the egg creates a curve with a radius much shorter than the radius of the curved line perpendicular to it. This would represent the astigmatic cornea much exaggerated. The long or myopic eye is usually an acquired defect, tho I have seen several Mongolian idiots with high-grade congenital myopia. Let us now see how these errors, when considerable in amount, affect the use of the eye.

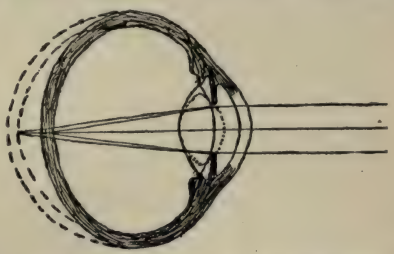

Diagram showing the hypermetropic eye. Broken line shows back of normal eye where parallel rays of light are focused with lens of eye at rest. Dotted line shows lens of eye increased in power by accommodative effort to focus the parallel rays on the retina of the short eye.

The short or far-sighted eye is the most frequently observed in these cases. In this eye at rest an object at a distance has its image formed behind the retina, and for the eye to see clearly, it has to bring into action its power of accommodation often much in excess of the amount necessary for a normal eye to accommodate for an object at fifteen inches. Now, when such an eye tries to see clearly at the ordinary reading distance, there is the usual accommodative effort necessary, added to the excessive amount already in use for distance. This combined excessive effort is much too great, and the eye cannot keep it up; so the accommodation soon relaxes, the type becomes blurred, and the book or paper is dropped. A child with such eyes finds it increasingly difficult to keep book type clear, no matter how large, and will early cease making any prolonged effort. If such a child is naturally dull, the inability to study makes the dullness very much more marked. This error, besides being the most frequent, is the least easily detected, for the child, unless the hypermetropia is of an unusually high grade, can often read as small test letters at twenty feet as the child with normal eyes, and for a time can often read the finest type at ten inches.

In the astigmatic eye a partly blurred image is always formed; for if rays of light coming from an object, and after passing thru a certain meridian of the cornea, are focused on the retina, the rays passing thru the meridian at right angles to the first will be focused in front of the retina if this meridian have a longer radius of curvature, and behind the retina if it have a shorter. In either case a blurred image results, so that a clear distant vision, as well as near, is rendered difficult or impossible. The child with moderately astigmatic eyes may also, by an effort of accommo-

dation, by partly closing the eyelids, or by educating the brain to interpret partly blurred images, be able to pass the school test, as a child with normal distant and near vision; but the great effort to maintain this soon produces symptoms of strain and disinclination to study.

I am prompted by the fact that children with even considerable degrees of hypermetropia and astigmatism often pass for normal sighted, to suggest that *every apparently dull and backward child in our public schools should have a thoro examination of the eyes, even tho the ordinary school tests show nothing abnormal as to acuity of vision or appearance of the eyes.*

You notice that I use the word "apparently" in speaking of dull and backward children, and I do so advisedly, for I find that such children with defective eyes must be divided into two classes; namely: those who are really mentally deficient, and whose defective eyes simply make their condition more pronounced; and those whose minds are normal, but who appear dull because they cannot keep up with their schoolmates on account of their inability to overcome their eye defects without a great, or often impossible, expenditure of nerve force.

The unusually high grades of hypermetropia are more easily detected, as such eyes cannot accommodate enough even to get clear distant vision, and the schoolbook is held within a few inches of the eyes to get as large an image as possible, even tho it be blurred. These are the cases that are sent to the oculist as being very near-sighted—an excusable error. The very high grades of astigmatism would be classed with high grades of hypermetropia, with which they are often combined.

The backward children with moderate or high grades of myopia need the greatest care. They cannot see the blackboards clearly, even tho seated near them, and what they do see is only with a strain. They cannot see to play the games of their schoolmates; but they can usually see to read by holding the book close enough; and herein lies their danger. They spend their time looking at things or books close to their eyes, and without enough outdoor life become pale and sickly. The eyes at their best are more or less diseased, consequently become more and more near-sighted, until all vision is greatly reduced. In all these children, with eyes defective by reason of refractive anomalies, the nearer we can bring the refraction to the normal by the aid of glasses, the more we shall help their eyes and brains.

I have not tabulated enough cases myself to deduce statistics of value. It has been my privilege, however, thru the kindness of Dr. W. E. Fernald to examine the eyes of a considerable number of the children from the Massachusetts School for Feeble-Minded, and I have also seen many backward public-school children who have been sent to me by teachers, doctors, and parents, so that I have become convinced that marked errors of refraction are unusually frequent in children of feeble-minded schools, and extreme errors common; while I am equally sure

that the same holds true, but in a lesser degree, for the backward children of our public schools. The benefit that the children in institutions for the feeble-minded may derive from a correction, by glasses, of their refractive defects is not great, depending largely, as previously shown, on the degree of mental defect. The very low grades of idiots will not take care of glasses, or even wear them, or, if they did, their minds are too defective to appreciate any difference or really be benefited. In the higher grades of imbeciles, those with marked errors will be benefited by glasses, if they can be made to wear them; and they should always be tried. Such children will certainly be able to do the things they can be taught to do better and with less fatigue, and it is conceivable that in doing so their minds will improve more readily than before, particularly if they thus pay better attention. It is, however, in the backward children of our public schools, whether they are separated and under the care of special teachers or not, that the greatest benefit is to be derived from improved eye conditions; and to bring this to your attention is the principal object of my paper. I have personally seen many apparently dull and backward children transformed into bright, energetic pupils by the removal of the depressing burden of an uncorrected hypermetropia; and I have seen a number of mentally defective and feeble-minded children take unusual strides in their mental development, after a proper correction of their eye defects.

Here in Boston there are five special classes in the public schools for the instruction of backward children, and I hope such classes will ultimately be established in all large communities. These classes are not supposed to take the true imbeciles, who should be kept in institutions devoted to the instruction and care of such cases. Before placing a public-school child in one of the special classes, it should be the duty of the person who authorizes the change to ascertain if the case is one of pure mental deficiency, or whether the mental defect is caused or aggravated by remediable or partly remediable defects of the higher sense-organs, particularly the eyes. In all large cities where there is a regular medical inspection of the schools, one of the inspectors should be competent to detect any eye defects, and to him such cases can be referred, and the necessity of correcting any defects found can then be urged on the child's parents or guardians. Most parents are deeply interested in the welfare and progress of their children, and, with the many free eye clinics and charitable organizations, no child, even of the very poor, need be kept back on account of an easily corrected defect.

From my studies of this subject and my own personal experience, I feel that I am justified in the following conclusions:

1. That anomalies of the eyes, particularly refractive errors, are unusually frequent among feeble-minded and backward children.

2. That proper correction of all correctable errors will allow a greater and more rapid improvement of the mental powers in many cases.

3. That many normal children are kept back in their studies by some eye defects, the correction of which will allow the apparently backward children to keep up with their mates.

4. That all children with real or apparent mental deficiency, in our public schools, should have a thoro examination of their eyes, and this should be urged upon parents and guardians by physicians and teachers.

In closing, allow me to urge all teachers, special or otherwise, who have such children placed under their care, to make sure, if they can, that the possibility that eye defects are aggravating or causing the difficulty is eliminated.

IV

SOME DISEASES OF THE NOSE AND THROAT OF INTEREST TO TEACHERS

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In the consideration of this subject I shall pay very little attention to the diseases of nose and throat which interfere with the child's mental or physical development, but more particularly to two diseases which interfere so considerably with the formation of the throat as markedly to retard the development of the child's voice. These two diseases are cleft palate and adenoid vegetations in the nasal pharynx.

The first of these two is one of the oldest recognized diseases in medicine; yet I have been frequently surprised, both in private and hospital practice, to see the number of people who have been allowed to reach adult life without any attempt having been made properly to close the cleft in the roof of the mouth either by a plate or by operation. In those cases where a cleft of the palate is associated with a harelip, an early operation is much more likely to have been performed. Certainly the harelip will have been closed in infancy, because it interferes with the nursing of the infant, and because the deformity is more evident to the parent. A cleft of the palate is more easily closed by an operation in the young child than in the adult; the result of the operation is not very satisfactory in many cases, and is less so as the patient grows older.

A cleft of the palate can be readily recognized by inspection. There is a V-shaped opening in either the hard or the soft palate, or both; the the point of the V in extreme cases being just back of the front incisor teeth. Small clefts may include the soft palate only, or we may have merely a bifurcated uvula. Naturally the larger the cleft, the more marked the defect in the development of the voice. Where the cleft includes any considerable portion of the soft palate, there is a marked interference of all the consonant sounds; only the vowels are rendered perfectly, and those with a peculiar intonation; so that where the patient is able to form the word, the peculiar pitch of the voice renders recogni-

tion of the sound difficult to the uninitiated ear. The peculiar nasal pitch of the voice is easily recognized by anyone used to the disease.

Of course, a cleft is not going to increase in size, as it is entirely a congenital lesion. In my opinion, there is very little use in paying attention to special instruction of the voice, until some method of closing the cleft has been tried. As I have said before, an operation is always the best method, when feasible, and should be tried in all young cases before trying any other method. In all cases where an operation is unsuccessful, and in all adult cases, a better result will be obtained by the use of a plate filling in the cleft. Such plates are rather difficult to make, but are apparently easily worn by the patient. The resulting effect upon the voice is not nearly as good as where the palate is closed from an operation; phonation is always more or less imperfect, particularly in the use of the palatal consonants. In all operative cases where the cleft is closed as the result of an operation, the effect upon the voice is phonetically very good; at times the child may need some special instruction in order to obtain a perfect palatal sound.

While a cleft of the palate is, as I have said, one of the oldest diseases known in medicine, and one of the earliest recognized, adenoid growth in the nasal pharynx, which is of much more frequent occurrence the world over, was not recognized until 1868. We know from old paintings and statues, as well as from old editions of medical text-books, that the disease must have existed since the civilized era, and as it is distinctly easy of recognition when one's attention is called to it, it is the more astonishing that its recognition was so long delayed. The growth is exceedingly common in children; it is hereditary in its nature, and probably in this latitude occurs in at least 5 or 6 per cent. of all school children. It is often associated with an enlargement of the lower or faucial tonsils, and to this enlargement was attributed, in former days, all the symptoms which we now know come from the post-nasal obstruction.

The facial expression of the child is almost diagnostic, and in large growths the speech is perfectly characteristic; the upper lip is short, and shows from two to four front teeth in the upper jaw; the upper jaw is narrow; the nose is narrow, and the face full under the eyes. On looking in the mouth, the hard palate is markedly arched, especially in older children where the growth has not been removed, and where the palate has been allowed to become deformed with the growth of the child; the line of the teeth is often irregular and there is occasionally a more or less perfect double row of teeth. The child is a persistent mouth-breather, and is apt to snore, or breathe hard, in sleeping.

Of course, enlargement of the lower tonsils is easily seen by anyone, on inspection; the child is apt to have repeated colds in the head; always has a thick nasal voice, and the consonants *n*, *m*, and *g* are particularly difficult to pronounce; in many cases there is either deafness or a history

of repeated attacks of earache. There is apt to be a marked retardation of the child's development, both mental and physical, so that the child is under size and at least two classes in school behind its associates of the same age. To a certain extent its deficiency in mental acuteness is attributable to the deafness, but in other cases it is certainly associated with the adenoid growth directly. In my opinion, enlargement of the tonsils, even to a very considerable size, has apparently little effect upon the development of the voice. It is not uncommon for any specialist to see well-trained singers with enlarged tonsils, who have no difficulty in acquiring and maintaining a perfectly clear and well-opened tone of the voice. Patients, however, with very large tonsils are apt to have fatigue of the voice upon unusual exertion, as, for instance, in speaking for a long time, or speaking to a large audience.

