



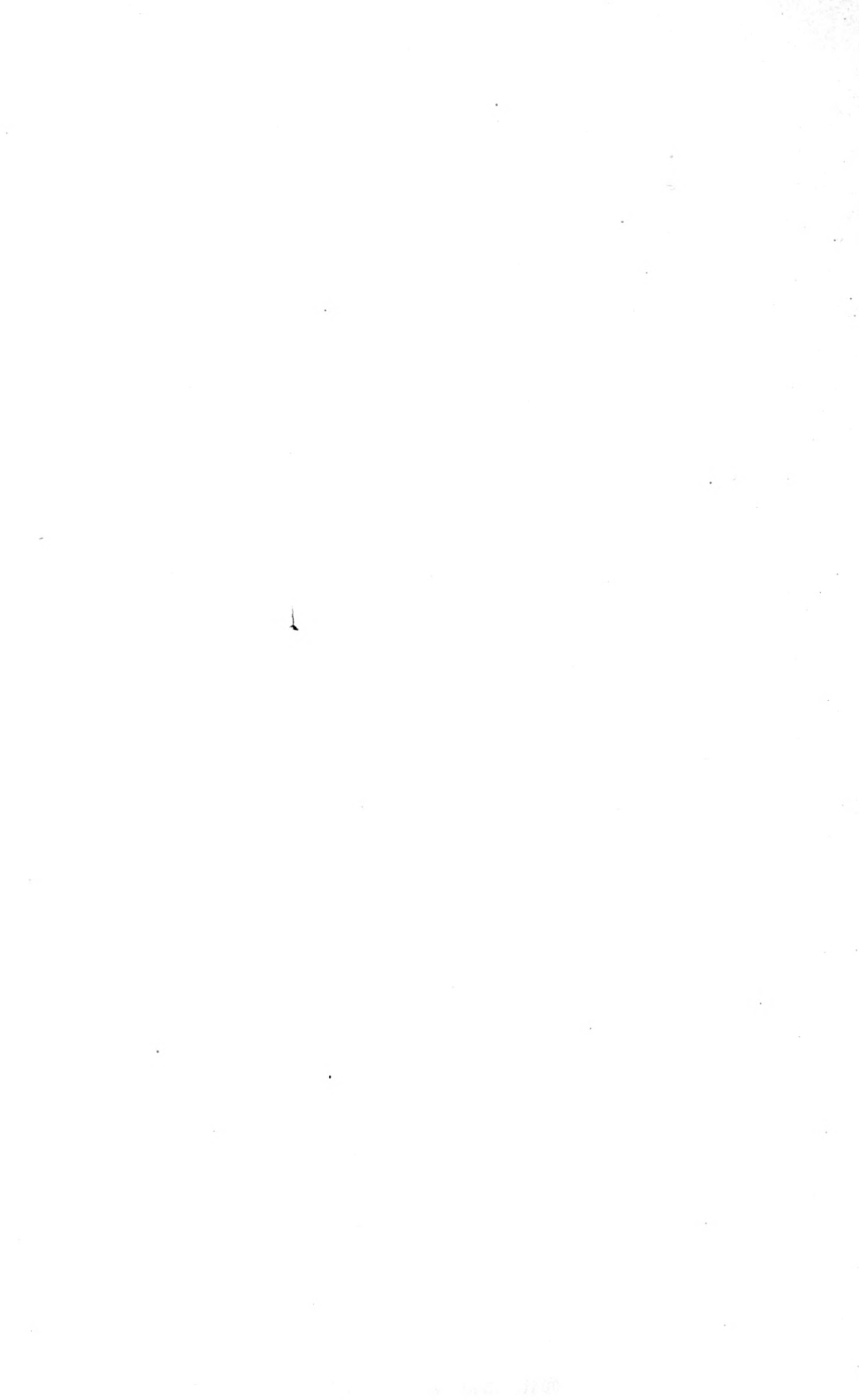
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EDUCATIONAL REVIEW

PUBLISHED MONTHLY

Except July and August

VOLUME XIII
JANUARY—MAY
1897



NEW YORK
HENRY HOLT AND COMPANY

BERLIN: MAYER & MÜLLER
PARIS: F. ALCAN

1897

EDITOR:

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16866.

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THE MERSHON COMPANY PRESS,
RAHWAY, N. J.

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The names of contributors are printed in SMALL CAPITALS; subjects treated, in ordinary type; titles of books reviewed, in *italics*.

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EDUCATIONAL REVIEW

JANUARY, 1897

I

THE ILLITERACY OF AMERICAN BOYS¹

[Mr. Godkin prefaced his paper by a short extempore explanation of the controversy between the Committee on Composition and Rhetoric, appointed by the Overseers of Harvard University, and the schoolmasters who had criticised the committee's report. Mr. Godkin was a member of this committee. His associates were Mr. Charles Francis Adams and Mr. George R. Nutter.]

In the first place let me observe that our language is the most precious possession we have. It is a commonplace to say that the greatest gift God has bestowed on man is the power of communicating his thoughts to his fellows by speech, and not only of communicating thoughts, but the nicest shades of thought. In fact civilization has only made great strides in the hands of people possessing, through their language, great powers of distinguishing and defining. The two great nations of antiquity—one of whom may be said to have founded philosophy and the other government and law, Greece and Rome—were, I need not tell you, both possessed, though in different degrees, of this great organ. Now to have and keep a language of this kind, somebody must take care of it and must see that its peculiar excellences are preserved, that its words keep their meaning, that additions to it are not wantonly made, that all changes in it are justified, and justifiable, and well considered. I speak with deliberation when I say that there is no civilized country in which,

¹ A paper read before the Schoolmasters' Association of New York and Vicinity, November 14, 1896.

outside the colleges, so little of this is done as in ours; in which the people at large, though their average speech is better than usual, pay so little attention to their manner of speaking and choice of words; in which so much havoc is made with the language in daily use. I meet every day with men whom we call educated, who do not seem to care how they speak or how they write. Their speech is full of solecisms, and their letters and notes are unpunctuated scrawls, and in their pronunciation the vowel sounds are summarily got rid of. A dialect is being formed to-day under our very noses in New York, which bears only a faint resemblance to English, and which you may see illustrated in *Chimmie Fadden*, a much read, much admired book, which has even been dramatized. This indifference to our tongue is fostered by the belief among many people that, as long as they know what is right, they may speak as they please. But I hold this to be a gross error, and have often pointed out to young men talking slang, that they cannot drop slang and speak pure English when they choose. Of all our habits, there is no habit so tenacious, so difficult to change or get rid of, as our habit of speech. You may see this in the way accent sticks to people through life. There is a story of a Scotch judge on the English bench, who, when he was admitted as a young man to the English bar, took infinite pains to get rid of his Scotch burr, and succeeded. But when an old man on the bench it came back on him in full force, and before he died he spoke once more the broad Scotch of his youth. You may depend upon it that there is no defense against bad speech but habitual good speech. If we wish to speak well, we must speak well every day. You cannot have what I may call Sunday or holiday speech, as well as everyday speech, like clothes. There is no defense against solecisms and mispronunciation but daily and hourly correctness. If we are in doubt about one of our own usages, we must look it up, and if found bad, remorselessly get rid of it.

I say so much about speech because of, in my opinion, its

very close connection with writing. Teachers in America are deprived of one important aid in regard to it, of which I have seen no notice taken, which teachers in European countries enjoy, and that is the fact that, in all the leading countries in Europe, language is connected with social station. That is to say, the way a man speaks indicates to outsiders the place he occupies in society, which to Europeans is a very important matter. Speech which we pass unnoticed here damns a man. The practice of dropping the *h*, which is common all over England among the uneducated classes, is a fatal obstacle to comfortable rising in the social world. Riches of course have their effect there as here, but I may assert positively that a man who drops his *h*'s, or speaks slovenly, slangy, ungrammatical English, as a rule, never gets a place of respect or equality in the upper circles. This makes a deep impression on parents, and makes them watchful of their children's speech and of their associations, and makes them very ready to correct the beginning of bad habits. Here I have heard a man who boasts of his colonial descent, and his old family place, and who had a large inherited fortune, tell you of it all in English which in accent and structure would discredit a newsboy. I have heard in an English school, boys who have had the misfortune to catch from servants or associates the practice of dropping the *h*'s drilled by the half hour in repeating such lines as

Up the *h*igh *h*ill *h*e *h*eaved a *h*uge round stone.

The same thing is true of Continental countries. In France and Germany and Italy, correct speech is a mark of social place. Bad grammar and bad accent indicate that a man has been brought up in humble surroundings, and discredit him for social purposes. This is undoubtedly a powerful aid to teachers of the language of the country; it supports and supplements their efforts. Here, as I have said, it is wanting. The teacher is left to struggle alone against the indifference of both the parents and society, and against the

streets. Half an hour at home, or in the street or playground, is often enough to obliterate the results of two hours' teaching at school. The community does not help the teacher in English. In nothing else does it do him any harm. Latin and Greek and mathematics, of course, suffer no damage from the outer world.

Another influence against which you have to contend is the newspapers. The object of most writers in the newspapers is to produce an immediate impression, no matter how. The first word that comes to hand will often serve the purpose. Style and nicety of expression are the last thing the writer thinks of. Very often he imagines that slangy, slovenly, or vulgar speech will accomplish his object most quickly. I have myself heard lawyers in the New York courts indulging in bad grammar, knowing it to be bad, in the belief it would be more effective than good grammar with the jury. The dialect novels are another evil influence, and the better the novel the more evil the influence. The more interesting the characters, the more likely is their way of talking to stick in our memory. The carelessness of teachers also counts for much. They are not careful about their own English. In the little brochure, *Twenty years of school and college English*, recently published by Mr. Adams Hill, Mr. Briggs of Harvard says (p. 36):

What is more vulgar than *you was*?—yet some teachers defend it; more illegitimate than *it don't*?—yet many teachers use it; more slipshod than *I don't know as*?—yet most teachers never notice it; more inexact than dangling participles?—yet good authors employ them; more offensive to a trained eye or ear than *to thoroughly appreciate*, or *to cordially thank*?—yet of such phrases professors (even professors of English) are guilty again and again.

What is a surer sign of second-rate diction than the confusion of *shall* and *will*? Yet a teacher, writing to ask me why his best pupil failed at the English examination, ignores the commonest truths about *shall* and *will*. In this very building,² in a discussion of preparation in English, I once heard a speech which showed plainly and repeatedly that to the speaker the distinction between *shall* and *will* was outer darkness.

It will thus be seen that our good old English tongue is surrounded in America by a great many serious dangers. I

² The Boston Latin School building.

am not calling your attention to them with any view of backing up the protest of the Boston schoolmasters who ascribe a large part, at least, of the poorness of the college themes "to the growing illiteracy of American boys" and to the "absence of literary interests and standards in the community." My belief is that if it be true that this illiteracy is growing, and if these standards be, indeed, absent, it is in some degree due to the failure of our educational institutions, both school and college, to attach due importance to the study of our mother tongue. It seems incredible, but it is strictly true, that, until 1874, or little over twenty years ago, no sort of English qualification was required for entrance to Harvard College. Until that time, it seemed to be presumed that every youth that presented himself for admission to college, either knew all the English he needed to know, or that it made no difference how little he knew. Now figure to yourselves the effect of this on the boys, on their parents, and on the schools. Why should any of them care much about an acquirement to which the colleges themselves attached so little importance? Before that time the instruction in English consisted simply in slovenly oral recitations, to which little attention was paid. It was in 1874 that entering students were first asked to present themes showing their capacity to write English. And yet I have shown you, in my account of the examination of these themes by our committee, what the result was after these twenty years.

Now the general impression made on me by the situation is that the less importance the parents, the boys, and the public are attaching to English, the more desirable it is that the institutions which are charged with popular education should exalt this importance. I will pass by very briefly the sentimental considerations which I might urge in support of this view. In my mind, our language is, more than anything not directly due to our own exertion, the thing to be proud of. Think of all the great men who have spoken and written it! Think of the great instruments of liberty and law which

have found expression in it! Think of the immense area of the world which it covers; think of the vast future which awaits it; think of the enormous influence it is exerting and is yet to exert on our civilization! For my part I enter deeply into the spirit of Cowper's lines, that it is

Fame enough for any private man
That Chatham's language is his mother tongue,
And Wolfe's great name compatriot with his own.

Universities are multiplying rapidly in America. University graduates are forming a large class of the community and a very desirable one. The larger it becomes the better, for no nation can go on successfully for any length of time which has not a large body of men who either know, or pay homage to knowledge by pretending to know. Nearly everyone would be a college graduate if he could. Thousands of the poor work into that position by great exertions and much privation. One of the first uses the rich man makes of his riches is to send his sons to college. The main function, I presume, of nearly all the gentlemen whom I see before me is the preparation of youths for college. I noticed two years ago, when the football fever was raging, that it was generally believed that a college's success in football drew students to it, and that some schools thought it necessary to make football a leading feature in their "fit for college."

Of this desire to enter college much use may be made, as it seems to me. You have it in your power, with the aid of the colleges, to make good English speech and writing seem throughout the country a necessary part of the equipment of a young man who wishes to graduate somewhere, and thus convert the rapidly increasing class of graduates into real guardians of correct speech. You have the scale of importance of studies in your hands. The study of English, too, no matter how much you exalt it, you will never have to defend, as you have often to defend the study of Latin and Greek. No youth will be able to excuse himself for slovenly diction by pleading want of aptitude for languages, or by

saying, as he might often say of mathematics, that he had no head for it. It ought to be made absurd and ridiculous for a boy who cannot speak and write his own mother tongue to want to go to college at all. It is not necessary for everybody to go to college. He can stay at home or follow some line of life for which a college education is not necessary. If college education be a prize, therefore, good English should be a condition of the prize, and it would be absurd to treat the exaction of good English as a hardship. Above all, the colleges should be delivered, in large part at least, from the necessity of teaching the mere rudiments of the language. This is not the business of colleges. It is a waste of their funds, and of the time of their professors. They exist in order to make boys familiar with the great masterworks of thought, with the best that has been said or written.

I freely grant that parents are much to blame for the present state of things; that fathers especially pay little attention to their sons' education beyond sending them to a good school and drawing checks for their college bills. But in the matter of English they are unconsciously influenced by the schools and colleges. Why should they, being usually, if not illiterate, unliterary men, concern themselves so deeply about their sons' English, considering how little the schools and colleges seem to concern themselves about it? But almost every father who can afford it, however illiterate or unliterary he may be, has an ambition to have his son graduated in some university. It gives the son a certain social place. It raises him out of the common crowd of business men. It enables him to form agreeable or useful friends and acquaintances. In fact, I do not think I am exaggerating when I say that a college education is one of the greatest prizes in life offered to American youth. On this I think the colleges and schools ought to work. I am rather radical, I confess, in my views about universities. If I had my way, I should be disposed to restrict the advantages they afford more strictly to those who really desire to use these advantages; that is, to the studious and industrious.

I should be disposed to get rid very early in their course, of the idlers and loungers who go to college to have a good time for four years, and get through by much coaching and conditioning. I doubt the desirableness of maintaining a large staff of professors, great laboratories or libraries, even partially, for the use of this class. But I am not likely to have my way, and it is very likely that my way may not be the best one. It may be best for the national culture that these youths should pass their formative years in the vicinity of learned men, within the precincts of great institutions devoted to the saving and increasing of human knowledge. I admit there is a moral influence in what is called atmosphere; and it is certain that, even if you cannot make great mathematicians, or great Grecians, or great philosophers of them, you can hardly fail to improve their English, to teach them to write and speak their mother tongue correctly. There is rarely one of them so idle or stupid that he cannot learn to express himself better in his own language. This, in my humble opinion, can be done by the simple process of making English of more importance either to get to college or get a degree in it. If a boy is made to understand that this is not possible without a good English equipment, that it is one of the things, not only somewhat needful, but more needful than anything else, I think he would begin at an early age to acquire it, for the hope or prospect of college goes back a long way in a boy's years.

I am conscious that in addressing you in this way I am very likely preaching to the converted. You know all the difficulties of the question far better than I do. You are much more familiar with the American boy. But we of this Harvard Committee have been unwilling to admit that his growing illiteracy made his case hopeless until some further and a different kind of effort had been made to improve him. That he has improved is shown by the fact that his entrance themes are now better than they used to be. In the matter of the relative importance of studies, he is in your hands. If you do not mend his English, he will be only too glad not to

mend it himself. And let me say again emphatically that college is not the place to mend it. College is a place in which to become acquainted with literature. It is not the place to acquire dexterity in the mere daily use of the mother tongue.

You see, then, that my remedy is simply a change in the scale of importance of studies. I do not say it is a complete remedy, or a remedy easily applied, or a quick remedy, but it seems to be the only remedy within the reach of teachers just now.

E. L. GODKIN

NEW YORK, N. Y.

II

PHILOSOPHY IN AMERICAN COLLEGES¹

The thirty years that have passed since the close of the Civil War have been marked by great changes in American university education. If we think of general educational policy, the introduction of the elective system, the development of "university work," including as a chief factor the addition of research to instruction, the broadening of the field of both instruction and inquiry, the correlation of the college downward with the secondary schools and upward with the professional schools, occur to mind as typical elements in the movement from the higher education of a generation ago to the education of to-day. If we turn, on the other hand, to changes of a less general kind, we must note the striking advance of whole groups of subjects—as the increased importance of the natural sciences in the curriculum of the colleges with the reaction on general university policy which this has occasioned, and the prominence claimed and received by the historical, economic, and social sciences; or the increase of attention to special departments of study, as the demand, whose justice can hardly be denied, for a larger and healthier development of the study of our mother tongue and its literature.

Among the subjects that of late have been coming into greater notice is philosophy. It would be a mistake, indeed, to imagine that this increase of interest in philosophical study means the introduction of a new element into the atmosphere of our universities rather than a development from one

¹For data on which this article is based the writer is indebted to Professors Garman of Amherst, Delabarre of Brown, Mead of Chicago, Butler of Columbia, Creighton of Cornell, C. F. Richardson of Dartmouth, James of Harvard, Wenzley of Michigan, Newbold of Pennsylvania, Ormond of Princeton, Russell of Williams, and Ladd of Yale.

already there. For, in comparison with the other departments of instruction, in the "old American college" philosophy, as it was formerly understood, received proportionately large attention. After the student had been trained in the time-honored classics and mathematics, after he had learned his modicum of rhetoric and history and natural science and the rest, there remained the "higher branches," which were held not only to train him in scholarship but to fit him for practical life. Political science would make him a good citizen; the evidences of Christianity would ground his religious faith. Between the two and merging into the latter came his philosophical instruction: in the elements of deductive logic very probably, and the elements of introspective psychology (often termed mental science or mental philosophy), and the elements of ethics, based perhaps on a psychological study of the conscience and including a considerable amount of applied morals as well as ethical theory. In addition to these courses one in natural theology was favorite and common, forming in many cases an introduction to the "evidences" or a part of a single course with them; and, in connection with the work in "mental philosophy," or as an independent course when the department began to broaden and advance, some discussion of the history of philosophy was given, often, after the translation of Schwegler's handbook, with that valuable little manual as a foundation. It is to be remembered, moreover, that these studies were pursued with great earnestness and under the direction of the leaders in the various institutions. For if we are now disposed to give philosophy its independent place in the curriculum, it remains true that one of the strongest motives to abstract thinking is always the desire for answers to practical questions, and that, under whatsoever rubric we may classify our philosophical instruction, it is never possible to divorce philosophy and life. And if the tendency of recent years is to demand special equipment on the part of the teacher of philosophy rather than mere dogmatic soundness or fitness to be the college's executive head; yet in this phi-

losophy is but sharing in the emphasis now placed on technical training in all departments, while we must not forget those honored names of the last generation which so often stood for a combination of insight and training with practical sagacity, pedagogic tact, and manly faith.

Nevertheless, the average curriculum in philosophy in the old American college was meager and imperfect. The difference between the organization of the department in the last generation and at the present time is shown at once by a comparison of the statistics of instruction then and now. At Harvard, for instance, till 1868--69 the work in philosophy was all prescribed, and consisted of courses in the elements of intellectual and moral philosophy and the evidences of religion. The instructors in the department numbered a professor of philosophy and one of ethics until 1872. The departmental announcement of the same university for 1896--97 shows a corps of instructors more than five times as large as that of 25 years ago, and 24 courses, besides 6 in Education and Teaching and a number of collateral courses under the direction of other departments.² At Yale President Porter, assisted by a single tutor, performed all the work in philosophy until the year 1881--82; now there are 10 instructors (including 1 from the Divinity School), and 29 courses. The catalogues of Columbia College show a single professor (who was also professor of English literature) down to 1881; there are now (1896) 8 instructors (besides 6 from the Faculty of Teachers College) and 24 courses (besides 13 at Teachers College). Even after the accession of Dr. McCosh to the presidency of Princeton (1868) and his subsequent enlargement of the philosophical curriculum, this for a number of years remained of a relatively undeveloped kind, the first notable advance being the introduction of graduate courses about 1878--79. In 1896--97 there are 8 instructors and 29 courses (besides courses in the evidences of religion).

² The number of courses stated in each case is the gross number, including both yearly and half-yearly courses, and courses "omitted in 1896-97."

These institutions, moreover, are far from being alone in their philosophical development; they are rather specimens of a rapid growth experienced by nearly every institution that has kept pace with the educational progress of the last few decades. An inspection of the catalogues of the various colleges and universities throughout the country surprises one by its revelation of the extent to which the philosophical department has advanced. At Williams College, where the work until 1887, with the exception of occasional courses of lectures in historical philosophy, was confined to Dr. Hopkins's instruction in the senior year, there are given in 1896-97 prescribed courses in psychology, logic, introduction to philosophy, ethics and the philosophy of religion, and theism, with an elective course covering advanced psychology and modern philosophy. At Brown University there were till 1889 but 1 instructor, 3 courses, and 6 hours of instruction weekly; there are now (1896-97) 5 instructors, 17 courses, and 32 hours of work per week. In 1878-79 there were offered at Cornell courses in nervous physiology in relation to mental phenomena, logic, history of philosophy, moral philosophy, and the philosophy of history; in 1896-97 there are 34 courses, including pedagogics, given by a teaching force of 12. Similar statements would be true of many institutions in the section of the country which we formerly termed the West; while it need scarcely be added that the leaders among the Western universities, as, for example, Michigan and Chicago, can boast of philosophical departments, either grown from smaller beginnings or created on a comprehensive plan, that well may rival those of their older Eastern sisters. Finally it must be noted that the last decade and a half has seen, both East and West, the establishment of special foundations for philosophical study and inquiry. The founding of psychological laboratories will be mentioned in another place. Besides these, or including them, there are the important philosophical endowments and schools—as the Stuart foundation at Princeton or the Sage School at Cornell—and one university, Clark, whose

strength is mainly devoted to the psychological and philosophical branches.

But although this development has been a marked one, the movement is of comparatively recent growth. At Harvard "the transition between the old order and the new may be placed at 1870" and "the date of the first serious attempt to enlarge the philosophical department" at 1872. About the same time Dr. McCosh was imparting a new impulse to philosophical study at Princeton and carrying out his first plans for the reorganization of the department. Probably the early seventies may be accepted as marking the beginning of the movement, the line of progress being taken up by the various institutions as their needs or opportunities or general pedagogical advance led them toward it. At some of the stronger universities, and perhaps a few of the smaller institutions, the change may be definitely assigned to this decade. The large majority, however, did not reach the dividing line before the eighties; and many are still engaged in their endeavors to advance.

The causes of this progress in philosophical study would furnish an interesting subject for investigation. The general advance in higher education during the generation past would, no doubt, be found to have been one condition of the increase of opportunities for philosophical work in the universities; this department sharing in the common growth as well as its fellows in the curriculum, and entering into generous emulation with them. Important also would be found the set of causes which have led in the same period to the enlargement and the deepening of our reflective thought both without the universities and within them;³ while in certain cases it would be evident that educational progress and causes specifically internal to philosophy itself have combined to develop the desire for increased philosophical instruction. Thus the apprehension with which some of our (older) educators viewed the growing prominence of the natural sciences in the colleges has been followed by an

³ See "Philosophy in the United States," by the same writer, *EDUCATIONAL REVIEW*, June, 1895.

appreciation of the necessity, felt in America as in Europe, for the speculative discussion of the empirical conclusions poured in on us by the science of the century in such abundance. As a correspondent puts it in explanation of the recent enlargement of the philosophical curriculum in one of our smaller but best known colleges:

One determining reason for the expansion in philosophy has been the wish to keep pace with the enlargement that has taken place in the other departments, especially in the department of special sciences. . . The growth of special sciences, the unavoidable specialization in study, make such a discipline as philosophy, rightly conceived, only the more valuable and important. . . I aim to keep one truth before the student, viz., that he cannot leave out the consideration of those problems and convictions which belong to philosophy without overlooking that spiritual bond without which our science is a fragmentary thing and life can have neither wisely chosen ideals nor a rational faith to support and strengthen it.

Another intrinsic factor in the growth of our philosophical curriculums has been more special still: the influence of the recent progress in psychological science in many quarters of the world. For not only were we favorably predisposed by our hereditary tendencies toward the "new" science; not only may its influence on our philosophical work at once be estimated from the welcome which we gave it; but it is suggestive that the time of our early interest in it so nearly paralleled the period at which, as we found above, the change from the older organization of philosophical instruction to the new was in process of accomplishment.⁴ Moreover, it is not to be supposed that the psychological development of recent years is to find its end in the investigation of details, as the matter has sometimes been put. Laboratories and special inquiries of necessity come first; and it is an honor to American scholarship that our psychologists have reached so valuable results in this line of effort in the past, and that they continue their labors with increasing promise for future years. But the new facts as imperiously demand new explanations as they have proved ruthless in interfering with

⁴ The subject was introduced at Harvard in 1876, at Yale in 1881-82, at Princeton in 1883. The laboratory at Johns Hopkins was founded in 1881. Since 1888 the establishment of special psychological laboratories in the universities has gone on at a rapid pace. See Delabarre, *L'Année Psychologique*, 1894, p. 210-211.

some accepted theories. Therefore our thought has been rapidly advancing from experimental investigations to the systematic discussion of psychological principles; while at the present time it is noticeable that the new psychological movement is entering on a third stage in its progress. After detailed inquiries, after systematic discussions, the inevitable philosophical questions are forcing their way to the front. American scholars have joined heartily in the world-movement that has made psychology a science in its beginnings and its empirical development; but they are also recognizing the metaphysical issues which the science involves and are commencing to face them with earnestness and success.

In this way the traditional "mental science" of our time-honored curriculum has been expanded beyond the ideals of a generation ago, and in its growth has given a powerful impulse to the general progress in philosophical work. Correlated at the one extremity with the researches of the biologist and the physiologist and erecting itself into an independent science with the methods of the laboratory and experimental inquiry, our psychology has yet not sacrificed its articulation with the more specifically philosophical disciplines; leading in the end to a definite circle of the deepest speculative problems, it has lost its somewhat exclusive position in our teaching and thinking, only to retain a place that is central and important. Logic, which formed a second constituent element of the older curricula, has in contrast to psychology received of late less attention. In fact the tendency has been toward a minimization of the subject after the elementary stage is passed. The first course in philosophy at many of our higher institutions continues, indeed, to include the elements of this discipline. But it is noticeable that in few of our colleges and universities are advanced courses in the subject offered. To cite a few examples: during the last five years, 1892--97, the faculties of philosophy at eight of our principal universities (Chicago, Columbia, Cornell, Harvard, Michigan, Pennsylvania, Princeton, Yale) have in four cases given no advanced courses in the subject;

in one case one course (*i. e.*, for a single year or term), in one case two courses, in one case several scattered courses, while in the case of but a single one of these institutions can it be said that attention has been devoted to the topic in a degree commensurate with that given to the other chief philosophical branches.⁵ It has been suggested to the writer that the explanation of this neglect may be found in the central influence of psychology already noted. This seems the more evident if a certain tendency to supply the lack, as psychology leads to philosophy, be taken into account. Nevertheless, the explanation can scarcely be deemed complete in view of the prominence of logical problems in the philosophy of the immediate past; in view also of the important part which the English logicians have played in the logical thought of the age; and if we remember that in at least one of our leading universities (Johns Hopkins) the subject of the newer, symbolic or algebraic, logic was formerly pursued in a way which not only attracted enthusiastic students but led to results of recognized value. A third staple element of the old instruction has better maintained its place. For if the ethical philosophy taught in our universities to-day differs sometimes by its distinctively speculative character from the more practical instruction of a generation ago, yet, considered from the philosophical standpoint proper, it has gained in breadth and depth as well as received much of its proportionate share in the general expansion. Further, an interesting accession of importance has accrued to ethics from the political and social movements of the period under discussion. The development of our political and social life and of our reflective thought thereon has brought a demand for larger consideration of social morality; so that moral science in the universities, as in "practical life," is being led back to that connection with the sciences of the state and society which historically was its early affiliation.

⁵ It should be noted, however, that the subject is touched on in courses which do not bear the definite title; that, in one or two cases, courses in algebraic logic have been offered in the mathematical department; and that, in the case of one of the universities cited, a new course is announced for 1897-98.

Apart from psychology, however, the greatest relative increase in the philosophical work of the colleges has been in that somewhat broad field which may be termed general philosophy. This was but weakly represented in the older curricula. It is true that the instruction in psychology, ethics, natural theology, etc., was at times coupled with a slight discussion of historical philosophy; this, in turn, being for the most part grounded upon a certain number of dogmatically asserted principles or a selected positive system. But the work of to-day, both historical and systematic, differs so widely from the teaching of a generation ago that in many cases it is difficult to realize that the later form is a growth from the earlier which constituted its germ. The situation in historical philosophy has been well described by a recent writer, who on one page of his work alludes to the favor at present enjoyed by the discipline and on another declares that the history of philosophy, in the strict sense, is unknown in the United States. For in the field of detailed research into the history of authors and systems we have as yet done little. Even the history of philosophy in America, in spite of certain preliminary ventures, is a chapter which yet remains to be written by someone who shall combine familiarity with modern thought and patience in retracing the course of those controversies in dogmatic theology with which so much of American speculation in the past has been connected. Yet, on the other hand, the history of philosophy, in the less technical meaning, has been receiving much attention. For in philosophy we have emerged from the stage of isolation and realize that, if our thinking is to be fruitful, it needs, besides its own original vigor, a thorough appreciation of the great movements in the history of opinion. In this respect the study of philosophy, as at present conducted in the American colleges, is exerting an important influence on our intellectual life. For it is both bringing our thought into articulation with the foremost tendencies of the past and giving our students an acquaintance with the features of the modern spirit. Thus in general

it supplies some account of the history of intellectual progress, while in special it serves as a study, in most cases a critical study, of the classical principles and systems.

Moreover, history and criticism lead on to construction. For in few cases have we been so influenced by the anti-metaphysical spirit of the age as to study the history of speculation merely for the history's sake; and whether or not our reflection is soon to produce a distinctive speculative product of our own, it is shown by the philosophical activity of the universities that the transition from our earlier dogmatic position to participation in the currents of contemporary thought is not preventing us from beginning constructive work. Courses are increasing in introduction to philosophy, which, even when introduction is interpreted in the sense of philosophical encyclopedia, rarely fail to include something of positive teaching; and which more often become "special" introduction, with not only an account of the various philosophical problems but also preliminary answers to these. In some cases, again, our curricula include courses in rational psychology, as already mentioned. In others, phases of the epistemological or metaphysical problem supply the point of departure for constructive speculation, with not infrequently a study of some system or systems of the classical authors as a basis. Or the outcome of modern science may furnish the outline for a discussion of the philosophy of nature, in connection perhaps with the evolutionistic theories that in the last decades have so engrossed attention. Or ethics and the philosophy of religion may be made the subject not merely of apologetic defense but of positive speculation. Finally, there may be found attempts at the construction of philosophical systems of a more or less complete sort; although the number of our philosophical teachers confident enough to make this venture is much smaller than the list of those who essay expository and critical work.

One of the youngest branches of the philosophical department in the American college is pedagogics. In fact,

although in a considerable number of the universities pedagogy has of late been handsomely recognized and vigorously developed, there are not a few which still lag behind. In others the study is not classed with philosophy; and not infrequently the pursuit of the subject is to be termed philosophical only with the tacit inclusion of many elements of a non-philosophical character. Nevertheless, it may be urged that these latter conditions are grounded in the nature of the case; while the prominence of the subject at the present time and its influence in the future are beyond serious question. Educational problems, furthermore, are being attacked in the universities along manifold lines of approach. Thus pedagogy has entered into alliance with psychology, especially the psychology of the newer order; the history of pedagogical theory is also being taught and the chief philosophies of education are being expounded; and the questions of practical education are gaining consideration in the pedagogical classroom as well as in the faculty meeting, or before the educational committee or convention.

With this growth in the extent and in the content of the curriculum in philosophy the methods of instruction have kept even pace. Like the former, the manner of teaching has been influenced both by the general trend of educational progress and by causes special to the department. Thus the transition from a college course composed of prescribed studies to one entirely, or in large part, at the election of the student has, of necessity, implied a change in the status of the philosophical disciplines in particular. But it is to be noted that our high estimate of the importance of such studies has in many cases prevailed to keep a minimum number of courses in philosophy on the "required" list in institutions where the student's choice of work is not wholly free. In a number of our colleges, therefore, a certain amount of elementary philosophy shares with economics and politics the doubtful honor of being exacted from undergraduates in their Junior, or Junior and Senior years. The majority of the larger institutions that come within this class confine

the requirement to the elements of logic and psychology, or of logic, psychology, and ethics. Yale University, however, forms an important exception to the rule. There not only is an elementary course in logic, psychology, and ethics prescribed for all academic Juniors, but also in the Senior year the student is required to take one course in philosophy, the choice being given him of one of four courses, one in the introduction to philosophy, two in modern philosophy treated historically, and one in philosophical anthropology. The basis of this requirement, as stated by the head of the department, is the conviction that every liberally educated man should possess some acquaintance with the philosophical manner of viewing the world, with the more important philosophical problems, and with the chief answers which may be given them.⁶

In spite, however, of this high example, the tendency of the times is to make all parts of the philosophical curriculum dependent on the election of the student himself. The first course in the department, whether prescribed or elective, will probably continue without much change. The purpose of this course is in the main elementary, the chief questions concerning the subjects to be included and the distribution of the emphasis placed upon them. Tested by current practice, the preponderance of opinion is in favor of psychology, associated with logic and, perhaps, ethics as the best philosophical propædeutic. This arrangement would be obviously the best, were it not for the propædeutic value of philosophical introduction and the history of philosophy. Probably the theory which controls the organization of our most fully developed "departments" or "schools" might be stated as follows: the first course should cover elementary logic (including induction), psychology, and perhaps ethics; second to this, and intended at once to be preparatory to the more advanced courses and to furnish a general knowledge of the field, a course in the history of philosophy or a course in the introduction to philosophy or a course embrac-

⁶See Ladd, "The essentials of a modern liberal education," *EDUCATIONAL REVIEW*, October, 1895, p. 231-232.

ing both these disciplines; third, where ethics has not been previously considered, a course in the elements of moral philosophy and, perhaps, one in the elements of the philosophy of religion. On these as a foundation the more special courses are then built up, in the way and with the tendencies that have been noted above. Psychology in its higher developments divides into several branches, experimental work in the laboratory assuming a prominent position. Historical, systematic, ethical, and religious philosophy of necessity take on a more literary form, with a constantly increasing use of the methods found fruitful in other departments: the seminary, research, reports, and papers embodying the results of original inquiry. Finally, the work culminates in the effort not merely to train students of philosophy but to rear those who will become teachers of others, and in the endeavor to make contribution to the fund of philosophical knowledge; the universities, to this latter end, taking the lead in the present rapid enlargement of our philosophical literature.

In general, then, we may conclude that philosophy has re-established its position in our university life. It began its progress in the change from the old order to the new later than several others of the fundamental disciplines; but, by way of compensation, its growth has of late been exceptionally rapid. It is supported, moreover, by the general revival of interest in philosophical problems as the century draws toward its close, and by the presence within its own boundaries of more than one movement of absorbing interest and constructive promise. Its influence on the intellectual life of the nation is certain to be a marked one. This is evident already in the eager application of theoretical results to practical problems, as the union of psychology and pedagogics. The deeper effects of philosophical reflection on the national thought will become more apparent as time goes on—especially in view of the increasing importance of the universities in our civilization.

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III

RECENT CENTRALIZING TENDENCIES IN STATE EDUCATIONAL ADMINISTRATION, (I)

Although popular education, since the earliest days of New England history, has been fondly cherished as one of the chief characteristics and safeguards of our American polity, and although public schools early became quite generally diffused, especially throughout the North, yet at the opening of the present century none of the States had what could be dignified by the term a "public-school system." Almost everywhere throughout the country the establishment and continued maintenance of free public schools depended chiefly upon local initiative and local public sentiment, while, so far from there being any effective control and supervision of the schools, this factor was almost entirely wanting in every State. What little control and supervision existed was local and took in no larger area than the township or county, and with the general establishment of the so-called "district system" was ushered in an era of the most extreme decentralization conceivable, during which a multitude of petty local boards of "directors" ruled supreme in their infinitesimal districts.

This extreme decentralization in educational administration lasted till quite late in the present century; but gradually, as population increased and wealth accumulated, the primitive conditions gave way to modern complexities, and as a result the early decentralization has also been obliged to give way at many points. During the first half of the present century (roughly speaking) township and county supervision over the expenditure of school moneys, the levying of local school taxes, the erection and repairing of school buildings, the fixing of school terms and salaries, and other matters of a purely business character, was constantly

becoming more and more thorough. During the latter half of the century this control has been gradually extended to an oversight of educational methods and courses of study, the qualification and selection of teachers, grading, classification, discipline, and sanitation. And furthermore, during this latter period, township and county supervision has been quite generally supplemented by more or less thorough State control over many branches of school administration. First of all there were developed in most of the States special school funds and a general system of taxation for the encouragement and partial support of public schools. Parallel with and closely connected with this movement was the differentiation and development of separate State educational departments; and this movement has in many States been attended with the downfall of the "district system" and the establishment of a quite thorough central control over such branches of educational administration as textbook supplies, courses of study, the examination and qualifications of teachers, compulsory attendance, and truancy. It is to a brief consideration of some of these significant tendencies toward centralization in school administration that the attention of the reader is invited in this and a subsequent article.

First, let me briefly note the relation of State aid to State control. American interest in popular education early took the tangible form of munificent State aid, and to-day every State in the Union follows this policy either by setting apart special funds or by providing various forms of taxation or appropriation for public schools. The varieties of taxation for this purpose in the different States are legion, consisting of taxes on banks, trust companies, railroads; taxes on dogs and other domestic animals; fines for intoxication and other offenses against the State; licenses for auctioneers, brokers, circuses, liquors, taverns, restaurants, marriages; poll taxes; mill tax; convicts' hire; percentage of fees of justices of the peace, prothonotaries, recorders of deeds, and other public officers; proceeds of sales and lease of public lands, escheats,

estrays, unclaimed dividends, tax sales, etc.; dividends on State banks; riparian rents and sales; saline funds, etc., etc. But the important fact to note is that State *aid* has naturally and necessarily led to State *control*. The granting of aid on the part of the State implied conditions upon which such aid should be received by the localities. These school funds and systems of taxation were not established simply for the benefit of the localities as such, but they are an evidence of a dawning sense of the need of a State system of education under central supervision and control. These funds were established for the promotion of the public good in a wider sense. The State had interests of its own to foster and a policy of its own to carry out. The establishment of the State school funds, therefore, became the basis of a distinctive State policy and inaugurated a system of State control and intervention in the field of education.

In the first place these State funds led to a better system of school returns, with all that this implies. Prior to the granting of State aid to the localities it was all but impossible to get even the most meager statistical returns from the same, because there was no adequate incentive for compliance and no effective penalty for refusal and neglect. Now when the localities understand that their share of the State appropriation will be withheld in case of non-compliance with the statistical demands of the central department, it is needless to say that even very extensive and detailed statistics are quite readily obtained. The very great value and importance of such statistics in developing a real system of public education are too apparent to require further mention. But this vast fund of statistical information is not the only result of the granting of State aid to schools, nor the only form of central control growing out of the same. It is primarily by the power of withholding appropriations from the localities that the State exerts its strong arm of control in other directions. It is the fear of losing their share of the State moneys that serves as the most effective method of inducing the localities to maintain schools during the entire

period prescribed by law; to provide instruction in all the required branches of study; to employ only those teachers who conform to various requirements made by law and by the various school administrative authorities of the State; to comply with numerous and important State regulations as to school property; in some cases to raise a certain required sum by local taxation; in some cases to enforce compulsory-attendance laws and factory legislation relating to children; in some cases to follow a State course of study and to use State text-books; to carry out various rules of the State superintendent or State board, too numerous to mention. It is very evident, therefore, that State aid to education has proven a condition precedent to any and all effective control over the same; and for this reason the establishment of State funds and taxation for public schools must be regarded as the first important step taken in this country toward a centralization of school administration.

As noted above, the movement toward State aid was closely followed by the establishment of separate State educational departments. At first there was a tendency to merge the office of superintendent of public instruction in other more purely political offices like those of Secretary of State, State treasurer, and State auditor. Of course there was no logical connection between the offices thus merged, and whatever development there was in the public-school system under this régime was in spite of the fusion; yet, owing largely to political reasons, the permanent separation of the two offices proved quite difficult. After a long and rather tedious development, however, there exists to-day a separate educational department in the administrative system of every State and Territory, except Delaware and Alaska, in each case headed by a chief administrative officer. In most of the States the chief educational officer is elected by the people, but in fourteen States he is either appointed by the Governor or by the State board of education, or is elected by the legislature. The term of office of this official varies from one to four years, but the evident tendency is to

lengthen the term. At least eighteen States now prescribe a four-year term.

The powers and duties of the State superintendent vary somewhat in the different States, but the following functions are usually assigned to him: to visit schools and consult with local officers and boards; to prepare registers and various blank forms to be used by the school officers of the State; to collect statistics concerning pupils, attendance, school taxes, etc., and receive reports from county superintendents, county examiners, and various local boards; to report to the Governor the condition of the public schools, the normal schools, and other educational institutions; to apportion school revenues among the localities; to grant and revoke State teachers' licenses; to recommend, and frequently to prescribe, text-books, library books, courses of study, and courses of reading for teachers; to publish the school laws; to bring actions for the recovery of misplaced moneys; to act *ex officio* as trustee of normal schools, regent of the State university, etc. In some cases the State superintendent exercises an important appointing power. For example, in quite a number of States he appoints institute conductors and instructors; in Alabama he appoints the county superintendents; in New York he appoints local boards for normal schools and can veto the appointment of normal-school teachers; in Ohio he appoints the State board of examiners; in Pennsylvania he commissions county, city, and borough superintendents, fills vacancies in the office of county superintendent, and appoints trustees for normal schools and examining committees for the same.

In at least twenty-nine States the exercise of part or all of the above functions is shared by a State board of education, generally composed of some or all of the following State officials: governor, lieutenant-governor, auditor, secretary of state, attorney general, comptroller general, surveyor general, treasurer, president of the senate, speaker of the lower house, and superintendent of public in-

struction. Sometimes, in addition to one or more of the above officials, this board is composed of other persons, either appointed by the Governor or elected by the legislature or people. In only a few States is this board a professional body. In some cases the State board exercises a very important appointing power. In New Jersey, Mississippi, and Virginia it appoints county superintendents; and in the latter State it also appoints and removes city superintendents. In Louisiana it appoints parish boards of directors and, in conjunction with the Governor, eight out of twenty of the city board of New Orleans. The Florida State board fills vacancies in county boards and can remove any subordinate officer for incompetency. The most common and important functions of State boards of education, however, are the examination of candidates for State teachers' licenses and the management of the State school funds. Four States which do not have the typical State board of education do have a corporate board solely for the control of the school funds. Five other States have central boards with the sole function of examining and licensing teachers. The Minnesota High-school Board has "full discretionary power" to prescribe conditions upon which State aid shall be granted to high schools and to act upon the same.

One other power of the State board and State superintendent deserves special mention, viz., the power of hearing appeals and deciding controversies among local authorities arising under the school laws. This appellate jurisdiction has been expressly conferred by law in at least twenty-eight States. The express statement of the law in quite a few of the above States, and the evident intent of the law in others, is that the decisions of either the State board or the State superintendent shall be final. In some of the above States this appellate jurisdiction of the educational department is made subject to adjudication by the courts; but the absence of contested cases in the courts would indicate that in practice this jurisdiction is also final in most of these States,

and for the most part the cases that have arisen have tended to strengthen this jurisdiction. Only a moment's reflection will reveal the vast importance of this power. Such a power and jurisdiction offers almost endless opportunity for central control of local authorities and for securing a more uniform administration of the school law. Indeed in some States these decisions of the State superintendent already constitute quite an extensive body of supplementary school law, as an examination of the decisions printed in various State school reports will show. And it is not too much to predict that, wherever firmly established, this power will surely bring about a more and more thorough central control and regulation. This appellate jurisdiction, therefore, is one of the really strong tendencies toward centralization in school administration which the latter half of the century is developing.

Descending in the official scale, the next grade of administrative officials is that of the county. All of the States outside of New England, except Ohio and North Carolina, have a county superintendent or county examiner in each county, and one New England State, Vermont, has a county examiner. The term of service of these officials varies from one to four years, with a preponderant majority in favor of a two-year term. In the majority of the States these officials are elected by the people; in some they are appointed by the county board; in some by the county court; in some by town superintendents or trustees; in a few, as we have seen, by the Governor, State superintendent, or State board. In general it may be said that these county superintendents and county boards occupy the same position with reference to the schools of the county as do the State superintendent and State board with reference to those of the State, subject, however, in a more or less tangible manner to the State authorities. The school law of many of the States declares specifically that these county officials are subject to such rules and instructions as the State superintendent or State board may adopt, and frequently also directly commands

them to carry the same into effect. This subjection of local officials to State authority would seem to be made quite effective in at least all of those States in which the county school officials are appointed by the central authorities.

In New England the town school committees or supervisors occupy the same place with reference to the schools of the town as do the county authorities with reference to the schools of the county in the other States.

Having now briefly outlined the present State, county, and township school organization, and noted some of the centralizing tendencies in the same, we are brought in natural order to a consideration of district organization or the "district system," as it is commonly called. Perhaps a few words, in passing, concerning the origin of the same will be fitting. This system, now so generally condemned, was an outgrowth of the exigencies of New England pioneer life. Originally the township system prevailed in this section, but by the middle of the eighteenth century the towns had become pretty thoroughly split up into districts, and then the Massachusetts law of 1789, by sanctioning, greatly encouraged this process, and thus the "district system" received a new impetus. In 1800 districts were given the right of local taxation. The next step was to make school districts corporations with full power to sue and be sued, to make and enforce contracts, etc. This was done in 1817. The final touch to this process of minute subdivision of power was given in 1827, when school districts were empowered to elect prudential committees, to whom were confided the care of school property and the important trust of selecting and contracting with teachers. At last the school district has become a full-fledged political institution and American sovereignty is split up into the minutest conceivable fragments. Surely the principle of "local self-government" here reaches its most extreme and absurd development. And unfortunately the evil effects of the "district system" were not confined to Massachusetts. The spirit of the law of 1789 and its sequels was altogether too much in harmony

with the extreme American predilections of the time toward "local self-government" to prevent it being rapidly transplanted into the other New England States, thence via New York into nearly all the other Northern States of the Union; and this was mostly accomplished before the worst features of the "district system" had been demonstrated in Massachusetts or known outside of that State. This rapid adoption by the other States, therefore, of the Massachusetts "district system" in the earlier part of this century marked the extreme limit of decentralization in American educational administration. The latter half of the century, on the other hand, is witnessing a very general undoing of this faulty early administrative development.

What, then, to be more definite, is the "district system," and what are its attendant disadvantages and evils? This is a term applied to a system under which a State becomes divided into nearly or quite as many units of school government as there are individual schools to be governed, except in cities and incorporated towns, where all the public schools of the community are generally under one management. Each district has its separate body of officials, intrusted to a greater or less extent with the management of its school affairs. These officials are generally elected by the voters of their respective districts, for terms varying in different States from one to four years. Their duties in the various States are quite similar, viz., the levying of local school taxes and the expenditure of the same, the employment of teachers, the provision and maintenance of schoolhouses and other school property, the selection of text-books and regulation of courses of study, and the general supervision of the school or schools of the district. The mere definition of the system condemns it, but some of the evils should be briefly elucidated.

(1) It fosters a very narrow provincialism and is fatal to a broad and generous public spirit in school administration. The constituencies of the district officials are generally so small as to represent little more than individual caprices

and prejudices instead of real public sentiment or policy. The parsimony of the typical school director has long since become proverbial, and this panders to private selfishness. Average public sentiment has no real opportunity for vigorous action when the township is split up into ten or twenty infinitesimal units. This extreme localization of administration, therefore, inevitably tends to breed official incapacity and irresponsibility, and school offices are very apt to become mere perquisites, used solely for selfish personal ends.

(2) The "district system" is much more expensive in proportion to what it accomplishes than a more centralized system. By means of it hundreds of schools in every State in which it exists are kept in operation which really ought to be abandoned. It is not at all unusual to find from one hundred to two hundred schools in a State in which the average attendance is less than ten pupils, and instances are on record where schools have been held the full period for the solitary benefit of one scholar.

(3) This system enormously increases the number of school officials and the number of school elections; and we must remember that no class of elections begets more feuds and animosities than these petty school elections.

(4) It occasions glaring and unjust inequalities in school taxation and school privileges. The poorer districts are left to shift for themselves, and this gives rise to shockingly meager school privileges in many cases. In almost any county or town in any State where the "district system" exists, there are some districts in which school is held only just long enough to draw the State money. It is frequently the case that within the very same town one child can attend school only twelve weeks in the year, while another in a different district can attend thirty-six weeks. Furthermore, in one district children are well taught; in another near by they are grievously mistaught; in one district they can sit in cheerful and healthful schoolrooms and have the advantages of good libraries and apparatus; in another just the reverse is true.

(5) This system does not admit of any continuous and steady school policy. School committees are generally chosen for short periods and the changes of teachers are correspondingly frequent and haphazard. Furthermore, the committees are seldom elected because of their fitness or familiarity with present educational needs, but are in fact generally conspicuously unfit. The result is that school policy is spasmodic and continuity is lost in the maelstrom of petty district politics.

That these weaknesses and defects of the extremely decentralized "district system" are now generally recognized and discussed, is proved by the fact that the recent school reports of many States frequently refer to them and condemn them. And these defects are also being checked and overcome. Even in Massachusetts, the State where the system originated, attempts were made at an early date to check and regulate its evil tendencies. It was not long before the educational leaders of this State gave over trying to regulate the system and began to work for its abolition. For many years, in many places, its abolition was stoutly opposed as the entering wedge to centralization and despotism, and for long the backwoods orators pathetically and eloquently appealed to the memories of the Revolutionary heroes in its defense, but all their warnings and pleadings did not avail to keep this anomalous administrative monstrosity alive. In 1882 the "district system" was finally and summarily abolished. In other States also the question of abolishing the system has been almost constantly agitated for over half a century. As a result, at least twenty-four States have already abolished the system in whole or in part, and bills looking to this end have been introduced into quite a number of other States during the present decade. The "district system" is evidently doomed, and its downfall is one of the hopeful and salutary tendencies of the time.

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(To be concluded)

IV

SOME CONTRIBUTIONS TO CHILD-STUDY¹

It is a matter of no small wonder that in the passing of a decade or so the child-study movement should have penetrated so deeply into the very heart of our educational and social life. Probably no considerable body of teachers could gather together anywhere in our country in these days without devoting much of their time and energy to a discussion of the results of modern child-study, and their bearing upon the problems of teaching. The great enthusiasm manifested in this new subject by teachers, and laymen as well, during the conventions of the Child-Study Congress at Chicago and the National Educational Association meeting at Buffalo seems but typical of the feeling developing everywhere, and expressing itself in the organization of special societies and associations, the publication of child-study numbers of educational journals, and in other significant ways. Those who are charged with the training of childhood, either in the home or in the school, are apparently becoming conscious of a great need of more definite scientific knowledge concerning child-nature which may serve as a guide in the process of training, and they are searching with eager eyes in all directions now for any information that will give them clearer insight into the nature and ways of child-life. It is not strange that with the great wealth of inductive knowledge which is being amassed in every other field of learning, we should thus appreciate the need of more extensive and accurate data concerning the

¹ *The child and childhood in folk-thought*—By Alexander Francis Chamberlain, M. A., Ph. D. New York: Macmillan & Co., 1896. 464 p. \$3.00. *Child observations*. First Series: Imitation and Allied Activities—Edited by Ellen M. Haskell, with an Introduction by E. H. Russell, Principal of the State Normal School, Worcester, Mass. Boston: D. C. Heath & Co., 1896. 298 p. \$1.00.

growth and development of human beings; and as we gradually change our view-point of the world from metaphysics to induction we shall doubtless find greater and greater need of other authority and counsel than custom in the methods of dealing with children both in the home and in the school.

It is universally as well as gratefully acknowledged that the leadership in this inductive study of child-nature rightfully belongs to Clark University. This institution has thus far produced much, doubtless most, of what is authoritative and valuable in inductive child-study, gathering together as it has during the past ten years a vast amount of scientific material upon many large and important topics connected with the development of children. The bulk of its investigations has been of a purely experimental character wherein the most accurate and delicate psychological apparatus could be employed, or where the testimony of a great mass of data, gathered by thousands of observers under the direction or by the suggestion of an expert, could be inductively gained. Chamberlain's *Child and childhood in folk-thought*, however, sets forth the results of studies entirely different from most of those which have been carried on at Clark, but yet none the less scientific or valuable. One is impressed at the outset with the magnitude of the work which the author has undertaken, for he has attempted no less a task than to search in detail into the lives and customs of all the primitive peoples on the face of the earth, past and present, to discover what they thought about childhood and parenthood, and how they treated children. As he says himself his "laboratory of research has been the whole wide world, the experimenters and recorders the primitive peoples of all races and all centuries—fathers and mothers whom the wonderland of parenthood encompassed and entranced; the subjects, the children of all the generations of mankind." Although he has had access to such works as those of Dr. Ploss upon childhood and parenthood among primitive peoples, yet these have not been numerous; but such as they are he has gone quite beyond them in collecting material indicating

what different tribes and ages thought about children, how they dealt with them, what they taught to as well as learned from them, what terrible superstitions concerning early childhood all savage races have held, and other matters of this kind.

It seems difficult to properly characterize this book in a few sentences. It may be rightfully said, however, that it is essentially a book treating of anthropology rather than of child-study, as this term is now commonly understood. It does not aim to describe the real nature of childhood in any stage of development; it sets forth no theories concerning normal child-growth that may be suggestive to parent or teacher. The records left to us of the most barbaric, benighted, and primitive peoples concerning any subject are usually of the character of superstitions of one form or another, and this is especially true of the greater part of what is set down in this book, relating as it does to the efforts of the savage mind to explain the mysteries surrounding the phenomena of the birth of children and the manifestations of their early life; and these superstitions are not calculated to be of great practical utility in modern life, although they may be of much speculative interest. Dr. Chamberlain has not confined his researches entirely to savage peoples, however, although the narration of their beliefs and practices occupies the greatest part of the book. An exception, to cite but one, is the chapter upon the Christ Child, where the legends and superstitions of people in modern civilization concerning him are presented.

After discussing briefly the subject of child-study the author deals with the lore of motherhood and fatherhood in the following three chapters, showing how parenthood has been most highly respected and regarded among all peoples of all times, although the mother has usually been the one to whom special reverence has been given. The investing of natural objects with the conceptions of father and mother by early peoples is very interesting, as is shown in the terms mother-earth, mother-mountain, mother-dawn, mother-

moon, father-sun, father-fire, father-river, and so on. Our own language preserves traces of this personification as when we call the Mississippi the "Father of Waters," when we speak of "Mother Nature," and in Macaulay's "O Tiber, Father Tiber." The various words and signs for child in different languages and dialects are exceedingly suggestive and are given in this book with much fullness. There is a chapter devoted to laboratory treatment of the child by savage peoples in measuring, weighing, and testing for physical conditions and efficiency, but the modern student would not find much that would be of help to him in his work to-day, although he would doubtless be greatly interested in reading how these poor ignorant creatures detected whether their children were normal or otherwise, whether they were in a state of health, how they put them to sleep, and so on. The chapters dealing with Affection for Children, the Golden Age of Childhood, and Children and the Plant and Animal World, show in the main a bright side of child-life in these savage homes.

Other chapters treat of the Child as a Member and Builder of Society; as Linguist, in which he is shown to oftentimes be an inventor of a language of his own; as Actor and Inventor; as Poet and Musician; as Teacher and Wiseacre; as Judge; as Oracle Keeper and Oracle Interpreter; as Weather Maker; as Healer and Physician; as Shaman and Priest; as Hero and Adventurer; and as Fetich and Divinity. The chapter upon Children's Food makes one wonder how the race has survived at all. These children of nature in all times must have had a vigor of constitution wholly foreign to people of modern civilization. Chapters giving proverbs, sayings, etc., about parenthood; about mother and child, and father and child; and about childhood, youth, and age are of marked value, and will be a delight to all who are interested to know what civilized as well as savage peoples have thought of parenthood and childhood. The very complete bibliography and index make the book of inestimable worth to all students in this special field of investigation.

Dr. Chamberlain without doubt designed this volume for the specialist rather than for the general reader, particularly the reader who would expect to derive much from it that could be put to practical use in the training of children. The teacher who is seeking to know more about child-nature in order that she may deal with it wisely in the classroom will find very little here that will be of service to her. What primitive peoples thought about children may interest her but cannot help her, unless indeed it may by contrast inspire her with more of content and satisfaction that she lives in this epoch of the evolution of the race. It is sometimes said that the intuitive beliefs of the race upon any subject have real scientific worth; but if this be ever true it is certainly not so in this special instance, thinking of the race in its most elementary stages of development. The practices of savage tribes in dealing with children have practically, if not absolutely, nothing of value to offer the teacher in these times who needs to know what the laws of normal child-growth are in order that she may choose the material of training in the classroom wisely, and also that she may know how to employ it most judiciously and skillfully. Dr. Chamberlain's book does not pretend to cover this field at all; its interest is a speculative one principally, and as such it accomplishes its purpose admirably. To the parent and teacher with a special taste for things anthropological and philological, it will be enjoyable reading; but it will probably always be of greatest service to those specialists who spend their lives delving into the very beginnings of the experiences of the race.

The soil at Worcester, Mass., seems to be well suited to the nurture of child-study; for, in addition to what Clark University is doing, the Normal School at that place, under the principalship of Mr. E. H. Russell, has been widely known for the past eight or ten years to be collecting a great amount of data upon all phases of child-activity. It is fortunate, perhaps, that the method of study in this school is so entirely different from that pursued by its neighbor; for

while at Clark an effort is made to reduce studies to the simplest form, so that all the conditions of experimentation may be taken account of and error eliminated so far as possible, the only plan at the Normal School is to observe and record everything seen or heard of children's activities without concern as to the observations bearing upon any special problem that the observer may have in mind. It might be just to say that child-study at the Worcester Normal is really methodless, thinking of it in connection with the work in other places. The purpose—to restate—is simply to observe and record, and the observer must not put any interpretation upon what she finds. If interpretations and generalizations are to be made at all they must be left to the specialist, who will collate the results of a great many individual workers, thus discovering whether certain phenomena are seen running through them all, indicating the existence of laws.

This sort of child-study has been going on at the Worcester Normal School for a number of years, with the result that a vast amount of material of every sort has been gathered together. Promises have been made from time to time that this material would be worked over and the results made public; and everyone interested has been looking forward with anticipations to the appearance of books like the one upon *Imitation and allied activities* just published. As might be inferred, this book is entirely different in purpose and character from Dr. Chamberlain's. Twelve hundred and seven observations upon children are presented, all showing the tendency of children from two to sixteen years of age to reproduce in their plays the actions and characteristics of the people and things in their environment. The observations are narrated in the most simple, direct, and scientific manner—scientific in the sense that they simply state facts and conditions without interpretation of any kind. As one reads the observations he is impressed that they must have been made upon average normal children, for there is nothing unusual or extraordinary about them in

any way. They seem to be faithful pictures of a part, doubtless a large part, of natural child-life.

The purpose of the book seems to be to awaken a direct interest in children on the part of those who shall peruse its pages, although it is probably hoped for it that it may incidentally contribute something to a science of child-nature. Doubtless some will say that it is poorly adapted to accomplish this aim, since it presents little that is not already within the experience of every person who has ever associated with children. But this would certainly be an unjust criticism if it were ever made, for the reason that while it may be true that all teachers have had constantly within their environment such exhibitions of children's ways as are set forth in this book, still they have not really become a part of their experiences because they have not been made eye- and ear-minded to them. One might as well say that he knows all of astronomy because wherever he may have chanced to dwell he has always been in view of sky and stars; or that he understands botany because he has always had flowers and grasses at his feet. The error in such argument is due to the failure to realize that what we apprehend of the things about us depends upon how our eyes and ears have been attuned to see and hear them. So in reading these observations, most parents and teachers will have the phenomena of imitation and imagination impressed upon their minds as in all likelihood they have never before experienced. What Principal Russell says in his Introduction, then, is indeed appropriate, that "it is hoped, by the irresistible attractiveness there is in these little narratives, to beguile the sympathetic reader into bathing and saturating his mind with them, so that he may come to realize as never before what a world of imitation even ordinary children live in, and may never after be able to look with the common indifference upon this most significant and charming phase of child-life."

While it is disclaimed for this book by its authors that it is published with the hope to make any contributions to a

science of child-nature, still its contents surely have some scientific value. It is doubtless true that in the making of the records the requirements of exact inductive science have not been fully complied with, in that the time and place of making, the conditions under which they were made, the antecedent experiences of the children upon whom they were made, and similar data do not appear. An inductive scientist, accustomed to work with apparatus where all accompanying and environing conditions are carefully noted as constituting part of the phenomenon being studied, might not at first attach much value to these records; but nevertheless, when we have such a large amount of data showing the imitative activities of children, we are entitled to say, whether we have noted all accompanying conditions or not, that children busy themselves greatly in copying those about them, and are most fertile in their resources thereunto. We can also observe changes in the imitative activity from year to year in a child's life; and if we can go no further, still this is no small distance for the average individual.

But the book is mainly of practical value for teachers and parents. It will serve to drive home the great truth that children are everlastingly patterning after the manners and habits, the tone of voice, and all the other characteristics of the people and even the things in their environment. Of course it has long been said that one is like the company he keeps—that through imitation we take on the peculiarities of those around us; but it is to be feared that in practice we have failed in a large measure to put our beliefs into operation. Perhaps parents have been especially faulty in this respect. The following observation upon a little child five years of age, which is typical of many others given in the book, indicates a kind of home environment that is exceedingly unfortunate because it is so common: "Della played house with a smaller child. The house was a large mat spread in the yard. On one end was a box, surrounded by four sticks laid in the form of a square. On the box were bits of broken glass and crockery arranged as on a table.

This was the kitchen. Outside this was the parlor. Della, seated in her rocking-chair, was rocking her doll, singing and giving orders to the other child, who was busying herself with the dishes. I heard Della say, 'Oh, dear! I want to go to that concert to-night, and I don't see how I can, with seven children to take care of. I never saw such a man as my husband is, anyway. He isn't like any other man. He might take care of the baby once in a while anyway, I should think. Will you go with me, if I go?' They played this about an hour."¹

We ought to have many more books upon the subject of imitation. The writer has a feeling that in the formation of a child's personality heredity has been given too prominent a place by all sorts of theorists, with the result that the shaping influence of environment has been too little appreciated. We have books giving instances galore of where mental as well as physical characteristics have been inherited; but it is remarkable that no one has thought it worth while to write books showing how individuals have adopted the personal characteristics of mind and body of those with whom they have been most in contact in childhood. Because we can point to children who possess characteristics like their parents or other ancestors, there is no more evidence *a priori* that they have inherited them than that they have imbibed them through imitation. One cannot read these records without feeling that the child gets the models which direct his inborn impulse to act from his environment; and it seems reasonable that the kinds of acts that are constantly presented for imitation are the ones that will become fixed through repetition in the nature of the imitator and so determine his individuality. But regardless of the virtue of such argument, this book should serve, at all events, to impress upon those who read it the necessity for making the environment of children the best possible.

Not the least valuable part of the book is the Introduction by Principal Russell, wherein he gives some excellent

¹ *Child observations*, p. 79.

interpretations of the data presented in the records, together with a fine essay upon child-study in general. Like most introductions it should have come at the close rather than at the beginning of the book; and it is suggested that readers postpone its perusal until after the observations have been gone through with. While one must heartily indorse most that Mr. Russell has said, and be greatly delighted with it all, still one wonders why he should so stoutly maintain that we ought not to generalize from our observations upon children when that is the very thing he himself does so skillfully in this book. It is a fundamental article in the child-study creed of the Worcester Normal School, as it is of some other people in these days, that we should go on observing children for a century or two without any attempt to derive practical guiding generalizations from our studies; but it is significant that those who hold to this theory never follow it in practice. It is well to remember, while we are observing our children with no purpose to interpret what we find, that the process of training in the home and in the school is going on, and expediency demands that as soon as we get a fact which may be of use we should immediately apply it. This does not imply, however, that we should be carried about hither and thither by every breeze that blows, as some scientists, with their eyes altogether upon the laws they are to derive rather than upon the children that are now being trained, sometimes seem to think.

Many persons will disagree with Professor Russell on another point—that a science of child-study must be elaborated independent of the psychologist. It is doubtless true that the methods of the old psychology are not proper for the inductive study of child-nature; and it is probably also true that one whose mind is full of logical, metaphysical psychology is not the most competent person in the world to discover what is natural and normal in child-development. But it is to be doubted if there is such a profound difference between the child mind and the adult mind as Principal Russell seems to think. Of course there is a dif-

ference, but is it not in degree rather than in kind? By the way, it is remarkable how those who declare we know so little about children are so ready in saying just how the child differs from the adult. To see a difference and to enter into detail in its description involves extensive knowledge of the objects compared; which fact, considering the present state of our knowledge of children, ought to make us less positive about there being such a vast gulf between the child and adult mind. It is to be questioned also if one who has no knowledge of mind is the best fitted to observe children. There must probably be some sort of balance struck between having a mind full of settled principles and having one with no principles at all. Psychology ought, at least in a measure, to set the problems for child-study—to outline the field of work; and it seems necessary also that it should furnish some apperceptive background for the observation of mental phenomena in the child. If it were true that a person without any knowledge of psychology could see all the manifestations of the child mind and record them, perhaps this would be the best way to proceed, but in all probability this is not the case.

It is to be hoped that this book will find its way into the hands of a great many teachers and parents, for everyone who has to do with children will be benefited by reading it. It is to be hoped also that other books presenting the records upon other phases of child-activity will be forthcoming from the Worcester school soon.

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V

COURSES IN PSYCHOLOGY FOR NORMAL SCHOOLS, (I)

In a contribution to a recent number of the *Citizen*,¹ I attempted to give an answer, in precise and yet untechnical language, to the question so often put to instructors of psychology, viz.: "What ought the teacher to know of psychology?"

Another question frequently follows close upon this, "How can the teacher acquire such a knowledge of psychology as will be of service in his or her professional work?" This question would hardly be asked did the instruction in psychology offered by normal schools and other training schools for teachers fairly represent the modern science in extent and point of view, and were it imparted by methods sufficiently effective to make a lasting impression upon the minds of the young men and women who are being prepared in such institutions for their professional career. Teachers who have already seen active service ought rather to be seeking opportunities for advanced or special work than to be inquiring for introductory courses in the science whose principles are the basis of pedagogical practice. A hopeful change in the direction of more satisfactory preparation in psychology is already manifesting itself. It would appear, from many indications, that it will not be long before thorough courses, extending over a period of at least two years, will form a part and perhaps the most important part of the curriculum of all normal schools that merit rank among the leading institutions for the professional training of teachers.

It may be of service at the present time, when the subject-matter of modern psychology and its practical value to the

¹ "The teaching of psychology to teachers," in the *Citizen*, July, 1896.

teacher are just beginning to be understood and appreciated, to have for suggestion and discussion a clear statement, as devoid of technicalities as precision of exposition will permit, of the nature and extent of the work in psychology which should form a part of every teacher's professional preparation. With this thought in mind I have endeavored to prepare a descriptive sketch of the content of a normal-school course in psychology, accompanied by an account of the methods and materials of instruction best adapted to its proper conduction and by a partial citation of text-books and works of reference that instructors of psychology in normal schools, and possibly the students also, ought to have within easy reach for ready consultation. To this I shall add an outline of the courses now offered at the Philadelphia Normal School, which are modeled upon the general plan suggested in this article. I shall conclude with a few suggestions to teachers and others who would acquire a reading knowledge of the facts and principles of psychology, but who lack sufficient acquaintance with the work to guide themselves amid the mazes of its literature. While I shall strive to make my treatment of the subject as direct and practical as possible, I cannot avoid using terms, in dealing with the details of a course, that may seem technical to those unfamiliar with the phraseology and subject-matter of psychology.

The plan of instruction, as here suggested, proposes to present the entire work in psychology in four courses that are discriminated by differences in subject-matter, but which yet furnish a continuous and progressive development. It is intended that an equal amount of time be devoted to each of the four constituent courses. If the work in psychology occupies two years, as it must if the student is to obtain a satisfactory psychological training for his professional career, these will be half-year courses. Although it is important to preserve a considerable amount of unity in the work in psychology as a whole, and care should therefore be taken to indicate the logical thread passing through the suc-

cession of courses from beginning to end, still, more interest and enthusiasm is aroused by marking off, when the subject-matter permits, one course as a unit distinctly from others. The student is helped to a better grasp of the subject and avoids shipwreck among details by keeping the single course as a unit in mind. As the courses are not too long, there is also a gain from the satisfaction and increased interest that come in passing from one subject to another.

COURSE I—THE MIND AND THE BODY

The student who is to become a teacher needs first of all to have impressed upon him, perhaps through the medium of introductory lectures, that the object of psychology is to learn what human beings are like. He should learn that psychology is studying him, his neighbor sitting beside him, the men and women that he meets upon the street, the infant in arms, the child in the kindergarten, and the boy or girl growing in mental and physical power throughout the successive years of school life. Hence psychology will be shown to be one of the sciences of life, and human psychology the most important of the sciences that concern themselves with man's nature and powers. The student may be shown that the human being can be studied from different points of view. He could examine, for example, the relations of the bones of the arm as a mechanical instrument for exerting force or the arch of the foot as a contrivance for supporting weight, and this would be physics. Or he could study the stature of men, or the relative length of arm and leg, which would be physical anthropology. He might examine the function of the heart and liver and lungs and engage in physiology, or again break up the tissues of the body into the substances of which they are composed, and this would take him into chemistry. But if he examines the co-ordination and function of the muscles over which he exercises volitional control, or the growth of muscular power from year to year; if he investigates the functions of walking, balancing, grasp-

ing with the hand, or the delicate co-ordinations of written and vocal speech; if he examines the structures and function of the sense organs; if he considers the manifestations, that others give through their bodily movements or through conduct, of imagination or of memory or of character, and even if he observes the effect of mental conditions upon the stomach and liver and heart, upon the muscles generally, or the converse influence of these upon the mind—then he is in the field of modern psychology.

Although the student does not need to have the distinction between the mental and the physical emphasized to such an extent that the existence of the mind and of matter is called in question, he nevertheless must be brought to see that introspection, or the observation of his own thoughts and ideas and emotions, gives him his only immediate knowledge of mind and mental phenomena. But at the same time he must be told that introspection has a reference to conditions beyond his mind, and that psychology will serve him only as it aids him in establishing better relations between his mental powers and capacities and those of his body and its physical environment. Of what use to him will psychology be if it does not enable him to interpret better than he otherwise would the significant bodily appearances of attention, of states of reverie, of passion, of affection, of evil disposition, of intelligence, of appreciation, or of lying and truth-telling? But if the mere introspection has taught him to consider his own mental states and powers in reference to their physical and physiological conditions, the better as a teacher will he be able to posit the existence of similar or like mental conditions in children whose minds he can never observe as he observes their bodies.

It is demanded—I do not fear to use so strong a word as this—that the metaphysical point of view which questions the existence of mind and matter, and the freedom of the will, shall be rigidly excluded from the treatment of psychological problems. The existence of mind and matter and their mutual interrelation are to be assumed by the teacher of

psychology as it will be by the students. Furthermore, the common-sense notions which accept the possibility of volitional freedom, though on some occasions admitting determination, are to be accepted as postulates of the science of psychology. Neither two years nor fifty will bring students or teachers to a settlement of these questions, if they start upon the highroad of philosophy. Meanwhile as teachers they must work and do for themselves as well as exert an intelligent influence upon the action of others; for this a comprehension is required not of philosophic speculation, but of the mental and physical conditions of human conduct. Psychology need not and ought not to disturb theological or philosophical opinions by raising metaphysical questions which are not its immediate concern.

A sufficient knowledge of the structure and action of sense organs of the nervous system, and of muscles, is necessary to form correct ideas of what these bodily systems are capable of performing with and without the guidance or accompaniment of the mind. To introduce this difficult and to some students tedious study, some consideration might be given to the concomitance, that is being more clearly demonstrated every year, existing between mental traits and outward bodily characteristics.

He should gain some information concerning racial characteristics, mental and physical, so as to be led to reflect upon the presence of the physical as an indication of the existence of the former. Ought an Irish boy to receive the same treatment from the teacher as a boy of German stock? They differ as much in imagination, emotion, and intellectual capability as they do in color of eyes and hair, or in shape of jaw and mouth. Some reference to the physical signs of atavism and of mental and moral degeneration might be given; the pseudo-sciences of phrenology and palmistry might be employed to demonstrate instances of overhasty and overminute correlation of mental faculties with physical characteristics. The introduction of such material will also serve to disabuse the minds of many pupils of false ideas that

they might otherwise carry through life. Besides this, it will give them food for individual reflection upon the crude generalizations that pass current as truths among professional phrenologists and palmists, and enable them to contrast the phrenological location of faculty with the somewhat analogous localization of centers of sensation and movement in the brain. In these days of hypnotic wonders, of telepathy and thought transference, of mind influence and mind cures, and of voices from the dead, the student must be put into the possession of scientific principles and acquire powers of thought that will enable him, when confronted by the startling experiences of others, to accept some, to reject some, and some neither to accept nor reject.

After this introduction on the mental and physical characteristics of the human being, and perhaps also of the lower animals, should follow the more detailed study of the relation subsisting between mental faculty and the nervous system. The human being must be presented as an organism reacting to its environment; that is, making movements of the body in response to or as a result of the action of objects of the physical world which receive technically, because they produce such reactions, the name stimuli. Thus the contraction of the pupil or the winking of the eye when a ray of bright light falls upon the retina, the pulling of the hand away from a hot stove, the start of the whole body at the sounding bell of a trolley car, or even the calling out of one's name in response to a question, are all examples of bodily reaction to stimuli, even though, as may be seen by the above examples, both the resultant movement and the originating stimulus may differ widely in complexity. It should then be impressed upon the student that the chief indication of life is a movement of the whole or of a part of the living organism. In consequence of this, psychology as one of the sciences of life—viz., that of conscious life—addresses itself primarily to the study of movements. As movements are brought about through the agency of muscles, something should next be given on their structure

and physiology. A movement is never the result of the contraction of a single muscle: a number or a group of muscles is always necessary to produce a single movement, hence the student needs to be made aware of this important feature in the production of movement, viz., the high degree of co-ordination required for the production of even the simplest movements. In leading on to the sense organs the student should be made to see that most reactions are the co-ordinating muscular response to a stimulus of the environment that has immediately acted upon the body. These stimuli—light, sound, heat, objects touching, pressing against, or pinching the skin, substances put into the mouth, or that enter the nostrils—will be found to act in most cases upon specialized organs, the sense organs. The general structure of the sense organs should now be given so as to demonstrate that the essential portion of all sense organs is a specialized sensory cell or group of cells; thus the retina should be studied, the basilar membrane of the cochlea of the inner ear, the ciliary cells in the vestibule and in the ampullæ of the semicircular canals, the olfactory cells of the mucous membrane of the nose, the taste cells in the various papillæ of the tongue, the touch corpuscles in the skin, and the sensory corpuscles or free terminations of sensory fibers in muscles, joints, and tendons, and in the internal organs of the trunk.

It will next be shown that these organs, muscles on the one hand and sense organs on the other, are connected with the central nervous system, the cerebro-spinal in distinction from the sympathetic, consisting of the brain and spinal cord, by means of fibers, motor or sensory respectively. This will lead on to the structure of the nervous system, the student being made familiar, through the individual examination of models and charts, and possibly also through the dissecting of prepared specimens, with the general topography of the brain and spinal cord and with their relations to the spinal sensory ganglia and to the fibers which ramify from the central system to all portions of the periphery.

This should be followed by a study of reflex movements. The experiments that have been made upon the frog whose brain has been destroyed or separated from the spinal cord should be described in order to bring the phenomena of reflex action before the student, care being taken to emphasize the characteristic differences that subsist between the responsive movements of the intact and of the brainless frog. This study will show that very complex and purposive movements, such as wiping off a drop of acid from the back, can be carried out by the frog with a considerable portion of the nervous system destroyed. It would then be well to proceed to a study of more complicated reflexes; first in order may be examined the movements that are initiated by the reflex centers situated in the medulla of the frog and those of the same region in the human being, many of which—the beat of the heart, breathing, coughing, sneezing, and so on—can be shown to be controlled by this part of the nervous system without consciousness and without volitional action. Of the same type are such actions as winking and the contraction or expansion of the pupil to rays of light. Then we should proceed up the nervous system to the cerebellum, pons, corpora quadrigemina, and basal ganglia. I should then lead off to a study of automatic action in the human being, which will involve the consideration of the development of acquired automatic movements—learning to catch a ball, to play the piano, to ride a bicycle—which will present many interesting illustrations of complicated movements that are produced automatically without the volition of the subject, but which have yet been acquired in the individual's lifetime by conscious processes. Here also might be introduced a short study of some abnormal instances of nervous and mental activity: cases of automatic speech and writing, double personality, and the phenomena of hypnotic dis-ordination or disruption of consciousness.

The student is now ready for the minuter structure of the nervous system. The anatomy of the cell, with its protoplasmic and axis-cylinder processes, should be demonstrated,

together with the aggregation of the cell bodies into the gray matter of the cord or brain, and the aggregation of axis-cylinder fibers constituting the white matter of the cord separated into ascending and descending bundles or tracts of fibers. Then should follow the relation of the spinal cord to the medulla, cerebellum, and other parts of the brain. The cerebrum must be studied in greater detail than these parts, the convolutions of the cerebral hemispheres receiving special attention; throughout it is better to combine with the anatomical study some account of the function of the parts examined in relation to mental activity. In particular should the localization of the areas of the cerebral hemispheres concerned in sensation and in the production of movement be carefully demonstrated.

The student should now have a fair notion of the relation of sense organs and muscles to the various parts of the central nervous system, and should be familiar with the co-ordinating function of the latter and of the interrelation of cells and fibers by which this is attained. To fix this knowledge in mind I should make the concluding part of the course a rather thorough study of equilibration and of speech. The first should involve a study of the mental and nervous factors, particularly of the sensory elements, involved in the maintenance of bodily equilibrium. This is suggested as an object of study because of its importance as a bodily function which yet does not involve to any considerable extent mental elements; thus portraying the possibility of the nervous mechanisms carrying on highly complicated activities without the directing agency of the mind. On the other hand the study of speech will reveal a complex process, which is indeed dependent upon nervous co-ordination, upon sense organs, brain centers, and muscles, some of which are beyond the control of the will—but a function, nevertheless, which has been presided over by the mind from its earliest development and which in its higher aspects—viz., the volitional or spontaneous speech employed in giving expression to one's ideas or feelings—is the chief and most

important volitional organ of expression possessed by the human being. Of some assistance in this portion of the course will be found illustrations drawn from the pathological studies of the disorders of speech to which the generic name of aphasia has been given.

The course will have served its purpose if the student carry away with him a knowledge of the elements and conditions upon which is based the intricate interrelated mental and nervous organizations of the human being.

Text-Books and Materials of Instruction—The teacher of psychology cannot be advised to place any reliance upon such text-books as are at present available. Jacob's atlas of the *Nervous system in health and disease* is the best condensed outline of the anatomy of the nervous system, and its wealth of diagrams and charts highly commends it to the student. It is perhaps too difficult and complete for normal schools, although I believe that it can be successfully used by a teacher whose knowledge of anatomy is coextensive with that of the work. McKendrick and Snodgrass on the *Physiology of the senses* may also prove of service. If these works are given to the students, they should be used by them rather as works of reference than as a text to be followed page by page.

I do not regard the lack of a satisfactory text-book as an unmitigated evil, if it will throw the teacher upon his own resources and compel him to rely more on practical demonstration and individual examination of models and prepared specimens by the students. Large models of the brain and spinal cord such as the Auzoux models of the sense organs, large charts and diagrams for class demonstration should be used. An excellent means of equipping the department with satisfactory charts at small expense is to have those members of the class who can draw well prepare large charts by enlarging diagrams that are found in the most recent text-books. Students find such work profitable and enjoyable; charts thus prepared may be kept up to date, whereas those that are upon the market are old, poor, and frequently inexact. Whenever practicable, students should be given

models for individual examination. For the use of my classes and of those at the Philadelphia Normal School, Queen & Co. of Philadelphia have had prepared a set of three excellent models of the brain; one of the entire brain and the others of two sections of the brain; the entire set costing but four dollars. These models should be placed in the hands of each student, to be individually examined by him and carefully described in his notebook. I know of no better method of teaching anatomy to large classes than this. A few prepared specimens of the human brain, showing the sections, might be kept on hand for study; students must not be allowed to injure these by excessive handling. A sufficient number can be obtained for twenty dollars, including the cost of preserving fluid. Ox brains, both fresh and prepared, might be given the student for dissection. These can be purchased for five or ten cents apiece at abattoirs or even in the market. Enough preserving fluid, formalin, to be used in a solution of from fifteen to twenty-five parts to one thousand of water, can be obtained for eighty cents to prepare and harden nearly a dozen brains. Many parts can be studied better on the ox brain than on the human. I find the use of the former of great service, not only for purposes of comparison but also for fixing in mind the relations of the parts. The student must keep a notebook in which should be entered separately the notes of lectures or demonstrations and of his individual study or description. The latter I regard as a feature of high importance. The student must be taught as early as possible to work and think for himself. Of great assistance to both instructor and student are blue-print photographs of ox and human brains and of diagrams from text-books, which I have been able to prepare and supply at the small cost of two cents apiece. A student is required to paste the blue prints in his notebook and to name the parts that are found therein. A set of six photographs has been used for a number of years at the Philadelphia Normal School by Miss Harmon and has given good service. With large classes, particularly, these blue prints in combination with the individual brain models are to be

recommended as the quickest and surest means of acquiring the necessary knowledge of the structure of the brain; at the same time they assist the teacher in finding out the actual extent of the student's acquisition of information. Sections of the nervous system are also helpful when microscopes can be readily obtained. Individual work of any sort exceeds in value lectures or text-books.