A peculiar thick, muffled tone of the voice, which adenoid patients nearly all have, is quite characteristic. The interference in most cases is principally with palatal sounds, particularly with *m*, *n*, *g*, and *p*. This difficulty in speech is partially from the interference with the vibration of the soft palate from the pressure of the adenoid growth, and partly from the obstructed nasal chamber, the narrowing of the nose, and the arching of the roof of the mouth. Such defect in the speech as results from the former of these causes, namely, from the interference with the vibration of the soft palate, will, of course, be removed by removal of the growth at any age, and removal of a growth of any size will also give an increased resonance of the voice at any age; but it should always be remembered that such obstruction of the speech, as comes from the narrowing of the nasal chambers will be remedied only by removal of the growth in early childhood, before the bony framework of the nose, nasal pharynx, and mouth has assumed its permanent shape; that is, before the child is ten or twelve years old. In fact, the ideal age to get the best results from adenoid operation is certainly between the ages of three and five or six, as the child's throat, nose, mouth, and teeth are then assured a perfect development. Certainly, in my own practice the results of operation in cases over eighteen or twenty years old have been quite unsatisfactory, as far as the effect upon the voice is concerned. This is not only from the interference with the nasal pharyngeal resonance, but also from the fact that the persistent mouth-breathing, particularly at night, keeps up the constant irritation of the pharynx and vocal cord, and destroys the fineness of the tone. In such patients, the production of a clear and distinct tone is almost impossible. We see, therefore, that both the affections which I have so briefly considered should be recognized at an early age in order to obtain a good result by treatment. In both, the treatment is surgical, and, unless the case has been allowed to go too long, it is productive of almost perfect result. Certainly in 99 per cent. of adenoid growths the result of the operation will convert the most skeptical parent.

Curiously enough, the parent is the one in the majority of instances who is less observant about her own child, and it is therefore to the teacher of the child that we must look for an early recognition of its deficiencies, and for advice as to their repair. The responsibility of the teacher in this direction is most clear and cannot be evaded, although it may be relegated to such schools as have an enlightened and thoro medical inspection.

V

WHAT TEACHERS NEED TO KNOW ABOUT SPEECH IMPEDIMENTS

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One great drawback in presenting this subject is the lack of any definite authority in regard to cause and mode of treatment. It is noticeable that, whether brain lesion, nervous affections, mental weakness, spasm of the glottis, diseased tonsils, or any other disease or weakness is the supposed cause, breathing exercises, articulative drill, shouting, separate or in combination, form the usual means for its correction. The logical conclusion is that, if a person cannot speak a word, he must learn to form the sounds composing it, and practice them until he can. If he expels the breath and exhausts the lungs, or inhales with a gasp, as many do in commencing to speak, it seems evident that he must learn how to breathe.

Upon this basis, with no knowledge of facts, my investigations commenced. Having taken lessons for years from the best teachers of the speaking and singing voice, I felt fully equipped for the work. My first case was drilled upon each consonant, and was made to speak the word with confidence. Words were woven into sentences, and soon the boy could speak and recite very well. Other cases were treated in the same way; but, while they could talk, read, and recite when with me, the power was gone as soon as they were exposed to outside influences. A case came who was made worse by the training. This was varied in every way, but it became apparent that if the work were continued the boy would become speechless. With this case the plain path disappeared. The question arose whether breathing exercises and articulative drill would correct or remove brain lesion, nervous affections, or any other assumed cause of this difficulty. It was noticed that the breathing of all these pupils when quiet, with mouth closed, was perfectly natural. Did, then, the breathing affect the speech, or the speech the breathing? It was a mystery why one could repeat consonants and words for hours, and, after a short interim, be wholly unable to speak them. It became evident that the repetitions gave rise, after the intervals of rest, to an increasing fear of those sounds. The theory had been that muscular weakness of lips,

tongue, and throat had much to do with the inability to speak, but, in truth, an increase of strength in those muscles increased the difficulty.

This questioning led to reading all the literature to be found upon the subject, and to visiting institutions in this and other countries. To my surprise, the method of training was practically the same everywhere, with similar results. In London and in Berlin such cases are trained with deaf-mutes.

The story of the influence that led to the truth has been repeated many times, but must not be omitted here. The Centennial Exposition took me to Philadelphia, and a call was made upon Madame Seiler. We discussed the subject freely. Her plan of work differed in no respect from that of others, in the training of persons having speech impediments, but the voice in singing and speaking was her specialty. She invited me to be present while she gave a lesson in vocal music. The point emphasized was: "Make a tunnel of your body. There must be no stop along the way." This was new to me. When Dr. Grant, a clergyman friend, lost his voice thru severe throat trouble, clearly resulting from a wrong use of the voice, he was induced to take treatment of Madame Seiler. "There's a divinity that shapes our ends." As he explained to me what he had learned, and showed by every word spoken the great gain that had been made, it occurred to me to compare his voice, as it had been, with those of some having speech impediment. A trial of her process was made with entire success. He had no impediment, and it took me some time to see that his case differed in having the contraction above the vocal cords; in theirs the glottis was closed and the passage of breath stopped. If the contraction centered at any place where the breath could be stopped, an impediment would result; if a little above or below that point, what is called clergyman's or teacher's sore throat would follow. Often the two were combined in one case.

Dr. Grant's case gave a deeper insight into the whole subject. What he learned was a free use of the vowel; that is, to drop the action from the throat to the breathing muscles, instead of lifting it to the throat and face. From that time work upon the vowel sounds grew in importance, and drill upon consonants was omitted, until they were never so much as mentioned.

The investigations outlined have led to the following conclusions. In the first cry of life there are three conditions: the inspiration which fills the lungs, the contraction of the breathing muscles which holds the breath under control, and the relaxation of that muscular grasp which sends the breath against the vocal cords, producing the cry called "the cry of life;" this varies from the full, strong, controlled tone to the merest aspirate, the tone indicating by the varying degrees of strength the amount of power used or unused by the breathing muscles. If all the force which nature provides for the production of tone is concentrated in

the breathing muscles, every repetition of the cry sends life and strength thruout the system. If the contraction in the breathing muscles is weak, the energy lacking there becomes focused in some other place, which will suffer from the misplaced contraction. The entire system will then be in a state of inco-ordination. When the misplaced contraction is focused in the muscles of the throat, lips, tongue, and jaw, the energy which is intended to produce speech becomes an impediment, and the greater the power in the wrong place, the greater the impediment.

The only primary cause of speech impediment is weakness in the breathing muscles, and a consequent misplaced strength in the muscles that can impede the breath in its outward passage. Therefore, the first thing to be done is to train strength into the breathing muscles, by correct drill. Often the muscles are so weak that at first a few minutes' work will make the pupil faint, and as the drill goes on the muscles will be sore and lame. Great care must be used not to overdo the exercise. The second point to be gained is entire relaxation of the muscles about the throat and face.

Some children are deficient in imitative power, and the misplaced contraction is complicated with undeveloped articulation. Often the *s* or *r* is omitted, and *th* or *w* substituted; and the omission and substitution may extend to so many sounds that they make for themselves a new language. These need to learn the formation of articulative sounds.

Secondary causes are many. Prominent among them are imitation, fright, shock of any kind, or a disease that affects the throat. Twin brothers, eight years old, were afraid of their teacher, who, tho meaning well, had a sharp, quick way of speaking to pupils. One day when she spoke to one of the boys, he could not answer. She thought him obstinate; his parents thought the same, because he could not speak when he reached home. When he tried to speak, the impediment was evident. The brother in a few days went thru the same experience, and neither of them ever recovered. Whooping cough, the cough resulting from an ordinary cold, or any influence causing an unusual action of the throat muscles may result in speech impediment, when the child is so pivoted that but a slight influence is required to focus the contraction. On the other hand, speech impediment is often complicated with bronchitis, swollen tonsils, and serious throat affections, as a result of throat contraction. The most prolific of all causes is imitation. We guard our children carefully against every other form of contagion, but to this the doors are open wide, notwithstanding the fact that a child by one exposure may be wrecked for life. In some children the desire to imitate is instinctive and involuntary; in others it is a deliberate desire to torture those suffering from any disability. As children will imitate, the barriers should be strong against this danger.

Cases range from mild to severe. Many outgrow an impediment,

because the breathing muscles need only a little more strength, which comes by speaking out with confidence, as most children do. Sometimes a little tact on the part of a teacher will carry the child thru. By saying the difficult word for him she may enable him to go on, and so gain confidence and strength. A change of subject will often give relief, always remembering that speaking the difficult word is of no consequence. Closely allied to such cases is another class who have been brought out of the difficulty by winking, snapping the fingers, tapping with the foot upon the floor, or any slight movement which distracts the attention from the speech and gives to it a rhythmic motion. Relief may sometimes follow lessons in singing.

The severity of the case depends upon the intensity and extent of the contraction. If it is mildly focused at one or two points, a great amount of repetition may give the appearance of great severity. These are the cases that cure themselves. On the other hand, the contraction may be so great at the articulative points that speech is stopped altogether. Such persons speak only when they know they can utter the word, and intimate friends may be unaware of their disability. Because so many outgrow and are able to gain control over the difficulty, the general sentiment is an entire lack of sympathy for all who fail to do this. The common advice to parents is: "Let him be; he will outgrow it." Ask someone to give financial aid to one suffering from this disease, and the ordinary reply will be: "I know several who cured themselves; he could if he possessed the same amount of character."

The fearful strain of going thru years, hearing others talk, and knowing all that is said, but void of the power of expression, can be understood only by experience. The time will come — we hope it is near — when to allow a child to grow up in that way will be considered nothing short of a crime; but without knowledge there can be no responsibility. What can we do to obliterate this fearful evil? First, the great law of prevention, which applies everywhere else, is equally applicable here. The fact that life begins with a cry should suggest to us the importance of a voice, and we should know at the beginning of a life what the character of the voice is. At first the cry is a reflex, and so continues until the desire comes to communicate or respond, when it is controlled by the will. The first sound made with a purpose, which is the beginning of speech, is short *u*, or *ugh*, and whoever has the care of a child should know how that sound is made. The difference between *ugh* made with the breathing muscles and *ugh* made with the throat muscles is the difference between right and wrong. Probably nine-tenths of the world are wrong to a variable extent, and many just escape. They may not, however, escape nervous prostration.

At the beginning of the imitative age the child should be made to follow the right, in learning every vowel sound, until a firm foundation is

laid. The vowel is practically the word, and if the speech is to be smooth and clear the vowels must follow each other continuously, which cannot be done if strength is put into the consonant articulations. At first the child makes the vowel sound, gesticulating with the hands. Soon he uses articulations, which are really gestures. If all the energy in the formation of the articulations is placed in the muscles that move the jaw and tongue, they will never interfere with the continuity of the breath, or vowel sound. If the vowel stops in the throat, it loses character and becomes an articulation.

Often a child who begins well loses balance and learns to talk in the throat by imitating the person who has the care of him. If the age for learning to talk is passed, the next opportunity is in the school; and here we must question: Are the voices of the teachers models for those of the children? In the teaching of reading, is strength trained into the breathing muscles, or into the throat, lips, and tongue? If the child is wrong, is the teacher able to correct him?

My experience leads me to believe that, if a voice properly placed were one of the requirements in our normal schools, if drill upon vowels made by the breathing muscles were substituted for that upon articulations, and if the voice of every teacher could be a model for the pupils, we should soon begin to see an improvement.

It is a common plan to make a list of refractory sounds and words, and to require the child to work diligently upon them. No better way than that can be found for extending the list, or even for producing a temporary paralysis. The words are easy in themselves; it is the struggle in speaking that must be overcome. The word is only the victim of circumstances. Overcome the struggle due to misplaced contraction, and the word is free.

This principle is of special importance with reference to the system of phonic drill so extensively practiced in our public schools. I have known children who had no trouble in speaking until they received phonic drill. Several teachers who tried the process in their classes upon pupils suffering from speech impediment were glad to stop when they saw the children apparently in convulsions as a result of the experiment. Such was my own experience in the beginning of my work, and it took me some time to perceive that the child did not need to learn the formation of the troublesome sound or to have any drill upon the sound, since, from the contraction acting at that point, he was receiving too much already.

In 1893 there were five hundred in the schools of Boston who spoke with difficulty, and the number was increasing. From Germany we have similar accounts. Dr. Lenox Brown, basing his estimate upon the reports of Robert M. Zug, who spent some years in this work, states that the number, in the United States alone, who suffer from speech difficulties

is nearly three times that of the deaf-mute, blind, and insane added together. To three of these classes every advantage is given that money and science can provide; to the fourth, having an equal claim, no relief is offered.

REPORT OF COMMITTEE ON STATISTICS OF DEFECTIVE SIGHT AND HEARING OF PUBLIC-SCHOOL CHILDREN

BOSTON, MASS., July 10, 1903.

To the President of the Department of Special Education of the National Educational Association.

DEAR SIR: Your committee has experienced considerable difficulty in collecting statistics concerning the number and percentage of pupils in public schools having defective sight and hearing, retarding their progress in school.

Thru the courtesy of Hon. William T. Harris, a special circular of inquiry was sent out thru the United States Bureau of Education to the superintendents of schools in cities having more than 25,000 inhabitants. The circular was sent to 160 city superintendents, seventy-eight answers were received, and only in nineteen cases were any statistics reported. In but few of these cases were the statistics so arranged as to be capable of combination together.

Ignoring minor defects of vision and hearing, and including only cases of marked defect, your committee has been able to compile the following statistics: Out of a total of 34,426 pupils whose sight had been examined, 4,603, or 13.4 per cent., were marked defective in vision. Out of 57,072 pupils whose hearing power had been tested, 2,067, or 3.6 per cent., were found to be extremely defective in hearing.

TABLE I

CITY	NO. OF PUPILS EXAMINED	PUPILS HAVING MARKED DEFECTIVE VISION	
		Number	Per Cent.
Bayonne, N. J.	4,610	353	7.7
Jersey City, N. J.	1,100	197	17.9
Pawtucket, R. I.	4,663	517	11.1
Utica, N. Y. (1897)	6,113	667	10.9
Utica, N. Y. (1898)	5,987	588	9 8
Worcester, Mass.	11,953	2,281	19.1
	34,426	4,603	13.4

TABLE II

CITY	NO. OF PUPILS EXAMINED	PUPILS HAVING MARKED DEFECTIVE HEARING	
		Number	Per Cent.
Bayonne, N. J.	4,610	115	2.5
Chicago, Ill.	6,729	437	6.5
Cleveland, O.	17,017	342	2.0
Pawtucket, R. I.	4,663	200	4.3
Utica, N. Y. (1897)	6,113	406	6.6
Utica, N. Y. (1898)	5,987	254	4.2
Worcester, Mass.	11,953	313	2.6
	57,072	2,067	3.6

These facts indicate that a considerable proportion of our school children are handicapped in their progress in school by defective vision or defective hearing, and suggest the importance of urging upon all superintendents of schools the advisability of testing the powers of sight and hearing possessed by their pupils, and publishing the results.

Your committee suggests that the Department of Special Education should appoint a committee to examine and report upon the various means employed to test sight and hearing in the public schools, and to collect statistics concerning the results.

Your committee desires to express its great indebtedness to the United States Bureau of Education for so readily co-operating with it in its labors, and would suggest the propriety of asking the Bureau of Education to continue the collection of statistics of this character.

Respectfully submitted,

F. W. BOOTH, *Committee.*

DEPARTMENT OF INDIAN EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY, JULY 6, 1903

A preliminary meeting of the Department of Indian Education was held at Huntington Hall, in the Rogers Building of the Massachusetts Institute of Technology, at 9:30 A. M.

Prayer was offered by Rev. Dr. Edward Everett Hale, of Boston.

The welcome of Massachusetts to the Indian educators was tendered by Dr. Hale, Hon. Curtis Guild, Jr., lieutenant-governor of Massachusetts; Dr. A. E. Winship, editor of the *Journal of Education;* Miss Gertrude Edmund, principal of the Training School for Teachers, Lowell, Mass.; and Dr. John T. Prince, agent of the state board of education, Massachusetts.

Responses were made by Dr. H. B. Frissell, principal of the Hampton Normal and Agricultural Institute, Hampton, Va.; John D. Benedict, superintendent of Indian Territory schools, Muskogee, I. T.; Miss Mary C. Collins, missionary, Little Eagle, S. D.; J. J. Duncan, day school inspector, Pine Ridge, S. D.; and Miss Estelle Reel, superintendent of Indian schools, Washington, D. C.

SECOND SESSION.—TUESDAY, JULY 7

Prayer was offered by Rev. Father Osborne, of the Church of St. John the Evangelist, Boston.

President H. B. Peairs, superintendent of Haskell Institute, Lawrence, Kan., delivered the annual address on the subject, "Our Work: Its Progress and Needs."

The remaining addresses were as follows:

Topic: "Citizenship."

1. "The Essential Qualifications of Good Citizenship," Dr. James H. Canfield, librarian of Columbia University, New York city.

2. "To What Degree Has the Present System of Indian Schools Been Successful in Qualifying for Citizenship?" Dr. H. B. Frissell, principal of Hampton Normal and Agricultural Institute, Hampton, Virginia.

3. "Alaska's Start toward Citizenship," Dr. Sheldon Jackson, general agent of education in Alaska, Washington, D. C.

4. "Some of the Conditions Which Prevent a Greater Degree of Success in Qualifying for Citizenship," William M. Peterson, assistant superintendent of Chilocco Agricultural School, Chilocco, Okla.

The department then adjourned.

THIRD SESSION.—WEDNESDAY, JULY 8

President Peairs called the meeting to order at 9:30 o'clock A. M.

The following was the program of the session:

Topic: "Character Building."

1. "The White Man's Burden *versus* Indigenous Development for the Lower Races," Dr. G. Stanley Hall, president of Clark University, Worcester, Mass.

2. "Heart Culture," Dr. Charles F. Meserve, president of Shaw University, Raleigh, N. C.

3. "Tenure in the Civil Service," James T. Doyle, secretary of United States Civil Service Commission, Washington. D. C.

4. "The Distribution of Good Literature among Indian Students," Miss Frances C. Sparhawk, Newton Centre, Mass.

The department then adjourned.

FOURTH SESSION.—THURSDAY, JULY 9

The Department of Indian Education met in joint session with the Manual Training and Elementary Departments at 9:30 o'clock, in New Old South Church, Copley square. For the program of this session see Department of Manual Training.

FIFTH SESSION.—FRIDAY, JULY 10

The Department of Indian Education met with the Physical Training Department at the Young Men's Christian Association Hall, on Boylston street.

SIXTH SESSION.—SATURDAY, JULY 11

A short business meeting was held at 9:30 A. M., at which the following resolutions were adopted:

Resolved, That we are cordially in sympathy with the recommendations made by President Roosevelt in his message to Congress in December last.

Resolved, That our thanks are due to the secretary of the interior for the deep personal interest which he has manifested in all measures for the betterment of the condition of the Indian.

Resolved, That we commend the able and statesmanlike administration of the commissioner of Indian affairs, and that we are grateful to him for the warm support and hearty co-operation he has accorded to the Indian workers; that we commend the superintendent of Indian schools, Miss Estelle Reel, for the untiring energy with which she has performed her duties and the valuable services she has rendered in our educational work, and that we specially commend the efforts she has put forth toward perfecting the methods of instruction along industrial lines. We also tender our thanks to the president of the department, Mr. H. B. Peairs, for his faithful and effective services, and for all that he has done toward making our meetings a success.

Resolved, That we offer our sincere thanks to the people of the city of Boston, and to the city and state officials, for their cordial welcome and generous hospitality, and the numerous courtesies of all kinds extended to us; and to the local press for the liberal manner in which it has reported our proceedings.

The department then adjourned.

ESTELLE REEL, *Secretary*.

PAPERS AND DISCUSSIONS[1]

ADDRESSES OF WELCOME

DR. EDWARD EVERETT HALE, BOSTON, MASS.

[AN ABSTRACT]

I am glad to greet our friends who have come from all parts of the country and who are especially interested in this work among the Indians. I am not going to attempt to teach you anything; I sit at the feet of those who have worked in the service and who know what they know and just what they do not know.

Four or five different systems have been adopted in succession in connection with this work by different administrations. These have all been adopted with good motives. The trouble is you have had to change plans because you have had to change managers. At the present time the government seems to me to be distinguishing itself by the intelligence of its work among the Indians. Since General Grant took the matter in his masterly hands, up to this moment, we have seen much improvement in the work of the management of these affairs.

[1] It is a matter of regret that only abstracts of most of the following addresses were furnished for publication by the secretary of the department. [EDITOR.]

HON. CURTIS GUILD, JR., LIEUTENANT-GOVERNOR OF MASSACHUSETTS

[AN ABSTRACT]

Governor Guild tendered to the teachers of Indian schools the greetings and welcome of the commonwealth of Massachusetts, and paid a tribute to John Eliot, the Indian apostle, and to the teachers of the red man today.

The Indian problem was once peculiarly Massachusetts' own. Most of us have forgotten that the charter granted to the colony of Massachusetts Bay in 1628 expressly stated that to "wynn and incite the natives of the country to the knowledge and obedience of the only true God and Saviour of mankind and the Christian faythe" was in the "royall intention and the adventurer's free profession the principall ende of this plantation," this being a quotation from Small's introduction to Dr. Eliot's *Indian Primer*. After the Pequot war most of our New England forebears forgot that New England was established for any purpose connected with the improvement of those from whom they took the soil, as the Indians whom they found there had taken it from the Skrælings, or whatever other name we may give to the races that owned the soil before Mohican and Pequot and Narragansett.

There was one, however, who did not forget; one who, tho recognizing the fact that it is well for the world that savagery should be supplanted by civilization, recognized also the duty that the conqueror owes to the conquered. John Eliot is usually described as a missionary. Our fresco represents him as preaching to the Indians on the banks of the Charles. He taught, however, more than theology. He taught the red men how to fence their fields and to drain their swamps. He taught the Indian women the use of the spinning-wheel. The praying Indians' settlement at Natick was laid out in an orderly fashion, with a piece of ground for each family.