Works of Reference—A teacher needs for his own use a well-equipped library of works of reference, to which students also may occasionally be referred. Such a library should be a part of the equipment of the psychological department of every normal school. Students may be required in lieu of an examination to write essays on selected topics based upon portions of works found in the library. A few volumes such as Clifford's essay on *Seeing and thinking* and Huxley on *Animal automatism* are obtainable in the Humboldt Library at fifteen cents apiece. Sufficient copies might be procured to assure their being read by every student at the proper time in the course. It is of importance to have students form a habit of referring to the literature for information. It would be better for a teacher to compel a questioning student to look up the answer to his question in some text-book or work of reference than to answer it for him. Beginning with a few essays from each student during the first course, I would gradually increase the number until at the end of the course the student had formed the habit of looking up the literature and of preparing satisfactory reports and abstracts. This will assist in forming habits of wide and close reading, which, if persisted in after leaving school, will insure a continual augmentation of the teacher's fund of information and a sounder basis for independent judgment on the application of psychological principles to the agencies of instruction.

The teacher will find it of some service to refer, among others, to such works as the following:

Mental and Physical Characteristics :

Taylor, Origin of the Aryans.

Lombroso, Man of genius.

- Havelock Ellis, The criminal.
 Havelock Ellis, Man and woman.
 Bain, On the study of character.
 Shaler, Nature and man in America.
 Galton, Hereditary genius.
 Clifford, Essays.
 Darwin, The expression of the emotions.
 Encyclopædia Britannica, Article on "Phrenology" (a popular work on phrenology and palmistry might be used for the study of human error).
 Brinton, Races and people.
 Warner, Physical expression.
 Lindsay, Mind in the lower animals.
 Lloyd Morgan, Animal life and intelligence.
 Lloyd Morgan, Comparative psychology.
 Romanes, Animal intelligence.
 Mantegazza, Physiognomy and expression.
 Quatrefages, The human species.

The Nervous System and the Mind:

- Jacob, Nervous system in health and disease.
 Quain, Human anatomy.
 Gray, Human anatomy.
 Martin, Human Body.
 Piersoll, Histology.
 Starr, Atlas of nerve cells.
 Edinger, Structure of the central nervous system.
 Flatau, Atlas cerebri humani. (German text, but excellent charts and photogravures of the brain.)
 Donaldson, Growth of the brain.
 Foster, Text-book of physiology.
 Waller, Text-book of physiology.
 Ladd, Elements of physiological psychology, part i. (Not the smaller *Outlines*.)
 Ferrier, Functions of the brain.
 Ferrier, Localization of cerebral disease.
 Mercier, The nervous system and the mind.
 Bastian, The brain as the organ of mind.
 Carpenter, Mental physiology. Maudsley, Physiology of mind. Maudsley, Pathology of mind. Ribot, Diseases of personality. Moll, Hypnotism. Wyllie, The disorders of speech. Wundt, Human and animal psychology. Wundt, Elements of physiological psychology (when translated). Ziehen, Introduction to the study of physiological psychology. Külpe, James, and other works on psychology, which will be subsequently cited.

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(To be concluded)

VI

THE MEANING OF INFANCY AND EDUCATION¹

Those of us who have an acquaintance, however cursory, with the history of human thinking will remember how bitter and how persistent have been the controversies of philosophers and metaphysicians in respect to terms of everyday use. Discussions on such familiar terms as "substance" and "thing" and "idea" and "matter" have shaken the schools for ages. It is a fact that when a term is somewhat unusual and remote from our experience and our interest, we are apt readily to be able to assign to it a definite significance and a concrete meaning; but when it is a term with which we are familiar in our everyday experience and conversation, we often feel its significance and its import, and yet find great difficulty in defining it accurately in logical or in scientific terms.

Two very familiar words, and two ideas that are always present in human experience, suggest and constitute the subject of which I shall speak to-night.

I should like to speak of the meaning of Infancy and Education just because the terms are familiar; because the ideas are commonplace, and because, as it seems to me, we so often fail to grasp their profound and far-reaching significance. And the point of view from which I should like to speak of them is the point of view given us by that remarkable generalization which has come to be known as the doctrine or theory of evolution, a doctrine or theory which we all associate with the nineteenth century, but which, nevertheless, was seen by the thinkers of the ancient world, by the lightning flashes of their genius, in what is after all very much

¹ An address delivered before the Liberal Club of Buffalo, N. Y., November 19, 1896. Reported stenographically and printed in the *Buffalo Express*, November 22, 1896.

the form in which the clear sunlight of modern scientific demonstration presents it to us. That doctrine of evolution has illuminated every problem of human thought and human action. It is a mere truism to say that it has revolutionized our thinking; but it is equally true that we have in very many cases failed to accept the consequences of the revolution and to understand them in all their far-reaching significance. It seems to me that in no department of our interest and activity is this failure more complete, speaking generally, than in that which relates to the great human institution of education.

The two chief contributions that light up this doctrine from the point of view that we occupy to-night are those that were made by Mr. Alfred Russell Wallace and by Mr. John Fiske. It was Mr. Wallace who pointed out, forty odd years ago, that the theory of evolution as applied to man could only sustain itself if it were acknowledged and admitted that there came a time in the history of animal types and forms when natural selection seized upon psychical or mental peculiarities and advantages and perpetuated them rather than merely physical peculiarities and advantages. That is the first, and in a sense, perhaps, the greatest of these contributions, for it has enabled us to understand the place of man in the order of the cosmos. Then, in less than a generation, came the remarkable insight of Mr. John Fiske, who explained for us on physiological and psychological grounds the part played by the lengthening period of infancy in the animal species. And it is from that doctrine of Mr. Fiske that I should like to take my point of departure in the present argument.

We have come to understand that evolution regards us all as individual centers of activity, being influenced by our surroundings—or environment, to use the technical term—and reacting upon them. And we have come to understand that our physical, our mental, and our moral life is the gradual growth or development of what may be conceived of as a point traveling through an ever-widening series of

circles, until, in this ripe and cultivated age, the point has come to include within the circumference that it traces what we call the culture or knowledge or acquirement of the educated man.

The doctrine of infancy, as it has been explained to us, relates itself directly to that figure and to that method of explanation. If we contrast or compare the lower orders of animal life with the higher, and particularly with the human species, we are at once struck by the fact that in the lower orders of existence there is no such thing as infancy. We observe that the young are brought into the world able to take care of themselves, to react upon their environment at the mere contact of air or food, and to breathe, to digest, and to live an individual existence. And we are further struck by the fact, on examining the structure of animals of that kind, that there is no nervous system or organization present except such as is necessary to carry on what are called reflex actions. There is no central storage warehouse; there is nothing corresponding to the human brain; and there is no action possible for animals of that kind in which any great time can elapse between the impulse which comes in from the world without, and the responding or reacting movement or action on the part of the animal itself. Each of those animals lives the life of its parents. Each of those animals, young and old alike, performs these reflex actions with accuracy, with sureness, with dispatch; no one of those animals progresses, and none develops or has a history. As we rise, however, in the scale, there comes a time when our attention is attracted by animals that act in an entirely different way. Their actions become more complex, more numerous, more subtle, more sustained; and on turning again to the organism that accompanies this and makes it possible, we see at once that there is an increased complexity of structure that accompanies this increasing complexity of function. And we find sooner or later, as we rise in the scale, that there comes a time when the young of the animal comes into the world unadjusted in all its com-

pletteness. It brings with it a great series of reflex actions, but it also brings with it a series of potentialities. It is not complete at the moment of birth, and a period of helplessness or infancy, longer or shorter, must result. In passing from the highest of the lower animals to man there is an immense stage in that development. There is the increasing bulk, and more than that, the increasing complexity, of the brain and central nervous system which accompany the complex adjustments and acts that make up your life and mine; and it comes to pass that while the human animal is born into the world complete as to certain series of reflex actions, able to digest, to breathe, the heart to beat, the blood vessels to contract, the glands to secrete—while the purely animal side is complete—yet a whole immense series of adjustments remains to be made. While those adjustments are being made there is a more or less prolonged period of helplessness or infancy.

The meaning of that period of helplessness or infancy lies at the bottom, as I see it, of any scientific and philosophical understanding on the part played by education in human life. That infancy is a period of plasticity; it is a period of adjustment; it is a period of fitting the organism to its environment: first physical, and then on a far larger and broader scale; and that fitting of the organism to its environment on the larger and broader scale constitutes the field and the scope of education. In other words, nature and heredity have so organized one whole side of the being of animal life that it is complete at the time of birth. A large series of adjustments to the world around us, the series of adjustments that in the case of higher animals and man make up the life that is really worth living, constitutes the life of the mind or spirit. Those adjustments are unmade at birth, and they have to be slowly and carefully acquired. We are born into the world even with our senses, "the windows of the soul," locked, unco-ordinated, unadjusted, unable to perform what is eventually to be their function. It is a familiar fact that sight, hearing, and touch all have to be developed and

trained and co-educated, taught to act together, before the infant can appreciate and understand the world of three dimensions in which adults live and which they had supposed to be the only world known to the human consciousness. While that period of plasticity or adjustment is going on, there is naturally and necessarily a vast influence exerted not only on the child but by the child. And I think Mr. Fiske is undeniably correct in saying that the prolonged period of infancy which is necessary to bring about these adjustments, and which is a period of helplessness, lies at the foundation of the human family and therefore at the foundation of human society and of our institutional life.

The factor in history that has changed man from a gregarious animal to a man or individual living in a monogamic family is, unquestionably, if anthropology and psychology teach us anything, the child.

During this long period of helplessness and dependence the parents of the child are kept together by a common center of interest, and the bonds of affection and interdependence that are eventually to constitute the family are then closely and permanently knit. That period of mutual association and dependence of the parents extends at first over only eight, ten, or twelve years. If two, three, or four children are born to the same parents, it may extend over a period much longer; it may last during one-third or even one-half of the average life of man. Out of that center of dependence and helplessness, the family, as we know it, has grown, and it has been constituted, so far as we can explain it at all, by the lengthening period of infancy in the animal kingdom and in the human race. I might cite fact after fact in illustration of this from the history of science and from natural history, did it not seem to me unnecessary. It is one of the most profound generalizations of our modern science, and it has enabled us to see to the very bottom of the meaning of education and to understand the biological significance of one of the most striking and imposing of social phenomena.

This lengthening period of infancy is a period of plasticity. No animal that has not a period of infancy can be educated or trained. Every animal that has a period of infancy can be educated or trained. The longer the period of infancy the more education or training is possible for it; and as our civilization has become more complex, as its products have become more numerous, richer, deeper, and more far-reaching, the longer we have extended that period of tutelage, until now, while the physiological period of adolescence is reached in perhaps 14 or 15 years, the educational period of dependence is almost twice as long. That is to say, the length of time that it takes for the human child in this generation so to adapt himself to his surroundings as to be able to succeed in them, to conquer them, and to make them his own, is almost, if not quite 30 years. The education in the kindergarten, the elementary school, the secondary school, the college, the professional school, the period of apprenticeship in the profession, before its independent practice can be entered upon, is in not a few cases, now 25, 26, 28, or even 30 years. The rich suggestion that this doctrine of Mr. Fiske and this conception of modern science has for us, seems to me to be this: That the entire educational period or career, after the physical adjustment has been made, after the child can walk alone, can feed itself, can use its hands, and has therefore attained or acquired physical and bodily independence, is an adjustment to what may be called our spiritual environment. After this physical adjustment is reasonably complete there remains yet to be accomplished the building of harmonious and reciprocal relations with the great acquisitions of the race that constitute civilization; and therefore the lengthening period of infancy, as we have drawn it out, simply means that we are taking half of each generation in order to develop in the young some conception of the vast acquirements of the historic past and some mastery of the conditions of the present.

In other words, the doctrine of evolution teaches us to

look upon the world around us—our art, our science, our literature, and our institutions—as an integral part, indeed as the essential part, of our environment; and it teaches us to look upon education as the plastic period of adapting and adjusting our self-active organism to this vast series of hereditary acquisitions. So that while the child's first right and first duty is to adjust himself physiologically or physically to his environment, to learn to walk, to use the hands and to feed himself, to be physically independent, there still remains the great outer circle of education or culture, without contact with which no human being is really either man or woman. We collect first, and for a short series of years, our animal inheritance; it then remains for us in the period of education to see to it that we come into our human inheritance; and when we compare the life of the lower animal, acting solely and entirely by reflex action and instinct, with the period of infancy and of self-determined activity of the human being, developing by reflex action, instinct, and intelligence, "forever separate, yet forever near," we get some conception of the vast difference there is between what Descartes called the animal mechanism and what we may truly look upon as the activity of the human mind.

This period of adjustment constitutes, then, the period of education; and this period of adjustment must, as it seems to me, give us the basis for all educational theory and all educational practice. It must be the point of departure in that theory and that practice, and it must at the same time provide us with our ideals. So that when we hear it sometimes said, "All education must start from the child," we add, "Yes, and lead into human civilization"; and when we hear it said, on the other hand, that all education must start from the traditional past, we may add, "Yes, and be adapted to the child." Then we are able to understand how the great educational temple of modern times upon which every civilized nation is pouring out its strength and wealth and treasure, rests upon the two corner-stones of the physical and psychical nature of the child and the traditional

and hereditary civilization of the race; and how it is that the problem of the family, of the school, and of the home, is to connect, to correlate, and to unite those two elements so that each shall possess the other. Then we have a conception of education which is in accord with the doctrine of evolution and which is in accord with the teachings of modern science and of modern philosophy.

So it may be said, I think, that after the child comes into his physical inheritance, he must be led by the family, the school, and the state into his intellectual or spiritual inheritance. The moment that fact is stated in those terms it becomes absolutely impossible for us ever again to identify education with mere instruction. It becomes absolutely impossible for us any longer even to identify education with mere acquisition of learning; and we begin to look upon it as really the vestibule of the highest and the richest type of living. It was the great thought of Plato, that inspired every word he ever wrote, and that constitutes a portion of his legacy to future ages, that life and philosophy are identical, and he used the word philosophy in a sense that was familiar to him and to his time, and for which we might very well substitute, under some of its phases at least, the word education. Life and education are identical because the period to which we confine the latter term traditionally is merely the period of more formal, definite, determinate adjustment; yet, just as long as life lasts and our impressionability and plasticity remain, we are always adapting ourselves to this environment, gaining power, becoming richer and fuller and deeper, like Antæus of old, every time we touch the Mother Earth from which civilization springs.

Therefore, if education cannot be identified with mere instruction, what is it? What does the term mean? I answer, it must mean this adjustment to the possessions of the race. Those possessions may be variously classified, but they certainly are at least fourfold. The child is surely entitled to his scientific inheritance, to his literary inheritance, to his æsthetic inheritance, and to his institutional inheritance.

He is entitled to his scientific inheritance. In other words, he is entitled to go out into nature, to love it, to come to know it, to understand it; and he is entitled to go out into it, not only as the early Greek and Oriental thinkers went, with fear and trembling and worship, but he is entitled to go out into it armed with all the resources of modern scientific method and all the facts acquired by modern research. He is entitled to know how it was that we have passed from the world known to the heroes of the Iliad to the world as we know it to-day. He is entitled to know how the heavens have declared their glory to man, and how the worlds of plant and animal and rock have all come to unfold the story of the past and to enrich us with the thought and the suggestion of the intelligence, the design, the order that they manifest. There can be no sound and liberal education that is not based in part upon the scientific inheritance of the race. The learning of the multiplication table, the learning of the necessary preliminary definitions, the learning of the necessary methods of research and practice—all these are the lower steps of the ladder, the necessary steps by which we must mount; and yet they are the steps from which how often we fall back without having gained any vision whatever of the land to which they are supposed to lead! And the scientific inheritance is one of the very first elements of a modern liberal education, because it is that element which presents itself earliest to the senses of the child. It is the element with which he comes in immediate sense-contact; to which he can be first led; from which he may be made to understand and draw lessons of the deepest significance for his life and for that adaptation which is his education.

And then there is the vast literary inheritance. That happens to be the phase of the past that mankind has during twenty-five hundred years most loved to dwell upon. It is the side that has captivated the imagination, that has enshrined itself in language, and that has, I think, on the whole, brought itself closest to the heart of cultivated man—

the great literary inheritance, going back to the earliest attempts at mythology and coming down to the great poems and prose triumphs of the eighteenth and nineteenth centuries in modern tongues. We have gone so far as to call these the "humanities," because most of all they seem to bear upon their surface the significance of that grand old word *Humanitas* which was once the ideal of liberal education. "Humanities" they undoubtedly are, but it seems to me that *humanitas* is a broader term still and that in its full significance it must be made to include all this inheritance, scientific, literary, æsthetic, and institutional. The gate to the literary inheritance is the gate of language; and just as scientific method is the gate to the scientific inheritance and therefore must in essence at least be mastered, so language is the gate to the literary inheritance and must be mastered at the earliest opportunity. We are accustomed, as a rule, to estimate and weigh power and culture in terms of language. The mastery of various languages, the mastery even of the mother tongue, is often taken as the sole test of education and of culture. That is our tribute to its great importance. We see how easily the mastery of a language, or of more than one, lends itself to this conception of education as an adaptation, as an adjustment, to the spiritual environment of the race.

Language is the frozen thought of the past. It contains in itself, in its products and its forms, all the little nuances of meaning and insight, comparison and abstraction, that the human race has gone through with; and when we are plodding through the weary and dreary details of grammar and of rhetoric we are again on the lower rungs of the ladder, the multiplication table of the literary inheritance, the steps that must be taken if we are to come to understand what the great world-poets and seers have enshrined for us in their monumental productions. Therefore it is that we are to-day putting the literary inheritance side by side with the scientific in the very earliest years of the education of the child; and in the education that is sometimes called "new"

it will be found that the linguistic exercises are almost always based upon something that is really worth knowing for its own sake. Our literatures the world over, ancient and modern, are so rich, so full of thought and feeling and action, that there is no time to waste in the merely formal five-finger exercises of grammatical drill upon lifeless material when we may be occupying ourselves with those same exercises, with the same purpose of discipline, upon material that enriches the human mind and touches and refines and softens the human heart. Modern education in its adjustments is bringing the child into his literary inheritance in a new spirit. That inheritance has always been before mankind. In the Middle Ages, in early modern education, in continental education to-day, it is and has been the main element. It must always remain. Nothing can ever be substituted for it. And yet it is mere narrowness to say that it of itself is sufficient, and that it excludes everything else. It should come side by side with the scientific inheritance in the early life of the child, during this period of plasticity or education.

The third element is the æsthetic inheritance; that feeling for the beautiful, the picturesque, and the sublime that has always constituted so great a part of human life, that constitutes so much of human pleasure and accentuates so much of human pain and suffering, which the ancient Greeks understood and used, and which, through a false and narrowing philosophy, was thrust out of life and education for centuries because it was supposed to antagonize the spiritual or religious life. It was supposed that the spirit could only be chastened by suffering, by privation, by pain, by tearing it away from one whole side of human civilization and by insisting that the human heart should suppress its feeling, its longing for the ideal in the realm of feeling and of beauty. The closet philosophers could accomplish that in education for a time, but they were utterly unable to suppress the Gothic Cathedral, they were unable to suppress the Sistine Madonna, and they have been unable to suppress the art element

in the human race. To-day we find it coming back to occupy its appropriate place in life. We should no longer think of applying the word cultivated to a man or woman who had no æsthetic sense, no feeling for the beautiful, no appreciation of the sublime, because we should be justified in saying, on all psychological grounds, that that nature was deficient and defective. This great aspect of civilization, this great tide of feeling that ebbs and flows in every human breast, which makes even the dullest and most inappreciative peasant remove his hat and stand in awe as he passes through the wonderful galleries of the Vatican or the Louvre—that, too, is a necessary factor in adjusting ourselves to the full richness of human conquest and human acquisition. Unless we are to be mere educational hewers of wood and drawers of water, we should see to it that the æsthetic inheritance is placed side by side with the scientific and the literary in the education of the human child. To-day we find art creeping into the schoolroom; instruction in color, in form, in artistic expression is being given. The growing child is surrounded with representations of the classic in art, and so, unconsciously and by imitation, we are teaching him to adapt and adjust himself to this once forgotten and now recovered element in human civilization; an element that certainly is, like the scientific and literary, an integral element in the child's inheritance.

And then, fourth, there is the wonderful institutional inheritance; most wonderful of all, because it brings us in immediate contact with the human race itself. This is the element of civilization before which we must, for the moment, sink differences of scientific opinion, differences of literary appreciation, differences of æsthetic judgment, and in which we look upon man as a whole but a member of a larger whole, in order to understand what human civilization really means. We have always had before us, in the history of civilization, two extreme types of thought and opinion as to human institutions. We have had the view typified in modern philosophy by Rousseau, and wrought out in the streets of Paris

from 1789 to 1794. This is the view that every individual is sufficient for himself. It is the view of the ancient Sophists, once combated by Socrates in the streets of Athens, that there are as many truths as there are men to perceive truth, and that each individual is a monarch sufficient unto himself. We have had that view, the atomic view of human society, the view that would blow all of our institutional life into millions of atoms and deify each. That view has failed to work itself out successfully in history, and when it has had a momentary success it has simply been because it came as a reaction against the tyranny of the opposite extreme. Then we have had the other extreme. We have had the view which insists that no individual is of any consequence or importance in the presence of the mass; the view that all individual peculiarity, all individual power, or acquisition, must be pressed down and trampled underfoot for the advantage of the whole. We have seen it in the civilization of China in the interest of ancestor worship; we have seen it in the civilization of India in the interest of the caste system; we have seen it in the civilization of Egypt in the interest of the priestly class; and we have seen those three civilizations wither and die. And now we have come to understand, again following the seed-thought of the Greeks, that the true line of institutional progress lies between the two extremes; that that conception of our institutional life is the true one which regards each of us as a unit but still as a part of a larger unit, which regards each of us as entitled to liberty but in subordination to law. We have come to regard that as the last out-giving of political philosophy based upon a study of human history and of human nature. That conception of liberty under the law, allowing a field for every human activity to develop and enrich itself without pulling down its fellow, all co-operating toward a common end; we have come to understand that that typifies and explains, better than any extreme theory of philosopher or sciolist, our institutional life. Then we look back and see what we have won. We see the right of private property, the common law, the state, the Church,

the freedom of the press, education, one great institution after another emerging from the mist of indefiniteness and coming out in the open to constitute our modern life, and we say at once that no liberal education can be complete that does not have some comprehension of all that. Unless the child understands that while he is an individual he is also a member of the body politic, of an institutional life in which he must give and take, defer and obey, adjust and correlate, and that without all this there can be no civilization and no progress; then we are thrown back into the state either of anarchy, the anarchy of Rousseau, or the communism and stagnation of China, India, and Egypt. We have wrested that insight into institutional life from history and it is going to-day into the education of children all over the civilized world. That means that they are being given their institutional inheritance; they are being given some insight not alone into their rights, which are so easy to teach, but into their duties, which are so easy to forget; and the institutional life that carries with it duty, responsibility, and a sense of the co-operative share in the working out of high ideals, is being put before children wherever sound education is given to-day, from the kindergarten to the university.

The period of infancy then is being used for adaptation along these four lines in order to introduce the child to his intellectual and spiritual inheritance, just as the period of infancy in the higher type of animals is used to develop, to adjust, and to co-ordinate those physical actions which constitute the higher instincts, and which require the larger, the more deeply furrowed, and the more complex brain.

That, as it seems to me, is the lesson of biology, of physiology, and of psychology, on the basis of the theory of evolution, regarding the meaning and the place of our education. It is a conception which must, I am quite sure, raise us above the mechanical, the routine, the purely artificial. We must then come to see that this period of preparation is not a period of haphazard action, not a period of possible neglect, not a period when time may be frittered away and lost, but

that every moment of adjustment is precious and that every new adaptation and correlation is an enrichment not only of the life of the individual but of the life of the race. For we all now understand perfectly well that this long period of infancy and adaptation, this period of plasticity and education, is the only thing that makes progress possible.

As I said above, the lower animals make no progress; they have no history; they have no records; they have nothing that could be recorded or that could constitute a history. Each generation moves in exactly the same path or circle as its predecessor, just as one sees on the banks of the Nile to-day precisely the same method of irrigation in process with the help of man or beast that is depicted on the temples—pictures that have stood there for thousands of years. The possibility of progress is given to us by this period of adaptation and plasticity. That is why it is perfectly correct to say that each generation is the trustee of civilization; that each generation owes it to itself and to its posterity to protect it and to enrich it and to transmit it. And the institution that mankind has worked out for that purpose, is the institution known as education. When a child has entered into this inheritance, first physical, then scientific, literary, æsthetic, institutional; when the insight has been gained, when the foundation has been laid, when the seed has been sown and the development has been begun, when adulthood is reached; then we use the word culture to signify the state that has been attained, and not until then.

The word culture is very modern. It is only used in its present sense during the latter portion of the eighteenth century and during our own. It is a word which owes its significance largely to Goethe and to Herder, the two men who first used it and explained it in our modern sense. But the conception is old. It is the *παιδεία* of the Greeks, the *humanitas* of the Romans; and after all it expresses pretty much what the patrician Roman, dwelling in his country house, had in mind when he said that he wanted

his boy, after obtaining some instruction in agriculture and in law and in military duty, to go to the great city of Rome itself in order to obtain or attain *urbanitas*, city-ness. We have softened that word down until it means merely urbanity or polished manner, but when the Romans first used it they meant by it pretty much what we mean by culture. The conception is old; it has always been before the idealists of the human race from the earliest times, and we have now come to use this new word of ours, culture, in that historic or traditional sense, and we have given it this rich, full, and diversified meaning, based, as I say, upon the knowledge of the child and upon the knowledge of the historic past. When we use it in that sense, the sense of Goethe and of Herder and Matthew Arnold and Mr. Pater, then we are using it as we may properly use it, as an ideal of our newer and modern education.

This civilization of ours is not the simple thing that it seems to some philosophers and critics. It is the most complex product of human endeavor. In addition to the ground-stock that it contains—that came from the forests of Germany, the home of the wonderful people described so long ago by Tacitus—in addition to that fundamental stock of tendency and power, this civilization of ours contains at least three great historic elements that have come trickling down to it in ever-widening and deepening streams from the distant past. It contains the element that we derive from the Jewish people, which has given us our religious point of view and so much of our religious belief and symbolism. It contains the æsthetic, the scientific, and the literary element bequeathed to us by that most wonderful of peoples, the inhabitants of ancient Greece. It contains the administrative or legal element, the sense of respect for law and order and established institutions, that has come down to us from the citizens of Rome.

It may be that many of you who hear me have been privileged to stand upon what seem to me to be the three most sacred and inspiring spots in the world: The summit of the

Mount of Olives, the Acropolis at Athens, and the Capitoline Hill at Rome. From each and all of those three summits one looks down upon a wide expanse of territory; wide, and yet not a fraction of the size of many an American county. From each of those summits one beholds a territory on which deeds have taken place from which inspirations have gone forth that constitute the ideals of our modern belief and thought and action. And anyone must be impressed, I think, with the wonderful disproportion that exists between the extent of the territory on which those scenes were enacted and the permanence and depth and sweep of their influence.

Standing on the summit of the Mount of Olives the City of Jerusalem lies at our feet. Immediately at the foot of the hill is the garden called Gethsemane. The brook called Kedron flows between the spectator and the city wall. The great site of Solomon's Temple, now crowned by the Mosque of Omar, standing on the summit of the ancient Mount Moriah, is in the foreground. Beyond it is the hill of Zion. The town of Bethany lies at the left, and Bethlehem is just over the hills to the south. Behind are the Dead Sea and Jordan and Jericho. To the north and beyond the Damascus gate are the hills of Samaria. Straight in front are the blue hills that run down to the Mediterranean at Jaffa. And there, all within the glance of the eye, lies this great series of historic spots that mean so much, with all their associations, for the history and civilization of the Western world.

Cross the sea to the Acropolis at Athens. Go out at sunset and sit on the corner of the temple of the Wingless Victory, that most beautiful and pathetic of ruins. Immediately in front is the scene of the battle of Salamis. Beyond the hills to the right the Persians were beaten back at Marathon. In that little grove of trees yonder, in the midst of the blue fields, were the Academy of Plato and the Lyceum of Aristotle. Under the hill to the left is the great theater in which the great dramas were

read to the delight of the Athenian people. Just below is Mars' Hill, where the energetic voice of Paul may almost be heard thundering out, "Ye men of Athens!" Just beyond stands the very platform from which Demosthenes appealed to the Athenian people to beat back the Macedonian tyrant. There again, within one stroke of the eye, is the seat and the home of a marvelous civilization.

But two days' journey to the west is the still more familiar Capitoline Hill at Rome which looks down upon the scene of so many marvelous events, the homes of so many extraordinary men, all of whom live and move to-day in our literature and our life. Now, compare for one moment the narrow territory on which those historic scenes were enacted; consider the smallness of the spring from which those great and perennial streams have come, and then look out upon the great field of our modern opportunity. Compare those scenes with this broad land of ours stretching from ocean to ocean and almost from the frost line on the north to the Gulf on the south, with its seventy millions of people, its diversified soil, and every opportunity for achievement, exaltation, and development. Contrast the feeble beginnings, geographically speaking, of our civilization; contrast them with the opportunities that are in the hands of this modern, highly cultivated, highly differentiated and developed people; and then ask yourself the question, What are the responsibilities resting upon culture, upon education? What is then the meaning of Infancy and Education for this great American people of ours, other than to use them both for the systematic, the thorough, and the continuous adjustment to this great civilization; for the gathering up of all its forces and the sweeping of them forward in the irresistible march of human progress toward the attainment of those ideals that will always inspire and lead on the human race?

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VII

DISCUSSIONS

SOME OBSERVATIONS ON CHILDREN'S DRAWINGS

The *Pedagogical seminary* for October, 1896, contains a very interesting and suggestive paper by Dr. H. T. Lukens on "Children's drawings." The paper is accompanied by several reproductions of some children's sketches, and Dr. Lukens finds in them a strong subjective element, combined with the simple registry of sense-impressions.

I have found these drawings particularly worthy of study because they show so clearly the presence of an *ego*,—something above and beyond all sense-activity or reflex action,—something that is appealed to as a personality and that acts by a volition of its own,—something with a power to image and idealize outward things, and with a power to command the physical organism in the service of itself. And another point of great importance—I notice that the power of this *ego* to image and idealize the products of the senses has at first a very feeble beginning, but grows and develops rapidly during the first five or six years. It is evident, too, in this as in other collections of children's drawings, that children take a great delight both in the exercise of their idealizing power, and in the crudest attempts at the externalization of this power. Everyone who has had any experience in working with children, or examining their drawings, observes the spirit of evident enjoyment shown in the drawings made in their earliest years.

But another thing is noticeable not only in the drawings Dr. Lukens shows, but also in most collections of the sort; there is little development or improvement to be seen after the sixth or seventh year, and the interest of the children in this free drawing soon dies out.

I have made much study of children's drawings for the purpose of finding some satisfactory explanation of this fact.

Why should this be so? Why do children who begin drawing with such interest and delight lose later all desire and power to draw?

It is frequently asserted that this loss of interest is due to formal, technical training received in school which kills all interest, all spontaneity and pleasure in the work; but this cannot be the true solution, for we find the same decadence of interest and power with children who are never subjected to any school training in drawing whatever. If drawing be a great natural means of expression to the child, it should naturally grow with his growth and development. This not being the case, the true explanation for the early atrophy of this form of expression will have to be sought in another direction, and I think it can be found in the child himself—in his inability by himself to overcome the inherent difficulties of linear drawing.

The great movement for child-study which is throwing so much light upon many problems of education is emphasizing the fact that there is somewhere in the physical organism an *ego*, or being, that is appealed to through sense-activity on the one hand, and that commands the motor-activities in its service on the other. And, as we study this *ego*, or the real child, we find it soon develops ideals and possesses imaging and idealizing powers which are constantly acting and developing, and by virtue of which it is constantly transforming the products of sense over into products of its own idealizations. Every child, therefore, in his awakened moments is actively engaged in a process of creating a world of his own, through his powers of idealization, and in his early years his powers of expression fairly keep pace with his powers of idealization. He does not at first, however, much concern himself with the results of his attempts at expression, and especially by drawing. The mere pleasure of expressing is at first enough.

The drawings submitted by Dr. Lukens are especially interesting as showing the crude beginning and the steady development of the imaging and idealizing powers, and the struggle to command the motor-activities with young children in the service of these powers. First, we have simply a scribble of lines, utterly unintelligible to another person,

gradually the trunk, limbs, features, garments, and finally action and expression of the person or persons observed are indicated. If these drawings were supplemented by other children's drawings, such as I have repeatedly seen, it would be apparent that this idealizing and externalizing process goes on quite freely with the child until about the sixth or seventh year, and that beyond that period the drawing does not improve in character; it rather decreases, becomes confused, and the children seem to lose their interest in the work.

I can account for this fact only on the supposition that the child now begins to sit in judgment on his own work and becomes more and more dissatisfied with it. His powers of idealization have developed to such an extent that he begins to see things in their true relations. He sees action and purpose, in other words, life, in all that surrounds him. The moment he undertakes to give an expression of his idea in regard to a person or an object that shall be at all truthful in regard to what he has observed or felt, he is overpowered by the consciousness that his results are no adequate representations of what he himself sees, feels, and thinks, and he naturally loses his interest in linear expression.

Now, if we think for a moment of the very difficult problem that is before the child in endeavoring to express by drawing what is in his mind, we should not be surprised either at his failure or at his relinquishing the practice of drawing at an early stage. In his mind he images and idealizes his sense-perceptions into persons or objects occupying three dimensions. In attempting to externalize his ideas by drawing he is compelled to represent them on a surface of two dimensions. Therefore, anything like active reality is out of the question. In order to give an interpretation of his sense-experience, or any sense of reality to his idealization, he has to create an illusion,—that is, such a combination of lines on a surface of two dimensions as will depict the desired reality in three dimensions,—and it is right here that the little child breaks down. He cannot, unaided, make his power of expression in two dimensions adequate to his mental image of the thing that exists in three dimensions, and it is to this fact that we are to attribute the early decadence in children.

of their interest in and their love for drawing. Just as soon as their power with it falls below what they wish and aim to express—below their ideals—they drop all interest in it.

And right here I wish to say a few words on the necessity in the training of children of respecting the child's own standards or ideals. It is the fashion in these days to decry formal training and to emphasize freedom and spontaneity in childhood as the all in all; and this idea is carried to such an extreme with some people that they overlook the fact that every well-minded child is a taskmaster unto himself; that in all the work that deeply interests him he has an ideal or standard, according to which he patterns himself. As evidence on this point look at the plays of children, and see with what patience and what devotion they give themselves up to vigorous self-training that they may do their part well, whether it is rolling the hoop, or jumping the rope, or running, or leaping, or skating, or firing at a mark, or playing jackstones or marbles, or playing ball. We have only to observe children carefully in their plays to see that they make for themselves standards of their own which admit of nothing lower than doing their very best. I sometimes feel that in this advocacy of the freedom of the child and the condemning of all holding of the child to formal training, that this powerful factor in child-nature is overlooked. Not long since I attended a child-study meeting in which such emphasis was laid upon gaining the instinctive interest of the children that the inevitable inference was that there was no need of formal training; that it was so repugnant to the child-nature that it stunted its growth. In going out of the meeting I passed a vacant lot in which I found sixteen boys playing ball. By the theoretical rules of child-interest these boys ought to have been engaged in playing a regular game of baseball, "learning to do by doing." Instead of this, they were divided up into twos and threes, and were simply pitching and catching. I watched them with interest for over half an hour, and I do not know that I ever saw a group of boys take a greater interest in an actual game than these boys were taking in the mere act of practicing in preparation for a real game. Again, from my window I have seen a boy, all by himself, day after day,

engaged in throwing a ball against a wall, and catching it on its rebound. What do such efforts at self-discipline mean, unless we credit children with having ideals or standards, to realize which they subject themselves to severe tasks?

I think this side of child-nature in children, their having ideals and standards and their subjecting themselves to hard and severe training for the purpose of realizing their ideals, is a matter that has not yet received sufficient attention in our investigations into child-nature and the proper training of children.

Coming back to Dr. Lukens's drawings and to children's drawings generally, I am forced to the conclusion that there is not and cannot be for average children any purely natural method of learning to draw. All forms of expression to the civilized man are arts that have been developed through the long and patient culture of the race. They are man's arts because they have been developed by him by immense effort and self-training out of nature's rude and primitive endowments. In this form of art-expression by drawing nature takes children a very short way out to sea, as it were, and then leaves them helplessly adrift. Something more than nature's endowment, something more than instinctive interest, something more than reflex motor-activity, must be brought to bear on the problem of the right development of the power to draw. In its primitive stages as a form of diagrammatic representation, it may be granted that drawing is a natural means of self-expression, but we must not forget that it is also a chief feature in one of the great arts of the race, and, as we have seen, art is not simply a phase of nature. Art is man's work as contradistinguished from nature. It is his conscious idealization and utilization of nature's materials and forces, and it is his power of externalizing himself—his idealizations—through drawing that makes drawing of such great service in education. Drawing, therefore, in education, must be regarded primarily as a mode of art-activity—as a means by which the individual externalizes his idealizations.

If this contention be true, the great end to be aimed at in elementary instruction in drawing is the development of the synthesizing and idealizing powers on the part of the

ego, accompanied by adequate powers of externalizing what is in the mind. The child is constantly idealizing, constantly transforming nature into his thought-products. We have learned to recognize this fact in language-training, and we are constantly endeavoring to see how we can help him to direct his own thoughts along the most desirable lines, and toward the most desirable ends, and also how we can help him to express his thoughts clearly, vigorously, and gracefully—that is to say, in a word, *artistically*. And I think the evidence shows that what the child most needs in drawing, after the primary stages, is to be shown how he can utilize it to express with some degree of fullness and power the thoughts—the idealizations—that come crowding into his mind for externalization. And here we want to avoid forcing him into ruts of formalism; rather we need patiently to show him how he can enlarge his own powers of performance and make them more effective.

I am glad to see Dr. Lukens pointing out the fact that the child needs help at this juncture. I am convinced that the more we study child-nature and come to recognize clearly the fact that back of the sense-activity is a personality that this activity appeals to, and that this personality has powers of assimilating sense impressions, accompanied by powers of idealization and creation, and that it is this personality that commands the motor organism, the sooner we shall come to a just understanding of the place of drawing in education.

Collections of entirely free and unaided drawings, such as Dr. Lukens and many of us are studying with so much interest, are invaluable helps to a just diagnosis of the child's condition. They are frank statements of his "symptoms," so to speak. They are absolutely necessary to us as a foundation for our work of rightly educating the child. But it is not to be supposed that they constitute a complete guide to what we, as educators, ought to do for his art-training. The physician depends on the patient for the data with which he starts, but he does not ask the patient to advise his own treatment. In this matter of children's drawing, all the accessible data lead us to diagnose the case as follows: The child begins with mental and manual ability about on a par, but growth in power of mind soon surpasses natural

growth in manual expression, and the result is a condition of discouragement and disinclination to draw.

What is needed is evidently help for the powers of synthesis and idealization and, *pari passu*, practical helps on the *technical side*; helps so judiciously planned¹ and presented that they will be palatable and digestible, and that will gradually so strengthen and re-enforce the powers of both ideal vision and manual expression as to keep them working harmoniously with each other. For, as we know, growth in both lines is immensely forwarded by mutual reaction in practice. The race was not born at once into a full command of art-processes. The art-processes are only to a very slight extent a natural inheritance. Men have learned skill largely from each other, accepting the help to be had from the best already attained and improving upon it by personal effort. Counting out the few rare excepted geniuses, art has been learned only with the help of other art, combined with constant recourse to nature for subject and material. Children must be brought in contact with good art if they are to understand its principles or master its processes.

The study of the child will not yield its full significance in education until it recognizes the importance of the arts of the race as among the supreme forces in education, and also recognizes the child in his best estate as, on the one side responsive to art-influences, while on the other he is potentially a creator of new art-products which are the best evidences of his own individuality and power.

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¹ The old-fashioned custom of basing school instruction in drawing on geometric lines of figures is practically out of date. No modern course of drawing instruction, as used in the schools to-day, actually perpetuates the formalism which Dr. Lukens evidently has in mind when questioning the value of school instruction.

VIII

REVIEWS

Harper's Dictionary of classical literature and antiquities—Edited by HARRY THURSTON PECK, M. A., Ph. D. Illustrated. New York: Harper & Brothers, 1897. 1701 p. \$6.