It is interesting to remember that a hundred years before any printer in America had printed a Bible in the English language, Eliot's Indian Bible had been printed (1663) by Samuel Green and Marmeduke Johnson at Cambridge. As the first distinctly American flag, the first emblem of American prowess in war, was raised in Massachusetts, so the first American triumph of peace, the first Bible, was not merely printed from a Massachusetts press, but in the now extinct Massachusetts (Mohican) language.

The spirit of Emerson and Channing was early abroad in Massachusetts, for it is recorded that one of Eliot's Indian congregation interrupted him with the question: "Why does God punish in hell forever? Man doeth not so, but after a time lets him out of prison again, and if they repent in hell, why will not God let them out again?"

The work of John Eliot and his fellow-workers may seem as words written in water. Nonantum and Natick stand for Massachusetts industry

rather than for Mohican literature. There are, I believe, but three copies of the first edition now in existence of the "Up-Biblum God" of Eliot. The race for which that monumental work was written has vanished. Their very language has ceased to have a meaning. Yet the spirit of our first great teacher of the Indians has not passed. It lived in Henry Dawes of Massachusetts. It kindled the great heart of Harvard's president when our Massachusetts university first held out the lamp of education to the people of Cuba. It lives in the devoted men and women who in Porto Rico, in Cuba, in the Philippines, in China, as well as among the men of our own western plains, have transformed the victories of war into the greater victories of peace. The negro may not be a citizen in South Carolina, but the Indian is a citizen in South Dakota.

To you whose lives are spent as Eliot's was spent, in the noble work of preparing the American savage for American citizenship, Massachusetts has a double welcome. The field of your work is no longer within our borders. To the student of primary, of technical, of classical education our scholars may yet have something to teach. To you, the teachers of the Indian, we come to learn. To you, struggling with a task of which we in the East of today know nothing, we offer the wreaths of bays that so become the brows of faithful service.

A. E. WINSHIP, EDITOR OF THE "JOURNAL OF EDUCATION," BOSTON, MASS.

[AN ABSTRACT]

We welcome you, teachers of Indian schools, on the strength of what New England and Boston have done for the Indians ever since the white man trod these shores. We appeal to the past in the welcome we offer today. It is a fact that this city, this state, and New England have stood by the Indian and have stood for the education of the Indian when it took some courage to do so. It is for such reasons as these that we extend to you our welcome. And in doing so we rejoice in the fact that we are in the twentieth century and have left behind the seventeenth, the eighteenth, and the ninteenth centuries with their mistakes. We welcome you to the standard of educational work which asks that we shall uplift humanity.

MISS GERTRUDE EDMUND, PRINCIPAL OF THE TRAINING SCHOOL FOR TEACHERS, LOWELL, MASS.

[AN ABSTRACT]

I am principally interested in this Department of Indian Education because I know what it is to teach Indians. I myself once taught in a country school about three hundred miles from a post-office among the sage brush — one of the regular country schools where we had three or

four white children and from twelve to twenty-five Indian children. I want to bear witness to the fact that the work of those Indian children compared very favorably with the work of the white children.

The speaker emphasized the debt which the teachers owed to such workers as Mary Lyon, who founded the Mount Holyoke school. She reminded her hearers that so late as 1864, outside of the dame schools, women were employed as teachers only in country schools. Today, in the equal-suffrage states, they elect women town, county, and state superintendents of schools.

JOHN T. PRINCE, AGENT OF THE STATE BOARD OF EDUCATION OF MASSACHUSETTS

[AN ABSTRACT]

We all regret the enforced absence of Secretary Hill of the state board of education. He would have told you of the great interest Massachusetts has always taken in the education of the Indian. Massachusetts has sent many of her most gifted sons into this service, and she is glad and proud of the high record which they have always maintained. Many of you in coming to Massachusetts ought to feel that you are coming home, and all of you ought to share that feeling who realize that there is a kinship of sympathy closer than the kinship of blood.

We welcome you not only to Massachusetts, but to our schools. They are closed now, but we have a few vacation schools open. If you visit them, you must not tell who you are, for if the teachers know you are from the Indian country, they will say you have anticipated many of the best things we have done, especially along industrial lines.

RESPONSE

H. B. FRISSELL, PRINCIPAL OF THE HAMPTON NORMAL AND AGRICULTURAL INSTITUTE, HAMPTON, VA.

[AN ABSTRACT]

I have not words in which to express our deep appreciation of the kind and cordial welcome which has been accorded to us, not only by the distinguished men who have addressed us, but by the good people of Boston. We who are engaged in this work of Indian education are greatly indebted to Massachussetts and to Boston for many of the practical methods which prevail today in the Indian schools.

We all rejoice that we are welcomed here by Dr. Edward Everett Hale, who has always stood for lending a hand.

Dr. Frissell paid a high tribute to the late Senator Dawes of Massachusetts, and added: The Dawes bill, which gave to the Indian the right of citizenship and brought with it the allotment of land, which has

meant so much in all this process of Indian education, came very largely as the result of the efforts of that honorable man, who devoted the best years of his life—long years of service—to the Indian.

We have come here because we want to know the way to the truth—we want to know the way to peace, which Boston has been teaching all these years.

PRESIDENT'S ADDRESS

OUR WORK: ITS PROGRESS AND NEEDS

H. B. PEAIRS, SUPERINTENDENT OF HASKELL INSTITUTE, LAWRENCE, KAN.

Education has long been recognized as the chief factor in the development of humanity. Especially has this been true of American civilization. From the very beginning of colonization, all attempts at reclaiming mankind from savage life and manners have been thru education. Thus it was in our earliest relations with the Indians. As early as 1646, Rev. John Eliot, a great-hearted, Christian man, began educational work among the Indians of New England. I quote from Dr. W. N. Hailmann on the education of the Indian:

> A remarkable pioneer work, of a typical character, was done by Rev. John Eliot in Massachusetts. Mr. Eliot was actuated by motives of broadest Christianity and purest philanthropy. His simple measures were chosen with consummate wisdom. In the first place, he familiarized himself with the language, disposition, and character of his Indians. Then he secured their confidence and respect by according them the same, and stimulated in their hearts reverence and a sincere desire for the industry and thrift, the godliness and purity of life, of which New England communities afforded the example. Those who would follow him he gathered into towns, where he taught them the liberties and responsibilities of township government and the devices and institutions of civilized life, among which the school and the church naturally occupied places of honor. A number of "choice Indian youths" he induced to attend English schools, that they might prepare themselves for missionary work as teachers and catechists among their own people.
>
> He was warmly supported in his work by "the corporation for the propagation of the gospel in foreign parts," by the general court of Massachusetts, and particularly by Mr. Daniel Gookins, the official superintendent of the Indians in Massachusetts. In 1674 there were fourteen towns of "praying Indians," whose schools and churches, in the majority of instances, were administered by educated natives. At the same time an Indian college had been founded at Cambridge.

Similar work was done under the direction of Rev. John Cotton and Richard Bourne, in Plymouth Colony.

This work was very successful, and could it have been continued without interruption, certainly the National Educational Association would be without a department of Indian Education, as it meets here in Boston in 1903. The Indian problem would have long since merged into the general problem of education. However, such a result was destined to

be greatly delayed. Misunderstandings, disregard for the rights of the Indian, a determination on the part of early settlers to acquire territory at any cost, brought on war; and war smothered, for a time, all attempts at education.

Altho feeble attempts were made from time to time by missionaries toward the Christianization of certain tribes of the Indians, there was a long period of inactivity. Meantime the Indians were gradually driven back, back—westward, westward—by the advance guard of civilization. The final result is well known. The tribes, so unjustly treated, became very revengeful. Their hunting territory having been encroached upon, their means of support was gone. Under the circumstances, the only thing to do at that time seemed to be to place the tribes on reservations under military supervision. A natural outgrowth of the reservation system was the annuity and ration systems—a very sure, altho slow, process of extermination.

Thus the Indian became the "white man's burden." At this stage of the play the selfish, non-Christian element would have said: "Exterminate the Indian and be done with him;" but Christian civilization took up the burden, accepted the duty, and said: "We must, in all fairness, in the sight of God and man, give the Indian a chance again, by offering to him educational advantages equal to the best." Systematic educational work was then begun.

"Missionaries took up the work with renewed zeal. Congress responded in 1819 with an appropriation of $10,000, in addition to certain treaty obligations. In 1820 the President was authorized to apply this sum annually in aid of societies and individuals engaged in Indian education. In 1823 the sum of $80,000 was expended in twenty-one schools maintained by missionary bodies; $12,000 of this amount was contributed by the government."

The number of schools increased gradually, largely under missionary control, until 1877. At this time the government began the work of Indian education in earnest, by the establishment of day, reservation boarding, and industrial training schools. The annual appropriations have increased from $20,000 in 1877 to $3,251,254 in 1902. The capacity of all Indian schools, including mission schools, was, in 1902, 28,024. The capacity has been increased somewhat since the close of the fiscal year 1902. From a mere beginning in 1877, such progress has been made that at present excellent educational accommodations are provided for almost the entire number of Indians of school age. In fact, I believe there are sufficient accommodations for every Indian child who really needs the help of the government to get an education. While appropriations for the maintenance of the school plants will need to be made annually, it is certainly cause for congratulation that such progress in establishing new institutions has been made that that part of the work is practically done.

Not only has great progress been made in building schoolhouses, but at the same time the character of the buildings has been greatly improved. The improvement in the manner of building has also resulted in the building of better homes by returned students. The opportunity which students have had to see good homes, either at school or in the vicinity, has resulted, in many instances, in their applying the knowledge thus gained in building homes of their own.

While the construction of school plants is only incidental to the real work of educating and training Indian youth, it has been a necessity; and it has been accomplished wisely, and in a great degree economically.

As shown by the statistics given, only 3,598 children were in school in 1877. It was difficult to get even that number, as the sentiment among the Indian tribes was very strongly opposed to any educational movement. The most difficult feature of the work in the early days was to secure children for the schools; in fact, they knew nothing but the free, indolent, tribal life, and therefore were satisfied to remain in such a life. The children were blameless, for they knew no better. The parents were practically in the same condition. Gradually, however, the influence of the returning pupils has become stronger; and now the prejudice of the parents is almost entirely overcome in many reservations. Altho some parents still object to placing their children in school, yet, considering the entire Indian population, the sentiment is now strongly in favor of schools and education. This is certainly a great step forward. A volunteer enrollment of practically thirty thousand children, or six-sevenths of the children of school age, shows beyond question, the change of sentiment. Public sentiment once being right, almost any result may be attained.

Not only has right sentiment been created, but at the same time very marked results of a more tangible character may be noticed. Statistics concerning Indian education are not always reliable, and yet they give a general idea of its progress; therefore I shall give a few from the annual report for 1902.

The population, exclusive of Indians in Alaska, is 270,236. Of these, 84,500 belong to the Five Civilized Tribes and provide their own schools. One of the marks of progress is the greatly increased number who read and speak English. The commissioner's annual report for 1902 gives as the number of Indians who read and speak English enough for ordinary purposes, 62,616, or more than one-third of the entire population with which the government is now doing educational work. This estimate is undoubtedly too low, but, accepting it as correct, is it not sufficient progress to be worthy of commendation rather than condemnation? Another mark of progress is the number who have adopted citizens' dress, wholly or in part; the total being 143,974, or more than seven-eighths of the population. Originally, these people were without

homes. There were, in 1902, 26,629 dwelling-houses occupied by Indians. Counting the average family to be five in number, this would make a total of 133,145, or approximately two-thirds of the population, living in houses.