Among the classical dictionaries hitherto available there has been no single manual that was adequate for the needs of the student in the many fields in which he is perpetually seeking information. In the dictionaries of Dr. Smith the material is distributed in three cumbersome and expensive works, a *Dictionary of biography and mythology* in 3 volumes, a *Dictionary of geography* in 2 volumes, and a *Dictionary of antiquities* in 2 volumes. Dr. Anthon covered the same ground in two works, originally published half a century ago, a *Classical dictionary* and a *Dictionary of antiquities*. With the exception, however, of Smith's *Dictionary of antiquities*, which has recently appeared in an admirable revision, all of these books are sadly out of date, and lag from forty to fifty years behind the state of our present knowledge. Classical philology is no more a stable science than physics or chemistry, and the progress achieved in its various departments in the last few decades has been prodigious. Apart from the general improvement in the texts of all our classical authors, this period has witnessed the appearance of a number of monumental special editions, such as the Ritschl *Plautus*, Munro's *Lucretius*, Mayor's *Juvenal*, Ellis's *Catullus*, Ribbeck's *Vergil*, Jebb's *Sophocles*, Wecklein's *Æschylus*. On the purely linguistic side of classical study great advances have also been made. Epigraphy has made rapid strides. The *Corpus inscriptionum Latinarum*, now numbering some twenty bound folios and containing over 130,000 Latin inscriptions, has all appeared since 1863; the *Corpus inscriptionum Græcarum* was finished in 1877, and the *Corpus* of Attic inscriptions is more recent still. The collection and classification of this epigraphic material

have given a keen impetus to dialect study, and yielded large contributions to our grammatical and philological knowledge. Comparative philology, too, has become a new science under the aggressive leadership of the *Junggrammatiker*, and has recently given an honorable account of its services to classical study in Brugmann's *Grundriss*. In this general forward movement possibly no department has made more signal progress than archæology. Excavations on classic ground have been numerous and fruitful. In Rome the débris has been removed from the Fórum and the Palatine, to say nothing of less notable excavations. In Greece Olympia, Mycenæ, and Tiryns have been once more revealed to view; Schliemann and Dörpfeld have unearthed Troy; while the latter scholar has revolutionized the existing theories as to the construction of the Greek theater. The foregoing are only a few of the fields in which the industry and acumen of scholars have been making substantial additions to our fund of knowledge. They are sufficient to show that the time was ripe for the appearance of a new classical dictionary which should take account of recent achievement. In meeting this demand it was a happy decision of the publishers of the present work to embrace the whole field of classical learning,—literature, antiquities, mythology, biography, geography,—in a single volume, thus relieving the student of the awkwardness of using two or more different works. Even within these limits the editor has found it feasible, without neglecting an adequate treatment of the subjects embraced in the foregoing departments, to go somewhat beyond the traditional scope of the classical dictionary, and to include lives of the most distinguished classical scholars from the time of the Italian humanists down to the present day; he has also devoted much space to matters specifically linguistic, such as Grimm's Law, Verner's Law, Pronunciation of Greek and Latin, Italic Dialects, Oscan, Umbrian, Sermo Plebeius, African Latinity, etc. Besides this he has given place to a host of miscellaneous titles, such as Greek and Latin Anthology, Monumentum Ancyranum, Iguvine Tables, Duenos Inscription, Cista Ficoroniana—subjects to which

the student meets frequent allusion in his reading, but concerning which it is usually difficult to obtain information.

In the execution of his task the editor has had the co-operation of several distinguished scholars, both American and foreign. But the total amount of their contributions is relatively small, and for the great bulk of the work he is himself alone responsible. In the main the earlier dictionaries of Anthon have been used as a basis for the new work, but fresh material has been freely drawn from every quarter, and none of the available publications in the classical field have been neglected.

The editor's own work has been performed with great zeal, ability, and—despite the laborious character of the undertaking—with evident enthusiasm. A striking feature of the work is the very full bibliography given in connection with each article. Not merely are the chief larger works of reference cited, but the scattered literature of programmes and dissertations is also given.

Too much praise cannot be accorded the illustrations. These are not only numerous, but finely executed and in generous proportions—far superior in size and finish to anything of the sort contained in similar works. With rare exceptions their source is also given.

The great strides made in archæology in the last few decades are fittingly recognized in the space given to such articles as Mycenæan art, Ilios, Athens, Rome, Pompeii; while Egyptian and Oriental archæology receive exhaustive treatment under Egypt, Assyria, Babylonia, India, Persia, the last mentioned subject receiving ten pages from the hand of Professor Geldner of Berlin.

In a work of such magnitude, involving so many details, absolute accuracy of statement in every particular is well-nigh impossible of attainment. Lapses are bound to occur now and then. Thus, on p. 878, Schrader's view as to the location of the home of the Aryan race seems to be misapprehended, and for the literature of the subject reference is inadvertently made to Brugmann's *Journal*, as well as to the *Indogermanische Forschungen*. The *Monumentum Ancyranum* (p. 78) is described as cut on "a marble slab,"

though the view given elsewhere (p. 171) correctly shows the inscription as covering a temple wall of many blocks. Homer's dialect can hardly be declared to-day to be "Old Ionic" (p. 502). In the excellent biographies of modern scholars, while all will be grateful for this feature of the work, a few lacunæ will be noted. No mention is made of Reisig, Bursian, Baehrens, Kühner, Jahn, Georges, Schleicher, Freund, Hofman-Peerlkamp, Melancthon, Riemann, Conington, Nettleship, or Jowett. A fair plea might also be made for the recognition of some American names, *e. g.*, Hadley, Felton, Beck, Anthon, W. F. Allen—perhaps also of Whitney, who, though not professedly a classical scholar himself, had probably the chief share in the making of a score of the ablest classical teachers in this country. Under Gesner's name no mention appears of his *Thesaurus*, nor under Lehrs of his iconoclastic *Horace*.

On p. 312 *Commentator Cruquianus* is defined as the scholiast to the *Codex Blandinius Vetustissimus* (V). The present writer confesses never to have seen the term employed in this sense, but only as a blanket designation for all of the Cruquian scholia, some of which derive from V, others from the other Blandinian codices, and some even from early printed editions. Under Lucilius the old error of assigning his birth to the year 148 B. C. is perpetuated, though it is practically proved that the satirist was born in 180 B. C. and the date is so given by Teuffel-Schwabe, Schanz, and Ribbeck. Accius, too (under *Tragœdia*), is rudely docked of the last twenty years of his life and made to die in 104 B. C., though Cicero tells us that he himself as a young man enjoyed the friendship of the old tragedian. On p. 201 Boeckh is curiously credited with the *Corpus inscriptionum Latinarum* to which Franz, Curtius, and Röhl as well as Mommsen are mentioned as contributors.

But enumeration of such oversights easily degenerates into captious criticism, and to dwell upon them would not merely be unjust to the editor and his coadjutors but would give an entirely erroneous conception of the book. In general it is not only extremely painstaking and accurate, but thoroughly stimulating. No reader can fail to recognize in it

the labors of a true scholar, or to receive from it fresh help and fresh impulse for his own work. Professor Peck has earned the gratitude of classical teachers everywhere, and both editor and publishers are to be congratulated on rendering so solid a service to the cause of classical learning and education.

CHARLES E. BENNETT

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The Werner introductory geography—By HORACE S. TARBELL, A. M., LL. D., Superintendent of Schools, Providence, R. I. Chicago: The Werner School Book Co., 1896. 188 p. 55 cents.

The Werner grammar school geography—By HORACE S. TARBELL, A. M., LL. D., Superintendent of Schools, Providence, R. I. Chicago: The Werner School Book Co., 1896. Part I, Text, 351 p. Part II, Maps and Illustrations, 160 p. \$1.40.

The demand for text-books that are better, both pedagogically and in scholarship, is the result of the strides we have been making in the science of education as well as in geographical science. In the department of geography-teaching wide-awake instructors have emphasized the fact that something more substantial than a method and a molding-board are requisite to success. They are demanding a broader and more logical treatment that shall harmonize with the teachings of psychology; at the same time business men of practical sense are claiming—and with some degree of justice—that a subject of such practical aspect shall be approached from the standpoint of economics and commerce.

A consensus of opinions shows that two correlated ideas about the teaching of the subject are beginning to assume a crystalized form. First, that the systematic course in elementary geography is best approached by the study of human industries; second, that all human industries are expressions of climate and geographic environment; moreover, the nationalization of government, although traditionally for mutual protection, is merely the machinery to facilitate the rapid and equitable distribution of food stuffs and commercial products. The older text-books, as a rule, presented the geography of location only, and it was a great

stride from the old "Number Three" of Professor Mon-teith to such books as his last work, the Barnes Series, or to its contemporaries, Harper's, Swinton's, Maury's, the Eclectic—and Butler's, if I may be permitted to include my own work. In these books physical geography instead of the geography of location was made the basis, and each series as it appeared was a distinct advance upon its predecessors.

But the leaven of modern thought is working rapidly and the army of teachers is demanding something beyond these books. In the geography of the future the trained geographer and the teacher—the specialist in the field and the specialist in the schoolroom—must work together. And the basis of the work must be, not only a description of the earth and its industries, but, what is still more important, the correlation of the two. The primary book must be within the range of child-thought; there must be no problems of abstract science concealed under the flimsy disguise of "words of one syllable," moreover, there must be no fulsome baby talk; child vocabulary is often more comprehensive than we conceive it to be, and the average seven-year-oldster usually understands the meaning of words that he cannot read in print. The advanced book must go a step farther and present the interrelation of history and the human industries and at the same time their dependence upon physiographic laws. Every illustration must be a geographic study, and every map must bear the physical geography of the country on its face. Some of the traditional methods of arrangement may well be abandoned, and in this Mr. Frye has set us a worthy example. There is no good reason, for instance, to perpetuate the ordinary classification or grouping of the States of our own country. The coal-mining, manufacturing, cotton-growing, grain-growing, and metal-mining groups are plainly circumscribed, and offer a far more logical method of grouping.

The latest text-books of geography are from the pen of Dr. Horace S. Tarbell, a veteran in the ranks of teachers, who for many years has been favorably known among progressive and practical educators. Of the two books the ele-

mentary one is unquestionably the better. It is written in an easy flowing style that will commend itself to the primary teacher and it shows a thorough acquaintance with the schoolroom. All through the text there is abundant evidence of that sort of tact and skill that tradition ascribes to a woman and that rarely appears in a man. It is not too much to say that a great deal of the intrinsic value the book possesses has been given it by Miss Martha Tarbell and her assistants. Miss Tarbell is already well-known as a contributor to the best class of educational literature and the influence of her clever pen is apparent in the pages of this book.

It is evident from the beginning that the elementary book will be a strong competitor of the very popular book Mr. Frye has given us. In its pedagogical arrangement and its adaptability to classroom work it will stand exacting criticism. Some of the subjects are treated in a highly interesting manner, namely, the description of the Lapps and the Eskimos, and the text about the plateau States and India. In other chapters the treatment is wholly inadequate. Thus, Russia is disposed of in less than forty lines, and of the whole number of statements at least one-half are readily discoverable by studying the map. Such matter should be brought out by inductive and not didactic methods. There is not a word about the village system of farm life that underlies the whole Slavonic civilization, nor is there a hint about the wonderful development of the Russian nation. There is a statement that the Russian plain is crossed by eight large rivers, but there is no intimation that the lateral branches and not the trunks of these rivers constitute the great highway by which Russian enterprises have been carried through Siberia across the continent. Of all the physiographic features of Russia this thalweg, which forms a nearly continuous waterway from the Volga to the Amur, is the most important.

That the book is open to the criticism of inadequate treatment from a geographic standpoint, however, is at once apparent; in some instances the underlying principles are not made plain, and in others they are not brought out at

all. Thus, the effect of the Andes on the rainfall of South America could not be well understood even by a reader of mature years, if he depended on the text for his information; while the most important product of Chile, and one that has played a major part in the history of the country, is not mentioned at all. When it is considered that seventy-five per cent. of the pupils of the public schools never advance beyond the elementary text-book of geography, it becomes apparent that this book should be more comprehensive and contain more of the geography of location.

The *Grammar-school geography* could hardly be drier and less connected had it been compiled exclusively from the *Statesman's Year Book* or the *Almanach de Gotha*. It is an excellent book of statistical information, and it is unusually free from the slips and errors of first editions; it is likewise an excellent text to enable the student to prepare for a Regents' examination. But it is not geography. For instance, in the consideration of the Central American States the only important statement that cannot be learned from an ordinary map is summed up in two lines, "Sugar, coffee, cacao, and the tropical fruits are exported." Now about the only essential geography of the Central American States is that which centers about the coffee plantation and the Nicaragua Canal. But the geography that has resulted from coffee cultivation is not mentioned, and the far-reaching effects of the Nicaragua Canal are disposed of in a single question, "What will be the advantage of this Canal?" A similar criticism applies to the treatment of the West Indies.

A contrast to the ungeographic treatment of the West Indies and the Central American States is found in the chapters devoted to Siberia and the Chinese Empire. There is some good wholesome geography in them, and it would not be easy to make them better.

The author rightly emphasizes the value of history in the study of geography by occasional historical sketches that accompany the more important subjects. The idea is an excellent one, for it is impossible to separate history from the geography of commerce and human industries. But in this book there is but little correlation between the historical

sketches and the geography; they seem to be interpolations rather than links in the text. Thus, the geographical history of Germanic Europe is the struggle between the factories and the feudal systems; and the salient history of the West Indies is not so much the Buccaneer times as the period in which the sugar industry began and developed.

In some instances there has been a misconception of physiographic processes. For instance, the spits and reefs along the South Atlantic coast of the United States are not river bars but wave formations, and they are quite as readily formed of sand as of alluvial matter. The essential feature of their formation is water shallow enough for the drag of the wave to reach bottom. The river bar, on the contrary, is quite another thing, and its explanation is not given.

The illustrations in the smaller book, as a rule, are lacking in geographic value: two of them, the coral atoll (p. 19) and Mount Rainier (p. 101), are thoroughly bad. The cut bearing the title "Mercator Map" (p. 31) is not a mercator projection at all, while a cleverly-drawn mercator chart on the page following has no title. The cuts accompanying the text of Part I could have been just as well omitted; they have no value whatever. Those forming the supplement of Part II would have been welcomed by all teachers, had they been appropriately placed in connection with the text. Both the working and the reference maps are good. The relief maps are mediocre, but the little sketch maps are both graphic and instructive.

Measured by the standard to-day demanded, the series, though by no means devoid of excellent features, falls short. The books certainly have good value, but they might have been better. They will be strong competitors of the most recent publications, but they might have surpassed all others now in the field. The moral is obvious. A text-book of geography, to be both geographically and pedagogically good, must have not only the authorship of the skillful teacher, but it requires the work of the trained geographer as well: no one person is likely to possess both qualifications, and even granting that such a one exists, there are good reasons for believing that the hand of a skillful editor

is quite as essential to success as the best combination of authorship.

J. W. REDWAY

MT. VERNON, N. Y.

Elements of psychology—By GEORGE CROOM ROBERTSON. Edited by C. A. FOLEY RHYS DAVIDS. New York: Charles Scribner's Sons, 1896. 268 p. \$1.00.

This is the first of two handbooks compiled from the lectures of the late George Croom Robertson, and published in the valuable little University Series of which Professor Knight is editor. The second is to be on *General philosophy*, to which this one is properly introductory. The fact that Professor Robertson never wrote out his lectures and seldom even used notes at once suggests the query as to how far this little volume is entitled to bear his name. The editor herself satisfies us on this score. Her own notes have been supplemented by those of twenty-five other students, representing the lectures from 1870-92. So complete was the material furnished her that it was unnecessary to add even a clause to the original, so that we can take the book as a faithful transcript of the lecturer's thought during that period. Of course the style is colloquial, and hardly that which the author himself would have chosen had he prepared the book, but we may be thankful to have the thought of such a man in whatever form it may have been preserved. Nor is the style unpleasant. The volume is readable and interesting from beginning to end.

The method of the lectures has naturally determined the form of the book. It was Professor Robertson's habit to use several text-books as the basis of his explanatory and critical remarks. These text-books varied, but the most constant was Bain's *Mental science*. Sully, Höffding, Clark, Murray, and Ward were also constantly referred to, and on these five the present book is based. It is plain, therefore, that it is hardly fitted to serve as an independent text-book on account of its lack of details. In the division of labor between text-book and teacher, it occupies the position of the latter. It interprets rather than describes. But while it is inadequate as a complete text-book, in con-

junction with some other work it would be of the greatest value. There is a clearness of thought and expression much to be desired in psychology. As a rule conceptions are carefully analyzed, and the student is impressed with the complexities of the problems and the need for exact definition. The plan of criticising the assigned text-books also promotes cautious thinking on the student's part. The unity of mental life is made evident by a treatment, so far as possible, genetic. The chapter on the growth of the mind is of the author's own writing, intended probably for some future work of scope similar to the present one. It is an interesting specimen of what such a work might have been had the author lived to complete it.

Psychology for Professor Robertson was not merely one empirical science among many, although he was emphatic in his claim for it of a place among these. Like his predecessors, psychology was interesting mainly in reference to epistemology; hence the theory of objective perception is the kernel of the book before us. Brain is approved as being on the right track in this matter, but is criticised for lack of clearness and consistency. Our author's own account is delightfully clear, even in the elementary form made necessary in these lectures. We may not accept it, but we must enjoy its distinctness. It naturally begins with his account of the senses, where he gives a clear description of the muscular sense; criticising Mr. Bain for his conception of it as active sense, rather than as sense of activity. This sense of activity furnishes the coefficient by means of which passive sense is transformed into active sense. Its importance arises from the fact that "perception, and especially objective perception, as opposed to sensation, is a kind of conscious experience into which there inevitably enters consciousness of activity put forth, *i. e.*, muscular sense." The theory of Dr. Ward and Professor James as to extensity is put aside as a *petitio principii*, their error arising from their order of treatment. They attempt to explain the perception of extension before accounting for the perception of object. The true order is the reverse. We cannot explain extension until we have explained objects. Our author here follows Mr. Bain

and his Franco-Scotch predecessors in emphasizing the part played by resistance in our knowledge of objects. "Object is for us first resistance; we analyze resistance and find activity so stopped that we get intensification of touch." Only after this stage has been reached can series and counter-series of touches give us our notion of extension. Until we first have the object, these series can give us only coexistence in time, not in space.

The only unsatisfactory part of the book is its treatment of feeling. There is a vagueness here not to be found in the other portions. Feeling, pleasure and pain, and emotions, are not clearly distinguished, nor are their relations defined. Feeling is described as the subjective side of mental states of all kinds, yet it is sometimes used interchangeably with sensation, which the author regards as the first stage of all classes of mental states. The confusion is perhaps due to varying usage at different periods in his lectures, and, at any rate, is only to be expected in the present condition of the subject. Besides this there is only the omission of a few topics which we might have looked for in more elaborate text-books. On the whole, therefore, as a brief, untechnical introduction to psychology, we have had no better book than this.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter.

Professor Emerson has done well to prepare a *Brief history of the English language* on the basis of his larger and more comprehensive volume (New York: The Macmillan Co., 1896. 267 p. \$1.00).—Miss Guerber's careful work in story-telling now includes the *Legends of the Middle Ages*, a collection that will be very helpful to many teachers (New York: American Book Co., 1896. 364 p. \$1.50).—The new edition of Richardson's *Primer of American literature* is attractive and well made. Though without any charm of style, it is a concise and systematic little book, whose useful-

ness is attested by the fact that over seventy thousand copies have been sold. The wayfaring teacher may perhaps be pardoned for wondering whether it is oversight or a mere detail of bookmaking ethics that leads to the incorporation, in this edition, without explanation or comment, of several novel features that distinguish another lately published work on the same subject. At least one very third-rate or fourth-rate writer is included in the list of essayists, while several of far higher rank and greater popularity are omitted (Boston: Houghton, Mifflin & Co., 1896. 122 p. 60 cents).—In the volume of *Biological lectures* delivered at Wood's Holl, in 1895, there are a number of papers of interest to the general reader. Perhaps the most generally interesting is that which gives Professor Osborn's personal reminiscences of Huxley as a teacher. Dr. C. S. Minot has a useful contribution to bibliography, and Professor Dolbear contributes two characteristic papers, abounding in sweeping generalizations put with great clearness and vigor (Boston: Ginn & Co., 1896. 190 p. \$1.50).—Professor Cajori of Colorado College, whose careful and scholarly *History of mathematics* appeared a year or two ago, has now published a *History of elementary mathematics* that will be found extremely useful by teachers. The rise and development of number-systems, of arithmetic, algebra, and geometry are traced clearly and succinctly. Hints are given throughout the volume on methods of teaching mathematics (New York: The Macmillan Co., 1896. 304 p. \$1.50).—Professor Brander Matthews's latest volume, *Aspects of fiction*, lies somewhat outside the scope of this REVIEW. But students of literature, and teachers generally, will find in it much that is instructive as well as entertaining. The paper on "American literature," read before the N. E. A. at Buffalo, opens the volume, and many of those who heard it, or were prevented from hearing it by the vast crowd, will be glad to possess it in this attractive form. The essays on "The gift of story-telling" and "Text-books of fiction" are also of especial value to teachers (New York: Harper & Brothers, 1896. 234 p. \$1.25).—Mr. Burt's translation of Erdmann's *Outlines of logic and metaphysics* may

interest a few specialists, but it is not suitable for use as a text-book in American colleges. It would have been wiser to translate the beautifully written and in every way more attractive book on the same subject by Kuno Fischer (New York: The Macmillan Co., 1896. 253 p. \$1.60).—The second book to appear in the excellent College Histories of Art Series, edited by Professor John C. Van Dyke, is a *Text-book of the history of architecture*, by Professor Hamlin of Columbia University. The author's name is an assurance that the treatment of the subject is scholarly and authoritative. The illustrations, more than two hundred in number, are well-chosen and well-executed. Misprints are few and far between, but there is a glaring one in the title to Figure 129 (New York: Longmans, Green & Co., 1896. 441 p. \$2.00).—Quaternions is never a difficult subject, but Professor Hathaway's *Primer of quaternions* brings the subject within the comprehension of a mere beginner (New York: The Macmillan Co., 1896. 113 p. 90 cents).—Mr. Fairbrother of Lincoln College, Oxford, has published his college lectures on the philosophic teachings of the late T. H. Green of Balliol College, in a volume entitled the *Philosophy of T. H. Green*. It is intended to lead the student to read Green's writings for himself, and so to come in immediate contact with one of the two or three really great expositors of philosophy that England has produced in the latter half of the nineteenth century (London: Methuen & Co., 1896. 187 p. 3 shillings and 6 pence).—Under the title of "Science ladders" Mrs. Arthur Bell publishes three interesting little books, intended to form an introduction to the study of biology. They are entitled respectively *Links in a long chain*, *Lowly water animals*, and *Mammals of land and sea* (New York: Thomas Whittaker, 1896. 60 cents each).—*Aus Herz und Welt* (Boston: D. C. Heath & Co., 1896. P. viii, 92. 25 cents) contains two short stories by Nataly von Eschstruth and Helene Stökl, edited with an introduction and ample notes by Dr. William Bernhardt. Both stories are good examples—one pathetic, the other humorous—of colloquial German, and will prove particularly useful to those learning to speak the language.

IX

EDITORIAL

On the third Wednesday of November, Mayor Strong of New York, in conformity with law, filed his list of appointments to fill the seven vacancies in the Board of Education occurring on January 1, 1897. The Mayor's action in regard to these appointments was awaited with great eagerness: by the "ringsters," because the terms of their leaders and chief schemers were about to expire; by the reformers, because it was in the Mayor's power to commit the public-school administration to a board of education containing a strong majority in full sympathy with the new educational ideals that are now animating the long-befogged metropolis. Of the seven men whose terms were about to expire, five had voted for Boss Jasper as superintendent in May last, one had voted for Mr. Gilbert, and one (Mr. Agar) was a recent appointment, and of the most satisfactory kind, to fill a vacancy. Knowing how strongly the Mayor felt about the re-election of Jasper and how fully he appreciated the insult that the Board of Education had thus put upon his reform administration, it was expected by many that no one of the five who assisted in the performance would be retained. But Mayor Strong was disinclined to give any faction an opportunity to pose as martyrs, and two of the Jasper cohort, Messrs. Adams and Little, were retained for another term of three years. Strong German influences were behind Mr. Adams, who has promised to do better hereafter, and Mr. Little, though a pronounced reactionary, has an experience in dealing with problems of school building and furnishing that is said to be of value. Mr. Agar, of course, was also re-appointed; but the other four names are new. On New Year's Day Messrs. E. Ellery Anderson, James Speyer, William Greenough, and John E. Eustis will succeed to the

seats occupied by Commissioners Strauss, Holt, Beneville, and Meirowitz. The departure of these four men has aroused great public enthusiasm. Dr Meirowitz was appointed as a Good Government Club representative, but he has been a disappointment. Though he usually voted against the Jasper "ring," he appears to have been animated by pique rather than by principle. Mr. Holt has long supplied the old régime with its brains and its balance-wheel. He is honest, industrious, and thorough; but he appears to be wholly incapable of taking a large view of education or of freeing himself from the hypnotic influence of the Boss and his Learned and Self-Sacrificing partner. For these reasons Mr. Holt's very virtues have made him a dangerous and undesirable member of the Board of Education, and the fact that he now leaves the board is a cause for municipal thanksgiving. Messrs. Strauss and Beneville have been the cavalry captains of the pedagogic marauders. Mr. Strauss especially has always been "in evidence," and in dealing with school matters has displayed an insolence and a cynical indifference to instructed public opinion that were disgraceful. His personal attack on the wife of Governor Morton and his impudent references to President Gilman are capital instances.

The new commissioners are of a different order of citizenship. Mr. Anderson was long a school trustee, and presided over the Mayor's Commission that drafted the first of the school-reform measures. Mr. Eustis also served as a trustee, and gave powerful aid to the movement that finally resulted in the abolition of those brakes on the wheels of progress. Mr. Greenough and Mr. Speyer are well-known in the community and are identified with its best educational and philanthropic life.

It is earnestly to be hoped that the reform majority will not surrender to sentimental considerations or to those who are crying Peace! Peace! where there is no peace, but proceed at once to reorganize the board, root and branch, in the interest of higher and better things. Unless this is done, half of the good effect of the passing of Messrs. Holt, Beneville, and Strauss will be lost.

The tenth annual meeting of the Association of Colleges and Preparatory Schools of the Middle States and Maryland was successful and enthusiastic beyond all precedent. The attendance at the several sessions was too large even for the hospitality of the University of Pennsylvania and of the Normal School, and scores of persons were unable to secure admittance.

The subject of the meeting was "College entrance requirements," and after papers by Professor Stephens of Cornell and Remsen of Johns Hopkins on "History" and "Science," respectively, a conference on the whole subject was held. This proved to be of the greatest interest. President Eliot was present and appeared at his very best. Others taking part were Presidents Gilman, Raymond, Thomas, Warfield, Holland, and Patton, Commissioner Harris, Professor Fullerton, and Mr. Talcott Williams. The conference took on the form of an experience meeting, and proved to be both instructive and stimulating to the large gathering of school and college teachers. Dr. Mackenzie of Lawrenceville made an admirable presiding officer, and Dr. Adams of the University of Pennsylvania was, at his own request, allowed to retire from the secretaryship of the Association after five years of unremitting labor of the highest order of efficiency.

The School of Pedagogy of the University of Buffalo has entered upon its second year with a large increase in the number of students enrolled. While in many other parts of the country student attendance has been either standing still or falling off, in Buffalo it has risen more than fifty per cent. Not fewer than 130 students, the majority of them teachers of experience and reputation, are now receiving instruction from Dr. McMurry and his colleagues. Readers of this REVIEW do not need to be reminded of what this means for the city of Buffalo, the State of New York, and the country at large. To assist in maintaining and developing a great forward movement such as this is one of the proud privileges that come to men and women of wealth and public spirit.

The City History Club of New York has undertaken the preparation and publication of a unique series of papers on historic New York that will be known as the Half Moon Series. They will appear under the editorship of Mrs. Almon Goodwin, Mrs. Charles H. Royce, and Miss Ruth Putnam. The announcements for 1897 are extremely interesting and include the following: The Stadt Huys of New Amsterdam, by Alice Morse Earle; The Fourteen miles round, by Alfred Bishop Mason and Mary Murdoch Mason; Wall Street, by Oswald Garrison Villard; Anneke Jans's farm, by Ruth Putnam; The Bowery, by Edward Ringwood Hewitt and Mary Ashley Hewitt; King's College, by John B. Pine; Old wells and water courses, by George E. Waring, Jr.; Governor's Island, by Blanche Wilder Bellamy; Defenses of old New York, by Frederick D. Grant; Old Greenwich, by Elizabeth Bisland; and Tammany Hall, by Talcott Williams.

The development of the public library spirit is now a noticeable feature in the educational affairs of the Old Northwest. In Wisconsin the free traveling library is the special interest upon which the new State Free Library Commission is centering its efforts. New York was the pioneer in this field, but its traveling libraries, sent out from the State Library in Albany, are composed for the most part of from fifty to a hundred books upon some special interest—as history, biography, travel, science, adventure, or fiction; these are lent chiefly to villages, or to small public libraries which desire for a time to supplement their stock of literature on a given subject—as, for instance, at the request of some local women's study club. In Wisconsin, still to a large extent a State of isolated forest and prairie communities, where it is impossible to form or maintain public libraries, and where the dearth of reading matter of any sort, outside of the county newspaper, is almost complete, the traveling library must and does take on a different character. Through the generosity of State Senator J. H. Stout, thirty of these libraries, each of them comprising thirty well-selected books, covering a wide variety of topics, have for the past six months been doing missionary work in Dunn

County. This is one of the most sparsely-settled of the counties in the northwest corner of the State, where the denuded forest lands are being developed into dairy farms by homesteaders, native and foreign, who are eager for reading matter, but as yet poorly-off in this world's goods. The success of this experiment has inspired another philanthropist, J. D. Witter, to place some twenty-five such libraries in circulation in Wood County, in the central sand plain of Wisconsin, where the soil is comparatively thin and the population widely dispersed. November 13 and 14 a convention was held at Ashland on Lake Superior, whereat the forest counties of a wide district were well represented, chiefly school-teachers, who are taking an energetic part in the Wisconsin library movement. At this meeting, a Northern Wisconsin Free Traveling Library Association was formed, which will solicit money and books, and—with the Vaughn Free Library, at Ashland, as a center—will start upon their travels a considerable number of libraries of the Stout and Witter patterns. As two or three wealthy Ashland men and women are backing this enterprise, it is likely to be an immediate success. The State commission, assisted by the Wisconsin Library Association and the State Historical Society, is the directing force in all these movements, and allows none of them to suffer for lack of energetic professional advice and assistance. It is confidently expected that at the session of the Wisconsin legislature, this winter, the commission will be granted an increased appropriation, with an expert official staff. The State will, in consequence, soon take a leading stand, not only in the matter of free traveling libraries for rural communities, but in free stationary public libraries for municipalities.

Principal Edwards of School No. 70, Brooklyn, N. Y., was brought into a police court a few weeks ago, charged with having punished a pupil with unnecessary severity. The punishment consisted in striking the boy across the thighs with a rattan thirty-two inches in length and one-quarter of an inch in thickness. Justice Harriman dismissed the complaint against the principal, and laid down this rule:

Discipline and good order must be observed in our public schools, or they are worse than useless. If one boy may persist in throwing spit-balls or doing any other prohibited thing which is subversive of good order, all the other boys in the class may do so, and in such a case neither good order nor efficient study would or could be maintained. This statement is too clear and apparent to need argument. Had Walford been sent to his class a second time without punishment of some kind, Mr. Edwards might as well have dismissed his class and closed his school, for any person who knows the nature of mischievous boys knows that chaos would have reigned in that school. The rules of the Board of Education give the principals power to inflict reasonable corporal punishment in certain cases, and add: "Of the necessity for which they shall in every case be the judge."

The Justice concluded by quoting and indorsing this decision, in *Lander vs. Seaver*:

A schoolmaster has the right to inflict reasonable corporal punishment. In determining what is reasonable punishment, various considerations must be regarded—the nature of the offense, the apparent motive and disposition of the offender, the influence of his example and conduct upon others, and the sex, age, size, and strength of the pupil to be punished. Much difference prevails among reasonable persons concerning this; and on account of this difference of opinion and the difficulty which exists in determining what is reasonable punishment, and the advantages which the master has by being on the spot to know the circumstances, the manner, look, tone, disposition, and language of the offender, which are not always easily described, and thus to form a correct opinion as to the necessity and extent of the punishment, considerable allowance should be made to the teacher by way of protecting him in the exercise of his discretion; especially should he have this indulgence when he appears to have acted from good motives and not from anger or malice; hence, the teacher is not to be held liable on the ground of the excess of punishment unless the punishment is clearly excessive and would be held so in the general judgment of reasonable men. If there be any reasonable doubt whether the punishment was excessive, the master should have the benefit of the doubt.

The Educational Club of Philadelphia has begun the publication of a monthly journal called *The Teacher*, to be issued in the interest of education in that city. The first issue is dignified, able, and printed in an attractive form. It presents a striking and significant contrast to the organ that is supported out of the salaries of the New York city teachers.

The sixth annual volume of *Minerva*, the indispensable handbook of the universities, libraries, and other learned institutions of the civilized world, is nearly one hundred pages stouter than its predecessor. The frontispiece is a strong portrait of Professor De Goeje, the distinguished professor

of Arabic at the University of Leyden. American institutions receive the same careful attention that Mr. Trübner, the editor, has always given to them. Four institutions are added to those described in last year's list—Smith College, Vassar College, Syracuse University, and the University of Illinois.

As this issue of the REVIEW goes to press, the plan proposed for the administration of the public schools of the Greater New York is on the point of being made public. It will be fully described and discussed in these pages next month. Meanwhile it may be sufficient to warn teachers and the public generally against taking their opinion of it from those adroit and versatile persons in New York and Brooklyn who combine the duties of a school principal with the wire-pulling and underground intrigues that are usually associated with the lowest type of ward politics.

One important contribution to the solution of the rural school problem, and a new demonstration of the hopeless incapacity of the district system to produce good schools, has been made in Missouri. A committee of the State Teachers' Association, with President Jesse of the State University at their head, have prepared a report on County Supervision in which the subject is treated with great thoroughness, and a plan of improvement outlined. It is hoped and believed that the incoming Legislature will take some forward steps toward establishing county supervision and escaping from the weight of the district system. When will New York, which can truly boast of so much that is good in its educational organization, free itself from this relic of educational barbarism?

The university statistics printed in the *Harvard Graduates Magazine* for December bring into bold relief the great increase in the number of students that has taken place at the University of Pennsylvania and the University of Chicago. The gain this year at Chicago in the advanced departments is no less than 459; at Philadelphia it is 247. Yale follows with a substantial increase of 105, while Harvard shows

only 68. Michigan and Columbia report decreases, the former 26 and the latter 28. No returns from Fiat Universities are included.

To the Editor of the EDUCATIONAL REVIEW.

Dear Sir: You designate as "extremely silly" the suggestion, in my sketch of the child-study movement in the *Pedagogical Seminary*, that the N. E. A. help child-study from its funds. In view of the fact that the Committee of Ten has been thus helped and that other appropriations have been seriously discussed, that it has a fund besides its annual income, and that scientific societies still poorer do just this, I feel justified in protesting against your language.

Your only other point is in objecting to my intimation that the N. E. A. does not smile upon child-study. In reply, I point to the animus of your paragraphs on this subject in your last [November] issue. A friend emphasizes the good, minimizes the evil, whether of a person or a cause. I submit that you do just the reverse.

You speak of "unscientific and hysterical" people, the "raking together of an undigested mass of alleged facts," and "never denied propositions apt to provoke a smile," "silly question papers haphazard," etc. What we want and most need is *discriminating criticism*.

One error of fact: You praise only the Illinois work, but that was not begun in 1894. Why then was the Child-Study Section received "with such open arms as no other applicant had been"? And were child-study proceedings printed under protest, or as a gracious favor not accorded to other departments? At Asbury Park I was one of many who trudged to three places before we could hold our meeting—which filled a church—the room assigned us being a small one in a hotel, containing only nine chairs.

Faithfully yours,

SARAH E. WILTSE

WEST ROXBURY, MASS., *November 17, 1896*

To the Editor of the EDUCATIONAL REVIEW.

Sir: Allow me to correct an error in my article on Horace Mann in your June issue. In my article, I said, "In February, 1848, John Quincy Adams fell dead at his desk in Congress. Horace Mann was elected to take his place; was re-elected by the people; but under the strong opposition of Daniel Webster, whom he had to face upon the slavery question, he was re-nominated for a third term." The truth is that Mr. Mann was not re-nominated by the Whig Party convention, but he ran as an Independent candidate in distinct opposition to the Webster following, and the "compromise" sentiment, and was elected by a handsome majority. His own comment upon the result as expressed in a letter published in his *Life*, was: "This is something of a triumph, personally; but, as a triumph of principle it is of infinite more value." Respectfully,

FRANCIS W. PARKER

CHICAGO, ILL., *December 19, 1896*

EDUCATIONAL REVIEW

FEBRUARY, 1897

I

CHILD-STUDY FOR SUPERINTENDENTS

What work in child-study can superintendents practically and profitably undertake? The following paper is devoted to a consideration of this question and divides the subject into two parts; First, a brief survey of some of the work actually being done by departments of superintendence in some of our cities and States, and secondly, a summary of the lines of work that have been shown to be practicable as well as productive of valuable results, and which are therefore strongly recommended to the attention of all supervisors of schools.

The attempt will not be made to give any exhaustive account of what is being done, but representative work will be mentioned in order to show its practicability.

Beginning with New England and naturally with Boston, we have some valuable investigations made by the Director of Physical Training. Dr. Scudder's Report on the Seating of Pupils in the Public Schools (1892) informs us that twenty per cent. of the girls in the grammar grades are decidedly round-shouldered, and that the method of seating tends to the production of permanent deformity of the spine. Statistics of age, height of children, and size of desk are given, together with photographs of malpositions assumed by children when there is disproportion in size between child, desk, and seat.

Dr. Hartwell's Report in 1894 is one of the most impor-

tant on school hygiene ever issued in the United States. In it he showed that Boston children of school age die faster than London and Berlin children, owing to the inferior sanitation in Boston, and he further discussed the means of meeting the difficulty. He gave tables showing Boston death rates and specific intensity of life for each sex at individual ages, from birth to twenty-one years; he showed that "during the period from ten to fifteen years, the years characterized by most rapid growth in height and weight, are years in which the fewest deaths occur." These years are not the same for both boys and girls. For boys the year is the thirteenth; for girls the twelfth. Thus girls reach their maximum of vigor earlier than boys.

It is scarcely necessary to point out the importance of minimizing all influences that hinder, and of magnifying all influences that promote, the growth of school children before their tide of exuberant vitality and of active growth begins to ebb. The specific intensity of life and the rates of growth in height and weight decline markedly for both sexes after the sixteenth year. Dr. Hartwell then proceeds to a study of stuttering in school children and shows that it is a neurosis of development. He compiled tables of the stutterers and showed that the years when girls were most subject to the disorder were seven, twelve, and sixteen; and that the corresponding ages for boys were eight, thirteen, and sixteen. The rise in the ratio of stutterers at seven and eight he attributes to the faulty methods of language-training in kindergarten and primary school.

This exceedingly valuable Report by Dr. Hartwell concludes with a further study of the problem of seating pupils and gives the norms for ages and heights.

The later Reports by the same authority continue the statistics and give further recommendations on these important points. As long ago as 1872 Superintendent Philbrick declared that "we ought to aim, not merely to avoid injuring the health of the pupils while carrying on their instruction in our schools, but to increase their physical

health, strength, and beauty." Without studying their physical conditions and requirements, we can never be certain that we are not injuring the health of the children, and these studies show that the schools were, and perhaps are still, injuring instead of promoting health.

Dr. Hartwell's work was based in part on Dr. Bowditch's earlier measurements of Boston children, which led to Porter's work in St. Louis, Peckham's in Milwaukee, and Greenwood's in Kansas City. These investigations have formed the basis of exceedingly interesting and important papers on "The relation between growth and disease,"¹ "The physical basis of precocity and dullness,"² and "The relation between the growth of children and their deviation from the physical type of their sex and age."³ Many of these and other points of growth in its relation to the development of children are summarized in convenient and accessible form in Donaldson's recent volume on the *Growth of the brain*.

Superintendent Greenwood has made very important contributions to the subject of the comparative development of boys and girls. He says that girls, especially in the high school, learn more rapidly than boys and usually stand much higher in their classes, and that this is doubtless owing to the fact that they cease to grow rapidly at an earlier age than boys and that, therefore, their systems have attained a higher degree of solidity than those of boys of corresponding age. Hence, he thinks, the intellectual educational stress should be the least possible on the system at the period of greatest growth and, in accordance also with Aristotle's recommendation, the hard study and severe discipline of the mental powers should come at puberty, in the two or three years immediately following the period of maximal growth. Superintendent Hancock of Durango, Colo., writes me that the boys at eight and fourteen, and the girls at ten, seem to lose their reasoning power to a large extent.

¹ H. P. Bowditch in *Transactions of American Medical Association*, 1881.

² W. Townsend Porter in *Transactions of the Academy of Science of St. Louis*, vol. vi. 7.

³ *Ibid.*, vol. vi. 10.

He finds it necessary to accord them different treatment at these periods. Mr. Johnson of Andover, Mass., also reports the dullards most numerous at these periods, while they brighten up somewhat in the next following years.

It is unnecessary here to dwell on the importance of making such studies as these on the physical growth and the hygiene of development. Excessive study, overstrain in late hours, and loss of sleep, at this critical stage of maximal growth, will sap the foundation of the most vigorous constitutions, and start those germs of future weakness that too often last throughout life.

One of the most practical results of the superintendent's knowledge of child-study and being himself a worker in the field is the Play School conducted by Superintendent E. G. Johnson at Andover, Mass. Several years ago Mr. Johnson made a very suggestive study of one thousand classified plays and games,⁴ showing how to turn on the play-activity in the direction of accomplishing work. Play is, in fact, normally the early stage of work and the preparation for it. Just as in the kindergarten the occupations are plays in the line of the child's future activities, so even Plato had recommended that children's plays should be directed into the line of their future pursuits and thus made a preparation for their life work.⁵

This Play School at Andover is not connected with the day school, but is a sort of boys' club, meeting two evenings a week under the oversight of the superintendent. The members are mostly boys who had been hard to get along with in the regular school work. Here are two sample programmes:

A—(1) roll call, (2) checkers, dominoes, or parchesi, (3) spelling game, *Crimsons vs. Blues*, (4) parlor magic (to test watchfulness), (5) rifle practice, (6) boxing, (7) dismissal.

⁴ *Pedagogical seminary*, vol. iii. No. 1.

⁵ Professor S. T. Skidmore of the Philadelphia Girls' Normal School has proposed in his *Evolution of play* to let the savage and hunting games die out, while mechanical constructiveness takes their place, as being more in harmony with the spirit and the demands of the present age.