These statistics show remarkable progress, most of which can be traced directly or indirectly to the work of the schools. Many other marks of progress might be mentioned, but I am also to consider briefly some of the needs of our work, therefore must hasten.

A careful study of present conditions convinces one that, altho much progress has been made in some lines of the work, in others there has been but little advance.

The trained young Indian men and women from the schools will forge to the front in all lines of industrial work. They know how to use their heads and their hands; and if brought face to face with necessity, or, I believe, if given opportunity among their own people, they will intelligently, willingly, and cheerfully work.

Given the opportunity and incentive of necessity, the Indian boy or girl will work as faithfully as anyone. It is but natural, however, for any son or daughter to drift toward home and kindred; and, while it may be argued that white boys and girls do not tie themselves to their mother's apron strings, it is true that they do tie themselves to some person's apron strings. At least the boys do; and girls generally tie some boy to their heart strings. It is just as natural for Indian boys and girls to seek among their own kindred and race for life partners.

This, then, brings us face to face with what seems to me to be of vital importance in our work. We cannot, if we would, keep the Indian children from returning home from school. Conditions at their homes must therefore be changed. To change and improve the homes materially will require vigorous, persistent effort. Encourage the building of railroads, the development of mining interests, and of all other natural resources of the reservations. In other words, break down the barriers and permit civilization to thrust its helpful influences upon the needy; to carry light into the homes of those who have been living in darkness.

There has been much discussion about the comparative value of reservation and non-reservation schools. Permit me to suggest the way to a satisfactory solution of this much-discussed question. Blot out of existence every reservation, and every reservation school will become a non-reservation school. The principal reason for the establishment of Carlisle, of Haskell, of Chilocco, of Phœnix, of Genoa, of Chemawa, and other non-reservation schools, was that reservation conditions at that time rendered the best educational work in reservation schools impossible. Therefore, the earlier these conditions are changed by the introduction of civilization, the earlier will it be advisable to leave the work of Indian education to schools located in the vicinity of the homes of the Indians. Education

has been at work all these years, and now I believe it is time for methods to be changed. Educational work should not, I believe, be curtailed in the least. In fact, it is very essential that it be conducted very vigorously while the barriers are being removed from the reservations. Let thoroly trained, courageous, Christian men and women be employed in the schools, to guide the Indian people and to protect their rights during this time when greater responsibilities are being thrust upon them.

I should like to suggest just at this time that, altho the extension of civil service rules to positions in the Indian service has been one of the progressive steps in Indian education, and has greatly improved the character of the work, a more practical civil service is needed, as far as the manner of selecting employees is concerned. It should be possible for superintendents to secure the services of persons having special qualifications for certain lines of technical work. For instance: I want a man who has had technical college training and also practical experience in farming, to put in charge of the agricultural work of an institution. Under present methods there is only one chance in ten of securing a satisfactory employee. The same is true of a number of other positions, such as physical director or disciplinarian, domestic-science teacher, domestic-art teacher, and manual-training teacher. While heartily endorsing the spirit of the civil service, I as earnestly advocate some reform in this particular.

Put all children of school age in school. Educational work should be continued along lines already well established. Further, the importance of domestic training for girls should be emphasized, especially cooking and sewing, and instruction ought to be given the boys in agriculture, stock-raising, and builders' trades.

I should like to suggest one other course of treatment that is essential, without which I would not be willing to guarantee a permanent cure. Boys and girls should both be given regularly, while in school, during that period of life when their habits are becoming fixed and character is being developed, systematic, thoro Christian training. Bible study should have an important place in the daily program. God made man in his own image. Later it became necessary to make laws for the guidance of man to enable him to avoid sin and wrong-doing, to live righteously. Boys and girls must have a knowledge of such laws, if they would stand erect in the sight of God and man. A really civilized people cannot be found in the world except where the Bible has been sent and the gospel taught; hence we believe that the Indians must have, as an essential part of their education, Christian training. This can best be given thru the schools. I wish to make a special plea for more intelligent, more earnest, religious work in Indian schools.

In closing I wish to summarize as follows:

PROGRESS MADE

School accommodations for practically all Indian children are now provided; these schools are generally well equipped.

Public sentiment among the Indians has gradually come to favor education for their children.

Nearly 30,000, or six-sevenths of all Indian children, are in school.

More than one-third of the Indian population are now English-speaking people; seven-eighths of the Indians wear citizens' clothing, wholly or in part; and probably two-thirds live in dwelling houses.

THINGS WE NEED TO DO

Use the intelligence and judgment of a good guardian and see to it that the child's educational opportunities are not interfered with.

Emphasize domestic training for the girls, especially cooking, sewing, and home-making; and agriculture, stock-raising, and the builders' trades for the boys.

Endeavor to secure competent industrial instructors.

Emphasize, for both boys and girls, religious training.

Push the educated young people out to work for themselves as rapidly as they are prepared to do so. Give them encouragement and sympathy while they are getting started in the battle of life, but do not give them anything more.

We must not become impatient, for the work cannot all be accomplished in a generation. Yet the present generation of young people should in some way be made to realize that they must soon, very soon, depend upon their own efforts for whatever they get out of life.

A careful investigation of work done reveals good results attained as well as present conditions that require earnest, vigorous work within the next few years. We should not allow ourselves to be led into impracticable channels of work by the suggestions of impractical onlookers, but should conscientiously and vigorously prosecute our work, ever keeping in line with the best that American civilization offers, until the Indian educational problem may be merged into the greater problem of general education.

TO WHAT DEGREE HAS THE PRESENT SYSTEM OF INDIAN SCHOOLS BEEN SUCCESSFUL IN QUALIFYING FOR CITIZENSHIP?

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[AN ABSTRACT]

Prominent among early Indian teachers was Rev. John Eliot, of Massachusetts, whose practical plans of education have had an important influence upon all training of Indians in this country. Eliot received their confidence and respect, and at the same time inspired in them a sincere desire for the industry and thrift, the godliness and purity of life, which

characterized the white settlers of New England. He made a careful study of the Indian language, disposition, and character. Instead of endeavoring to kill out their race characteristics, he recognized the good that there was in them, and endeavored to perpetuate it.

The Indian day schools are among the most interesting and valuable because of the instruction they give to parents as well as to children, in civilized ways. A teacher and his wife are provided, not only with a schoolroom, but with a house and a piece of land. During a part of each school day the boys work with the teacher on the farm, while the girls help the wife in the cooking and housekeeping. At noon all sit down together to a meal which the girls have cooked. The work of the schoolroom is closely correlated with that of the farm and kitchen. The house and farm become an object-lesson to the Indians in the vicinity. The teacher gives instruction to the farmers of the neighborhood, and his wife shows the Indian woman proper methods of keeping their homes.. How much more such a school means to a child-race than does the ordinary public school it is not difficult to understand. Instead of centering the educational work upon book-learning it is made to center upon real life. The schoolroom is used to explain the farm and home, just as John Eliot, when he would help his Indians understand the ways of civilized life, took them to the towns and explained to them the store, the church, and the schoolhouse.

In the reservation boarding school the Indian is introduced to a small industrial and agricultural village. In addition to the usual teachers, there are a cook, seamstress, and laundress, whose office is not only to supervise their respective departments, but to instruct the girls in these arts. Similarly for the instruction of the boys there are a farmer, an industrial teacher, and at the larger schools, a tailor, a shoe-and-harness-maker, a carpenter, and a blacksmith. In these, as in the day schools, the emphasis is placed upon the home, the workshop, and the farm, where the study of history, geography, etc., helps the Indians to understand the place which the small industrial village of which they are a part holds in the history and geography of today. The stories told them by their fathers of the past of their own tribe are supplemented by the stories of other great men who have excelled in quite different spheres.

The non-reservation boarding schools have carried on the same methods, devoting half the day to work and half to study. The plan of these schools originally was that each should devote itself to some special occupation.

As, in the schools of France, certain institutions are devoted to the study and cultivation of grapes, certain others to the fishing industry, still others to dairying; so it was felt that the Indian youth of certain tribes might with advantage be taught dairying or herding, for instance, and the whole work of the school be made the center of that industry.

In all these schools undenominational religious work is carried on, and opportunity is given to both Protestants and Catholics to influence the life of the young people. In some of the schools there is cordial co-operation between Catholic priests and Protestant clergymen, and it is to be hoped that this will soon be true of all.

Having considered the systems of schools under which our Indian youths are being educated, let us inquire how far this system has qualified them for citizenship. When one goes to the agencies where returned students live in the greatest numbers, he finds that most of the important positions at the agency — those of interpreter, clerk, farmer, and policeman — are filled by returned students, and that nearly every place in the trade shops, except that of foreman, is filled by boys who have learned more or less of a trade at school. In the boarding schools one or more will usually be found in the class-rooms as teachers, and several in industrial positions. Among the camp schools — little oases in the desert of ignorance — very often an educated Indian and his wife are in charge, doing their best teaching by providing a living object-lesson to both children and parents. At several agencies societies have sprung up among the returned students, which hold the leaders together, sustain the weak, and have proved of political as well as ethical value, supplying the places made vacant in civil affairs by the deposition of the chiefs and the absence of any other guiding power.

While the progress of the Indians in adopting the white man's dress and habits, in agriculture and mechanical arts, and in willingness to have their children educated, is not altogether the result of Indian schools, there is no doubt that these have had much to do with it. Statistics given in the commissioner's report as to the advancement made along these lines will be interesting. In the year 1890 the Indians had under cultivation 288,618 acres of land; in 1901, 355,261. The number of acres fenced increased during these eleven years from 608,987 to 1,289,689. The number of families actually living on farms and cultivating their lands in severalty rose from 5,554 to 10,279. The number of horses and mules decreased from 443,244 to 343,300, while their head of cattle have increased from 170,419 to 253,397, showing that they are getting rid of worthless ponies and investing in cattle.

While the allotment of land to the Indian has had much to do with these improved conditions, it is doubtful if the allotment itself would have been possible except for the schools. The number of Indians adopting citizen's dress has increased between 1890 and 1901 from 70,095 to 98,197. The number of Indians that can read English has increased from 23,207 to 32,846, and the number of dwelling-houses from 19,104 to 26,574. It is not too much to say that the abolition of the ration system and the adoption of the work system, which Commissioner Jones has so effectively brought about have been made possible thru the government schools.

The last twenty years have seen a progress far in excess of anything that preceded it. The system of Indian schools which is in existence today is worthy of study, and its results, as shown in qualifying men and women for citizenship, have already proved its value.

ALASKA'S START TOWARD CITIZENSHIP

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[AN ABSTRACT]

Alaska has five families of aboriginal peoples—the Eskimos, the Arthabaskans, the Thlingets, the Hydahs, and the Aleuts and Creoles. They are industrious. The necessities of their hard life compel the Alaskan man, woman, and child to work from earliest childhood to secure sufficient food to support life. They are also of a mechanical turn of mind. With a few pieces of drift wood and a walrus hide they can construct a canoe which will weather heavier seas than the best boats of the same size created by our highest skill. A band of Eskimo boys, with the same knowledge of the English language, placed in an industrial school with an equal number of American boys, will excel the latter. With healthy bodies and a mechanical turn of mind, they are good raw material from which to make good American citizens.

The start toward citizenship was made August 10, 1877, when I located a Presbyterian mission and School at Fort Wrangell, in southeastern Alaska. On March 2, 1884, the secretary of the interior assigned the work of making provision for the education of children in Alaska to the Bureau of Education, and I was appointed to establish and carry forward the public schools in Alaska. Since then, between forty and fifty public schools have been organized, and four to five thousand of the native children have been brought for a time under their influence.