B—(1) roll call, (2) choosing sides, (3) conundrums, Greens *vs.* Reds, (4) puzzles, (5) checker match, (6) wrestling, (7) dismissal, with books and papers to read. Benches and tools are also introduced, and, this year, Mr. Johnson tells me, he intends to utilize toy-making as manual training. The boys are steadily improving in attention, foresight, and judgment.

Mr. Johnson has also made other studies of games and plays in conjunction with his teachers, has tested children's hearing in relation to mistakes in spelling, has made some tests on motor-ability and nervousness, and has under way a short investigation into children's favorite studies.

In Michigan, too, the teachers have organized State spelling contests in at least twenty-five counties, and an account of these is published in the advance pages of Superintendent Pattengill's Report for 1896.

Dr. Spaulding, superintendent of Ware, Mass., gives a considerable part of his last Report to child-study. Tests of sight and hearing have been found so necessary that he contemplates having all the pupils tested hereafter twice a year. Besides teachers' meetings once a month, devoted to addresses on the subject and to directions for careful observation and study of children and the keeping of records, many suggestive points have been brought out through the regular language lessons by having the children write on topics that closely concern their interests and about which they know a great deal, which they are delighted to have the opportunity of expressing. Thus they tell, with the naïvest childish frankness, "of the happiest day in their lives, when it was and what made it so;" "what they want to be when they grow up;" "the stories they have read or heard during the year and which they like the best;" "their favorite games and why they like them;" they write to an imaginary friend, telling all about themselves that they think will be of interest to their friend, etc. The success of this method evidently depends on the sagaciousness of the topics assigned for the essays; but the testimony of the superin-

tendent is that it has proved the most profitable lesson of the week in language and is a complete success in securing valuable insight into the child's mental life, without either burdening the teacher or harassing the children. This method has been employed with the best of results by Superintendent Kratz in preparing the data for several of his studies of children, and by many city and county superintendents in California and elsewhere in co-operation with Professor Barnes.

Superintendent Balliet of Springfield writes me that he has had so many new teachers to break in of late years that it has taken all his time and strength to teach them the rudiments of pedagogics. In a paper read in 1890 before the Department of Superintendence, he expressed himself very strongly on the necessity of relieving the superintendent from the routine and administrative duties of secretary of the board, agent in distributing supplies, clerk of statistics, and examiner of the manuscript tests in the different grades; so that the superintendent may devote himself to training the teachers to observe children, to interpret their observations, and to deduce from them the principles that must guide them in teaching. In a recent letter to me, Mr. Baillet says that his experience shows that eye and ear tests are entirely practicable and necessary; growth and weight records might possibly be kept by most teachers; tests for nervousness (chorea) can be made with profit, and well-trained teachers can be instructed in the methods of making other tests on stuttering, motor-ability, contents of children's minds, etc.

Some of the city superintendents in New England are co-operating with child-study clubs, as, for instance, Superintendent Baldwin of Belmont, Mass., and Superintendent Tarbell at Providence, R. I. The Belmont Education Society has issued a neat syllabus of suggestions for the study of children in the home and school, including some very well-put questions and a particularly good outline for a study of play. The movement resulting in the formation of this society

grew out of a desire to secure a more active co-operation on the part of teachers and parents. The preliminary meeting was held in January, 1896, at the call of the School Committee. Superintendent Dutton of Brookline assisted at the organization and gave an account of the work of the Brookline Education Society along somewhat similar lines.

Worcester is so near the heart of the child-study movement and the source of its greatest inspiration that, even without any special child-study organization, Superintendent Carroll and Miss Howes have, nevertheless, aided materially in a great deal of the work. The school committee has been most willing and the superintendents most cordial in co-operating with studies made from Clark University under President Hall's direction. The school of observation, in connection with the work of the apprentices, is also, with great discretion, used as an experiment school for trying new ideas on a small scale before requiring their general adoption in the other schools.

The value of such a school can scarcely be overestimated. Here new ideas can be welcomed by bright, expert, and tactful teachers; and, under their direction and their application of these ideas in the schoolroom, the way may be opened for improvements in the adaptation of the methods and material of instruction to the interests and capacities of growing children. It serves the same purpose in education as do the experiment farms of the Agricultural Department in maturing new and improved methods of farming. The value of an educational museum and pedagogical library, such as is advocated in the Report of the Secretary of the Board of Education of Massachusetts, would be of great assistance in connection with such schools, and would exert a powerful influence in keeping the schools abreast of the best thought and best methods.

Several of the State Reports give space and emphasis to child-study. In the Maine Report for 1895 Superintendent Stetson recounts the work in child-study by the summer

schools for teachers provided for by the State legislature, and publishes a valuable study of the rural schools of Maine, giving details as to school furnishings, attempts at ornamenting the rooms, characteristics of the teachers, methods in use in the different branches, and the quality of the results thus obtained. Commissioner Stockwell of Rhode Island, in his Report for 1896, recognizes the vigorous and promising work done by the Barnard Club School of Pedagogy in furtherance of systematic child-study. In Connecticut Secretary Hine is doing a unique and exceedingly important piece of work in the detailed report of the condition of the schools in different counties of the State. Fairfield County was reported last year and Tolland County this year. The work would perhaps ordinarily not be classed as child-study, but it contains nevertheless exceptionally valuable material for our subject, and might be described as a statistical study of the influence of certain methods and school conditions on children. Studies of children's reading, work in arithmetic, memory tests, tests in arithmetic and English, and much suggestive material on school hygiene are contained in these valuable reports. Somewhat similar are Superintendent Greenwood's *verbatim* reports on arithmetic and language, reprinted in Commissioner Harris's Report for 1893-94. These reproduce actual school lessons and thus furnish a practical basis for studying methods.

Outside of New England perhaps New York is foremost in official recognition of the importance of child-study, but Iowa, Michigan, and Illinois are not far behind. In New York it is a regular department of the State university, under a special State Director. While Dr. Thurber was director he instituted a fruitful and important study of "children's hopes," which is published in Superintendent Skinner's Report for 1896, together with blanks and suggestions for other topics in child-study. The advantages of the New York plan are similar to those secured by Professor Barnes in California in that only a few definite points are asked for, these questions are officially distributed, and the material

collected all at once on a wholesale scale under the superintendent's direction from a great number of schools. This sort of co-operation in the collection of material by school-teachers and school officials, acting on the suggestions of educational experts, is one of the best and happiest combinations of skill with opportunity.

In Illinois the State Society for Child-study is heartily indorsed by the State superintendent, who co-operates with it in official recognition and propaganda. The superintendent of Cook County is one of the Vice Presidents and Colonel Parker is at the head of the society, with Dr. Van Liew as the energetic and enterprising secretary and treasurer. The *Transactions* of the society contain much valuable material and the association, while particularly noted for its enthusiastic organization and its rousing child-study convention of last spring, appears now to be about to settle down to actual work with children.

In Iowa Superintendent Sabin has given his official and hearty approval to the work of the Iowa Society for Child-study. The Department of Public Instruction last year issued suggestions for a study of eye-mindedness and ear-mindedness, weight and height records, individual characterization of school children, and a study of temperament in education. Superintendent Kratz of Sioux City is one of the leaders in the work, and in his Report for 1895--96 he devotes seven or eight pages to the child-study work he has undertaken in sight and hearing tests, in an inquiry into pupils' preferences in school studies, into the causes of poor spelling, etc. He has lectured to his teachers during the year on these and other topics and has contributed a very suggestive little piece of work to the *Pedagogical seminary* on "The characteristics of the best teachers as recognized by children."

The Michigan Department of Public Instruction has just issued its *Manual of child-study*, containing an introduction by the State superintendent and outlines, articles, and suggestions by Superintendent Whitney of East Saginaw,

Superintendent Hoyt of Lansing, Miss Marsh of Detroit, and others.

Superintendent Whitney has given much time to the work, some results of which he reported in a very practical paper read at Jacksonville last February before the National Department of Superintendence.

Superintendent Hoyt has made a comprehensive study of defectives, and has recently issued blanks for a study of temperament. He writes me that he has made personal studies of individual children, held mothers' meetings, and addressed the teachers on the subject in conferences, and that the interest and sympathy aroused in the teachers have brought to the schools a success they had never before attained. He is now engaged in making laboratory tests on children in the city training school.

Superintendent Griffith of Utica, N. Y., has entered quite extensively into the work, and last October, at the meeting of the New York State Council of School Superintendents, he reported what he had found practicable. He uses carefully prepared blanks for inventorying the pupil's knowledge on entering school, for testing sight and hearing, for recording the results of physical examinations, and for testing the senses, attention, memory, imagination, reasoning powers, and emotions. He reports the work of immense value to teachers and pupils.

Superintendent Hancock of Durango, Colo., writes me that he has found it best to let whatever child-study the superintendent engages in be such as grows out of the teachers' difficulties in their daily teaching and discipline. Only in this way can the most active co-operation of the teachers be secured. Professional reading to an almost unlimited degree is easily secured by this method. In this way Mr. Hancock has found it practicable and valuable to have eye and ear tests, and tests for motor-ability and nervousness. Health records of each child (as in the French system) are kept. The superintendent has made personal studies of individual children, has utilized the examination

papers in working up particular points, and holds frequent conferences on the subject with his teachers. His recent article in the *EDUCATIONAL REVIEW*,⁶ on "Children's reasoning," grew out of the difficulties his teachers found and complained of, in teaching arithmetic.

Superintendent McClymonds of Oakland, Cal., devotes twenty-seven pages of his Report for 1892--93 to the work in child-study under his direction. An important study of children's interests in reading-material was made in co-operation with Professor Brown of the State University. Co-operating with both Brown and Barnes, studies were made on memory, visualizing power, association, children's fears, religious ideas, color-sense, their plays, their rights as seen by themselves, and, with Mrs. Barnes's co-operation, a valuable study in the development of the historical sense.⁷ Besides all this the Oakland children were measured and weighed, and records of their physical development were kept.

Much of the work in Cleveland under Superintendent Jones is pervaded with the idea of child-study. The drawing course has been entirely remodeled and the old system of geometrical type solids entirely discarded. "The most inherently interesting subject-matter in drawing," says the director, "is the living human figure. It is infinitely varied; no one ever tires of its study, and it is an easy matter to present it adaptably to any stage of development." Hence it is used in all the grades as the chief object to draw. In the last report the director of drawing describes a new method of teaching foreshortening, which he has developed as a result of the study of the needs of the children in the primary grades.

The Cleveland teachers have a story-telling club also, in which they meet together to develop their capacity in that direction.

In Superintendent Draper's Report for 1894 he gives several pages to his own sagacious observations on the man-

⁶ October, 1896.

⁷ On this, along with other studies, she has based the book recently issued in Heath's Pedagogical Library, *Studies in historical method*.

agement of children to secure frankness and cordial relations with the teachers. It is, indeed, refreshing reading.

These are some of the lines of work that superintendents have already found practicable and valuable in their results. It is not so much expert training in psychological laboratories or elsewhere that teachers and superintendents need, but their most pressing need is rather to overcome the all too common adult self-conceit that presumes to know what the children should be before it knows what they really are. The study of children increases our love and appreciation of them, which, in turn, will develop our ability to study them profitably. One of the city superintendents in New England, writing to me a few weeks ago, said that the reason why teachers did not more generally take up work in child-study is that they are so often not in sympathy with children and are therefore unable to appreciate the significance of child-activity. This is the reason why they cannot interpret the meaning of their data when the observations have been collected. If the superintendents and teachers are not in sympathy with the children, I pity the condition of those children. Nothing that a teacher could do in the way of professional preparation is more necessary than to get into sympathy with children, to be able to understand them and appreciate the significance of their activities. No one who is unable to study children is fit to teach them or to superintend the teaching of them.

In conclusion, then, the work feasible and desirable for superintendents, as such, to undertake may be grouped as follows:

(1) Health—Eye and ear tests; tests of motor-ability and nervousness; stuttering; recess, fatigue, length of recitation period; health records (*e. g.*, French system); growth records; precocity and disease as related to growth; school hygiene, furniture, seating, postures, etc.

(2) Sense-perceptions—We must study the concrete contents of the minds of our pupils, not only on entering school but at every stage of their progress. When I was teaching

biology to first-year pupils in the high school, I found it just as necessary to inquire what their range of sense-perception was and what could be depended upon to arise in their minds when the words snail, scale, heart, muscle, etc., were used, as it is confessedly necessary with six-year-old children on first entering school. It is a good sign that superintendents and school boards are beginning to recognize now, in a greater degree than ever before, that they must supply things, as well as books, for teaching purposes. Laboratories, school museums, scientific collections, charts, maps, pictures, lantern slides, illustrative apparatus of all kinds, and in all subjects, need to be provided or made accessible by visits to public museums, art galleries, industrial establishments, historic spots and monuments, and the open fields and woods. School excursions for these purposes should be made during school hours and recognized as part of the regular school work instead of being relegated to voluntary Saturday afternoon trips. All the efforts made toward beautifying schoolrooms and school grounds are in the right direction and exert a powerful though silent influence in the development of good and wholesome ideas. To test the influence of these surroundings on the pupils, the concrete contents of the minds of the pupils should be inventoried in every grade at least once a year. This may profitably take the place of some of the examination tests now made on the word-memory alone.

(3) Pedagogical biographies and special reports—Just as the physician, who in his practice comes across an interesting and important case, writes it up and sends it to a medical journal, and just as the cases decided in our law courts are all recorded and reported in law books for reference in the study of the law, so also should pedagogical cases be written up and reported in the pedagogical journals. The superintendent has exceptional facilities for directing such work; for, under his supervision, a pupil may be followed from grade to grade through his course, and his record may be made continuous and complete, notwithstanding the fact that he

passes from one teacher to another. Such records should include samples of school work done at regular intervals in all the subjects, and should detail the physical and mental peculiarities of the pupil. Special occurrences of importance in the daily school work, cases of discipline, notes on play habits, all instances furnishing insight into the pupil's mental habits and traits of character, together with the measures taken by the teacher and others in their treatment of the case, and, finally, the results of the whole development in the later life of the boy or girl—such records, published, of course, without giving names, and with all the care and accuracy characteristic of medical and legal cases, should be printed in the teachers' journals, and would be worth more in practical usefulness than almost anything else we now have. Russell,⁸ Bohannon,⁹ Foley,¹⁰ and others in this country, and Siegert,¹¹ Ufer,¹² Pfeifer,¹³ Trüper,¹⁴ etc., in Germany, have given us some such pedagogical biographies.

Secretary Hine and Superintendent Stetson have set the example of making special detailed reports on the school conditions in various counties, and, I think, no one who reads their graphic accounts and compares their statistics will doubt the value of such work in giving us a solid basis of facts on which to frame our plans for improvements.

(4) The organization of children's plays in the interest of education—This was the master stroke that Froebel used in solving the problem of education for smaller children. But it is much more than a mere kindergarten device, it is a pedagogical principle of application to every age of the pupil. We are just beginning to see that play is the natural way of preparing an immature organism for work in any line of activity and that it is the only natural response possible until skill has been acquired through its exercise. There

⁸ "Exceptional children in school," EDUCATIONAL REVIEW, December, 1893.

⁹ "Peculiar and exceptional children," *Pedagogical seminary*, iv. 1.

¹⁰ *Two deaf girls*, Philadelphia, 1896.

¹¹ *Problematische Kindesnaturen*, Leipzig, 1889.

¹² *Geistesstörungen in der Schule*, Wiesbaden, 1891.

¹³ In the new and valuable periodical, *Die Kinderfehler*, i. 3. (Langensalza, 1896).

¹⁴ *Ibid.*, i. 2.

would be no complaints of long sessions and school fatigue if there were not undue restraint and constraint exerted. In the George Junior Republic at Freeville, N. Y.,¹⁵ the members are not calling for recesses every thirty or forty minutes. The boys of the McDonogh School, Md.,¹⁶ learn more of economy, order, justice, *esprit de corps*, and honor, as well as of civics, law, and government than could be taught them in any set lessons from text-books in the hands of the best of schoolmasters. The sand-pile in the front yard of the Massachusetts cottage¹⁷ furnished an education of a richer, broader kind than any school curriculum affords. The Syracuse High School Congress¹⁸ is a better illustration of "education by doing" than is most of our schoolroom work. If the whole course in manual training were turned into a course in the making of toys and playthings, it would be much more educative and much better adapted to the different stages of children's developing skill—just as girls learn sewing, knitting, washing, ironing, etc., in the care of their dolls. Superintendent G. E. Johnson's article on "Education through games and plays," before referred to, is an attempt to arrange a regular curriculum of plays based on their educational value and selected for all the different grades. These are but the beginnings of important reforms that every superintendent can and should aid in making practicable.

(5) A genetic curriculum—The most fundamental problem in relation to the course of study is neither the choice nor cross-correlation of the subjects, but their sequence. We must get beyond the present ideal of making a symmetrical curriculum, with all the branches of learning advancing with measured tread through every grade. Each subject has a more or less pronounced "nascent period," when interest in and physical ability to learn it culminate. The periods of maximal physical growth are not

¹⁵ *The Outlook*, October 31, 1896, and *Review of Reviews*, May, 1896.

¹⁶ J. H. Johnson's *Rudimentary society among boys*, Baltimore, 1893.

¹⁷ G. Stanley Hall, "The story of a sand-pile," *Scribner's*, June, 1888.

¹⁸ W. K. Wicks in *The Independent*, August 6, 1896.

periods for severe mental discipline. The mind and the body both grow by fits and starts. For instance, is it true, as has been urged, that the drill in penmanship, for accuracy and beauty of handwriting, should come at twelve or thirteen years of age; that it should be concentrated into a year or two; that language can be learned best through the ear before the eighth year, and through the eye best between eight and fourteen; that severe discipline in logical analysis comes best just after puberty; that "drawing must be learned before the ninth year or not at all," etc.? These are definite questions for superintendents to study and test. They cannot be settled by *a priori* arguments.

Secondly, the methods of teaching must be fitted to child-growth, instead of, as is now so largely the case, to adult logic. Rudiments are scarcely ever the same as first principles. The logical order of proof and demonstration is seldom the psychological order of presentation requisite for the first understanding of a subject. Superintendents should be able to test and adapt ideas on these matters, and then report their experiences in school journals.

(6) All superintendents should recognize it as a duty, and a necessary part of the work of the schools, to co-operate with educational workers, wherever practicable, in gathering material on child-study.

(7) An experiment school, where new ideas on all educational subjects may be tried under sympathetic and able teachers, together with a pedagogical library and a museum of child-study and educational apparatus, should be supported as an essential part of the school system of every city and State.

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II

THE TEACHING OF THE FRENCH LANGUAGE AND LITERATURE IN FRANCE¹

In most of the European nations serious efforts have been made, for a quarter of a century, to give in the scheme of instruction a larger place to the national language and literature. In some of these nations the causes of this movement have been political. I would cite Germany and France in particular; both of which have found in a more thorough study of their language and literature a sure means of strengthening the national consciousness itself. In all, the movement of which we speak has had as its motor the felt necessity of bringing education into touch with modern needs. Thus,—to confine our discussion to France,—in the first place, the primary education laws of 1881, 1882, and 1886 have determined a programme of elementary instruction calculated to give to every French youth a body of knowledge fitted to his future need, and which, accordingly, has not omitted the study of the national tongue. In the next place, the classical secondary education—that, namely, which is based upon the study of French, of Latin, and of Greek—has seen grow up at its side the modern education, which, leaving the ancient languages and taking on a distinctively utilitarian character, gives so much the more prominence to the language and the literature of France. Finally, the higher education itself has not escaped this general movement of the nationalization of education; it refuses to be limited to the study of the ancient languages and of classical philology; it has frankly undertaken a study of the national literature in all its periods; it has adopted the

¹ Translated from the author's manuscript by Dr. Frederic L. Luqueer, Principal of Public School No. 110, Brooklyn, N. Y.

methods of modern philology; it sees that closest acquaintance with the nation's writers will surely lead to the diffusion of French influence through the world. And one can foresee that the recent (1896) law, constituting the French universities, will only strengthen more and more this sentiment of the higher French education in regard to its patriotic mission.

Thus, in many ways, for a quarter of a century and more, particularly for the last fifteen years, in all stages of our education the study of our language and of our literature has been developing. I would try to show briefly in what measure these two subjects assist and complement each other in the three orders of instruction which, in France, comprise the national education.

As regards primary education, it is hardly necessary to say that in France, as in all other countries, the study of the literature, by the nature of the case, is subordinated to that of the language. One cannot reasonably hope to give children from six to thirteen years of age a truly literary instruction; especially when it is remembered that the majority of these children come to the school very little prepared by their education or by their social environment for literary studies. Nevertheless, the first article of the law of March 28, 1882, enumerating the subjects of primary instruction, names third among them the French language and the elements of its literature. But it must be added that, in the enactment of January 18, 1887, which apportioned to the various orders of education their appropriate subjects of instruction, in the programmes for the primary schools, although mention is made of "the French language" there is no reference to literature. It is true that considerable space is given to the language instruction, since we read, in Article 19, "The teaching of French [exercises in reading, reading with explanation, grammar lessons, exercises in orthography, dictation, analysis, recitation, composition, etc.] shall occupy, every day, about two hours." But it is evident that all these exercises are chiefly practical, and are meant

less to culture and adorn the mind of the pupil than to teach him to express clearly and correctly his thought. Accordingly, the instruction in French of the primary school is almost wholly grammatical.

However, in turning over the programmes of the primary school, we may see that the teacher is to try as best he may to awaken in his pupils a feeling for literary beauty; and that certain of the exercises may, in experienced hands, lead to this result. Thus, in the programmes for the children's classes (children of from six to seven years), we see mentioned "recitations of short pieces of poetry"; and brief readings by the teacher listened to and recounted by the pupils. For the elementary course (from seven to nine years) there is recommended, besides the recitation of poetry, "the reading aloud by the teacher, twice a week, of a selection interesting to the children." For the intermediate course (from nine to eleven years) there are assigned reading with running comment, "the reproduction of selections read in class," "the recitation of prose pieces," and dictation—an exercise dearer to French instruction than to American²—made, wherever possible, from standard authors. In the upper course (from eleven to thirteen years), certain exercises, though remaining language exercises, nevertheless have something of a literary character. I may cite, for example, the "reading with expression," the "expressive recitation of selections of prose and verse, of dialogues, of scenes taken from standard writers," or again, "the oral recitation upon an historical or literary selection which the pupil has been told to read or analyze." As written exercises, it is recommended, in addition to the dictation of passages from standard authors, that "some account be written of the lessons and readings," and compositions on "easy subjects." These compositions may describe an instrument; they may tell of some historical event or of happenings in private life; they may be a friendly letter, or an account of an instructive walk, etc., etc. Examples of these subjects,

² See Buisson, *L'enseignement primaire aux États-Unis* (Hachette, 1896), p. 209.

such as are proposed to the better pupils of the primary grades, especially to those of the upper primary schools, may be found in *Les exercices de composition*³ of M. Devinat, director of the men's normal school at Lyons. I cite, as examples of the subjects for composition by the children, the following: "A traveler describes in a few lines a village and its environs;" "My garden in November;" "A family group about the fire, in winter;" "The blacksmith at his forge;" "A dog that I know," etc.

Here are some examples of subjects, first, for narration; second, for dissertation; third, for letters. First, "You have seen one of your companions rescued from drowning. Tell what passed before your eyes; and describe how you felt at the moment." "Write a story in which a good man voluntarily gives up his ease and comfort in order to serve his fellow-citizens." "Your first journey on the railroad," etc. Second "Charity begins at home." "The benefits of saving." "Draw a lesson from the fable of the grasshopper and the ant," etc. Third, "Write to your uncle to give him the news of your family, and to ask him the news of his." "Letter of thanks to one who has procured you employment." "Letter to a friend who is recovering from serious illness," etc.

It is true that no one of these subjects demands for its proper treatment really literary power. Still no one of them debars it; and the teacher, if he has before him an able pupil, may always suggest, as a model for this or that subject, a page of our standard authors. Thus the grammatical instruction in the primary school borders upon literary instruction, but remains predominantly grammatical; and nowhere in the programmes of the primary schools is there space given either to rhetoric or to literary history, properly speaking.

And indeed a great obstacle prevents it from being otherwise: I mean the very large amount of time demanded of the French pupil for the study of our spelling. The major part

³ Paris: Hachette, 1896.

of the time devoted to French, in the elementary courses, is used up in this dry and sterile study, which is one of the plagues of our national instruction. But public opinion has been stirred, and for several years eminent men have led in an active campaign in favor of a reform in spelling. Only recently, the French and Belgian sections of the Société de Réforme Orthographique addressed to the Minister of Public Instruction a petition, from which we quote the following: "Who does not know by experience that the study of orthography, because of its complexities, to-day absorbs for itself alone at least a half of the time set apart for instruction in the primary schools, and so renders impossible to the children a gaining of really useful knowledge, such, for example, as that of the French language, which differs essentially from its orthography, but which is abandoned to the profit of the latter? And the time thus expended in wasting the young minds, that is to say, the most vital force of the nation, is for nine-tenths of the children the only period of their life reserved for instruction. Is it not indeed a wrong to oblige them to study an orthography which they cannot understand, to put them upon the rack, to force the entrance of merely arbitrary distinctions (*holocauste* with *h*, but *olograph* without *h*; *courtisane* with a single *n*, but *paysanne* with two, etc.), and this at an age when there is the utmost need of instilling ideas tending to form the judgment and to protect it from harm?"⁴

The case could not be better stated. When, at last, our primary education shall be relieved of the nice but sterile study of an out-of-date orthography, then we may hope to give to literary instruction some of the time which, at present, is absorbed by grammar. Then, perhaps, the reading with explanation, the expressive recitation of classic prose or poetry, the composition on topics, simple but which allow of a certain literary treatment; perhaps, finally, some elementary notion of rhetoric and of literary history—then, perhaps, all these exercises may occupy, in primary instruction,

⁴ See the *Bulletin de la société de réforme orthographique*, January, 1896.

a more important place. Still, whatever the shortcomings of this instruction as regards literature, it certainly in these last years has put forth every effort to facilitate the pupil's acquirement of the national tongue.

We may affirm as much of the secondary instruction classical and modern, that is to say, of the instruction of our lycées and colleges. Here the teaching of the literature and of the language rests on ancient traditions. It has not had to create everything anew, as had the primary instruction. There has been, however, much innovation, particularly in improving the methods. "Perhaps,"—we read in the *Instructions, programmes, and rules* published in 1890 by the Minister of Public Instruction,⁵—"perhaps even, after having for so long neglected our French authors, we have accorded them too much attention all at once. Perhaps we have gone, with grammar, into subtleties, and with literary history into curiosities of erudition." If, however, there has been excess, a subsequent reaction has had its effect, and now it may be said that the courses on the French language and literature are among the most flourishing in our lycées and colleges.⁶ In fact, no instruction is better adapted to our national spirit, formed as it has been by long centuries of Latin and classic culture; none is nearer the taste alike of students and of professors.

The exercises which, in our secondary instruction,⁷ have for end at once the study of the French language and literature, are first, the systematic history of that language and of that literature; second, the recitation and the reading of texts; third, French composition. We are far, however, from assigning to these exercises equal importance.

The systematic history of the language and literature occupies comparatively small space. In regard to the language, the *Instructions, programmes, and rules* speak as fol-

⁵ *Enseignement secondaire : instructions, programmes et règlements*, Paris, 1890.

⁶ See the American appreciations quoted by M. G. Compayré in *L'enseignement secondaire aux États-Unis* (1896), p. 8.

⁷ We speak here particularly of the *classical* secondary instruction; but the exercises are the same in the *modern* instruction.

lows: "The purpose, here, is simply to show the pupils that our language, as it is now, is not a direct offshoot from the Latin, that it has passed through a period of transition, that during this period it none the less has been subject to rules, and that these rules, taking the principal ones, are few and distinct." There is thus in the lycée no special course on the history of the language. At the end only of the fourth class, the master is to explain to the pupils the "laws that have governed the formation of the French words"; and this study shall be reviewed and carried further in the third class (fourteen years), and shall continue in succeeding classes in connection with explanation of texts, but without being made the subject of a special course, which belongs rather to the university than to the lycée. Nor is much space accorded literary history. It is not to usurp the time assigned the subjects styled "essential." "If a young and inexperienced teacher ventures upon the pleasure of giving the pupils in the second class (fifteen years) or in the rhetoric classes (sixteen years), university lessons in literature at the expense of textual explanation and correction of tasks, he makes a mistake. It is not a true aim to endeavor to present to children literary criticism upon works with which they are as yet unacquainted. The aim of literary history in the lycée is not so ambitious, but is more practical. It should seek to co-ordinate historically and logically the notions that have been presented fragmentarily in connection with the reading." This means that but little time is given each year to systematic literary history. To be sure, in the programmes of our lycées, we see among the subjects of instruction for the fourth class (thirteen years) the mention of "short biographies of authors," in connection with the explanation and dictation of texts; and, among the subjects for the third class, "summaries of literary history," again in connection with the texts read. But it is only in the second class, at fifteen years, that our pupils pursue a consecutive course in the history of French literature from its beginnings to the death of Henry IV. (1610); and, still, this course includes but

fifteen lessons, of an hour at the most, including the questioning. This course is continued in the rhetoric class (sixteen years) and covers the literary history of France from 1610 to the nineteenth century inclusive; but here also the teacher has at his disposal only fifteen lessons of an hour, which is little enough when one considers the length and importance of the period of which he has to speak. Still, the *Instructions* are precise on this point: "A few dates, a few facts, and the chief general ideas which may serve as guide lines for the mind in grouping the various works—this is all that should be attempted by the lycée. To go further would be to go astray; and would miss perhaps, for uncertain gain, the substantial results derived from exercises really appropriate to secondary instruction."

These exercises, fundamental in the eyes of French teachers, are, first, the reading and explanation of texts; second, written work. "What properly belongs to us," say the *Instructions*, "is the reading and explanation of texts: this is the ground and the life itself of the secondary school." The great service rendered by the reform of 1880 is that of having given to the grammatical and literary study of the French authors something of the important place formerly reserved for the Greek and Latin classics. A knowledge of the French texts is gained by the pupil in the daily recitation of pieces learned by heart and in his personal reading; but most of all by the explication, made in class and under the teacher's guidance, of selections as long and as varied as possible from authors designated by the programmes for the several classes. This last exercise is employed throughout, from the preparatory class (eight years) to the rhetoric class (sixteen years); and it appears, too, in the examination for the baccalauréat-ès-lettres which crowns secondary study, as well as in the examinations for the scientific and university degrees,—examinations which open the gates of instruction.⁸

Two observations must be made here. In the first place,

⁸ See, on the theory of the French text explanation, Gazier, *Traité d'explication française* (Paris, Belin L. Robert); and *Cours de lecture expliquée* (Paris: A. Colin).

the textual explanation is at once grammatical and literary. It is expressly recommended that it have this latter character in classes beyond the elementary. "It is a fact," say the *Instructions*, "that certain professors, excellent enough in other respects, seem to think that in the grammar classes [from eleven to thirteen years] it were a fault to go beyond the rudiments and the syntax and to give a truly literary exposition of the text, as if it were reasonable to shut the eyes to the idea and sentiment in seeing only the words and constructions. This is much to be regretted. It may happen a beautiful poem is being read in class: the pupils, the very youngest often, charmed by the melody of the lines and by their brilliant imagery, experience a vague emotion; they believe the professor feels it, too; they look to him to make clear the beauty of which they have but glimpses. He speaks; but it is to ask for some grammatical or logical analysis. The disappointment is keen." The good teacher, on the contrary, is one who aims to bring out the moral and æsthetic meaning of what is read, and to make it felt by the pupils. The end of textual explication is not merely to give the children a more precise knowledge of their language. Rather is it, most of all, to fill them with appreciation of the moral and artistic beauty of the works read. Truly this latter part of the teacher's task calls for the finest powers; and we need not be surprised if some fail. The conduct of such an exercise cannot be learned from books. It is a matter of personal taste and culture. It is the expression of all that is most original in the professor's power as a teacher.

In the second place, one must mark the considerable number of authors mentioned in the programmes for each class, a number still added to in 1896. There has been no hesitation, say the *Instructions*, "in augmenting rather than lessening the list of great authors given in the programmes, not for the purpose of prescribing for the professors the exposition each year of all the authors, but to give them wider and freer choice." The purpose of the French instruction here is to render the programmes as attractive as possi-

ble by their freshness and variety. Thus the programmes of the single rhetoric class, which in recent years have included fifteen or sixteen authors, name to-day about twice that number, all of which cannot indeed be thoroughly studied in class, but which may be read by the pupils in private. I need not enumerate the authors assigned to each class. It will suffice to note that, in the second class, place has been made for the works of the Middle Age, such as the *Chanson de Roland* and Joinville; and that in the upper classes generous provision is made for the writers of our own century. "In the teaching of literature as well as of history," say the *Instructions*, "the teachers are to orient their pupils in the modern world and to have in mind the needs of the present."

The same principles have guided our teachers in their requirements concerning written exercises. These exercises, for children under ten years of age, are purely grammatical. They consist, for example, in the eighth class (nine years), of substituting in short sentences the passive for the active, the future for the present, or of producing a description or narrative prepared in class. But, from the seventh class (ten years), the children have to write "short exercises in composition." In the fifth (twelve years) there are "simple compositions." In the third, there are longer compositions of a somewhat more literary character, and also "analyses, written and oral, of selections from French poetry and prose." In rhetoric, finally, there are "discussions and compositions in French." All these exercises are designed to bring the children "to exact thought and clear expression." But they are also meant to teach them to go to their literature for their materials. Thus, in the upper classes, stress is laid upon the dissertation on some moral or literary theme, rather than upon description, narration, or discussion. "There is need, however," say the *Instructions*, "of cautioning the professors carefully to avoid too difficult subjects for composition, and particularly subjects in literary criticism, in which the pupil is asked to write what he thinks of authors or of works that he has never read." It must be confessed

that this recommendation has not always been strictly heeded. Too often the French dissertations proposed to our pupils in rhetoric, or to our candidates for the baccalaureate, are too difficult. But this fact goes to prove, it would seem, the high value we affix to French composition as an educative discipline. It is indeed for us the most important of the practical exercises in our classes, because it calls at once for the accurate knowledge acquired by the child and for the personal qualities, imagination, sensibility, taste.⁹

As examples of French compositions such as are required of a French pupil of sixteen, I cite here some of the topics given in recent years in examinations for the baccalaureate: "Discuss the literary ideas of Molière as expressed in *Le Misanthrope*." "Boileau writes Racine to console him for the non-success of his *Phèdre* (1677)." "Saint-Simon writes to a friend, describing the condition of France on the morrow of the death of Louis XIV. (1715)." "Discuss, in the tragedy of *Polyeucte*, by Corneille, the character of Pauline." "Write a letter, as if from Mme. Sévigné to her daughter, telling of having but just heard a sermon by Bossuet," etc. As may be seen, these subjects have both an historical and a literary side. In almost every case they demand of the pupil creative effort to make speak historical personages of whom he is supposed to have a precise idea; and, consequently, they demand fine qualities of mind and imagination together with good sense and accuracy. In brief, the French composition, to be considered satisfactory, must give evidence not only of exact information and of a command of the language, but also of qualities of invention peculiar to each pupil: it must be literary.

We now touch upon the essential character of the French instruction in the lycées and universities. "The real end of secondary education," we read in the *Instructions*, "is the harmonious development of the mind and spirit." As it seems to us, the purpose of the study of the classic languages

⁹ See the excellent book of G. Lanson, *Conseils sur l'art d'écrire* (Paris: Hachette).

and literatures is less the acquisition of exact information than the general culture of the intelligence. The profit derived from reading is twofold. In the first place, literature contains the ever living traditions of the human spirit, by which the present is linked to the past; it leads the child along the way which humanity as a whole has had to travel; and, in making him acquainted with his ancestry, confers upon him true title to intellectual nobility. In the next place, it presents ideals; it leads the pupil to the knowledge of the true, the good, and the beautiful; it awakens in his soul a love, active and directive, for the things of truth, goodness, and beauty." These words of the ministerial *Instructions* describe the spirit of the teaching in both the lycée and the university.

Assuredly the national language and literature are here studied in pre-eminently a scientific spirit. Were there space, I would show what enormous progress has been made in this respect during the last twenty years. After having been distanced by Germany in the study of Roman philology, we to-day have schools of eminent specialists, and numerous reviews devoted to the study of the Middle Age in France. As regards the study of modern languages and literatures, I shall cite, as indicative of our activity, only the recent foundation, in 1894, of the Société d'Histoire Littéraire de la France, which publishes an important review.¹⁰

Perhaps it is to be desired that the teaching of philology in our universities be yet more closely bound with that of the literature, that we may see less and less of the old regrettable tradition separating the two. But no one can reasonably say that the progress attained is not marked and considerable. The French language and literature are now studied in France with all the method of modern science. But if the French universities have as one incentive to their work the scientific wonder and curiosity, they are spurred on also by the feeling that the French literature is a splendid discipline for the spirit; and thus they are at once with the educators who have reformed our primary and secondary instruction.

¹⁰ The *Revue d'histoire littéraire de la France* (Paris : A. Colin).

With us, more than in any other country, the three orders of instruction are all in closest connection. All three being, in large measure, in the hands of the state, it is natural that they should have common direction and respond to common influences. This centralized control is, I am aware, not without its drawbacks. But it has also its advantages. As regards the instruction in the national language and literature, these advantages are evident. From the beginning to the end of French instruction, the language and literature of the fatherland are studied with love; and, as we read in the *Instructions* for secondary education, "The great authors of France figure at present on all the programmes. . . Do they not thus offer the bond which we have been seeking for the unification of orders of instruction so diverse? From the lycée to the humblest village school do they not give common standing ground for all the children of our country? . . . Can we overestimate their aid in maintaining, through what is deepest and most lasting, the unity of our national spirit?"

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III

RECENT CENTRALIZING TENDENCIES IN STATE EDUCATIONAL ADMINISTRATION, (II)

In my former article I considered a few of the tendencies toward centralization which have been developed in the organization of our State educational systems and in the purely business administration connected therewith. In the present article I wish to consider a few questions of a more purely pedagogical character, and to show the degree of administrative centralization there displayed.

(1) Compulsory education—The principle of compulsory education is not a new one in this country. Massachusetts and Connecticut established education on a compulsory basis almost as soon as these colonies were founded, and the judicial and municipal records show quite conclusively that these early compulsory statutes were by no means dead letters in either colony. For many years they were quite rigidly enforced, but later legislation for various reasons relaxed. Then early in the present century, when population began to rapidly concentrate, the evils of truancy became greatly aggravated; and this fact brought about a new movement in the direction of compulsion, which first came to a head in the Massachusetts law of May 18, 1852, the first compulsory-attendance law in the Union. This law contained too many exemptions and loopholes for effective execution, and it therefore remained a dead letter; but in spite of its defective nature its passage was by no means unimportant. It was something to have the principle of compulsion recognized by law, and other States soon began to follow suit. In all, thirty States and Territories have passed compulsory laws since the Massachusetts law of 1852. Furthermore, many States, including Massachusetts, which at first had

very weak and indefinite laws on this subject, have replaced them with more stringent ones and have provided more and more effective machinery for enforcing the same. On the other hand, a close study of both the earlier and the later compulsory laws, as well as the various school reports, reveals the fact that in many States and Territories the principle of the right of the State to interfere with the affairs of the communities to the extent of compelling school attendance is as yet little more than a beautiful theory. Many of these States have with a loud hurrah caught up the cry for compulsory education and have spasmodically rushed into premature legislation on the subject, most of which has been defective in the extreme; either containing many loopholes for evasion or else failing completely to provide any definite or effective machinery for enforcement. Many of the States have provided so many exceptional cases in which attendance is not compulsory that the whole system has thus been thoroughly honeycombed; others have nominally required towns to provide special truant officers for enforcing the law and yet have not provided any penalties for failing to do so; still worse, in many cases, either no provision whatever has been made for enforcement or else the provision was so intangible as to be absolutely worthless. For example, many States have made prosecutions for neglect on the part of parents and guardians dependent upon the complaint of voters or taxpayers in the district. This is manifestly an absurdly inefficient provision and consigns the law in advance to the dead-letter domain. So loose and defective in fact are many of these laws, especially the earlier ones, that there may have been some slight justification for the following sweeping verdict of the Colorado State superintendent, made in 1877: "Compulsory education in America . . . is a well-proven failure. . . If American experience has settled anything during the last ten years, it has established the fact that education cannot be made compulsory in the United States." But on the whole I think that the development in educational administration during the last twenty years would go

to prove the above radical statement entirely wrong and quite out of date. Several of the States, as I have said, have been marching right ahead, passing more and more stringent compulsory laws and coming nearer and nearer to a proper and effective administration of the same; and there is very evidently a growing tendency in this direction in several other States. The tendency is undoubtedly more and more toward State interference in this field.

Undoubtedly the two States which have gone the farthest in this direction are Massachusetts and Connecticut, and we here encounter two widely different systems of administration of the compulsory-attendance laws. In Massachusetts the system is practically local option and is administered by the towns, while in Connecticut a more centralized system has been developed, in which the State executes the law through its own agents, with the co-operation of the local authorities. There can be little doubt, I think, as to which of the two systems is the better. While the principle of compulsory education has evidently taken a very deep hold on public sentiment in Massachusetts under the local-option system, and while the law relating thereto is being well enforced in many parts of the State, still the law is very unequally executed throughout the State, owing to the absence of a strong central administration of the same. Furthermore, the defects of the local-option system are being recognized even in Massachusetts, and a centralized administration of the law is coming to be recognized not only as innocent and safe, but salutary and necessary.