In southern Alaska many of the pupils have been taught industrial pursuits in connection with the schools. In at least one of the schools the pupils are required to give at least three hours each school day to books, and at least three hours to manual labor. In arctic and sub-arctic Alaska, to the extent of the funds provided by the government for the purpose, Eskimo young men have been given a five-year course of training in the care and management of domestic reindeer. These schools and their industrial training are also centers for the start toward citizenship. The larger number, after leaving school, take their places among their own people, and by an example of better living help lift up the native community.

Many of the recent pupils of the Sitka Training School have engaged

in commercial pursuits, and in most cases have been successful. Two brothers, for instance, formed a partnership and started a store. Making a few thousand dollars at storekeeping, and encouraged by the success of their comrades at saw-milling, they removed from the village and established a saw-mill which, when I visited there, was running night and day, unable to fill all its orders. Another of the native pupils, who left the school in the nineties, went to the Klondike, where he has made a moderate fortune in gold-mining.

The instances of success achieved by the native students after leaving school will be increased hundreds of times when the educational advantages and opportunities of the Alaska aboriginal races are similarly increased.

THE WHITE MAN'S BURDEN VERSUS INDIGENOUS DEVELOPMENT FOR THE LOWER RACES

G. STANLEY HALL, PRESIDENT OF CLARK UNIVERSITY, WORCESTER, MASS.

Man is today, and from the dawn of history has been, the greatest of all exterminators. The great auk, the cave bear, the woolly rhinoceros, and scores of smaller species owe their extinction to him, and several score of other species are in a slow process of extermination. The missing link that connects him in evolutionary series with the humbler forms from which he sprung he himself has destroyed. The same process is now rapidly going on with the lower races. Primitive tribes fade away at his touch. Where civilized man wishes to preserve savages he cannot do so. Many diseases, slight for him, like measles and whooping cough, are deadly to lower races. Other worse infections find the nidus of a more vigorous and deadly development in the bodies of barbarians than they have in our enfeebled systems. Often our worst is in contact with their best. The world knows the sad story of the extinction of the Tasmanians, the Boethuk Indians of Newfoundland; has read the story of the Last of the Mohicans; of poor Calle Shasta, the sole survivor of the Modocs; of the natives of Hawaii, who dwindled from a hundred thousand to thirty thousand; of the fading tribes of the Samoieds of Siberia; of the Todas of India; of the natives of New Zealand and Madagascar. A few of their younger men and women have taken on a little of our superficial culture, and even become limp prodigies, later to go back, ostracised, to the bush and wish they had never left it. A great ethnologist estimates that twenty million slaves, mostly adolescent, have been sold or died in slave ships within the Christian centuries, and declares that Africa would today be better off had it never been discovered by the whites. Discovery is doom for low races, if they have committed the unpardonable crime of settling on land the mineral or vegetable product of which makes it valuable to whites. One-

third of the land of the world and two-fifths of its population are today comprised in the various dependencies, colonies, or spheres of influence which, since the great international scramble which began about 1897 or 1898, has absorbed all of the inhabitable globe.

Civilization is man's attempt to domesticate himself, and the most civilized among us have not yet attained the true test of domestication, namely, breathing or self-reproduction in the captivity we have made for ourselves. We have developed the city, which is a biological furnace that intensifies individuation and reduces genesis. Culture at its best is a dim candle illuminating only a few rooms in the great city of man's soul, and leaving the rest in twilight or pitchy dark. Huxley said in substance that slum life in London was lower than among any savage race, and Rancke urged that civilization was in no whit an advance over barbarism, because its lowest dragged down its highest half to a lower average; and yet, with a fanaticism worthy of the Mahdi himself, we force our culture upon unwilling necks as the most holy thing on earth.

What is the most precious of all things in the world? It is the native indigenous stocks or strips of men and women who are natural, vigorous, pure, abounding in health, and that have potency for posterity, which is the very best test of a race and of civilization. It carries in its bosom the great promise to Abraham, that if he kept covenant with the Divine his seed should be as the stars of heaven for multitudes. Ounces of heredity are proverbially worth pounds of education and civilization. This is the most ancient wealth and worth. It conserves thru generations the most precious things.

Now, my simple proposition today is that the lower races should first be understood, their customs studied, their language made familiar, their feelings, views of the world and life, their traditions, myths, institutions, sympathetically appreciated; and that all attempted reconstruction of their lives, thoughts, and emotions should be guided by this knowledge. The tribal system of our Indians is not unlike that on the basis of which, as Morgan has shown, Greece, Rome, or earlier civilizations were developed. The policy is to break it up, instead of studying it, grafting all possible good into its vigorous stock, utilizing everything that is excellent in it, and developing it up to the point when a better culture and system shall come as naturally as a growth. Low races abhor our methods of industry, regulated by the clock that makes alike all the days for them. Longer periods of great effort alternate with those of relaxation. Between matrix and all literary culture is myth, and every well-developed myth system has in it the promise and potency of more or less highly developed art, philosophy, literature, and perhaps religion. Instead of reviving these, we ignore, or perhaps wage a war of extermination against, them. Instead of trying to make a good Indian, we try to make a wretched third-class white man.

Pritchard described traders who batten on the failings which they found, and the greater ones they made, among the Tehuelches in Patagonia. Humboldt tells of the great gift of music, the wealth and depth of religious thought and feeling, among the Huichols in Mexico, all of whom are descended from a god. Bolt in Nicaragua finds abundant traces of an early civilization which he deems higher than that of Cortez, who exterminated it and, according to Bastian, killed one hundred and fifty thousand natives, introduced small-pox that slew eighty thousand the first year and two million in a generation, and destroyed a magnificent system of irrigation, and so left the land a waste ever since. Le Plongeon thought the natives of Yucatan great builders, like the Pelasgi, and that they were direct descendants from the old Egyptians.

Miss Fletcher and Cushing have taught us that to know the real Indian is to love him, and suggest that we should teach that our religion is only another form of theirs; tell us that their dances are sacred passion plays, and that even the ghost dance is only a pathetic appeal for help and comfort to the denizens of their unseen world, who seem to have forsaken them. Duncan has developed a new pedagogy and transformation among the Metacathlahs. Is it extravagant to say that Anilco, Spotted Tail, Samoset, Massasoit, Pontiac, Black Hawk, King Philip, and many more represent a patriotism comparable to that of Winkelried? General Crook, who spent much of his life among these men of the Stone Age, tells us that many of them have an eloquence that would not disgrace the halls of Congress. We are long past the stage of hunting them with dogs, as Rev. Samuel Hopkins urged Popham's men to do in Maine in 1703, and of being proud of Indian slayers in our ancestry who kept tallies on their gun stock of the heads of Indians they had killed.

Canada has no Indian problem, because it adopted the French policy, which affiliates, and sometimes even promotes intermarriage.

Thanks to the present administration of Indian education, efforts are now made to preserve, or rather revive, their wondrous art of making baskets, into which they sometimes weave in symbols the whole story of their lives. This renaissance not only gives them support — such is the demand for basketry — but teaches them self-respect. Why cannot the same thing be done with their pottery, skin-dressing, bead-work, canoe-making, taught, where possible, by natives before they become lost arts? Why cannot all their myths and ceremonies be studied and developed? Why should we force them, in the beginning of a new century of dishonor, in the words of a young brave, "to clean the spittoons of the white man's civilization?" Why, instead of making them poor, and perhaps bad, white men and women, breaking down their health, industries and social organizations, morals and spirit, shall we not try to make them good Indians?

Cushing, Miss Fletcher, Fewkes, Catchet, Hough, Miller, Cyrus

Thomas, and many other ethnologists have studied and know them sympathetically. Why should not our bureau and schools avail themselves to the fullest extent of this knowledge, and be guided by the very practical suggestions from such sources? Now, on the reservations, in which they are impounded very like the victims of Weyler in *concentrado* camps, they cannot paint, and cannot even celebrate their dances, which are holy passion-plays, sacred worship, all their religion to them. The agent should be simply a kind and fatherly adviser to these men and women still in the adolescent stage of their development. Why should not the missionary graft, instead of eradicate? Why should he not study their totemism, worship, myths, and make religion a natural growth rather than a sudden alien conquest?

Above all, the Indian is perhaps the most religious race on earth. Among many tribes, nothing is begun without asking help from on high. Children of the gods themselves, their lives center in worship. What most struck the Zunis whom Cushing brought to Boston was, as one chief said, that "they saw many men hurrying about and doing many things, but no one praying."

Our country now needs to take a new and larger view of the problems of lower races, and base its treatment upon their nature, as we now study children in order to mold schools and methods to fit them. I have been told by government teachers among the Filipinos that they had no legends or customs. This, ethnological literature abundantly disproves. In fine, we ought now to consider education, religion, statesmanship, history, from a larger standpoint, because the best things have not happened yet. Often victims have been in the end the real conquerors. We may sometime need primitive stock, that our blood or institutions will dominate the far future. In later ages other stocks now obscure, and perhaps other tongues now unstudied, will occupy the center of the historic stage, appropriating the best we achieve, as we learn from Semites, Greeks, and Romans. If this be true, every vigorous race, however rude and undeveloped, is, like childhood, worthy of the maximum of reverence and care and study, and may become the chosen of a new dispensation of culture and civilization. Some of them now obscure may be the heirs of all we possess, and wield the ever-increasing resources of the world for good or evil, somewhat perhaps according as we now influence their early plastic stages.

HEART CULTURE IN INDIAN EDUCATION

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[AN ABSTRACT]

Within the last quarter of a century the United States has established industrial, boarding, and day schools, allotted land in severalty, extended civil service to school positions, broken up the autonomy of the five civil-

ized tribes, stopped making appropriations to denominational schools, withdrawn or reduced rations, and has begun to put Indian agencies under the control of school superintendents. The annual appropriation for schools has grown from $20,000 to $3,522,950.

Many Indians are working their own land, and all ought soon to be thrown upon their own resources. The civil service has improved the schools, and great progress has been made in the Indian Territory by the breaking up of the tribal relations. Congress withdrew the appropriation from denominational schools, but religious liberty is safer, and all denominations are free to give religious instruction in the government schools to the children of their faith. When rations were reduced or cut off, the government was considered cruel, but the Indians are beginning to work, and some say they like work and wages better than idleness and Uncle Sam's free-lunch counter.

Agency affairs are being taken out of politics by putting agency business in the hands of school superintendents. In a decade or two the Indian agent, the reservation, and the rations system are destined to be as extinct as the dodo.

When President Harrison, forced to action by the intolerable persistence of the spoilsmen, placed in the classified civil service list the positions of superintendent, physician, matron, and teacher, a great step in advance was taken. At that time the only road from the spoils system to better things led to the doors of the civil-service commission; but a decade or more has wrought a great change, and the schools now have superintendents of high character and more trustworthiness, who have no political pull and are not affected by political pressure, as was the case when President Harrison issued his executive order.

Some of these schools, like Haskell, Carlisle, Chilocco, Phœnix, Harrison, Genoa, and others, are as large as, or larger than, some of the well-known colleges of national reputation, and require men of good education, wide experience, and a high order of executive ability to preside over and manage them successfully.