Let us now briefly glance at the Connecticut system and its operation. Under this system the State board of education appoints a State agent, who acts under its supervision and control in enforcing the compulsory law throughout the State. The system was established in 1872, and one person has done continuous service as State agent ever since that time. It is very interesting to note the rapid change in public sentiment in Connecticut regarding compulsory education as developed by this thoroughly businesslike and cen-

tralized system of administration, especially as contrasted with all the other States in which a merely local and ineffective executive machinery has been established. At first twelve weeks' attendance each year was all that could be exacted, and that somewhat reluctantly; now thirty-six weeks are required in every district in the State. At first the age limit was eight to fourteen years; now it is eight to sixteen years. At first the people were shy of the State agents and cried out against what was then thought to be excessive centralization; now they send in numerous requests from all parts of the State each year for the services of these same agents of the central board. In short, everything goes to show that this centralized system is working admirably and without friction, right in the cradle as it were of the principle of "local self-government."

And what has already proven true in Connecticut probably might, and perhaps will, in the near future prove true in other States of the Union. When compulsory education, even in its dilutest form, was first agitated in this country it was everywhere declared to be unsuited to the "genius" of the people, "the first step toward centralization," "opposed to the spirit of American institutions"; and other like shocking epithets were hurled at it from every quarter. But facts indicate very plainly that Americans are getting over their proverbial fear of such phrases as the above and are being converted to compulsory education by its evident practicability. It is no longer deemed sufficient, in a free public-school system like ours, to simply give every child an opportunity to acquire an elementary education, but the very safety of the State imperatively demands the certain securing of this great essential of good citizenship to every child. And what is wanted in America to make compulsory education thoroughly successful is a strong administrative department at the head of the system in each State. Connecticut, one of the earliest and staunchest upholders of "local self-government" has taken the lead in asserting that, in this one realm at least, this time-honored and hoary prin-

ciple must be supplemented by efficient State control; and while many States still lag and none have come up to the standard set by Connecticut, a few are following close in her tracks and the tendency is already quite strong in the direction of a wise centralization of administration in this realm.

(2) State Regulation of Text-books—During the past twenty-five years a great many laws have been passed by the various States and Territories regulating the selection, adoption, and supply of school text-books. A brief examination of these laws will, I think, prove interesting and profitable, as they reveal another strong tendency toward centralization in educational administration. Let us examine these laws with reference both to the degree of uniformity established and also the various systems of supply.

A very few of the States have no laws whatever on the subject of text-book uniformity; 14 have made district uniformity compulsory; 5 have made township uniformity compulsory; 7 have made county uniformity compulsory, and 2 have passed permissive county uniformity laws. At least 15 States have gone to the extreme of centralization in the direction of text-book uniformity by establishing a system of compulsory State uniformity under the control of the central educational authorities. The school law of Connecticut empowers the State board to prescribe uniform text-books for the State, but this power has never been exercised. In a few States the State superintendent or State board is authorized to recommend lists of books, and either the counties or districts are required to adopt from these lists. Several of the States which have not yet established a general system of State uniformity have prescribed a State text-book in physiology and hygiene.

Several systems of text-book supply are prevalent in the various States. At least 15 States still allow individual purchase in an open market; in 5 States text-books are supplied by county contracts with the publishers; in 12 States they are supplied by State contracts. The general practice under the State-contract system is for publishers to make bids for

furnishing all the schools of the State with one or more of the State series of text-books and for the State board of education to decide which proposition it will accept. In Montana and West Virginia the prices are directly fixed by law; in Ohio by the so-called "School-book Board."

It would not be within the compass of the present article for me to attempt a discussion of the merits and demerits of the State-contract system. I am simply dealing with facts and tendencies. It should be noted right here, however, that Minnesota after a long trial, and North Carolina after a short trial, have both abolished this system. But in judging the general tendency in this direction we must also remember that Indiana, which has one of the best school systems in the country, established the State-contract system in 1889; Missouri in 1891; and Idaho in 1893. Friends of the system seem to be raised up more rapidly than enemies. Furthermore, it is only fair to say that the system recently abolished in Minnesota was not the typical State-contract system and contained some special features, objectionable in themselves but not necessarily condemnatory of the general system. And as far as concerns the abolition of the system in North Carolina, it is well known that this was done by a legislature which was proverbially ruthless in its treatment of the existing school law of the State, and this in the face of the strongest opposition on the part of prominent educators and officials of the State. It will also aid us, in judging the strength of this tendency, to glance at the legal and constitutional phase of the question. Of course the enemies of State uniformity and State contract have frequently contested its constitutionality, but it would seem that they have been clearly defeated. In the noted cases of *State vs. Haworth* (122 Ind. 462), *State vs. Hawkins* (44 Ohio St. 98), *Currier vs. Merrill* (25 Minn. 1), *People vs. State Bd. Educ.* (49 Cal. 684), *Bancroft vs. Thayer* (5 Sawyer 502) and others, this form of centralization has been upheld in spite of the strong American predilections toward "local self-government." And while one can easily find in some States which have not

adopted any such centralized system many expressions of holy horror over this "desecration of American institutions" and departure from the strait and narrow path of "local self-government," one notes that these objections have weighed very lightly in those States which have made up their minds that the State-contract system is wise and expedient. From the foregoing facts, therefore, it seems fair to conclude that, whatever may be the merits or demerits of State uniformity and State contract, there is, as a matter of fact, quite a strong tendency toward this form of centralization, and seemingly this tendency is increasing rather than waning.

A still more extreme and unique case of centralization in educational administration is the Californian system of State publication of text-books. This system was established in 1885 in conformity to a constitutional amendment of the previous year. Under this system the State board of education has compiled and copyrighted a series of text-books, and the same has been printed under the direction of the government printer. The books are furnished to pupils at cost, and retail dealers are required to make an affidavit that they will not sell them at a price exceeding that fixed by the State board. It is also interesting to note in this connection that within the past few years bills have been introduced into the legislatures of Indiana, Ohio, Wisconsin, Illinois, Missouri, Kansas, Kentucky, New York, Iowa, and Texas, looking toward State publication of text-books. One of these bills, that of Illinois, proposed to employ convict labor in this work.

There is a very strong tendency in the Eastern section of the country toward a system of free text-books, and also a slight tendency in the West in the same direction. Six Eastern States and two Western States have thus far made this system compulsory; and there are at least five other Eastern States and five other Western and Central States in which this system is either authorized by law or practiced. It is fair to infer, I think, that the permissive laws in the above States will soon prove to be steps toward compulsory

laws, as they have already in some. It is quite evident, therefore, that there is a strong tendency in this field toward State control; and the probability that this tendency will grow stronger in the near future is increased by the fact that the system of free text-books is very enthusiastically indorsed in many school reports and elsewhere, and on very substantial grounds.

(3) State Regulation of Courses of Study—Closely connected with the subject of text-book regulation is that of regulation of courses of study. Here again we find quite a strong tendency toward direct State control and extreme centralization in administration. The school law of at least thirteen States empowers either the State superintendent or the State board of education to prescribe a uniform course of study for the common schools of their respective States. The Territorial board of Arizona is also given the same power. At least eleven States which have not gone to the above extreme have made a certain minimum course of study compulsory upon the local authorities.

(4) State Control of Teachers' Examinations—In no department of school administration is effective central control and supervision more necessary and vital than in the examination and determination of the qualifications of teachers, and yet in all the States, until quite recently, this element has been conspicuously lacking. The time-honored practice has been to leave this matter to the unrestricted action and caprice of local authorities. But experience and "grinding necessity" have gradually developed a wholesome tendency toward centralization and direct State control even in this administrative field. In many States this tendency is still rather weak, but in others it is quite strong.

Undoubtedly the State which has gone the farthest in this direction is New York, she having developed a very complete system of uniform State examinations under direct and thorough central control. The system has been in nominal existence for a number of years, but has recently been greatly

improved and rendered a reality. As the system now stands it is uniform throughout the State, except in certain school districts organized under special acts. The questions for examination are uniform and are prepared under the direction of the superintendent of public instruction. Examinations occur on the same date in every commissioner district in the State. But the special point of superiority in the New York system is the fact that there is a really effective and permanent State board of examiners, consisting of experienced professional officers long identified with the educational work of the State. All answer papers submitted by candidates in the examinations throughout the State are forwarded to the central department and there examined and marked by this board, free from the influences of favoritism and personal prejudice. The board is established on a non-partisan basis.

The Mississippi State Board of Examiners is empowered to grade the papers of all applicants for certificates throughout the State and to hear and decide all appeals regarding examinations. The weak point in the Mississippi law seems to be the fact that the compensation of the board consists solely of examination fees. In at least fourteen other States uniform examination questions are required by law to be prepared either by the State superintendent, the State board of education, or the State board of examiners. The same is true in the Territory of Oklahoma. In most of these States the same authorities are empowered to fix uniform dates for examinations and to prescribe rules and regulations for conducting the same. Without specifically conferring the above power of preparing uniform examination questions the school law of at least five other States contains clauses from which these powers can by fair construction be deduced. In two of these States at least—viz., Indiana and New Jersey—quite an elaborate system of uniform examinations has been evolved under the direction of the State board of education.

In a very large number of States which have not yet gone

so far in this direction as have the above there is a system of special State certificates granted by the State board, which certificates are valid in any portion of the State. Generally the State board is given very large powers of regulation and control over these certificates. In nearly all of the States the subjects in which candidates are examined are prescribed by the central authorities; and it is also very common for the State to fix the general average which all local examining boards must require and to prescribe certain qualifications and disqualifications for teachers. Furthermore, in many States which have not yet established a complete system of uniform examinations this question is being favorably agitated and urgently recommended by school officers and others. It seems very safe to conclude, therefore, from all the foregoing facts that there is now a very strong and growing tendency among the States to place the examination of teachers under direct State control and to centralize the administration of the same. Here again in this field the new tendency at first met with violent opposition in some States, but these enemies have gradually been banished, and it has been again demonstrated that the extreme application of the principle of "local self-government" must give way if the best possible school system is to be developed.

(5) State Control of Teachers' Institutes—During the past fifty years there has been a very general development of teachers' institutes until to-day they are established in nearly, if not quite, all of the States and Territories of the Union. There is still, however, a very great diversity among the various States in respect to the mode of organizing, regulating, and supporting these institutes. In some States they are wholly voluntary associations, and in others they are made compulsory by law; in some they are held directly under State authority, and in others under local authority; in some they are organized into a State or district system, and in others into a county system. In some States the expenses are paid out of State funds; in others out of county

funds; in others by the fees for teachers' licenses; and in still others by contribution from teachers. In some cases the institutes are held at a regular time when the schools are closed, and in others they are held at any time the various local authorities may decide and when the schools are in session; in some the schools are closed during the sessions of the institute, and in others they are not; in some the teachers are paid their regular wages while in attendance, and in others they are not; in some attendance on the part of teachers is made compulsory, and in others it is not.

The degree of State control and centralization existing in this field will appear from a more definite statement concerning some of the above points. The holding of State, district, county, or township institutes (in some cases both State and local institutes) has been made unconditionally compulsory in at least 18 States; compulsory under certain conditions in at least 11 other States. Attendance on the part of teachers is made compulsory in at least 24 States. This requirement is rendered more effective in 8 of the above States by making teachers' certificates revocable for non-attendance; in 3 States by imposing the penalty of forfeiture of a certain number of days' wages upon non-attendants; in 17 States by providing that teachers shall suffer no loss of wages for attendance upon institutes held when the schools are in session. In Colorado five per cent. is added to the examination grade of all candidates for teachers' licenses for attendance at institutes. Teachers' institutes have been made the subject of annual State appropriations in at least 17 States. This appropriation is as high as \$30,000 in New York; \$10,000 in Arkansas; \$7000 in Minnesota and Wisconsin; \$3000 in Massachusetts and Connecticut; and smaller sums in the other States. In New Hampshire there is a permanent State institute fund.

Quite a number of the States have not only exercised an extensive control over teachers' institutes through the law-making body as shown above, but have specially conferred upon the State board of education or the State superin-

tendent an extensive administrative control. For example, these central authorities are very frequently specifically empowered to select the times and places for holding institutes; to fix the duration of the same; to employ the instructors and conductors and fix their compensation; in a few cases to determine the number of institutes to be held each year; in a few cases to prescribe the programmes and courses of study. But quite a number of the States have conferred on these central authorities the power to "prescribe all rules and regulations," to make "suitable arrangements" for institutes, or to have "full charge" of the same. Such clauses in various school laws furnish, I think, a sufficient legal basis for full administrative control, and have usually, I believe, been so acted upon. Clauses of this nature, or others from which the same power can, I think, be fairly deduced, are contained in the school laws of at least eighteen States.

In this brief review some of the leading strong undercurrent toward centralization in administration appears. In fact, in some cases the principle of "local self-government" has been completely cast to the winds, and the most extreme centralization adopted in order to achieve some much-desired end. In conclusion, the writer wishes to express his opinion that this tendency is a wholesome and safe one, and that our people need not be frightened by the bugbear of paternal government, which the opponents of this tendency continually invoke. Many things that could be left to individual enterprise and local initiative in a frontier country, such as ours was fifty years ago, can no longer be trusted to such agencies when the whole machinery of our civilization has become so much more complex. This is a lesson that our people must learn, and it is not too much to predict that the tendency, already quite marked, will become more pronounced, and be felt in other States as well as in other fields of administration.

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IV

COURSES IN PSYCHOLOGY FOR NORMAL SCHOOLS, (II)

COURSE II—SENSATION AND PERCEPTION

The second course, relying upon individual experimentation, class demonstrations, and lectures, will undertake, in part, an introspective and analytic study of sensation and perception; in part, it will concern itself with the relation of sensations and perceptions to their physical causes or stimuli, to ether waves, atmospheric waves, tastable or odorous substances, heat, touch, or pressure—the subject-matter of psychophysics in the narrower sense; in part, also, it will examine the dependence of sensation or groups of sensations upon the sense organs and brain centers—an important part of the subject-matter of physiological psychology. The structure of the special sense organs will now be treated in greater detail than in Course I, because the student, through experimentation, comes into immediate contact with the primary conditions of perception and will discover at first hand what is important in the structure of those organs which supply the mind with the elements of sensation.

Simple illustrative experiments may be devised so that the student may observe for himself the psycho-physical and psycho-physiological conditions of perception. The first object of a psychological experiment is to arouse, in the mind, sensations, ideas, emotions, etc., so that these mental states may be introspectively observed, described, and analyzed by the student in whose mind such states are made to exist. A further object is to enable the student to observe and describe the connection between these mental states and the stimuli of the external physical world which gave rise to them, or to the physiological processes upon which

their arousal in his mind was contingent. Very exact or elaborate experiments ought not to be required; for it is not intended that this shall be a course in experimental psychology. Its purpose is chiefly to acquaint the student with the simpler problems of sensation and perception, using practical experiments to present facts and illustrate principles.

Sensations of touch or contact may be taken up first in order. Qualitative discrimination can be demonstrated by the simple experiment of requiring the student to touch himself upon different parts of the body and to describe the so-called "local sign" of the touches, by means of which he distinguishes a touch sensation in one part of the body from that in another. A simple experiment requiring the student to touch himself upon the same spot on the body previously touched by an experimenter, who is also a student, will show that the student always makes a certain amount of error, from which may be estimated the limit of sensory discrimination in locating touch sensations. There are two primary facts of sensation—the differentiation and discrimination of the quality of sensations. The synthesis or combination of sensory impressions to form the perception of a single object may be illustrated by "Aristotle's experiment." Modification or complication in perception due to simultaneous association may be demonstrated by the so-called "eccentric projection" of touches. To show the psycho-physiological conditions of sensory discreteness, the student may be required to find out how near two points touching his body may be brought together without his being unable to tell that he has been touched by two. If they be brought too close together, two points will feel like one. This gives as a result the so-called "sensory circle," a measure of the just noticeable difference or threshold of perception. The experiments on active and passive touch will demonstrate the fact of apperceptive complication due to self-conscious direction of attention. The "after-image" of the sensation is easily demonstrated by suitable experiments. The changes or modifications in sensation or perception due to complication

of the stimuli, or to their mode of application, may be brought out by experiments on the sensation of tickle and on the perception of motion, or of the direction of motion and by the so-called illusions or judgments of tactual space. Thus, in a single group of sensations, the dermal sensations, may be presented the more important psychological facts that comprise the study of perception, viz., the psychophysical relation of sensational qualities to the exciting cause or stimulus, the relation of the sensation to physiological processes, sensory discrimination, associative combinations, apperceptive complication, and finally the phenomena of after-images, which may be viewed as a primary condition of memory.

Upon this should follow a brief treatment of sensations of pressure and temperature, and those of the muscles, joints, and tendons. Vision should next be studied in more detail. Under the heading of retinal sensations should be considered sensations of color, the phenomena of color contrast, color fatigue, after-images and inertia, and the relation of color sensation to the structure of the eye, involving the demonstration of color blindness, color fields, the blind spot, and entoptic images. This should be followed by an examination of the kinæsthetic and other associated sensations in monocular visual perception, and after this should be given a study of the phenomena of vision with two eyes—that is, of binocular perception, of binocular perspective, and of the visual perception of distance, magnitude, and form. This is best followed and supplemented by a study of optical illusions. These always interest and serve as a review of the facts that have just been learned. All of the student's newly acquired knowledge will be drawn upon to explain the multifarious illusions that may be placed before him.

Next in order should follow a study of auditory sensations, comprising an analysis of noise, tone, timbre, and of harmony and discord. Taste and smell may next be given a brief treatment, followed by the organic sensations and leading on to a study of the sensory elements in emotion and

thought. The course will close with some consideration of such general mental conditions as memory, association, attention, and apperception, which determine the course of sensory perception. This will gather up the many threads of reference to complex mental conditions dropped in previous parts of the course and also prepare the student for their more detailed treatment in the next course.

The student has now been made acquainted with the elementary facts of perception and at the same time introduced to the phenomena of attention, association, memory, imagination, and perception. These processes are so inextricably interwoven with the simpler processes of sensation that at one time I took them up for consideration first in order, but experience has shown that it is better to reserve a study of these to the third course, in order that the student may be more advanced in habits of introspective observation and more familiar with methods of psychological induction.

Text-books and Materials of Instruction—The appropriate text-book for this course is a laboratory manual of simple experiments, with the directions for carrying them out so explicit that an untrained student of psychology could follow them without much individual assistance from the instructor. The only work in the field is Sandford's *Course in experimental psychology*. Although admirable in its way, I have found it to make considerable demands upon the instructor before the experiments can be carried out by the student. The experiments also lack the logical and scientific arrangement which I believe essential, if experimentation is to serve the purpose of unfolding to students general psychological principles. I have found it necessary to prepare a manual for the use of my own students which has helped me greatly with college students and with university extension classes. Almost any skillful instructor will find it possible to adapt for the use of his students the experiments of Sandford and the suggestions given in Tichener's *Outlines of psychology*, and in the numerous reports of special investigations.

Simple apparatus is necessary; the simpler the better, for students are apt to overlook the psychological principle contained in the experiment, if the attention is caught by a mechanical contrivance. Complicated apparatus is not necessary, though it is often helpful, for the demonstrations of fundamental psychological principles. I would not hesitate to begin this experimental course on sensation and perception with no more than a five-dollar appropriation for necessary material. Special apparatus saves the time of teacher and student; more and better work can be accomplished with a satisfactory equipment than without. In this economy of time and effort in imparting information lies the chief educational value of a psychological laboratory.

Æsthesiometric compasses at one dollar apiece, a set of four tuning forks for ten dollars, color tops at fifty cents a dozen, the set of optical illusions called Pseudoptics at five dollars; miscellaneous material, paper, scissors, etc.: these will make a fair beginning in the demonstration of the subject-matter of this course for about twenty-five dollars. A moderately complete equipment in apparatus would cost five hundred dollars. Charts, models, and demonstration material for the study of the sense organs are needed in addition to the material recommended for Course I.

Much of the material recommended for the previous course must be drawn upon to review old facts already known, as well as to demonstrate new. Psychology, more than any other science, requires the student to co-ordinate all his previously acquired knowledge, whether it belongs to physics, physiology, or psychology—in fact to marshal in disciplined array his entire intellectual possession of fact and theory—if he is to obtain a just comprehension of the problems of the development of the human mind. He must, therefore, be warned against the tendency of students, in acquiring new knowledge, to forget the old. He might be induced to persistent efforts in acquiring and co-ordinating knowledge from many sources, were it impressed upon him that no student of psychology and no well-educated

man or woman can afford to do without at least one text-book in physics, biology, and physiology as well as in psychology. Every student certainly, and every man or woman who would be well informed on current problems of thought, must have these at hand in his own private library.

The student's notebook is a matter of even greater importance in this course than in that preceding. Every experiment performed by the student should be entered with care and accuracy of description. The most convenient form of notebook is composed of a stiff back with holes punched in the end, and of loose sheets of paper similarly punched, which can be inserted, as needed, between the backs and held together by fasteners or a piece of ribbon passed through the holes. The notebook, if properly kept, will not only serve, as does a text-book, to keep the student down to the work but should also train him in clear and logical thinking as well as in scientific methods of procedure, which, after all, are only concrete instances of logic directed to a special object of thought. The young student and, unfortunately, too many adults need to learn, as perhaps the most important elementary lesson in science and in logic, to discriminate accurately between an experimental result or a description of an observation or occurrence, and the conclusions they draw from the result or observation, from their preconceived notions, or from such information as they may have gathered from the statements of an instructor or from the text-book or other literature. I find it of service to have every student follow a prescribed form. Thus he enters under each experiment (*a*) the directions for conducting the experiment as given by the manual or by the instructor; (*b*) the description of the experiment as actually made by the student; (*c*) the result of the experiment as obtained by him; (*d*) conclusions from the result of that particular experiment; (*e*) references to the literature with abstract of important selections; (*f*) discussion of the facts and general principles involved—such, for example, as may be brought out by the instructor,

obtained from the literature, or derived from the student's own thought and belief.

The instructor will need to refer to works already mentioned under Course I. Some of the following will be his chief dependence throughout this second course and in its preparation.

Library of Reference

- McKendrick and Snodgrass, Physiology of the senses.
Halleck, Psychology and psychic culture. The education of the central nervous system.
Ziehen, Introduction to the study of physiological psychology.
Titchener, Outlines of psychology.
James, Principles of psychology.
Wundt, Human and animal psychology.
Ladd, Elements of physiological psychology (part 2).
Külpe, Outlines of psychology.
Le Conte, Sight.
Bain, Senses and the intellect.

In connection with the experiments, I should have the students from time to time abstract portions of these works and report under the heading, "References to the literature," in their notebooks.

COURSE III—CONDITIONS AND ACTIVITIES OF THE MIND

As in the previous course, experiments will be made by the students, the instructor expending all his ingenuity to develop in the student the capability of observing and analyzing his own mental states. Only a brief indication of the special topics properly falling within this course need be given. The order in which they shall be considered must be left to the discretion and genius of the individual instructor. With my own classes, I generally begin with a study of movement, including instinct and habit, impulse and desire, pleasure and pain, kinæsthetic ideas, ideas of purpose, and other ideas having motorial consequents. This necessitates a general consideration of perception and ideation, in the course of which reference will be made to attention, asso-

ciation, apperception, and the primary conditions of memory. But throughout, the "idea" has stood out as the object of study and I follow with memory ideas, hallucinatory ideas, and illusions. The student is then ready for the specific treatment of association, memory, imagination, and apperception. If it be desired to consider the logical processes of thought, with a treatment of the understanding and reason, this is the proper place in the course. I should then, reverting to the opening treatment of movement, consider the "feeling" side of conscious conditions and activities, leading on to the emotions, and to the ethical and æsthetic feelings. My treatment of the course ends, as it began, with movement—a summary of the preceding presents the problem of the Will—the activity of an individual mind resultant upon the summation or co-ordination of all its powers and capacities.

Text-books and Materials of Instruction—The selection of a class text-book for this course is a problem of importance. A text-book is needed to help the student and the teacher in what is the most difficult department of psychology. We need a work that shall give due emphasis to the many complex problems belonging here. Above all do we need a haven of escape from the immaterial disquisitions of a metaphysics masquerading as psychology and from the dry dust of paraphrasing definitions. No text-book seems to me satisfactory in all respects. Halleck's *Psychology and psychic culture* is sometimes inaccurate in its desire to be simple. Ziehen's *Introduction to the study of physiological psychology* has a too decided bias and is incomplete in that it ignores important problems. Titchener's *Outline of Psychology* is perhaps the best that is in the field, but may be heavy for normal-school classes; Wundt's *Human and animal psychology* is also excellent, but may be too expensive, as well as above the mental powers of the student. James's *Outlines of psychology* is interesting and stimulating. Any one of these works may, in my opinion, be successfully employed by a competent instructor. But a teacher hav-

ing sufficient ability to use them might do just as well without.

Exactly the same conditions as were emphasized in Course II obtain in this course in regard to apparatus, demonstration material, and the student's notebook. A fairly complete equipment would cost five hundred dollars, but no teacher need be deterred from the introduction of experimentation, if paper and pencils are at his disposal.

Library of Reference

The works of James, Ladd, Wundt, Külpe, Titchener, already cited, and in addition Stout's *Analytic psychology* and Wundt's *Elements of physiological psychology* (when translated) are recommended to the teacher of psychology as works of reference. The psychological periodicals cited in connection with the course following, ought to be frequently consulted.

COURSE IV—DESCRIPTIVE AND PRACTICAL CHILD-PSYCHOLOGY: GROWTH OF THE MIND

After a general introduction on the influences and conditions that affect the growing mind some detailed account should be given of the facts that throw light upon the mind in its progressive stages of development from infancy to adult age, grouped under the following heads: (1) Mental characteristics in relation to heredity; (2) The influence of the physical environment upon mental condition and development; (3) The social environment; (4) External bodily traits of form and movement, as indications of mental and moral characteristics; (5) The constitution and organization of the mind.¹ Upon this should follow some account of the developing mind in its successive stages of babyhood, infancy, childhood, and adolescence. The course may appropriately conclude with some illustrative studies of the psychological significance of pedagogical methods.

The course may be purely descriptive and the method may be that of lectures. But this would not be so satisfactory as a method which should compel the student, as far as possible,

¹For a more detailed description of this classification, see *The teaching of psychology to teachers*, cited above.

to gain his own information for himself. In the first place, he should be compelled to refer to the literature, for which purpose the most valuable source of information will be found to be the volumes of the *Pedagogical seminary*. This journal should be in every normal-school library and be bound, not in volumes, but in single numbers, so that the student may have ready access to the important articles which fill its pages. Next in importance for this purpose will be found the *Child-study monthly*, and the *American journal of psychology*, while students may also be referred to many special articles contained in the EDUCATIONAL REVIEW and the *Psychological review*, and to monographs and larger works in the broad fields of anthropology and pedagogy. In the second place, each student must report observations and tests upon himself and his fellow-students and upon the children that are in the school of practice, if such school be connected with the normal school. This work can be carried on without interfering with the regular work of the school of practice and without offending the sensibilities of the children or permitting them even to know the object of their being tested. Some interruption and inconvenience, however, if necessary for conducting these tests and observations, would seem to be justified by their pedagogical significance for the teachers of the children tested and for the coming race of teachers, who are thus being taught a practical psychology and pedagogy in the normal school, as well as by their importance to the children themselves, in adding an increased effectiveness to the instruction they receive, through its more intelligent direction and adaptation to their individual needs. These observations and tests should follow along with the descriptive part of the course.

As far as practicable, students in normal schools should be made familiar with the characteristics of those children who have minor mental or physical deficiencies. The study of a blind child, or of one otherwise defective, will often open the eyes of the student to the characteristics of normal chil-

dren that have never been noticed because what is a matter of every-day acceptance so frequently escapes conscious observation. Regularly conducted expeditions might be made to special institutions for the instruction of the deaf, of the blind, or of the feeble-minded, and for the reformation of those children who have shown themselves to be out of harmony with their moral surroundings. In these institutions as nowhere else, unless it be in a kindergarten, can the student observe such direct relation between pedagogical method and the mental characteristics of the individual child.

Text-books and Materials of Instruction—If there were a satisfactory text-book with which to follow this course, it ought not to be used except as a reference hand-book. The work in child-psychology should throw the student, who is about to become a teacher himself, upon his own resources of observation and thought. He must be trained to find his material, to work it over into satisfactory form for presentation and to make conclusions from it that may later influence his treatment of children in the schoolroom. The works to which he may be referred for information and for guidance are mentioned below.

Apparatus will be serviceable for making physical and mental tests and measurements. Upwards of five hundred dollars would be needed for a working laboratory. Question-blanks or syllabi may be printed and distributed. But as has been once said, if the students have paper and pencils, they can accomplish a great deal without apparatus, provided they have an instructor who can teach them to use their own eyes and ears and thinking powers. The use of apparatus for making these physical and mental tests is recommended, because it will advance the individual's knowledge of psychology and at the same time the results obtained will increase our scientific and practical knowledge of children. Very simple tests may be devised that will not interfere with the regular work of the school, and which normal-school students in their last term may successfully assist in conducting. A complete schedule of statistics and tests will include

family history, age, height, weight, lung capacity, muscular force, rate of movement, motor co-ordination, reaction-time, time of various processes of thought, keenness and discrimination of the senses, memory, fatigue, attention, etc.

Library of Reference

Both student and instructor will need for frequent and regular use :

The Pedagogical seminary.

The Child-study monthly.

The American journal of psychology.

The EDUCATIONAL REVIEW.

The Psychological review.

These journals are arranged in the order of their importance for this course.

General works on the child will be useful, such as those of Preyer, Chamberlain, Sully, and Baldwin. Special monographs should also form a part of the library.

Are these courses practicable with normal-school classes? It is my opinion that, no matter what the grade of student may be, the general outline of these courses would remain unchanged, so long as the class is composed of beginners in psychology. I have given these courses, very much as here outlined, to students representing great diversity of position and intellectual development: college presidents, county superintendents, institute lecturers, primary-school teachers, medical students and instructors, graduate and undergraduate students. All students cannot be expected to obtain an equal benefit from the course, and, although all will need to be taken over the same range of subject-matter, the details must vary with the intellectual capacity of the class of students to whom it is addressed.

These courses are now in operation at the Philadelphia Normal School. The Normal School offers a two-year course of special training, following upon a four-year course in the high school. The instruction in psychology extends over the entire two years. Thus each of the four constituent courses represents a half-year's work. A one-year's course in physiology is given in the Normal School to

students of the second year. Students of the first year, therefore, get practically their first introduction to physiology from the work that is given on the nervous system in Course I and from the courses in biology that are given simultaneously. Should the normal-school course in physiology be extended to cover two years, it would still be necessary for the work on the anatomy and physiology of the nervous system to retain its present position in the course on psychology. No more important subject of instruction to young women entering upon adult life, and looking to the profession of teaching, can be offered than that of physiology. No time should be taken from the physiologist to give to the psychologist. Moreover, the physiologist and the psychologist study the nervous system from such different points of view that a treatment of the nervous system by a physiologist would hardly suffice for the purposes of psychology. The following outline of the courses, now in operation at the Philadelphia Normal School, was prepared as a working plan of instruction by Miss Pritchard and Miss Harmon, the teachers in charge of this subject, and I wish to take this opportunity of expressing my indebtedness to them for many suggestions in the preparation of this paper. The allied department of physiology and other departments are already better equipped than many colleges; such additions will shortly be made to the psychological equipment as will place the instruction in psychology at this school on a level with that given to undergraduates at the very foremost of our universities. This outline is here presented to convince the doubtful that a high grade of work can be done in a normal school by qualified instructors with a proper, adequate equipment of demonstration apparatus and material at their disposal. The figures opposite the titles under each course indicate the relative amount of time that it has been thought best to give to each topic; they represent roughly a week's instruction of three hours.

FIRST YEAR, FIRST HALF: THE MIND AND THE BODY

1. *Introductory*—The subject-matter of the science of psychology; methods, old and new; the modern point of view; the postulates of psychology; the interaction of mind and body.
2. *The Human Being and his Environment*—The reacting organism; physical stimuli and the objects of the external world; their action upon the nervous system, the sense organs and muscles.
3. *The Function of Muscles in the Production of Movement*—The structure and physiology of muscles.
4. *Sense Organs*—Their general structure and sensitivity to physical stimuli.
5. *Nervous Tissue*—General outline of structure of nervous system.
6. *Reflex Movement*—The characteristics of the reflexes of the spinal cord; the nervous elements involved; relation to mental control.
7. *Complicated Reflexes*—The medulla and basal ganglia.
8. *Automatic Action*—Its development in the individual; habit; automatic speech and writing; cases of dual personality.
- 9-13. *The Structure of the Nervous System in Detail*—Spinal cord, medulla, cerebellum, basal ganglia, cerebral hemispheres; their activity in relation to the mind.
14. *Cerebral Localization*—The parts of the brain concerned in sensation and in the production of movement. The neural basis of memory and association.
15. *Equilibration*—A study of the mental and nervous factors involved in the maintenance of bodily equilibrium and in locomotion.
16. *Speech*—A study of the mental and nervous elements involved in speech; some reference to the growth and disorders of speech.

Methods

Lectures, demonstrations; individual study of models, blue prints of photographs of the brain or of diagrams, and of prepared specimens of human and ox brains, dissection; a carefully kept descriptive notebook.

Estimate of cost of demonstration material; Minimum, \$100; Moderate, \$500; Complete, \$1500 and upward.

FIRST YEAR, SECOND HALF: SENSATION AND PERCEPTION

1. *Sensations of Touch and Pressure*—The localization of touch sensations; sensory areas; relation to perception of space.
2. *Muscle Sense*—Sensation of bodily movements.
3. *Temperature and Pain.*
- 4-9. *Vision*—Color, monocular and binocular vision.
- 10-12. *Audition*—Noise, tone, musical harmony, and discord.
13. *Taste and Smell.*
14. *Organic Sensations.*
15. *Sensory Elements in the Emotions and in Thought.*
- 16-17. *General Mental Conditions Affecting Sensation and Perception.*

Methods

Experimentation, class and individual; discussions and lectures; a laboratory notebook.

Estimate of cost of demonstration material and apparatus: Minimum, (above the charts, etc., of Course I), \$25; Moderate, \$250; Complete, \$1000 and upward.

SECOND YEAR, FIRST HALF: MENTAL CONDITIONS AND PROCESSES

1. *Simple Conditions of Movement*—The idea, impulse, desire, pleasure, and pain.
2. *Instinct and Habit.*
3. *Perception and Ideas.*
4. *Hallucinatory Ideas and Illusions.*
- 5-6. *Association of Ideas.*
7. *Memory.*
8. *Attention.*
9. *Volition.*
10. *The Emotions.*
11. *Ethical and Aesthetic Feelings,*
- 12-16. *Logical Process of Thought.*

Methods

Experimentation, class and individual; discussions and lectures; a laboratory notebook.

Estimate of cost of demonstration material and apparatus: Minimum, \$25; Moderate, \$250; Complete, \$500 and upward.

SECOND YEAR, SECOND HALF: DESCRIPTIVE CHILD-PSYCHOLOGY;
THE GROWTH OF THE MIND

1. *The Growth of the Mind and the Influences and Conditions that Affect it.*
- 2-3. *Heredity.*
4. *Physical Influences.*
5. *Social Influences.*
- 6-7. *Bodily Conditions and Relations.*
- 8-12. *Mental Organization*—Memory, attention, motor-ability, volition, moral sense, etc.
13. *The Successive Stages in Mental Growth—Babyhood and Infancy.*
14. *Childhood.*
15. *Adolescence.*
- 16-17. *The Psychological Significance of Pedagogical Methods.*

Methods

Lectures, class demonstrations, practical work in reporting observations and making tests and measurements.

Material and apparatus: Minimum (including *Pedagogical seminary*), \$75; Moderate, \$200; Complete, \$2000 and upward.

Before concluding, a few words may prove helpful on the relation of teachers of psychology to these courses. This sketch endeavors to present the minimum requirement for thorough work in the science of the human mind; normal-school instructors in psychology may be overwhelmed by the amount of preparation on their part that this calls for; in particular, by the wide range of literature which it is suggested they should make themselves familiar with. Teachers of psychology who are lacking in the proper training for successfully conducting these courses or others of equal value can only be advised to follow the example of their professional brethren, who attend summer schools or extension courses, and to seek this preparation where it can be best obtained. No general guide in the form of a handbook can be recommended to the teacher in equipping himself for the proper conduction of work in psychology. In the field of child-psychology one work does stand out above all others. If the student wishes to catch the spirit of modern psychology directed toward the study of the child, and to become informed of the newest work that is being done in this field, he cannot do better than to depend upon the pages of the *Pedagogical seminary*. No teacher in psychology, giving instruction to students who are either teachers or destined to become teachers, can afford to be without this valuable journal.

Teachers, who are beginners in psychology, and who wish to acquire only a reading knowledge of the science, may be advised to begin with a study of the two works of Halleck, *Psychology and psychic culture* and the *Education of the central nervous system*. Ziehen's *Introduction to the study of physiological psychology* may be taken up next in order, followed by a very careful and thorough study of Titchener's *Outlines of psychology*. The student by this time will have acquired a fair introduction to the science of psychology. If he wishes to pursue his study farther, he must proceed to give careful study to the anatomy and physiology of the central nervous system and of the sense organs. He may

select the portions that appeal most to him from the textbooks on anatomy by Quain or Gray or from Jacob's Atlas, and for the physiology he may consult Waller, or Foster, or McKendrick and Snodgrass. He will find Donaldson's *Growth of the brain* a good book to have for his own reading and also to draw material from, while the first part of Ladd's *Elements of physiological psychology* will serve the same purpose. He may now examine with care, which, if he is actively engaged in teaching, will involve the work of a couple of years, Wundt's *Human and animal psychology* and the *Elements of physiological psychology* about to be translated, Külpe's *Outlines of psychology* and Stout's *Analytic psychology*. James's *Principles of psychology*, the large work in two volumes, ought to be in the individual possession of the student early in his course of reading; it should not be read systematically from cover to cover, but kept always at hand, ready to be drawn out, like a well-thumbed favorite poet, for profitable and interesting excursions afield where the book happens to fall open or personal liking directs. It is important that the student and teacher very early learn that psychology is neither dull nor unintelligible nor remote. James may be relied upon to give this impression and to counteract the unhappy influence of such works as Sully's *Teachers' handbook of psychology*. Baldwin's work on *Mental development in the child and the race* may be read by those who have time and ingenuity to ferret out the many important genetic principles that are concealed in an abstruse and carelessly constructed phraseology.

This list is, of course, formidable, but the education of the teacher is never complete. After all, teaching is an art and *Ars longa est*.

LIGHTNER WITMER

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V

SCHOOL ORGANIZATION¹

During the life of the present generation great advances have been made in our public-school system, and as Americans we are justly proud of what has been done. School architecture, ventilation, text-books, teachers, methods, training schools, superintendence—in all of these lines we are far in advance of twenty or even ten years ago, but in the organization of our schools along strong educational lines we are still in our infancy. Politics instead of educational ability has been the strongest factor in the selection of the directors of educational work in cities, counties, and States, and the lower positions in the teaching force have suffered as a consequence. The educational world has awakened, as far as cities are concerned. The introduction of the Cleveland plan of city school government has marked an epoch in city educational affairs, and as yet no better plan has been devised to secure careful, independent, and economical administration of schools. This plan, or a plan essentially the same, is being recommended for adoption in many cities. Local ward boards, or large boards elected along political lines, and on the basis of ward representation, should give place to small boards chosen from the city at large and without reference to political lines. City superintendents should be elected

¹A paper read before the Southern California Teachers' Association at Los Angeles, December 5, 1896. The Association instructed the chair to appoint a committee to devise means of securing legislation to carry into effect in California the ideas of the paper. The committee is as follows:

Professor Melville Dozier, chairman, Normal School, Los Angeles; Professor Earl Barnes, Stanford University, Palo Alto; James A. Foshay, Superintendent of Schools, Los Angeles; Miss Margaret M. Mogeau, County Superintendent, San Bernardino; Mrs. M. J. Frick, High School, Los Angeles; Principal F. E. Perham, High School, Santa Ana; Ellwood P. Cubberley, Superintendent of Schools, San Diego.

with regard to professional ability and personal character, other considerations being of minor importance. The same is true of State and county superintendents, and not until such qualifications are made the basis of appointment can we expect results of a high order.

One of the worst features of the position of State and county superintendents is the rotation in office to which these officials are subjected. What results could we expect of our State universities if they were compelled to take as their professors men elected by popular vote and selected along political lines from among the citizens of their State, and subject to change at the next political landslide? Such would be little more unreasonable than the present popular election of State superintendent and State geologist.

Another important step in school organization that lies before us is the abolition of politics from our State and county school systems, and the substitution of more rational methods of selection of our higher educational officials. Better school organization would mean greater co-ordination and centralization of educational responsibility and power; it would mean that school superintendents, State and county, would be appointed because of marked educational ability, and not elected because of political prestige; it would mean that their tenure of office would be lengthened or shortened to correspond with their educational ability; that their work would be changed from the collection of statistics to the dissemination of educational ideas—in short, it would mean that the school system and politics should be divorced for all time to come.

In 40 of the 45 States from which I have information I find that in 29 the State superintendent is elected at the general State election as a part of the State ticket; in 5 States he is appointed by the Governor; in 3 States by the State board; in 1 by the Governor and confirmed by the Senate; in 1 by joint ballot of the legislature; and in 1 the secretary of the State board acts as State superintendent. In 16 States the term of office is but 2 years; in 3 States 3 years; in 14 States

4 years; in 1 State 1 year; in 1 State no limit is fixed, and in 6 States I have no information.