TENURE IN THE CIVIL SERVICE

JOHN T. DOYLE, SECRETARY OF THE UNITED STATES CIVIL SERVICE COMMISSION

The law relating to the exercise of the appointing power in the civil service is rapidly assuming great importance, with the development of administrative science, and the literature relating to it, tho still partial and fragmentary, has become voluminous. A distinct body of law has arisen from the decisions of the courts and the practice under various statutes and regulations. This body of law and practice is important in securing honest and efficient administration of the government, as upon that

honesty and efficiency depend the integrity and maintenance of republican institutions.

More than two hundred thousand persons are employed in the federal civil service, and perhaps as many more in the state and city governments. The conditions of appointment and removal, as related to this great body of employees, are vitally important, not merely to the personal welfare of the individuals concerned, but to the nation. If the principles of appointment and tenure are vicious or unsound, abuses will necessarily arise in the administration of government; the civil service will become extravagant and corrupt, threatening the whole fabric of government. It is essential, therefore, that there should be sound teaching on this subject.

The power to make a removal is allied to the power to appoint. In our early history, few restrictions were placed either upon the power of appointment or the power of removal, and these restrictions were not at all uniform. When the civil service of the country was small there was little need of regulations to govern appointments and removals; and administrative reform, along with many other great reforms, only began in the latter half of the past century. The use of the patronage system in Great Britain to influence legislation, the giving of colonial positions as sinecures to the privileged classes and to personal favorites, was one of the causes which brought about the American Revolution. The debates on the Constitution show that our earliest statesmen had a clear appreciation of the evils of the patronage system, and sought to avoid them in founding the new government. It was their intention that the administrative officers should hold office during good behavior and efficiency. During the first forty years of the Constitution this principle was given thoro and practical effect. Madison, the expounder of the Constitution, said that the wanton removal of a meritorious officer was an impeachable offense. It was not until nine years after the passage of the four-year-tenure-of-office act, in 1820, that any material departure arose from this traditional policy of the government. This act was passed at the instance of an appointing officer, for the purpose of using its power to secure his nomination as a presidential candidate. The abuse of the power of removal which then had its inception, like that of the power of appointment, has been one of the most potent agencies by which the public service has been demoralized and degraded and the spoils system established.

The theory regarding removals, before the spoils system arose, was laid down by Madison. It was this:

> Whatever may be said of a technical legal *power*, no officer can have a right to remove a worthy public servant except for adequate public reasons, nor any right to forbear to remove an unworthy one, unless the removal would, for peculiar reasons, be at the moment a public detriment.

The courts have said that where there is a tenure of good behavior it is plain there must be good cause, arising from the bad conduct of the official, to justify removal. Removal in such a case must be preceded by such action as is equivalent to a conviction of misbehavior; and upon that charge there should be a trial and an opportunity for defense. It is clear that the exercise of the power of removal should be governed by the same normal obligation which would forbid the use of public money for private or party purposes. Whether or not there is abuse of public office in this respect largely depends upon the state of public opinion; and it is of the highest importance, for the purification of politics and the elevation of official life, that public opinion should be informed on this subject.

The subject of the term and tenure of the president, members of Congress, and the federal judiciary was discussed in the early debates on the Constitution, but nothing was said about the term and tenure of subordinate office-holders.

Certain of the federal judges have a tenure of good behavior, and there is a statute forbidding the head of a department from removing certain officers, except for cause stated in writing, which shall be submitted to Congress at the session following such removal. But these are trifling exceptions to the great body of officials. There is also the greatest divergence in the terms and tenures of judges in the federal and state services, school officers, commissioners, mayors, state senators, and governors. This divergence exists not merely in practice, but also in the views of public men. On the one hand, permanency in office is insisted upon by some as essential to efficiency, and, on the other, denounced as an aristocratic monopoly. Some regard a fixed term of years as a corrective of party despotism and corruption, while others regard such a term as increasing both those evils. Rotation in office is demanded to guard against bureaucracy, and Congress has been urged to fix a short term of office for all subordinate officials.

There is a wide divergence of opinion as to how long a term of office the law should provide, or whether removal should be made only for cause, trusting to sound principles and good administration. In European governments, down to within a century, offices were given as a matter of favor, and often sold outright or leased. This has been changed in all civilized states and the patronage lessened, so that offices are given only to those who are found to have the requisite education and experience. Short and precarious terms and tenure have given way to comparative stability of tenure. In our army and navy, offices are held during the pleasure of the president.

Now, what are the reasons which require a stable and independent tenure rather than a short, fixed term? The reasons in the case of the great body of mere administrative positions which are filled by appoint-

ment, and not by election, are: first, that the duties are in objects and methods the same, to be performed in the same spirit and manner at all times and under all circumstances; and, second, that officers of this class are not representative of either interests, opinions, times, classes, or sections. These reasons apply equally to the tenure of judges and to officials, who, unlike cabinet officers, heads of departments, and ambassadors, are not appointed to carry out a political policy.

The reasons for a stable tenure do not apply to elective officers. Such officers represent interests, opinions, and policies which are constantly changing. Representative government requires short terms for legislators in order that the changing phases of public opinion should be adequately represented in debate and in framing legislation. By frequent elections the people can instruct their officials and call them to account, and thus change the methods of government. The citizen is the judge of the fitness of the candidate for whom he votes. It is necessary that the terms of officials or towns and villages should be short, to make rotation in office for the diffusion of information concerning public affairs.

As we get away from these merely local offices which are filled by election by the people, we find that the terms of office become longer. This is because the officers do not represent public opinion to the same extent, and that experience acquired in the service is more important than ideal representation. So manifest is the value of experience to members of Congress that they continue to be re-elected, notwithstanding great changes in party measures and opinions.

We come now to the great body of subordinate officials, who have nothing to do with the policies or principles of administration, whose duties are to be performed in the same way, no matter which party is in power, and whose political opinions have no relation to their duties. There is very great harm when they become active partisans and use their offices to control political movements. This means, as President Roosevelt has said, that in consideration of fixity of tenure and of appointment in no way due to political considerations, the man in the classified service, while retaining his right to vote as he pleases and to express privately his opinions on all political subjects, should not take any active part in political management or in political campaigns, for precisely the same reasons that a judge, an army officer, a regular soldier, or a policeman is debarred from taking such active part.

The civil-service act of 1883 was intended to cure in part the evils which grew out of that relic of feudalism, the four-year-tenure-of-office act. Our administrative system presents the contradiction of filling the great body of the civil service upon competitive tests of merit, free from removals for political reasons, and at the same time of subjecting the positions of postmasters, other than of the fourth class, and collectors of customs and internal revenue to a term of four years. It is a marked advance

that fourth-class postmasters are now no longer changed every four years, but only for reasons other than political. The positions subjected to this periodical change require the largest capacity and longest experience for their successful conduct. As it is, they are attained by partisan zeal and party service for a term of four years. Calhoun, Webster, Clay, Benton, and many other able and patriotic statesmen have declaimed against the evils of the four-year-tenure law and advocated its repeal. It is becoming a physical impossibility for the president and cabinet officers to examine the papers and to hear the arguments and complaints relating to nearly ten thousand officers to be commissioned, and the repeal of the four-year-tenure law would afford needed relief to permit more time to be given to the consideration of public business.

Briefly stated, the existing law respecting removals is that the power of appointment implies an absolute and unrestricted power of removal, except in so far as there are express restrictions imposed by statutes consistent with the Constitution. In the federal service the tenure of office is at the will and discretion of the head of the department, who has the constitutional power of appointment, provided he does not violate the civil-service act, which is the only provision of Congress that curtails or abridges the right of removal. Legally speaking, the appointing power may make removals without any accountability, except that he is liable to impeachment or to removal by the president. The civil-service act provides for procuring a body of employees whose appointment is made to depend upon fitness, and not upon political favor. Altho the act does not limit the power of removal, the filling of a vacancy must not be controlled by political considerations, and the appointment must be made from among those who pass highest in the examinations. The temptation to make a removal for other than just cause is usually to make room for a favorite. By removing this temptation and relieving the appointing officers from the pressure to make appointments for political or personal reasons, removals are kept within proper limits, and there is less need for statutory restrictions.

With a view of preventing removals upon secret charges and to diminish political intrigues for removals, the civil-service rules require that within the classified service no one shall be removed from a competitive position except for such cause as will promote the efficiency of the public service, and for reasons given in writing; and the person whose removal is sought shall have notice and be furnished with a copy thereof, and be allowed a reasonable time for answering the same in writing. This rule does not create any legal interest and cannot be invoked before the courts, but merely has force as an administrative order of the executive. It is further provided that no examination of witnesses or any trial or hearing shall be required, except in the discretion of the officer making the removal. This rule is an authoritative expression by the executive of

his desire, and command to his subordinates, with respect to removals from office of those coming within the scope of the civil-service act. The executive has the constitutional authority to regulate for himself the manner of appointment and removal. He may direct his subordinates who exercise under him, in certain cases, the power of appointment and removal, and may regulate the manner in which they may act for him; but this is an administrative order, not done in compliance with any law, but simply an instruction to those who hold positions by virtue of his appointment as to the manner in which they shall discharge their duties in respect to the removal of their subordinates. The only authority or duty the Civil Service Commission has in a removal is to see that the procedure required by the rules is carried out. The appointing officer is the final judge of the qualifications of his subordinates, and the question whether such cause exists as requires a removal for the efficiency of the service is for him to determine. The commission has no power to review his finding in this respect.

The civil-service act did not, of course, intend that there should be a life-tenure, or that persons who became inefficient should be retained. The authority of removal and its exercise for proper reasons are necessary for the discipline and efficiency of the service.

Of the entire number of classified competitive employees only about 2 per cent. are removed each year for cause, less than 1 per cent. of such employees of the departments at Washington being removed, and only a little more than one-half of 1 per cent. of the employees of the railway mail service. The largest number of removals is from the services in in which many positions are of a mechanical or trades character, as in the assistant custodian and janitor service, where the removals amount to about 10 per cent., and the quartermaster's department at large, where they amount to a little more than 4 per cent.

The amendment of the rules in 1897, requiring charges and a hearing before a removal, supplemented by the amendment of 1899, requiring that the reasons for any change in rank or compensation shall be made a part of the records of the proper department or office, has given stability and permanence to the service, and based the tenure of employees upon efficiency and good behavior. The training received by employees in the government service is of peculiar value, because of the radical differences between the methods of public and private business; and, as a rule, employees are far more efficient and useful after several years' experience than when they first enter the service. It is not good policy to exchange men trained in technical public work for untrained and inexperienced persons. Such changes often involve large losses to the government, cause delays in doing the work, and require the employment of a larger force than would otherwise be necessary. The regulations requiring the keep-

ing of records of efficiency, and promotion examinations, also afford protection indirectly against improper removals.

The act and rules require that entrance to the service shall be upon the basis of ascertained merit, and consistency, as well as the efficiency of the service, requires this.

The recent amendments to the rules, so far from impairing the exercise of the power of discipline in making removals, aid its exercise. It is the duty of appointing officers to remove from the service those who fail to show adequate qualifications, and to retain those who do possess them. No restriction has been or should be placed upon the exercise of that power, which would tend to keep the inefficient in the service.

CLASSIFIED MEMBERSHIP BY STATES
IN THE
NATIONAL EDUCATIONAL ASSOCIATION
FOR THE YEAR 1903—(BOSTON MEETING)

State or Territory	Active Membership					Associate Members	Total Membership
	Life Directors	Life Members	Former Active Members	New Active Members	Total Active Members		
Total	31	120	2,772	1,365	4,288	30,695	34,983
North Atlantic Division	11	22	713	825	1,571	12,592	14,163
South Atlantic Division	3	8	192	60	263	1,582	1,845
South Central Division	1	4	148	55	208	1,746	1,954
North Central Division	13	76	1,371	359	1,819	13,800	15,619
Western Division	3	9	286	52	350	586	936
Colonies	....	....	14	4	18	7	25
Foreign (including Corresponding, 28)	....	1	48	10	59	382	441
North Atlantic Division—							
Maine	1	1	10	33	45	632	677
New Hampshire	....	1	10	20	31	401	432
Vermont	....	....	13	16	29	160	189
Massachusetts	2	3	144	249	398	7,061	7,459
Rhode Island	1	....	18	19	38	297	335
Connecticut	....	....	32	37	69	246	315
New York	4	9	297	376	686	1,637	2,323
New Jersey	1	3	69	22	95	313	408
Pennsylvania	2	5	120	53	180	1,845	2,025
South Atlantic Division—							
Delaware	....	....	6	3	9	38	47
Maryland	....	1	31	11	43	270	313
District of Columbia	2	3	36	8	49	459	508
Virginia	....	....	17	11	28	158	186
West Virginia	1	1	18	5	25	112	137
North Carolina	....	2	17	5	24	107	131
South Carolina	....	1	18	3	22	76	98
Georgia	....	....	34	10	44	319	363
Florida	....	....	15	4	19	43	62
South Central Division—							
Kentucky	....	1	26	9	36	485	521
Tennessee	1	1	22	9	33	369	402
Alabama	....	....	29	10	39	192	231
Mississippi	....	....	11	3	14	131	145
Louisiana	....	....	16	7	23	187	210
Texas	....	....	18	12	30	199	229
Arkansas	....	....	15	....	15	99	114
Oklahoma	....	1	8	4	13	42	55
Indian Territory	....	1	3	1	5	42	47
North Central Division—							
Ohio	1	12	222	68	303	2,351	2,653
Indiana	....	2	95	25	122	964	1,086
Illinois	6	6	363	139	514	3,499	4,013
Michigan	2	....	139	20	161	1,222	1,383
Wisconsin	....	31	91	10	132	946	1,078
Iowa	....	2	88	13	103	1,073	1,176
Minnesota	1	1	139	19	160	951	1,111
Missouri	2	2	82	24	110	1,361	1,471
North Dakota	....	....	31	10	41	120	161
South Dakota	....	....	39	8	47	224	271
Nebraska	....	1	46	9	56	651	707
Kansas	1	19	36	14	70	438	508
Western Division—							
Montana	....	....	26	5	31	51	82
Wyoming	....	....	7	3	10	16	26
Colorado	2	1	48	15	66	239	305
New Mexico	....	....	13	1	14	12	26
Arizona	....	....	12	2	14	10	24
Utah	....	....	17	4	21	34	55
Nevada	....	....	3	....	3	4	7
Idaho	....	....	6	3	9	18	27
Washington	....	1	42	8	51	57	108
Oregon	1	....	9	1	11	15	26
California	....	7	103	10	120	130	250
Colonies—							
Alaska	....	....	1	....	1	....	1
Hawaii	....	....	5	2	7	5	12
Porto Rico	....	....	4	2	6	2	8
Philippine Islands	....	....	4	....	4	....	4
Foreign	....	1	48	10	59	382	441

RECORD OF MEMBERSHIP BY STATES
IN THE
NATIONAL EDUCATIONAL ASSOCIATION
FOR EACH YEAR FROM 1884–1903, INCLUSIVE

Excepting for 1893, when no regular meeting was held. Heavier numbers show membership from the state in which the meeting for the year was held.

STATE OR TERR.	Madison	Saratoga	Topeka	Chicago	San Francisco	Nashville	St. Paul	Toronto	Saratoga	Asbury Park	Denver	Buffalo	Milwaukee	Washington	Los Angeles	Charleston	Detroit	Minneapolis	Boston
	1884	1885	1886	1887	1888	1889	1890	1891	1892	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Total.....	2,729	625	1,197	9,115	7,216	1,984	5,474	4,778	3,360	5,915	11,297	9,072	7,111	10,533	13,656	4,641	10,182	10,350	34,984
N. Atl. Div	792	406	386	773	803	101	795	426	1,187	1,711	1,462	2,940	942	1,492	1,877	783	1,309	1,548	14,163
S. Atl. Div	77	16	31	44	113	128	95	151	309	271	289	237	172	1,146	361	1,181	473	363	1,845
S. Cen. Div	111	19	47	370	216	1,074	261	417	253	460	899	419	304	1,588	818	414	768	301	1,954
N. Cen. Div	1,712	176	708	7,671	1,074	642	4,156	2,933	1,456	3,357	7,211	5,083	5,315	5,882	5,074	1,903	6,981	7,535	15,619
West'n Div	26	7	25	102	4,974	38	122	196	104	73	1,403	377	366	412	5,487	354	686	481	937
Colonies..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	16	17	25
Foreign...	11	1	....	155	36	1	45	655	51	43	33	16	12	13	39	6	39	105	441
N. Atl. Div																			
Maine..	21	2	5	25	11	....	32	30	10	5	24	7	7	10	16	12	13	32	677
N. H...	64	6	10	23	11	....	32	9	5	7	27	8	6	6	14	5	7	26	432
Vt.....	43	8	3	41	4	....	40	4	20	4	13	14	15	11	11	8	21	25	189
Mass...	310	145	85	277	206	28	290	114	212	52	191	197	159	159	294	139	196	281	7,459
R. I....	50	13	13	29	30	4	31	42	23	12	55	35	23	36	50	18	23	28	335
Conn...	40	18	23	36	48	4	31	18	63	13	26	43	24	31	46	24	41	68	315
N. Y...	143	159	91	211	210	29	228	117	611	326	521	2,132	411	509	756	327	512	595	2,323
N. J....	40	27	35	23	41	13	12	16	65	969	168	179	110	172	154	93	173	116	408
Penn...	81	28	121	108	242	23	99	76	178	323	437	325	187	558	536	157	323	385	2,025
S. Atl. Div																			
Del....	1	....	4	....	3	1	2	5	6	8	17	11	8	9	9	4	7	13	47
Md.....	5	....	10	8	17	3	7	13	49	45	53	23	31	80	50	81	76	62	313
D. C...	30	1	7	12	32	13	21	10	35	24	47	29	57	382	99	57	137	97	508
Va.....	6	4	3	2	18	12	2	8	2	24	36	21	10	63	22	38	22	27	186
W. Va..	15	3	3	8	6	6	27	49	20	37	49	52	16	129	29	18	56	28	137
N. C....	3	2	....	2	8	12	2	13	17	15	5	14	4	76	27	72	29	33	131
S. C....	5	4	1	2	13	22	4	18	14	52	1	31	7	92	22	691	30	25	98
Ga.....	11	1	2	10	16	43	23	31	163	64	62	43	30	261	87	145	77	43	363
Fla.....	1	1	1	....	....	16	7	4	3	2	19	13	9	54	16	71	39	35	62
S. Cen. Div																			
Ky.....	33	2	8	151	22	114	39	57	42	128	176	77	98	408	136	68	215	73	521
Tenn...	12	6	5	62	83	607	97	124	57	124	66	57	25	248	113	96	108	37	402
Ala	9	1	1	16	45	123	35	79	51	41	41	59	25	229	69	74	35	52	231
Miss....	7	1	2	7	10	87	44	42	36	20	49	25	19	100	65	27	20	15	145
La	3	7	8	11	7	19	13	25	21	35	108	25	42	146	60	26	46	41	210
Texas ..	22	1	15	55	29	89	20	53	9	82	294	99	41	257	221	55	148	26	229
Ark	22	....	8	67	12	29	12	34	33	25	84	63	41	132	96	46	116	28	114
Okla ...	....	....	....	....	....	....	....	....	....	4	58	14	11	60	47	21	71	17	55
Ind. T..	3	1	....	1	8	6	1	3	4	1	23	....	2	7	11	1	9	12	47
N. Cen. Div																			
Ohio ...	121	43	67	581	225	60	361	355	178	990	592	565	357	1,313	580	286	753	486	2,653
Ind.....	54	15	46	418	71	89	206	149	65	258	321	250	205	591	354	173	357	261	1,086
Ill.....	354	33	164	1,750	222	204	625	666	214	871	1,495	1,174	785	1,340	1,216	557	1,142	1,247	4,013
Mich...	77	12	20	273	40	29	137	259	285	155	204	589	327	379	196	110	2,193	372	1,383
Wis....	546	18	18	486	57	28	443	222	72	143	188	413	1,870	361	287	187	293	677	1,078
Iowa...	304	18	87	1,146	96	67	572	278	110	164	1,086	578	543	383	593	82	444	801	1,176
Minn...	132	9	11	649	58	16	933	118	54	86	193	303	333	164	267	121	382	2,498	1,111
Mo.....	46	11	73	625	133	68	249	320	189	435	1,113	406	285	795	673	166	415	187	1,471
N. Dak.	} 23	1	5	149	8	7	} 99	32	16	8	28	34	53	26	38	16	98	308	161
S. Dak.							} 109	31	20	9	78	83	118	45	86	30	141	390	271
Neb....	39	5	27	634	40	10	147	220	126	127	742	363	251	103	331	86	325	196	707
Kan....	16	11	190	960	124	64	275	283	127	111	1,171	325	187	382	453	89	348	109	508
West'n Div																			
Mont...	3	1	1	9	4	5	37	24	9	3	15	43	78	20	70	24	88	60	82
Wyo....	1	2	2	8	8	....	5	13	4	2	48	7	10	8	13	7	15	10	26
Colo....	12	2	11	40	109	8	56	114	59	58	1,136	177	145	196	465	65	118	74	305
N. Mex.	....	....	....	2	26	2	1	7	5	....	26	16	21	27	90	18	31	15	26
Ariz....	....	....	....	1	45	1	1	....	2	2	11	6	6	21	158	19	34	22	24
Utah ...	....	1	3	4	127	...	....	10	8	4	89	37	22	25	106	8	32	25	55
Nev....	1	....	1	6	134	....	1	....	....	....	2	5	3	2	49	3	6	7	7
Idaho ..	....	....	1	....	12	....	....	....	1	1	3	10	6	3	32	11	19	13	27
Wash ..	1	....	1	3	27	1	6	18	1	2	6	16	8	12	56	20	81	71	108
Ore	3	1	1	11	204	8	7	5	5	....	14	9	7	10	79	13	45	27	26
Calif...	5	...	4	18	4,278	13	8	5	10	1	53	51	56	87	4,357	156	217	157	251
Colonies																			
Alaska..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	1	1
Hawaii.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	9	5	4	5	12
P. Rico.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	4	5	5	8
Phil. I'd	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	6	6	4
Foreign...	11	1	....	155	36	1	45	655	51	43	33	16	13	13	39	6	39	105	441

INVENTORY AND PRICE LIST OF PUBLICATIONS OF THE NATIONAL EDUCATIONAL ASSOCIATION IN THE DEPOSITORY AT WINONA, MINN., JULY 1, 1903

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IRWIN SHEPARD, *Secretary N. E. A.*
Winona, Minn.

GENERAL INDEX

[Names of authors of formal papers are set in SMALL CAPITALS. A † indicates a memorial sketch.]