Popular election, I think we will generally admit, is not the method best calculated to secure the best men for the office. Many of the ablest educators in each State would not go through a political campaign for all that the office can give. We frequently get good men by the method, but not always; the method cannot insure it, and in education we should take no chances. Our own State has been especially fortunate in securing its present superintendent, but we have no assurances of being as fortunate next time. I do not believe that the elective method of selection is now, or ever will be, calculated to give high results. The politician has no high ideals for education unless they can dovetail into the principles of his party. In nearly every State where popular election prevails the State superintendent and State geologist are the last places on the party ticket to be filled by the convention. The State offices are fought over, the slates made and broken, and the offices finally divided on the basis of representation and majorities. Let me illustrate what takes place in many of our State conventions: Jones of the fourth district was the best man by far that came before the convention for State superintendent, and the second best was Smith of the sixth. But the important part of the ticket had to be arranged first, and Jennings of the fourth was the best man available to head the ticket for Secretary of State. Johnson of the sixth had the confidence of the delegates as a careful business man, and he was slated for State Treasurer. In addition, Jones and Jennings are both from the same county and city, and it would never do to give two offices to this district, and leave the first and the fifth, districts that are generally strong for the party, without representation. So Jones, who would have made a good superintendent, and Smith, who would have made a fair one, are both turned down, and Green, the schoolmaster of the first, is nominated for State superintendent, and Moore, the stone mason of the fifth, is nominated for State geologist. The

delegates think it a winning ticket, and the newspapers say that it will surely win, because the convention has left no sore spots in making it.

The other great party of the State meets and divides the spoils after the same plan. As a whole, its nominees are as good as its opponent's. It renominates the present incumbents for State superintendent and State geologist because they have been good men, and in order, it is announced, that the State may suffer no loss by a change in these offices.

But times the past two years have not been prosperous. The crops have failed, the party has not done the great things for the country it promised to do during the previous campaign, and a political landslide follows. Green of the first is elected head of the school system, and Moore of the fifth takes up the official geological hammer. The result has shown the wisdom of the distribution as made by the first State Convention. The present incumbents turn over the keys and seals of their offices, and carry away with them the years of experience and information which can never be turned over to anyone.

The same thing, on a smaller scale, is carried out in the election of a county superintendent. Of the 40 States mentioned above, 29 elect a county superintendent at the general election; 5 States have none; in 2 States the county superintendent is elected by the trustees of the townships; in 2 he is elected by the county board; in 2 he is appointed by the county judge; and in 1 State he is appointed by the State board. The term of office is but 2 years in a majority of cases and in but 1 State in the 40 is any qualification required for the office.

A worse method than general election without qualification could not be easily imagined. The wires must be properly manipulated, the delegates to the convention seen, the friends of the candidate interested, and the office be finally awarded on the basis of representation; fitness for the position being of less importance than residence in the proper portion of the county. Good men are frequently secured by

the system, but more often poor ones. The method of selecting is against the best results. Under the election by township-trustee plan, in Indiana, I have known the worst of ignoramuses to be elected county superintendent. Many good men refuse to seek the office because they do not feel that they can afford the time and expense of a doubtful campaign. Of the other local methods, appointment by the county judge is perhaps the best.

In many States a movement is starting to throw off this yoke of political bondage. Our entire school system should be free from the influence of partisan politics and sectionalism. If teachers and educational leaders unite in a demand for these reforms, they will come. If the teachers of any State unite in a demand for any just legislation, it will follow. Education works downward, and equally great reforms have been accomplished by the determined effort of those from above. The Cleveland plan of city school government necessitated a special act of the Ohio Legislature to establish it, and was vigorously opposed when first proposed.

I believe that State and county superintendents of schools and State geologists should be appointed instead of elected, and appointed solely with regard to educational and executive ability. The problems of securing able men for the office, of bringing backward counties up to a standard, of bringing into co-ordination the school system of a State, of a uniform course of study, of fixing requirements for the office of superintendent—all these and many others could thus easily be settled. The plan that I would propose is as follows:

That there be constituted, in every State, a State Board of Education, to consist of the Governor, the Superintendent of Public Instruction, the President and the Professor of Education in the State University, the President of the State Agricultural and Mechanical College, the Presidents of the State Normal Schools, and the City Superintendents of not to exceed the three largest city schools in the State. This would be a permanent and non-partisan board, rep-

resenting all phases of educational work. This board should appoint the State superintendent, his term of office to be at their pleasure, and dismissal to be for cause. His selection should be wholly non-partisan, the only requisites being that he possess high educational and executive ability and be a citizen of the United States. Once appointed, he should be given power and responsibility commensurate with the dignity and importance of his office. This State board should also appoint the State geologist, under the same conditions as the State superintendent; select uniform text-books for the schools of the State for a term of years by competitive bids from any publisher in the United States; issue uniform examination questions to be sent to the different counties of the State, the answers to be returned to them for grading, and issue to those who pass certificates to teach, valid anywhere in the State; approve certificates and designate institutions of learning of other States, and prescribe rules under which the holders of such certificates and diplomas may be granted certificates to teach, valid anywhere in the State; and appoint, for terms of four years, with reappointment as long as satisfactory, county superintendents for the different counties of the State. These appointments, too, should be based on educational ability alone, and the State board should be privileged to go anywhere to find the man for the position; preference being given, of course, to educators in the State, though the board should not necessarily be confined to it. The cry of local pride is too often used as a shield for local incompetence. The board should no more be confined to a county, or even a State, in the selection of a county superintendent than is a city in the selection of its city superintendent.

Again, if a superintendent, State or county, is satisfactory, there is no valid reason for a change, and every reason against it. The cry of rotation in office is one of the curses of American politics. We elect men to Congress, and by the time they have learned their positions we conclude that it is time for a change, and elect someone else. If a man is com-

petent to fill a position, the longer he is retained the better it is for the district and the State. This principle holds true in school affairs as well as in politics. We recognize the principle in city school government, but in State and county supervision we almost forget that the principle exists. In scientific work done under the control of the State, the results have been little better. The State geologist, as well as the State superintendent, has been one of the spoils of the campaign. The result has been that there are but a few States in the Union that have anything like a scientific and valuable geological survey. New York has, perhaps, the best of any State in the Union, and it is largely, if not entirely, due to the fact that Dr. Hall has been State geologist since 1842. Pennsylvania has a good survey as well, and Professor Leslie has been State geologist for about two decades. The secret of the good work is that when these States found the man for the place they kept him, and the results have proved the wisdom of doing so. Ten years ago it was decided to inaugurate a geological survey in the State of Arkansas, and, happily, the selection of the geologist to take charge of the work was left to the Governor, without restrictions. Instead of the State electing one of its own citizens to the office, the Governor was left free to select a man for a man's work. He applied to the director of the United States Geological Survey for the best available man for the work proposed to be done, and Dr. Branner, then of the University of Indiana, and now of Stanford University, was named for the place. His five years of work more than justified the selection, and his reports on the economic resources of Arkansas are highly prized.

In the educational world, the eminent services of Mann in Massachusetts, of McCosh at Princeton, of Eliot at Harvard, and of Harris at Washington, are sufficient evidences of what can be achieved when an element of permanency accompanies an appointment.

I realize that the plan I have proposed will be considered political treason by many, but it would bring about a rational

system of school organization, the fruits of which would far surpass anything we now obtain. It would take away part of the occupation of the politician, it is true, but the sooner that part of his occupation which relates to our public schools is taken away the better it will be for the schools. In the words of Superintendent Jones of Cleveland, "partisan politics is the most horrible curse that ever spread its blighting influence over the public schools."

The colleges of to-day, and especially our State universities, owe their greatness to their freedom. What if their presidents and professors were elected by political parties from among the electors of the State? We smile at the idea, and then tenaciously cling to a system, or rather a lack of system, which is the equal of that at which we smile. It is only recently that our colleges have become free. They were once bound hand and foot, though their bondage was more religious than political.

"In its early years," writes Dr. Jordan, "the State university was, in aim and method, almost a duplicate of the denominational schools by which it was surrounded. Its traditions were the same, its professors drawn from the same source, its presidents were often the defeated candidates for presidencies of the denominational schools. Men not popular enough for church preferment would do for the headship of the State university. The salaries paid were small, and the patronage local, and the professors were often chosen at the dictates of some local leader. I can remember one case when the country was searched to find for a State university a professor of history who should be at the same time a Democrat and a Methodist. All questions of fitness were subordinated to this of restoring the lost symmetry of a school in which Presbyterians, Baptists, and Republicans had more than their share of the spoil. The idea of the division of the spoils in schools, as in politics, is only a shade less baneful than the still older one of taking all the spoils without division. And when the spoils system was finally ignored, and in the State universities men were chosen with

reference to their character and scholarship and ability to teach, regardless of other 'marks or brands' upon them, the position of professor was made dignified and worthy."

So it could and should be in the educational world outside of the colleges. Once select men for county and State superintendents, with regard to their character, their scholarship, and their executive ability, and the position of superintendent will also become "dignified and worthy." State and county supervision would then become a profession instead of a trade, able men would prepare themselves for the work by courses of special training, and much talent would be drawn into the profession which is now turned into other channels.

ELLWOOD P. CUBBERLEY

SUPERINTENDENT OF SCHOOLS,
SAN DIEGO, CAL.

VI

A RECTORIAL ELECTION AT THE SCOTCH UNIVERSITIES¹

The three Rectorial elections for the Universities of Glasgow, Edinburgh, and Aberdeen have created a considerable amount of interest on the south side of the Tweed, and probably there will be some desire on the part of the Southron to know something in detail as to the course of proceedings on such occasions. There are no similar functions in connection with any English universities. There are Rectors in the German universities, but these are professors of the particular universities elevated to the headship for a single year of office; and their functions differ—a system by no means without example in the earlier history of the Scottish universities. The Lord Rectorship in Scotland has gradually returned, however, to its ancient ideal; and, more particularly as regards the mode of elections by nations, which is still maintained in Glasgow and Aberdeen, it is one of the most ancient of existing academic institutions. It comes down from the French and Italian models of the Middle Ages—the universities of Paris and Bologna—on which the system is based. The University of Aberdeen keeps nearest of all to the Continental idea in the details of the process of voting.

The Lord Rector is elected by the matriculated students of all years in all the faculties at the date of the election. He is President of the University Court, the highest governing body in the University. He nominates another gentleman as his Assessor, and for this purpose he may, under the Universities (Scotland) Act, 1889, consult the Students' Representative Council. The Lord Rector and his Assessor,

¹ From the *Educational Times* (London), December, 1896.

therefore, are the representatives of the students in the University Court. The Lord Rectorship has for a long period usually been bestowed upon men of title or eminence in politics, science, or literature; and for the most part such Rectors have been absentees, contenting themselves with the delivery of a "Rectorial Address" some time during their three years of office, and with a single attendance at the University Court, held at the same time for the foreign Lord Rector's convenience.

For more than a quarter of a century Aberdeen has honorably taken the lead in insisting upon the reasonable attendance of the Lord Rector. In the absence of the Lord Rector, the Principal takes the chair at meetings of the University Court. The Principal and the professors naturally look with disfavor upon a Lord Rector who does not see eye to eye with them, and upon this firmly rooted right of the students to be represented in the highest court of the University. It is not surprising, then, to hear of allegations that professors occasionally show an active, though unobtrusive, practical interest in the progress of elections. The Act of 1889 reduced the representation of the students on the University Court from one-third to one-seventh, by increasing the number of members. The members of the University Court in the University of Aberdeen—and the list is similar in the other Scottish universities—are: The Rector, the Principal, the Lord Provost of Aberdeen, and eleven Assessors—one nominated by the Chancellor of the University, one nominated by the Rector, one nominated by the Town Council, four elected by the General Council of the University (practically graduates), and four elected by the Senatus Academicus (the professors). Not more than four representatives of affiliated colleges may be added; but, in the meantime, there are no such colleges at Aberdeen. The University Court, then, stands at fourteen, and the students' representation is one-seventh, with the additional advantage that the Lord Rector presides, and possesses both a deliberative and a casting vote.

The first business of the election usually commences a fortnight or three weeks before the decisive day. A mass meeting of students is held, amidst the liveliest demonstrations. Candidates are proposed and seconded, and their respective merits and demerits are canvassed with refreshing frankness. In the southern Scottish universities the election commonly turns on politics. Mr. Chamberlain at Glasgow, and Lord Balfour of Burleigh at Edinburgh, were carried in on purely political grounds. The university clubs, Liberal and Conservative, exercised all their influence, and outsiders came forward to address the students in support of one political creed or the other.

In the Aberdeen election the Progressive party followed a tradition of at least a quarter of a century's standing in running Professor Murison, of University College, London—an Aberdeen graduate—on purely academic grounds and personal merit. At the first meeting, one of his supporters, who was recommending him on political grounds, was promptly howled down by his own friends. The mass meeting, on dissolution, resolves itself into a procession, and marches through the principal streets, "demonstrating" before the houses of popular—and unpopular—professors and other citizens of prominence.

The business of the election now sets in with its usual vigor. Meetings of the two parties—there has been no third party for many a day—are held, as a rule, on alternate evenings. Various committees are formed on each side for the conduct of the various classes of business. There is a literature committee, a cartoon committee, a fighting committee, and so forth. During the day the opportunities of meeting at the classes and elsewhere are utilized in canvassing. Badges are worn, handbills, cartoons, and sometimes special "newspapers" are issued and circulated with the perfervid energy of youth. Thus, an Aberdeen cartoon represented Professor Murison tackling the Marquis "in grand style" at football—the reference being to the fact that the Professor is a vice president of the London Caledonians' Football Club,

of which his two sons are well-known playing members. In his interest also was issued an election sheet styled "Blue and Gold," the University colors, adopted by the Murison party as being (in their own view) the true University party. There is thus plenty of scope for the wit and humor and argumentativeness of the students. It is quite impossible to exclude the influence of the election from the lecture rooms. Thus, at Aberdeen, Professor Ramsay, of Asia Minor fame, innocently remarked that "Roman law would triumph," which was taken as a favorable indication by the Murisonites, their candidate being Professor of Roman Law. Even the logic class got excited. A prominent Huntlyite was a certain cavalry major, who is a student of medicine. "Now," said the professor, deep in deductive logic, "convert the Major simply!" And again: "Nothing can be proved from the assumption of a particular Major!" The very chemistry class was convulsed, by the casual mention of muri-atic acid!

A week before the election day a grand function takes place, without which the election would be no election at all. This is the Fight for the Standard. The opposing hosts are marshaled under their leaders in battalions and companies in different squares of the city. The biggest man available is constituted standard-bearer. The rank and file are laden with artillery and ammunition, consisting in the main of packets of peasemeal, carried secretly in ample pockets or openly in frank commercial bags. The word to march is given; the pipers screw up their pipes and "gar them skirl"; and the army defiles into the main street with heroic bearing. The march of the Aberdeen men is right for the quadrangle of Marischal College, which has been agreed on as the field for the dread arbitrament. Woe to any unlucky driver of tram-cars that finds himself, or is found, on the line of march of either column; his sole refuge is inside his car, till the invasion be overpast. Adventurous urchins likewise retreat to the entrance of side streets or passages or house-doors, followed by inevitable pease-

meal. Thus the columns sweep on, stirred by the martial skirl of the pipes, into the roomy quad.

The quad gained, the opposing hosts plant their standards on opposite sides of the open space, and blast defiance, each to the other. The formal nomination of the candidates now takes place, but it is little regarded. That is a very insignificant part of the proceedings. All are burning for the fight. There are three referees, the principal being a sergeant major of experience; and the rules of warfare are definitely laid down beforehand. The fight shall last not more than one hour by the clock, and it shall be over the moment either party has lowered the other's flag in the dust, so that it cannot be replaced. The sergeant major blows his whistle, and the battle joins. We must refer to Homer or Scot for a description of the advance and the retreat, the surging of the battle over the plain, the clouds of spent ammunition, the deeds of derring-do, the demoniacal yells of the combatants. Baffled endeavor is ever valorously renewed, and many is the slip 'twixt cup and lip. The zenith of excitement flits now here, now there, and many a valiant knight bites the dust. Eventually, in the Aberdeen fight, the Huntly flag was brought to the ground in eight minutes from the whistle—record time. In such cases it is difficult, indeed, for the referee to persuade the vanquished that their cause is lost. The capturer of the Huntly flag bore the historic name of Robert Bruce. But, like his great namesake, did he not waver in his allegiance? The sole casualty in the fight was a Murisonian collar bone.

The armies re-form. The victorious party, headed by the two standards (the captured one in tatters) and by the pipers, defiles into the broad streets of the city and publishes to the interested crowds of citizens the news of battle lost and won. The excitement is not to be worked off by miles of marching, and the judicious leaders advise a night at the theater in preference to a miscellaneous demonstration in the public streets. If the chiefs, victorious or vanquished, are borne on the shoulders of their comrades, what cause for marvel?

For another week the canvassing, speechifying, cartooning and paper war go merrily and laboriously forward. Then comes the fateful day of the election. Again the parties march into the quad under the inspiration of pipers and drummers, and with all the pomp and circumstance of glorious war. The handbills are circulated in profusion. Special telegrams from outside sympathizers are exhibited. At five minutes to eleven the college bell begins to peal, and it peals assiduously till the stroke of the hour. The voting takes place by nations—but only at Aberdeen and Glasgow; in Edinburgh and St Andrews the decision goes by simple majority. "Voting by nations is the greatest curiosity in voting extant," says Mr. John Malcolm Bulloch, in an excellent sketch of "The Lord Rectors of the Universities of Aberdeen."² At Aberdeen there are four nations, defined by Ordinance No. 6 of the 1858 Commission—Buchan, Moray, Mar, and Angus. The number four was never exceeded in the Universities of Paris and Bologna.

"In Edinburgh," says Mr. Bulloch, "the nations never did exist, and at St Andrews they were abolished by Ordinance No. 4 of the Universities Commission of 1858. Why they should have been left at Aberdeen and Glasgow does not seem clear, and it is curious that they should not have been abolished in these two universities by the Act of 1889. By that Act they are only modified, for it is proposed that in the case of equality of nations the deciding vote shall be the numerical majority of votes; and, in the case of these again being equal, the Chancellor—as at present—shall give the casting vote."

Mr Bulloch shall further describe for us the system of voting. "The system of voting at Aberdeen is in this wise. The nations vote in four different rooms, the doors of which are locked at the time appointed, so that all the voters must be in by a certain time. Two professors preside over each nation—one to read out the names of the voters, the other to take a record of the vote. Procurators for each candidate are proposed and seconded. They are usually the

²Aberdeen: D. Wylie & Son, 1890.

gentlemen who have taken a prominent part in the election campaign. The name of each voter is read out, and he names, not the Rectorial candidate whom he supports, but the procurator presenting that candidate. The proposers of the procurators check the votes as the professor records them. When the voting is finished the procurators of the successful candidate meet the presiding professors, when the election is formally made. In the case of an equality of nations, the procurators of the equal nations meet with the presiding professors and record their votes. It is usual for the procurators in the general voting to vote for their opponents out of courtesy, but in this final decision they must vote for the candidates they represent. Thus, eight professors, eight procurators, and their eight proposers conduct the voting—in all, twenty-four. The election is thus entirely a matter of proxy. The candidates do not plead their own cause by appearing before the constituency, nor is the voting directly in their name.”

To this we may add that the determinative meeting is presided over by the Principal. In one of the nations at Aberdeen, the procurator for Professor Murison was a Mr. Christian, and, when two divinity students were observed to vote for him, someone called attention to the fact that actually two divinity students were “Christians”! The open voting before the professors too obviously lends itself to possible intimidation. The statutes regulating Parliamentary elections might be advantageously applied.

More speeches in the quad, more processions through the streets, a visit to the railway station, and stentorian cheers for candidates, station master, and everybody—all this, of course. Last of all, a grand torchlight procession in the evening, in all sorts of fantastic costumes, and with vast expenditure of energy in shouting and miscellaneous “demonstration”—the *terminus ad quem* the everlasting granite quad, where a bonfire is made of the expiring fag-ends, and a war dance is executed around the flaring embers. And so ends the boisterous episode of the Rectorial election.

VII

REVIEWS

Analytic psychology—By G. F. STOUT, Fellow of St. John's College, Cambridge University, University Lecturer in the Moral Sciences. New York: The Macmillan Company; London: Swan Sonnenschein & Co., 1896. 2 vols. xv + 289 p.; v + 306 p. \$5.50.

In the renaissance of psychology for which the present decade is noteworthy this book occupies an important place. It is of special interest because it shows that psychological analysis, resting chiefly on immediate introspection, may make contributions to the science as valuable as any obtained by physiological, experimental, comparative, or clinical methods. The traditional psychology of Great Britain, developed by Hobbes, Locke, Berkeley, Hume, the Mills, Reid, Brown, Stewart, Hamilton, and Bain, still has representatives equally able in Ward, Bradley, and Stout.

The general contents of Mr. Stout's book may be briefly indicated. There is an introduction on the scope and method of psychology, which is in many ways the ablest presentation ever made of the subject. This, like some of the subsequent chapters, has already been printed, but they have all been rewritten for the present work. Mr. Stout defines psychology as "the positive science of mental process." By introducing the word "positive" he distinguishes psychology from the normative sciences—ethics, æsthetics, and logic. This is a useful distinction, though the present writer believes that with the advance of knowledge the normative disciplines tend to become positive sciences. Mr. Stout points out that mind is a concrete and consciousness an abstract term. In speaking of "mental process" stress is, perhaps, laid on the genetic method. The author tells us that when he first planned the present work it was his intention to follow the genetic order of treatment, but he found himself crippled in the attempt to do this without a prepara-

tory analysis of the developed consciousness. He has, however, in view a genetic or synthetic work, and reserves for it questions that can be most efficiently treated from this point of view, such as the psychological investigation of space and time, and the steps in the development of self-consciousness and the will.

Mr. Stout argues that though psychology is a positive it is not a physical science. This is, of course, true as a mere matter of definition. The more important question, as to whether psychology is or can become an exact or quantitative science, is ignored. We may have a genetic science apart from measurement, but we cannot have an adequate causal science. It is, as Mr. Stout says, the annihilation of psychology to claim that its only possible basis is physiology. It must, however, be remembered that all our sciences are only artificial points of view from which we look at an organic world. We may take vision as our aspect, and must then combine physical, physiological, and psychological facts. There may be room for a science in which certain of the phenomena which we now assign to physics, biology, and psychology, respectively, may be treated in their interrelations. Indeed, Mr. Stout himself discusses in some detail certain obscure connections between blood supply and attention and the like. But, as he says, "psychology must at present do the main body of its own work on its own lines."

In addition to the physiological method, Mr. Stout reviews and dismisses the faculty hypothesis, and advocates psychical dispositions—permanent mental conditions, lying outside consciousness and yet playing an indispensable part in psychical process—and these are considered in their relation to the hypothesis of subconsciousness.

In the main body of his work Mr. Stout first undertakes a general analysis of consciousness. The first chapter is on the method and principle of division of ultimate mental function, and there follow an analysis of presentation, a discussion of the apprehension of forms of combinations apart from apprehension of their constituents, and a treatment of judgment, feeling, and conation. Mr. Stout bases his position throughout largely on the criticism of other writers.

This is legitimate in so far as it is the best method of bringing forward his own views, but it is unfortunate in so far as it makes psychology appear a set of individual opinions rather than an objective science. Much space is given, further, to the definition of terms. This also is in part a legitimate method for analyzing the processes named, and is in part an unfortunate necessity in the present state of affairs. It, however, gives psychology too much the appearance of a logomachy, rather than a science describing and explaining matters of fact.

The second division of Mr. Stout's work is on mental processes, treating the general laws and conditions according to which change takes place in consciousness. The concept of mental activity and the process of attention are reviewed, and the relation of these to interest, habit, and association. Mr Stout distinguishes from association "noetic synthesis," by which he means "that union of presentational elements which is involved in their reference to a single object." Under apperception are included processes such as understanding, interpreting, identifying, etc.; cases in which "a presentation acquires a certain significance for thought by connecting itself with some mental preformation as this has been organized in the course of previous experience." The three last chapters of the work are on "Thought and language," "Belief and imagination," and "Pleasure and pain."

It would be attempting the impossible to undertake to give an account of the results of Mr. Stout's acute analyses. Abstruse relations are apprehended by him with the same definiteness as the ordinary man sees the furniture of his room. Trains of thought proceed with great logical consistency, and are expressed in language clear and elegant to an unusual degree. As there are poems for poets, so there are psychologies that appeal especially to students of psychology. Mr. Stout's book is one of these. To the plain man, "undebauched by learning," it will be as caviare, but by the psychologist it will be read and re-read.

J. McKEEN CATTELL

The education of the central nervous system. A study of foundations, especially of sensory and motor training—By REUBEN POST HALLECK, M. A. New York: The Macmillan Company, 1896. 258 p. \$1.50.

Mr. Halleck's purpose in this little book is, quoting from his preface, "to call attention to the importance of early purposive training of the central nervous system, while its brief morning of plasticity lasts," and he goes on to speak of molding the nerve cells into "lifelong friends," into "trusty servants," of preventing their development into "relentless enemies," etc., etc. From the scientific point of view, it is this almost shocking familiarity with the nerve cell and its habits exhibited by the author which is the chief fault of his book. It is highly probable, of course, that the nerve cell is the ultimate nervous element, and that on its modifications depends the development of distinctive reactions which go to make up distinctive characteristics; but, after all is said and done, our acquaintance with that element is extremely slight, and any dogmatic statement as to its functions must rest largely upon assumption. It would seem as if the author might have reached his conclusions and made his practical suggestions with less flagrant violation of neurological caution. But, as the book is not written for the neurologist, and as actual misstatement is rare, perhaps one has no right to complain.

Of the opening chapters on the structure and possible modifications of the nervous system, little need be said. Mr. Halleck does not attempt any contribution to our knowledge of brain anatomy, nor to the existing theory of brain function; but his statement is brief, clear, and fairly correct, the fault being that stated above—namely, the dogmatic tone where our knowledge is extremely vague.

Under the caption "Environment and training" the author presents an urgent plea for the country life as the most favorable for early youth. He brings forward a large number of recognized literary geniuses, who were remarkable for powers of observation, and argues that this characteristic was due to their rural training. He is ingenious, but pushes his idea too far. As long a list could be prepared of writers whose early surroundings were those of the city or town, and whose senses were as acute, though their similes smack

less of the field and forest. "How," asks Mr. Halleck, in this connection, "can the nerve cells of poor children in the city be trained?" Now, pitiable as is the condition of the children of our slums, it is doubtful if it is the lack of country stimuli which accounts for their lack of development. On the contrary, if a number of street Arabs be compared with an equal number of country children, the city representatives will be found sharper and more observant than their country cousins. The quickness of observation of street-bred children is notorious. More than that, the author's general attitude suggests the reminder that education and training are not for the incipient literary genius alone, but for the average potential citizen, and it is quite possible that properly directed education can do as much in the way of observation in New York as in the Berkshires. At the same time, the general remarks as to the importance of environment and change of environment are true, and, even if commonplace, will bear repeating now and again.

The importance of training in youth is emphasized under "Age and training," and, with these general considerations out of the way, the author proceeds to offer his suggestions as to "Sensory training." For the details of these chapters, the important ones of the work, one can only refer to the book itself. As a preliminary, or even an accompaniment to school education, their suggestions are in the main well directed and good. The average mother may be perfectly aware of the importance of sensory training for her child, and yet entirely helpless in planning a method, and Mr. Halleck's few pages of examples will be found suggestive and sound.

The chapter on "Cerebral development by the formation of images" is unfortunate. To compare in importance powers of imagery with accuracy of sense perception is absurd; yet this comparison is certainly implicit in the book. Many, possibly most, of our best thinkers are, for example, extremely poor visualizers, and aside from the opportunity of investigating certain psychological questions of minor importance, and possibly of affording themselves some moments of mild amusement, it is difficult to see just what they would gain by the faculty. It is one thing to be able to dis-

tinguish chloroform by smell, and another and much less important thing to be able to form an olfactory image of its odor. Here again we see the author's tendency to make polite literature his ultimate good, and his pages are drenched with poetical quotation in support of his attitude until one cries for mercy or judiciously skips.

The chapter on "How Shakspeare's senses were trained" is interesting, but unimportant. Under "Motor training" is discussed in a very brief way the general subject of motor response to sensory stimuli, as well as imitation, suggestion, habit, and other related questions. While emphasizing, and justly, the importance of proper reaction in early youth, it is to be regretted that Mr. Halleck did not see his way clear to more definite suggestions as to methods of bringing this about, as in his consideration of sensory training. These chapters on sensory and motor training are, as a matter of fact, the *raison d'être* of the book, and one would gladly exchange some dozens of pages of illustrative quotation for a little fuller treatment of the practical points at issue. This chapter on motor training exhibits very well a characteristic of the whole book, and that is a marked facility in presenting the kernel of modern psychology in brief and popular language. The psychological reading exhibited is not wide, but the works quoted are almost invariably good and of recognized authority, and if the conception of psychology obtained from these pages by an untrained reader would be fragmentary, it would at least not be absolutely incorrect and misleading. As much cannot be said from the neurological point of view. While the book is in no sense a contribution to science, and would not mislead anyone acquainted with the results of modern research in the field of the central nervous system, it must be remembered that the average teacher, and still less the average parent, is probably totally unfamiliar with such work, and, as implied above, the almost certain inference for such a reader would be that our knowledge is much more exact than it really is. It is hard to see just what is gained by such glib treatment of the nervous elements. The senses improve under training, no matter what the accompanying physical modifications may be, and methods of training gain nothing by adding a doubtful

theoretical foundation to one of practical experience, on which latter Mr. Halleck evidently bases his suggestions. It must not be assumed that these faults destroy the practical usefulness of the book; they do not, and it can be read with profit by everyone actively engaged in the training of children.

LIVINGSTON FARRAND

COLUMBIA UNIVERSITY

Fear—By ANGELO MOSSO. Translated from the fifth edition of the Italian, by E. LOUGH and F. KIESOW. New York: Longmans, Green & Co., 1896. 273 p. \$2.00.

Popular science is, no doubt, a very useful and admirable thing, and when a popular work on a scientific subject issues from the pen of a physiologist of the deserved reputation of Professor Mosso one takes up the book with decidedly pleasant anticipations.

In the present case it cannot be said that the realization corresponds with the hope. From the first page one's feeling is that of surprise and wonder, and as the work proceeds amusement comes in until the reader's state of mind is as complicated as the subject of the book is obscure.

From a scientific point of view, it is hard to treat the work seriously. Its best point is its vivid description of the emotion of fear, but the vividness so often runs into grotesqueness that much of its value is lost. Stirring description is not always analysis, and as far as the psychology of fear is concerned, Professor Mosso has not advanced our knowledge in the least; from a genetic point of view he is hardly better, and in the physiological field, where, if anywhere, we should expect light, we are left about where we started.

The author opens his entertainment with a moving account of his first public lecture, and from the first sentence we are keyed up to the tension necessary to respond properly to the style of the chapters that follow—a style that seldom wavers, and is exciting enough to suit the taste of the most jaded reader of emotional novels.

The introductory pages on the functions of the brain and spinal cord need no comment as to their matter; they are, of course, irrefragable from that point of view; it is

the manner of presenting elementary neurology which is striking.

These are followed by a discussion of "The circulation of the blood in the brain during emotion," "Pallor and blushing," and "The beating of the heart"; being chiefly an anecdotal account of the author's own previous experiments (experiments of the greatest value), and, as such, interesting reading.

In the chapters on "Trembling," Mosso presents perfectly valid objections to the previous theories of Darwin and Mantegazza in explanation of that perplexing and much discussed phenomenon, but while leading us on from the beginning with the hope of enlightenment, we reach the end in a whirl of anecdotes, but with no sign of a substitute theory for those he combated at the opening of the chapter. It would seem as if the flood of recollections, of which he says he is a victim when thinking over the question of trembling, had driven from his mind all idea of the real problem in hand.

The chapters on "The expression of the face," "The expression of the forehead and eye," and the "Physiognomy of pain," are better. Mosso lays it down as a principle that "it is the quantity, not the quality, of the stimulus which has weight on the scale of the expressions." That is, the mechanism of expression is comparatively simple and the means of expression comparatively few; the nervous tension accompanying an emotional state tends to discharge along the lines of least resistance, and the stronger the excitement the more paths will be occupied, and, as must often happen, the same paths occupied by the discharges of different emotions. Hence it is that we find the perplexing resemblances of the expressions of diametrically opposed emotions of pain and pleasure.

Mosso further objects to the explanation of the expression of fear as propounded by Spencer and Darwin, both as insufficient and not in accordance with the facts. To illustrate: In the explanation of the frown as the first and most general mark of non-pleasurable feeling, as a remnant of the attempt to get better sight, in direct antagonism with an enemy, by shading the eyes, he shows that, on the contrary,

under an extreme emotion, such as fear, the small blood vessels of the eye contract and the pupils consequently dilate, which produces an indistinct image in the retina. This he explains by the necessity of all possible nutrition for the nerve centers at the moment and the subordination of the circulation of the blood in other organs, including the eye, to this end, even though it be followed, as he shows, by dilatation of the pupil, and hence be disadvantageous to distinct vision. His explanation of the frown itself is that the facial nerve is sympathetically excited with the motor oculi, which must necessarily be innervated, in intent gazing, in order to bring about convergence of the axes and adjustment of the lens.

The treatment of "Fright and terror" is an example of the author's apparent contentment with description of phenomena and neglect of even an attempt at explanation. He opens the chapter in question with the statement that one of the most terrible effects of fear is the paralysis which allows neither escape nor defense, and then states the problem: "How does it happen that under the influence of a powerful emotion the empire of the will over the muscles ceases, and the energy for defense fails?" This is followed by twelve pages of most vivid account of the paralyzing effects of fear, closing with a lurid peroration on the descriptive powers of Edgar Allen Poe, but never a word as to the question. This is characteristic of the whole book, and the strangest part of it all is that it is not characteristic of Professor Mosso.

One can only say, in closing, that a physiologist of world-wide reputation and deserved eminence has perpetrated a monograph which, if its purpose be to while away a winter evening, will fulfill its end, but if to advance the subject, never.

The work of the translators and publishers is all that could be desired.

LIVINGSTON FARRAND

COLUMBIA UNIVERSITY

Social forces in German literature—A study in the history of civilization. By KUNO FRANCKE, Ph. D., Assistant Professor of German literature in Harvard University. New York: Henry Holt & Co., 1896. 577 p. \$2.00.

To trace in the history of German literature the influence of the intellectual and social forces manifest in the history of the German people is the appointed province of this work. The writer regards literature chiefly as an expression of national culture; and, while defining the conflict between the evolution of the individual and the evolution of the state, seeks to detect illustrations of this conflict in the literary records of the nation. To warp slightly a line of Tennyson, "not the individual withers, but the world is more and more," seems to be the conclusion of the investigation; and the highest hopes are to be entertained for the progress of literature, as well as of humanity, where the free activity of the individual harmonizes with the wise development of the state.

We are, therefore, not led to expect a work of literary criticism, still less of linguistic research; and yet the reader will be rewarded by discovering not merely a study of the influence of social, political, and religious movements and institutions upon intellectual and literary activity; he will also enjoy a succession of vivid descriptions of the principal productions of German literature, without any biographical detail, sketched against the background of the period to which each is related.

The writer has the grateful function of interpreting the literature of the land of his birth to the land of his adoption; and if one may observe a generous tendency to praise rather than to censure, and may meet with estimates and conclusions which cannot always be accepted without reserve, it is not an unpleasant experience to find a work pervaded by an enthusiasm which is both appreciative and discriminating. It is a part of the writer's method to draw illustrations from the associated domains of art and music; and, in agreement with a tendency in recent literary history, recognition is paid to the potent influence of Richard Wagner, who, more than a histrionic and musical magnate, must be numbered among the genuine powers in the realm of letters, too.

It should not seem hypercritical to regret that so com-

paratively small a portion of the work is devoted to the earlier period—a field in which the author's studies and attainments testify to his critical competency; and to that end, if necessary, a certain diffuseness might have been spared in the treatment of various well-known productions of eighteenth-century literature, admirable as this treatment is. An interesting chapter might also have been devoted to an account of the gradual evolution of the new high German literary language out of the various mediæval dialects, as a manifestation of individualism in linguistic movements struggling with the tendency toward uniformity, and modified and shaped by great ecclesiastical and political changes—an investigation, perhaps, not entirely foreign to the scope of the work.

On the other hand, we should have welcomed a somewhat more adequate treatment of the present tendencies in German literature, which are to be illustrated from the novel and the poem as well as from the drama. A minor point for criticism is the inconsistent spelling of names of persons and places in various passages, which would seem to invite some revision.

For the two leading ideas, the presentation of which distinguishes the work, the author has selected the terms individualism and collectivism (including collectivist and collectivistic), the latter epithets appearing to be somewhat awkwardly, although, perhaps, necessarily, adapted from recent socialistic terminology. These ideas the author traces consistently from the earliest times, accentuating them with occasionally a touch of doctrinarianism, but with an optimistic faith that all things have worked together for ultimate good. He finds in feudalism that the lack of individual liberty is offset by a remarkable community of interest and purpose; that the mediæval man considered himself chiefly as part of a system, although in the middle high German poets and preachers individualism is beginning to have its say; and that the development of municipalities paves the way for modern democracy. The religious drama of the fourteenth and fifteenth centuries, the folk song, the didactic prose and poetry of the same period bear witness to this same awakening of individual thought and feeling in literature.

The Reformation period, however, displays the doctrine of individualism run riot in both religion and politics. The idea of Germany unity was still to be a vision for many days, while the struggle for completeness of individuality, the intellectual revolution, continued through barren centuries, although promoted by humanist and reformer, pietist and rationalist, and revealed in hymn and epigram and satire, until the eighteenth century is reached. Fostered and furthered by influences from England and France, and helped by what was best in the ancient classic world, in the eighteenth century occurs the literary regeneration of Germany, and the political regeneration of Europe is initiated. A century of remarkable contrasts! Its beginning is marked by an era of narrow and sentimental self-culture and harmless rationalism, of which Gellert is put forward as the type. It advances with Klopstock, who, with his religious idealism, his exalted conception of nationality, and his faith in the high destiny of man, was "the prophet of that invisible republic which now for nearly a century and a half has been the ideal counterpart in German life of a stern monarchical reality"; with Lessing as the apostle of liberty and artistic reform, of religious emancipation, of positive and constructive liberalism, "standing both for cosmopolitan freedom and for national dignity." It is agitated by the literary extravagances and the lawless individualism of the storm and stress leaders. It culminates with the influence of Herder, who, with his "intuitive grasp of the organic unity of all mankind, of the inevitable interdependence of the individual, the nation, and the race, became the father of the modern evolutionary view of history, and, enthusiastic individualist as he was, at the same time was the first great modern collectivist"; with Kant in his exaltation of the moral law and of the doctrine of personality, reconciling, too, the empiricism and the idealism of his predecessors; and with the joint activity of Schiller and Goethe, "the twofold embodiment of the most exalted ideals of their age," who, with their associates, were "the true leaders from the exaggerated individualism of the eighteenth to the collectivism of the nineteenth century and the true founders of German unity."

Finally, the creed of the nineteenth century is collectiv-

ism, "ripened into a principle of its own, affecting national life at large, revolutionizing science, art, religion, politics, changing the mental, moral, and social aspect of all Europe."

The ideal of a perfect personality is to embrace the ideal of a perfect society, individual culture in the midst of a well-organized community. The growth of this creed is followed through the manifold phases of the Romantic movement, if we may permit the insufficient term Romanticism to cover the whole movement of civilization in the first half of the present century; and, as a last step, the author finds in Hegel's philosophy "the first comprehensive attempt to make the collectivistic view of life the key for the interpretation of the universe, a deification, in short, of the state and of human history."

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Vergil's *Æneid*; Books I-VI, VIII, IX, and selections from the other books—
Edited by DAVID Y. COMSTOCK, Principal of St. Johnsbury Academy, Vermont.
Boston: Allyn & Bacon, 1896. 431 p. \$1.40.

Latin composition for secondary schools—By CHARLES E. BENNETT, Professor of Latin in Cornell University. Boston: Allyn & Bacon, 1896. 164 p. 80 cents.

These are both worthy, but not extraordinary, books. Comstock's edition of the *Æneid* is the work of a veteran teacher of Latin, who has proved by years of fruitful teaching that an intelligent appreciation of the great epic can be acquired only by a willing pupil, who has been well taught in the elements of Latin syntax as they are revealed in classical Latin prose and illustrated in Latin composition. There is nothing that will startle anyone who examines the edition. Some teachers may be surprised to see that an attempt is made to reveal to the pupil the integrity of the *Æneid*; but such teachers ought to be shown how heinous an offense it is to dismiss the pupil and the epic on the edge of the *maior rerum ordo*. The chief merit of the edition is to be found in this sane attempt to prevent the mangling of the epic. The other commendable features of the book are the ample prefatory matter, the clean text, and the reasonable notes,

with their unsparing quotations from the best English editors. Perhaps the fact mentioned last is the most distinctive thing in the book.

Men with long experience in teaching Latin can hardly be expected to agree as to all the details of teaching any single subject. At some points it seems to me that Professor Comstock has erred in judgment. The vocabulary seems to be rather sterile, from its lack of etymological, historical, and mythological helps. I must lament the tribute that Professor Comstock has paid to depraved English usage in the spelling of the poet's name. But these, like occasional slips in proof-reading, are matters of detail, on points where reasonably catholic teachers can afford to disagree without quarreling. The book is sensible, wholesome, and practical.

Professor Bennett's little manual has intrinsic value as an effective drill-book, but its chief merit consists in the fact that it is the first intelligent protest against the style of text-book that has been so widely used in teaching Latin composition for the last ten years. It seems so difficult for teachers to avoid being extremists. To avoid gerund-grinding many teachers of foreign languages were converted several years ago to the use of the "natural method." Even among those whom this epidemic did not affect fatally there were many who accepted in large measure the doctrine that the introduction of the child to the study of Latin must be by very easy stages. Grammatical drill must be postponed until the child is ready to read his Cæsar. And then Cæsar is condemned as unclean in morals, harsh in literary style—a ruthless barbarian. Horace Mann's dictum, "What interests is remembered," is perverted to base uses, and made to mean "Nothing will be remembered unless it tickles." Out of his first year's experience with his "Easy Lessons" the child emerges with hazy notions of Latin syntax. The proper remedy for such haziness should be a well-organized course in Latin prose composition. A complete cure cannot be expected; for it is practically impossible to repair completely the harm done by a bad beginning in the study of Latin. But the bookmaker is ready at this juncture with his bolus, a

manual of Latin composition containing incoherent grammatical references, no clear-cut examples of the rules referred to, a bundle of English sentences based upon a classical text, and an injunction to search in a chapter of Latin text for illustrations of the rules. Teachers who have been employing this kind of a text-book are ready for a change. College professors like Professor Bennett, who have seen the fruitage of such inarticulate work, must be fully as anxious for a change. Professor Bennett's manual cannot be called an ideal text-book; but it is the beginning of something rational and effective. As long as the colleges insist upon the careful study of special portions of Latin literature as a basis for Latin composition, a text-book in this field must aim to meet this demand. Professor Bennett's book draws from too wide a range of Latin usage to contribute effectively to this special end. The subject of the order of words in a Latin sentence, and sentence-structure generally, receive no attention whatever. The study of synonyms is practically ignored. I can discover no philosophy or system in the vocabularies that accompany the separate lessons; and the general vocabulary at the end of the volume is too scant and juiceless. There should be much more paragraph translation, with ample instructions for writing connected Latin sentences. When words are employed that are defective or peculiar in their inflection (such as *impetus* or *nemo*) references to the grammar should guard the pupil against mistakes. A few of the lessons, particularly Lesson XIV, have too many usages packed into them. In the references at the beginning of the lessons Professor Bennett has failed to do ample justice to the resources of other grammars than his own admirable book. I fail to see why Professor Bennett should display such misapplied devotion to the character *j*.

But teachers will thank the author for his contribution to sound methods of teaching this difficult subject. It may safely be said that any method of teaching Latin composition that aims at being interesting *per se* is vicious. The first and only legitimate aim of the author of the text-book is thoroughness and soundness. An able teacher will make

the use of any text-book interesting. A shiftless, incompetent teacher will sacrifice thoroughness, unless restrained by the demands of his text-book. Professor Bennett's theory of the function of Latin composition in secondary schools, as stated in his Preface, is sound; and his little manual is a rational attempt to apply this theory.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

Dr. William J. Rolfe has edited for the Riverside Press Tennyson's *The coming of Arthur and other Idylls of the King* (Boston and New York: Houghton, Mifflin & Co., 1896. P. iv, 221. \$1.00). Not only has Dr. Rolfe prepared this edition with his usual care and skill regarding matters of interpretation and textual criticism, but he has laid all readers of Tennyson under obligation by reproducing from the *Contemporary review* for May, 1873, an article, inspired and approved by the poet himself, which expounds the deep allegorical meaning of the *Idylls* as well as their "artistic unities."—Mr. Bardeen's new Reading Circle edition of Quick's *Educational reformers* contains an interesting addition in the form of the "pedagogic autobiography" that Mr. Quick had under way for this REVIEW at the time of his death, as well as the *Encyclopædia Britannica* article on Froebel and a large number of portraits and illustrations (Syracuse, N. Y.: C. W. Bardeen, 1896. 420 p. \$1.00).—The *History of the last quarter-century in the United States*, by President Andrews of Brown University, is as interesting in content as it is journalistic and amateurish in style. The book is sumptuously printed and the illustrations are both numerous and excellent (New York: Charles Scribner's Sons, 1896. 2 vols. 390, 409 p. \$6.00).—An unusually good and well-balanced *History of the United States for schools* is that by Dr. W. A. Mowry and his son. The development of the social and literary life of the nation is given adequate attention (Boston: Silver, Burdett & Co., 1896. 437 p. \$1.50).

VIII

EDITORIAL

The liveliest interest has been manifested, not only in New York and Brooklyn, but throughout the country, in the provisions concerning education that are contained in the proposed charter of Greater New York which has been made public by the Commission charged with its preparation. The task of drafting this portion of the charter was a difficult and delicate one at best, involving as it did the bringing together of two such school systems as those of New York and Brooklyn, and including also the care of rural or district schools in the suburban counties of Richmond and Queens. The necessary complexity of the problem was greatly increased by the jealousies and animosities developed during the successful struggle for school reform in New York, as well as during the short-lived and unsuccessful struggle toward the same end in Brooklyn. As is now pretty well understood throughout the country, New York had, by law, in its ward-trustee system, and Brooklyn has, by custom, in its local-committee system, the worst known methods of municipal school administration. Because these systems were old, they commended themselves to the easy-going, the indifferent, and the narrow-minded in both communities. Because they were familiar, they were approved by the great mass of the teachers, as well as by other strong, but unthinking, elements of the population. Because they were bad, they were tenaciously clung to by the politicians, big and small, within and without the school system. It is obvious, therefore, that any attempt to uproot these administrative abuses and to put the school system of the Greater New York upon a rational and scientific basis, would be desperately opposed, not only by the forces of ignorance, vice, and malice, but by those of indifference and stupidity as well.

Students of the problem in its larger aspect saw,

two years ago, that the greater New York was inevitable. They also saw that if, at the time of consolidation, the ward-trustee system was in operation in New York and the equally vicious local committee system in operation in Brooklyn, the chances were that the worst features of both would be fastened upon the new metropolis for a generation, and that the schools would continue indefinitely to be Houses of Refuge for the possessors of local and political "pulls." It was of vital importance that the fighting should be forced and a breach made in the enemy's lines before the Commission to prepare the Greater New York charter was appointed. As readers of this REVIEW well know, the fighting was forced; and thanks to Governor Morton, Senators Stranahan, White, and Pavey, Speaker Fish, and their colleagues, a victory of national significance was gained. This victory, however, related to the city of New York alone, and a large part of its fruit was left to ripen another year when Boss Jasper and the Learned and Self-sacrificing Hunt were put in command of the Board of Superintendents.

Brooklyn, however, is more fortunate than New York, despite the wire-pulling and intriguing of its local-committees and the political principals. In the first place, it has far better and higher public-school traditions than New York. Next, it has three superintendents of ability, disinterestedness, and power, who control the examinations for teachers' licenses, and so greatly restrict the vagaries of the local committees. Third, it has had an unusual number of very good men on the Board of Education, and their influence has been consistently thrown in favor of better things. On the other hand, the Pedagogical Trades-Unionists of Brooklyn are abler than their New York allies, and they work not only more effectively but less openly. They do not have to bear the awful weight of the name of Tammany, and so are able to pose before the community as far more virtuous and high-minded than it would ever interest them to be, even if their natural endowments were suited to making a strong effort in either direction. Through a personal influence, which is well understood, they are able to use the

news columns, and sometimes the editorial page as well, of the Brooklyn *Eagle*, a powerful organ of opinion, and their lines of communication with the leaders and underlings of both machines, the Republican and the Democratic, are numerous and well-traveled.

In order that no stone should be left unturned to make things as difficult as possible for the Charter Commission, the schemers and orators of the Brooklyn Board of Education devoted most of their meeting in September last to a perfervid defense of the *status quo* in that city. They declared with hands on their hearts, streaming eyes, and voices choked with sobs that if the Brooklyn Board of Education should be increased to forty-six or cut down to forty-four, or if any prerogative of a local committee should be interfered with in the least degree, plague, pestilence, and famine, together with envy, hatred, malice, and all uncharitableness, would necessarily and immediately follow. It was of no avail that the sane members of the Board pleaded for delay or for more thorough discussion. They were swept aside. One orator made the preposterous statement that the newly established New York system was "practically unknown throughout the country"—a statement that was either flatly untrue or else a euphemism to describe the speaker's ignorance. All this took place while President Swanstrom was out of the country; but whether his influence would have kept his colleagues from making such a ludicrous and lamentable exhibition of themselves, must remain forever uncertain.

Into a tangled and disagreeable situation such as this the lot of the Charter Commission was cast when it approached the educational chapter. The preparation of the chapter was intrusted to a committee of three: Seth Low, Stewart L. Woodford, and Silas B. Dutcher. Two of them were Brooklyn men, and the third had been Mayor of Brooklyn within a dozen years. One was a banker and a politician, one a lawyer and a politician, and one an administrator and a statesman. It is an open secret that President Low did all the drudgery and contributed all of the constructive work; while his colleagues sat back and either approved or criti-

cised, according as their tender sympathies were neglected or aroused by the Pedagogical Trades-Unionists of Brooklyn. Never for a moment, apparently, did either of them look upon the preparation of the chapter as an educational and administrative problem; they were mere politicians, first, last, and all the time.

New Yorkers took little part. The reformers had absolute confidence in President Low, and Boss Jasper and his Learned and Self-sacrificing Partner were too much occupied in casting horoscopes and studying palmistry, with a view to peering into their own future, to be able to contribute any of their meager stock of ideas.

If rumor is correct, President Low took up his task not only in the largest and most generous spirit, but with a desire to conciliate all intelligent opposition and to meet all fair criticism. He was prepared to yield and did yield his personal views on many points of detail; but when it came to fundamental principles where his reputation as an administrator and an educator was at stake, he refused to go a step farther. Messrs. Woodford and Dutcher, however, fell an easy prey to the Pedagogical Trades-Unionists, and were rash enough to report a plan of school government, undoubtedly suggested in every detail by a group of Brooklyn principals, that was intended to throw the schools into politics at once and forever. The Committee on Draft, however, promptly sustained President Low, by what is said to have been a unanimous vote, and left Messrs. Woodford and Dutcher to the leisurely contemplation of their gold brick.

The plan as reported to the Committee on Draft by President Low, and as accepted by the former may be summarized as follows:

General Administration—The Greater New York is divided into five administrative divisions called Boroughs. These are: (1) Manhattan, including so much of the present city of New York as lies below the Harlem river; (2) the Bronx, including so much of the present city of New York as lies above the Harlem river; (3) Brooklyn, including the present city of Brooklyn; (4) Richmond, including Staten Island; and (5) Queens, including as much of the county of Queens as is included in the Greater New York. Each Borough is to have a School Board and a Board of Superintendents, and is to control its own schools, subject to the restrictions stated below. The School

Board of Manhattan is to consist of 15 members; that of Brooklyn of 15 members; those of the Bronx, Richmond, and Queens of 5 members each. They are all appointed, without confirmation, by the Mayor of New York. The full term is three years. One-third of the membership of each School Board, or as nearly one-third as possible, goes out of office each year. The members of these boards serve without pay, and may hold no other office of any kind except those of notary public and commissioner of deeds, or in the National Guard.

For the entire city there is provided a Board of Education, which is to be a central or federative body consisting of representatives chosen from and by the 5 Borough School Boards. Each Borough School Board is represented on the Board of Education by its chairman, and in addition there are 4 elected delegates from the School Board of Manhattan, 3 from the School Board of Brooklyn, and 1 from the School Board of the Bronx. The Board of Education will consist, therefore, of 13 members. The term of office of the members of this board is one year. Provision is also made by which, after 1898, the representation from each Borough shall be increased by one member of the central board for each additional 300,000 of population.

Powers of the Central Board of Education—This board is to

(1) Represent the school system before the Board of Estimate and Apportionment and before the Municipal Assembly in all matters of appropriations for educational purposes, and in general to represent the school system of the city in its entirety.

(2) Have power to direct the Comptroller to withhold from any Borough School Board any part of the appropriation apportioned to the latter, when the City Superintendent shall report that the provisions of the State law or the by-laws of the Board of Education are not complied with, or that the minimum standard of efficiency required is not attained by any school.

(3) Have power to appoint a secretary; a superintendent of school buildings, who must be an architect of experience and standing; a superintendent of supplies; one or more auditors; and a City Superintendent of schools. The salaries of these officers are to be fixed by the Board. The term of the City Superintendent is fixed at six years.

(4) Have power to provide for the purchase of all supplies needed by the school systems of the city.

(5) Have power to fix the salaries of the Borough Superintendents and of the associate superintendents and of all principals and teachers, which salaries need not be uniform throughout the Boroughs, nor even in any one Borough.

(6) Determine, on the recommendation of the City Superintendent, the minimum grades of certificates or licenses to teach that shall be required throughout the city, and all such licenses shall be issued in the name of the City Superintendent.

(7) Apportion the General School Fund (see below, p. 201) among the different Boroughs. The quota for each Borough is one hundred dollars for every qualified teacher who shall have actually taught in the schools of the Borough for a term of thirty-two weeks of five days each. After apportionment shall have been so made, the remainder of the General Fund shall be apportioned among the Boroughs in proportion to the aggregate number of

days of attendance of the pupils resident therein, between the ages of five and eighteen years.

(8) Administer the Special School Fund. (See below, p. 201.)

(9) Administer the Public School Teachers' Retirement Fund.

Powers of the Borough School Boards—Each Borough School Board, in and for its own borough, shall

(1) Organize on the second Wednesday in February, and elect a president and such clerks and other subordinate officers as may be necessary.

(2) Have the safe-keeping, subject to the by-laws of the Central Board of Education, of the school buildings and other school property of the Borough.

(3) Choose all sites for school buildings.

(4) Have power to divide the Borough into school inspection districts, and when such districts are made the Mayor shall appoint five inspectors for each district. [This makes it optional for any Borough to adopt or reject the admirable school inspection provision of the present New York school law.]

(5) Have power to appoint a Borough Superintendent of Schools and associate superintendents.

(6) Appoint all principals and teachers on the written nomination of the majority of the Board of School Superintendents, which nominations must be made from the eligible lists of properly certificated teachers.

(7) Make by-laws governing the transfer of principals and teachers.

The City Superintendent—This officer, who is given no deputies or associates, shall

(1) Visit and inspect all the schools of the city and report upon the same, but "he shall have no right of interference with the actual conduct of any school in the city of New York."

(2) Have the right to speak on all matters before the Board of Education, but not to vote.

(3) Visit the schools as often as possible and inquire into their courses of instruction, management, and discipline, and shall "advise and encourage the pupils, and teachers, and officers thereof."

(4) Submit an annual report on the schools, together with plans and suggestions for the improvement thereof.

(5) Have power to call together all the Borough Superintendents and associate superintendents for consultation.

(6) Examine, together with such experts or assistants as he may employ, all applicants for all grades of principals' and teachers' licenses, and issue such licenses for one year. If the work of the teacher is satisfactory to the *Borough Superintendent* the license may be renewed for two successive years without examination. At the close of the third year of continuous, successful service, the City Superintendent may make the license permanent.

(7) Act as a court of appeal in cases where charges of misconduct, insubordination, neglect of duty, or general inefficiency are brought against a principal or teacher.

The Borough Superintendents—These, with their associates, constitute the Borough Boards of Superintendents. They shall

(1) Visit and examine all the schools of their Borough, and report the results to the Borough School Board and to the City Superintendent.

(2) Keep a list of all principals and teachers, with their records and standing.

(3) Establish rules for the promotion, graduation, and transfer of pupils.

(4) Have power to transfer teachers from one school to another, subject to the by-laws of the Borough School Board.

(5) Have power to advance teachers in grade or pay in accordance with the rules of the Borough School Board.

(6) Recommend to the Borough School Board all text-books, apparatus, and other scholastic supplies that may be needed. All requisitions made by principals for such supplies must be approved by the Borough Superintendent.

(7) Have power to issue syllabuses in the various branches of study, to indicate the minimum amount of work required in these branches.

Financial—The amount of money to be raised by tax for school purposes is fixed each year, in general and in detail, by the Board of Estimate and Apportionment and by the Municipal Assembly.

The Special School Fund is to contain all money raised for the purchase of school sites, for the erection and repair of buildings, for the purchase and leasing of buildings, for the purchase of supplies, and for the administrative purposes of the Central Board of Education.

The General School Fund embraces all items for educational purposes not contained in the Special Fund. It will be made up chiefly, therefore, of teachers' salaries and the administrative expenses of the five Borough School Boards.

Removal of Principals and Teachers—Any member of a Borough School Board or any associate superintendent may prefer charges against a principal or teacher. Charges are made to the Borough Superintendent, who may suspend such principal or teacher, with or without pay. The Borough Superintendent is then to appoint a trial commission, to consist of an associate superintendent, a member of the Borough School Board (neither of whom shall be the person who preferred the charges), and a principal of not less than five years' experience as such. This commission shall try the case and report its findings to the *City Superintendent* of Schools, together with its recommendations as to a fine, penalty, or punishment to be imposed. The City Superintendent has power to review the report. His decision is final and he is to inflict the penalty, if any.

Miscellaneous—Sites are selected by Borough School Boards. They are then either purchased or acquired by condemnation by the Central Board of Education, since the title is to be vested in the city and not in any Borough.

The superintendent of school buildings, who is to have a deputy in each Borough, has charge of all plans for new buildings or for alterations in buildings. He appoints and removes janitors.

In the above very brief résumé of a complex and involved document of over fifty printed pages, only the most important points have been mentioned. The plan proposed, it will be seen, is, in some respects, a federative union of five boroughs. How it will work in practice must remain

problematical for at least a year. That it has serious defects, chiefly in the limitations that hedge about the City Superintendent, and in the undue advantage given to the smaller boroughs, is certain. That its advantages greatly outweigh its defects, is equally certain. Much will depend upon the composition of the first Borough School Boards and upon their first superintendents. If these are men who will start the system on a higher plane, all will be well. If they are of the self-seeking, wire-pulling sort, any abuse is possible. The proposed system will be carefully examined and criticised in a future issue of the *REVIEW*.

The magnitude of the school system of the Greater New York is not fully appreciated. The latest statistics available show a school population (5--18) of 766,847, and an enrollment of 469,064. The average daily attendance is 318,225. The total number of teachers and principals is 8428, distributed among 376 buildings. The value of school buildings and sites is \$31,662,631, and the total school expenditure in 1895 was \$10,552,955.37. Of this amount \$6,086,499.70 went for teachers' salaries.

Some rather startling facts were made evident at the public hearing granted by the Charter Commission on their educational plan. One looked in vain for Hunt and Holt, and Little and Maclay, and Strauss and Elgas, and Boyer and Bolte, and all the other valiant and defiant upholders of the ward-trustee system of a year ago. Some of these are now drawing comfortable salaries under the provisions of the new school law, and are acquiescent; while the rest had apparently forgotten that any other system than the present one ever existed. Not a voice, however humble, was raised in support of the once famous and indispensable trustee. The terrible threats that 1897 would see the trustee system restored proved to be empty bombast. The opponents of reform had in eight short months been beaten to a standstill; or, what is better yet, to a state of speechlessness.

But the old familiar jargon of the looters and spoils-hunters was gravely repeated by the Brooklyn Pedagogical Walking Delegates. The same moan about the dear "people getting out of touch" with the schools was heard. The glories of being a principal [the Walking Delegates were principals] were exalted, and the tyranny of superintendents [the Walking Delegates had tried to be superintendents] was bewailed. The doctrine that only principals ought to appoint teachers was preached, and the correlative doctrine that the business of superintendents was not to superintend, but to look out of the window and write reports, was left to be inferred. It was a pitiable exhibition for admittedly able men to make of themselves. In no other part of the United States would it have been possible, and nowhere but in New York and Brooklyn will it be fully understood. The political life of those communities has developed a type of political schoolmaster that has no counterpart elsewhere. It was the political schoolmasters, and the poor, befogged teachers that they first organize into associations and then lead by the nose, that spoke by the mouths of the Walking Delegates. And the community smiled.

As this issue of the REVIEW goes to press it seems likely that some changes in the scheme as above outlined may be made. It is understood, however, that they are in no respect vital. They will be described next month in these pages.

On January 13 the Board of Education of New York organized for the year, electing Charles Bulkley Hubbell president by a vote of 11 to 7 for Robert Maclay, the candidate of the reactionaries. The seven commissioners who voted for Mr. Maclay were Messrs. Adams, Andrews, Hurlbut, Ketchum, Little, Maclay, and Van Arsdale. For the first time in many years the presidency of the Board and the appointment of the committees pass into the control of the representatives of the independent and progressive element in the community. Those gentlemen have no alliances

with the school "ring" and no sympathy with its interests and purposes. At the same time they have no friends to reward and no enemies to punish, and a year of steady, intelligent progress may safely be counted upon. President Hubbell is an educated gentleman, a graduate and a trustee of Williams College, who has for seven years led an apparently hopeless fight for reform within the school board. It cannot be said that New York is not making progress when the forces and ideals that Mr. Hubbell represents are dominant in the Board of Education. The new committees are the strongest and most promising in the history of the Board of Education.

In his speech seconding the nomination of Mr. Maclay for the presidency, Commissioner Ketchum said: "Every member here knows that we [the old Jasper majority] were thoroughly opposed to the evils of the trustee system. Because we favored its curtailment, instead of its immediate abolishment, are we to be everlastingly condemned?" The gentleman's somewhat pathetic question must be given an affirmative answer: first, because when one sets about "curtailing" a system by increasing its representatives from 120 to 225, both his use of language and his knowledge of arithmetic are open to suspicion; second, because the "we" of whom Commissioner Ketchum speaks have dealt the schools many more serious and staggering blows than by supporting the trustee system, bad as it was.

An important step has been taken recently by the city of Boston in the interest of college-bred teachers who have studied their profession. Heretofore college graduates without experience as teachers could not become candidates for positions in the Boston schools; the only persons without experience who were admitted to candidacy were persons who had had a normal-school training. The supervisors have now modified the rules governing the examinations of candidates so as to admit to the examinations college graduates

“who have had a satisfactory course in pedagogy.” This timely recognition of the advantages of professional training for college men who become teachers is a step that should be taken in all the cities of the country.

A considerable number of students who intend to teach, as well as teachers already in service, now resort to the professional courses provided by colleges and universities because of their own interest in their chosen profession, and not because of any general demand on the part of the public for the peculiar training these afford. Much would be gained if this professional spirit could be developed at the start in all young persons who become teachers. Such a result will inevitably follow a public demand. As in other professions, professional training will be sought by all when it is demanded of all by a public alive to its own interest.

The aims of the department of Education and Teaching at Harvard University are exemplified in two new features added this year to the work of the department. The first is a course of lectures on School Supervision by Superintendent S. T. Dutton of Brookline. These lectures are given in addition to the usual lectures on that subject, and will deal with special problems of supervision as they have arisen in the experience of the lecturer. Though addressed especially to the students of education and teaching, these lectures are open to all members of the University, and will be given at an hour least likely to conflict with other college exercises. There is no work in the educational field more likely to attract a steadily increasing number of college-bred men than the work of the town and city superintendent. Mr. Dutton's well-known progressive and successful work as a city superintendent, both in New Haven, Conn., and in Brookline, Mass., enables him to bring to these lectures a valuable fund of practical suggestion that cannot fail to be of service to his hearers.

The other feature referred to is an arrangement made with the cities of Newton and Brookline, whereby a limited number of students who have had the necessary training will have

an opportunity to do some teaching under the general direction of the university professor of education and the immediate supervision of the principals and superintendents of schools in the two cities. In extending this privilege to the students, preference is given to graduates who have had no experience. This is an experiment in practice teaching under conditions quite different from those obtaining in normal schools, and the outcome will be of general interest.

A distinguished and successful school politician of Brooklyn was surely misquoted by the *New York Sun* when he was made to "denounce," at the public hearing before the Greater New York Commission, "the impression that had gone abroad from some source that there was politics in the school system of either New York or Brooklyn," and to say that "it was a falsehood, without excuse." Or can it be that the gentleman's sense of humor is losing its pristine glory?

Eloquent clergymen who find themselves suddenly translated to college presidencies are not always at home with the facts of educational history or educational philosophy. President Stryker, the vigorous and stirring executive of Hamilton College, took occasion to illustrate this truth recently when he allowed himself to talk this arrant nonsense to the New York alumni of his institution:

"I am glad to say that there is good reason to be confident that the new departure in favor of the corruption of the A. B. degree, by awarding it for four years of work in any subject whatsoever, will not stampede the educational forces of this great State. This new programme is the denial of the history of the A. B. degree, and it is a flat outrage upon those who thus protest in behalf of its legitimate and immemorial meaning. It is an attempt to demoralize this degree, which will be more honored in the breach than in the muzzle."

In order that this paragraph may have any meaning whatever, it is necessary to invent the fiction that it is proposed by anybody to award the A. B. degree for "four years of work in any subject whatsoever." The history of the degree that has so long stood for a liberal education, but

never necessarily for Greek or for Hebrew, and that is richer and fuller to-day than ever before, is a subject that demands much time and study for its mastery, and assumptions regarding it ought not to be lightly made by persons in authority; much less should they be made the sole basis for constructive argument.

The American Institute of Instruction will hold its next annual meeting at Montreal, Canada, July 9--12. It will be possible for such New England teachers as care to do so to attend at least two of the sessions of the N. E. A. at Milwaukee, and then reach Montreal in time to participate in the meetings of the Institute.

The school reform wave has reached Baltimore. Mayor Hooper has appointed a new board of school commissioners made up of representatives of the best citizenship of Baltimore. President Gilman of Johns Hopkins University is one of the new appointees.

The fact that better reading matter than ever before is now being put within the reach of elementary schools is emphasized by the announcement that the Scribners have undertaken a new series of school reading books, the earliest numbers of which are by Frank R. Stockton and Edward Eggleston.

The Southern Educational Association held a most successful meeting at Mobile, Ala., during the holidays. The programme prepared by President Phillips was excellent, and the papers read were of an unusually high order. The new president is Mr. George J. Ramsey of Clinton, La., who has long been prominently identified with the N. E. A. and its management.

By the sudden and lamentable death of General Francis A. Walker, American education is deprived of one of its

strongest and most virile leaders. General Walker had for years been a prominent figure before the public, as a soldier, a statistician, an administrator, an economist, and an educator. He was always aggressive and always constructive. His leadership in the manual-training movement, his work in the reformation of arithmetic teaching, and his success in placing the Massachusetts Institute of Technology at the head of all American schools of its class, will never be forgotten, and they will one day take their rightful place in the permanent history of American education.

The following is the record, since licensing examinations were established, of the medical examinations held by the University of the State of New York, and the relative standing of the various colleges and universities whose graduates participated in the examinations. Only those institutions contributing at least twenty graduates are included in this table:

	Number of Candidates	Number Rejected	Per Cent. Accepted
Woman's Medical College of the New York Infirmiry,	42	2	95.2
Columbia University,	345	21	93.9
New York Medical College and Hospital for Women,	30	2	93.3
Syracuse University,	50	4	92
University of Buffalo,	146	15	89.7
New York Homeopathic Medical College, . .	96	10	89.5
Bellevue Hospital Medical College, . . .	156	20	87.1
Long Island College Hospital,	143	19	86.7
Albany Medical College,	151	22	85.4
Eclectic Medical College,	34	6	82.3
New York University,	236	46	80.5
Niagara University,	41	8	80.4

EDUCATIONAL REVIEW

MARCH, 1897

I

AMERICAN STUDENTS AND THE SCOTTISH UNIVERSITIES

As is natural, a newcomer like myself finds endless food for reflection in the characteristics and surroundings presented by university life in the United States. The diffusion of the elective system; the free and easy relations subsisting between undergraduates and members of faculty; the mysteries of "credits" and "conditions"; the multiplication of degrees in course—A. B., B. S., B. L., Ph. B., and others; the passage up the degree-ladder from the A. B. and B. S., through the A. M. and M. S., to the Ph. D. and D. Sc.; the absence of academic usages and of those more or less formal ceremonies in which the university as a corporation comes prominently before the British student; the tendency to lay little stress on the abiding terrors of degree-examinations; the multiplication of institutions empowered to grant titles; the habit of transference from one university to another; coeducation—all these are new features, affording problems in plenty for the reflective mind, and invoking, *prima facie*, admiration or adverse criticism, as the case may be. But among all such fresh, and sometimes startling, developments, none is more impressive and pervasive than the reverence in which the American student, and the American professor, for that matter, holds the universities of Germany. When a pupil tells one that he intends to go abroad for purposes of study, there is no need to inquire whither he proposes to proceed. For the only problem

with him is at which of the German seats of learning he had best give attendance. This has been an increasingly marked trait for about two generations. In 1835 there were 4 American students in residence at one or other of the principal German universities. In 1860 this modest number had increased more than 19 times, to 77; while in 1880 this had, in turn, grown nearly $2\frac{1}{2}$ times, to 177. Later statistics are not before me, but I am aware that, till 1890, and perhaps till this hour, a similar growth has been in process. Nor is the relation one of absolute number merely. The American element has been steadily increasing in proportion to the total attendance of foreign students. In 1835 it was only 1 per cent.; in 1860 it had risen to $10\frac{1}{2}$ per cent.; in 1880 to $15\frac{1}{2}$ per cent. For recent years I have heard it authoritatively stated at as much as 23 per cent. Nothing strikes Scotch students in Germany more than the much larger number of American than of British students; and this astonishment is only deepened when the disproportion between American and other English-speaking students who graduate is taken into consideration.

For all this there are unquestionably potent reasons. It will not suffice to say, for example, that the wonderful German immigration to the United States, especially since the nation-making wars of 1866 and 1870, accounts for it. The real superiority of the German institutions, the eminence of their teachers, their freedom and thoroughness, their readiness to welcome foreigners and to grant them degrees—particularly the doctorate—have been the potent factors. The exclusiveness of the English universities, the poverty of the Scotch, and the centralization of the French, have effectually put them out of court to this point.

According to ancient wisdom, with which, even in this land of the free, no one would interfere, those who live in glass houses should not throw stones. And, bearing this in mind, I am not in a position to appear as a special pleader against the universities of Germany, even were it my desire to assume this ungracious and ungrateful rôle. My purpose

is far different. I simply wish to urge some considerations which, relating as they do to recently accomplished facts, have not yet had time to impress themselves upon the general academic mind.

Things have not been at a total standstill within the university circles of Europe for the last fifty years. The conditions that present themselves to the American student who is to-day about to seek further instruction abroad are not those of 1835, of 1860, of 1880; they are not even those of 1890. Indeed, the situation I am about to delineate arose so late as 1894. Further, it is by no means certain that the German universities are so completely pre-eminent now as they were without question from 1850 till, let us say, 1880. The eminent names that were the jewels in their chaplet of scholarly renown have one by one disappeared. There are reasons for thinking that they have not been replaced by their equals—not by their peers in originating faculty, at least. The spirit of enthusiasm that generates operative ideals, the spirit that regenerated the Fatherland, proceeded largely from her schools and universities; the schoolmaster was Bismarck's most potent ally in repaying Jena with Sedan. It may very well be asked whether this functionary is making the same contribution to the national stock to-day; and many would not be slow to allege that he is no longer his old self. The ancient spirit appears, in some ways, to have departed with the ancient names. Perhaps, laboriousness has tended to replace insight. In a word, it is possible to ask now, Have the Germans kept their own? and, in view of the advance made by other European institutions of learning—thanks to German instruction and influence—to answer, This is not altogether certain. What I mean to indicate is that here there is actually something to think about, where thirty years ago the very suggestion of such a question would have been scouted.

Already Scotch students are looking to France—witness the Franco-Scottish Society—a quarter that would not even have been thought of in the sixties. Nay, one might say

that the man—now very prominent in his own sphere—who proceeded to Paris in 1879 was the first to act upon this new perception. One of the most learned of Scottish professors, himself the recipient of the most coveted degree bestowed by the authorities of Germany, tells me in a recent letter: "I am strongly convinced that in many cases American students make a great mistake in coming over to Germany." And this tendency has traveled further afield than to France's ancient ally. I actually met in the flesh the other day a young American professor who had just returned, not from Berlin or Leipsic, or München, but from Paris. Nay, more, about a week later, the well-known head of a department in one of the largest American universities told me that he was now advising his graduate students to attend the Sorbonne and its neighbors rather than Heidelberg or Göttingen. Now, these are not miracles; they derive their importance from the circumstance that they are exceptions, and in this respect they serve to show that a new idea is at length springing up. Its origin is due, not so much perhaps to the questions I have just indicated, but more largely, as seems likely, to the fact that France has been setting her academic house in order¹; along with other portions of her property it has been receiving an overhaul sadly needed. Paris is an attractive place now, not simply for its traditional pleasures,—which, indeed, are rather at a discount,—but for its men, whom we on this side are only beginning to discover. In classical scholarship, in literature, in philosophy, in political science she can now present a galaxy of names as eminent as those ornamenting any seat of learning. Further, the old centralization is breaking down; foreigners may now go to her sure of a welcome, and with some prospect, I am told, of obtaining substantial recognition for their work.

The same is true of the two great English universities. Their eminent names in various departments of learning are household words with the American student. And within the last three years provision—not entirely satisfactory, it

¹ The first great step was taken so recently as November, 1896.

must be said—has been made for the admission and graduation of foreigners. Oxford and Cambridge are quite likely, no matter how slowly things commonly move with them, to do even more in the near future—to substitute, as we all trust, a doctor's degree for the baccalaureates now offered.

But of all European academic institutions the Scottish universities have experienced the most thoroughgoing reconstruction within recent years. An outgrowth of the national life, they had been molded for the purpose of meeting peculiar national wants rather than for the more specific ends of higher education. Their achievement had been the making of men rather than of scholars, and this was the more inextricably bound up with their existence because of the comparative deficiency of the Scotch educational system in the matter of secondary schools—of gymnasia of the German type. Their poverty, too, rendered it hard for them to expend the funds so necessary for the efficient maintenance of a graduate school. As against this, on the other hand, their full professors were paid unusually high salaries, and so the staff compensated to some extent in personal distinction for what it lacked in numbers. Lord Kelvin, John Caird, Edward Caird, John Nichol, John Veitch, R. C. Jebb, Ramsay, of argon fame, not to mention others hardly less distinguished, were all on the Glasgow staff during my undergraduate days, and the mere contact with such men was an inspiration. The few select students, moreover, who went on to an honor degree, were perforce bound to acquire their knowledge largely for themselves; what they had was their own, they were distinct individualities, and usually they contrived to cut their way to high positions. But, plainly, it was not for edification that the universities should continue to be almost exclusively avenues to the professions. The younger men who had proceeded to Germany or to England for the completion of their university studies gradually came to see that this condition of affairs was not entirely desirable, and could not permanently remain. Aided by some education-

ists outside the university organization—medical men, engineers, clergymen, lawyers, and civil servants, among others—they began an agitation that found voice, about the year 1883, in the once notorious and now historical *University pamphlets*, published by an obscure firm in Glasgow. Once well launched, the obvious facts of the case helped the agitation, and forced its pros and cons upon the people at large. As a result, a Royal Commission was appointed in 1889, with executive powers directed toward bringing the university system more into line with the greatly extended training demanded by the conditions of modern investigation and scholarship. This commission has now all but completed its labors. The changes introduced into the government of the universities need not trouble us here. But it is to be noted that the elective system has been so far adopted, that the staff has been enlarged, provision being made for the introduction of such distinctively modern subjects as history, modern languages, Anglo-Saxon, economics, and so on. Government, too, realizing, however inadequately, the increased expenditure thus incurred, has added a sum of \$375,000 per annum to the grants previously appropriated; private benefactions continue to flow in, although often subject to such restrictions as sensibly impair their usefulness. To illustrate the progress that has taken place, it may be interesting to point out that in 1860 the income of the University of Edinburgh was \$83,000; it is \$417,500 now. In 1860 the Edinburgh staff counted 32 members; to-day it has 100. Glasgow had 34 instructors in 1860; now she has 99.

While it still remains true that the arts (literary) faculty, especially in its ordinary routine work, is largely occupied in training men for entrance to the professions of medicine, law, the Church, and teaching in the common schools, the needs of the new secondary school system, which is slowly developing, are forcing higher work upon it. Perhaps in view of this—perhaps, too, in presence of the pressing necessity for training their own professors—provisions have been

introduced by the Commission of 1889 for the fostering of what is a graduate department according to American ideas. It is in this connection that the Scottish universities now appeal to the American student who is about to proceed to Europe.

Higher degrees have been instituted in the faculties of arts and of science. Students who can present the necessary credentials in the department of philosophy can obtain the degree of D. Phil.; those whose *Fach* lies in any of the languages or literatures can proceed to the degree of D. Litt.; while in the faculty of science the degree of D. Sc. is open to all who are highly prepared in the mathematical, the pure, or the applied sciences. In this connection it should be said that within recent years laboratory experiments have been greatly extended. Now, these new facilities are not confined to Scotch graduates; a special scheme has been devised whereby American and other foreign students may take advantage of them. To this I desire to direct attention for a little.

Before entering upon any explanations or suggestions, the formal Regulations laid down by the commissioners may be quoted so far as they vitally affect the points at issue.

REGULATIONS FOR SPECIAL STUDY AND RESEARCH, FOR APPOINTMENT OF RESEARCH FELLOWS, ETC.

I. It is in the power of the *Senatus Academicus*,² with the approval of the University Court,³ to make regulations under which graduates of Scottish universities, or of other universities recognized by the University Court for the purposes hereof, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the university.

II. It is the duty of the *Senatus Academicus*—

- (1) To receive and decide upon all applications for admission to prosecute special study or research.
- (2) To prepare a list of persons so admitted (hereinafter referred to as research students).
- (3) To make regulations for the supervision of their work.
- (4) To satisfy themselves from time to time that the research stu-

² Faculty in America.

³ Regents, Trustees, or other governing body, in America.

dents are carrying on their work in the university in a satisfactory manner.

- (5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant for admission must send in to the *Senatus Academicus* a written application stating any degree or other distinction which he has already obtained, the line of study or research which he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. This refers to the report to be made by the Faculty⁴ to which the applicant desires to be attached.

V. and VI. These refer to fees, which, in Scotland, are always moderate.

VII. "The title of Research Fellow may be conferred by the *Senatus*, with the approval of the University Court, on research students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think fit."

VIII. This contains details as to Research Fellows, such, *e. g.*, as that they shall retain their title only so long as they are actually working in the university.

IX. Provides that all fellowships, scholarships, etc., the conditions of competition for which research students and fellows fulfill, shall be open to them.

Appended to these general regulations are the rules for higher degrees. I extract only the essential parts, and may premise that while the Scotch M. A., or a degree held by the university to be its equivalent, is a necessary preliminary to the D. Phil. and D. Litt., the D. Sc. is open also to holders of the B. Sc. or of the medical degree of M. B. If in Section I of the subjoined American students will read mental philosophy or the language departments for mathematics and natural philosophy, and D. Phil. or D. Litt. for D. Sc., they have substantially the regulations for all the degrees. They will also be careful to notice the special references to research students.

REGULATIONS FOR HIGHER DEGREES IN ARTS AND SCIENCE DEGREE OF D. SC.

I. Graduates who have taken the degree of Master of Arts in any Scottish university with first or second class honors in mathematics or natural philosophy, under the conditions prescribed by the Regulations for Degrees in Arts, or under the regulations previously in force in such university, may

⁴ Department in America.

offer themselves for the degree of Doctor of Science (D. Sc.) in the same university, after the expiry of five years from the date of their graduation in arts, under the same conditions as if they held the degree of Bachelor of Science.

II. Research students, within the meaning of the Regulations for the Encouragement of Special Study and Research, and for the Appointment of Research Fellows, may offer themselves for the degree of D. Sc. of the university in which they have prosecuted some special study or research under those regulations, although they have not taken the degree of B. Sc. or the degree of M. A. with honors as aforesaid in that university; provided—

- (1) That they hold the degree of B. Sc. or M. B. of a Scottish or any recognized university, or a degree of any such university which the Senatus shall hold to be equivalent to the degree of B. Sc. or to the degree of M. A., with first or second class honors in mathematics and natural philosophy; provided that candidates who hold any such degree from a university outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as research students with a view to the degree of D. Sc., to pass an examination equivalent to an honors or final science examination in a group of subjects cognate to their line of work as research students.
- (2) That they have spent not less than two winter sessions⁵ or an equivalent period as research students in the university granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.
- (3) That a period of not less than five years shall have elapsed from the date of the graduation required in the sub-section (1) of this section.

III. All candidates for the degree of D. Sc. shall present a thesis or a published memoir or work, to be approved by the Senatus on the recommendation of the Faculty of Science; provided that, if required by the Senatus, the candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his thesis, as may from time to time be determined. The thesis shall be a record of original research undertaken by the candidate, and shall be accompanied by a declaration signed by him that the work has been done and the thesis composed by himself.

IV.-XII. These refer to the degrees of D. Ph. and D. Litt. They provide that the thesis must be published.

XIII. "The degrees of D. Sc., D. Phil., and D. Litt. shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*. The fee to be paid for each of the degrees of D. Sc., D. Phil., and D. Litt. is ten guineas (\$52.00), payable when the thesis is lodged, and the fee for each re-examination for each of the degrees is £5.5/" (\$26.00).

⁵ Semester in America (duration in this case mid-October to end of March).

On close inspection of these regulations, several points become apparent at once, and may be summarized as follows: (1) Liberal provision has been made for the reception and encouragement of foreign students. (2) The universities, very judiciously, reserve to themselves the right to examine in doubtful cases, both before entrance upon the course for a higher degree and with specific reference to the degree itself. (3) Foreign candidates for higher degrees whose credentials are satisfactory are at once placed on the same footing as native graduates. (4) As the M. A. is the Scotch degree in course, the five years which must elapse before the doctorate can be conferred would probably date from the equivalent American degree in course; or an American student might at any period posterior to his required attendance submit the necessary thesis or published work, and obtain the degree at once *in absentia*. (5) At the same time, I would advise that all students proposing to proceed to a Scotch doctorate should have taken the M. A. or M. S. at home. For this practically means adding to the B. A. what the Scotch term "honours" covers. Roughly speaking, the Scotch pass M. A. corresponds to the American B. A., while the M. A. with honors corresponds to the M. A. taken here subsequent to a year or more of study in a first-rate graduate school. (6) The residence requisite at the university granting the degree is two winter sessions—*i. e.*, from mid-October till the end of March. During the intervening six months and a half the student would be entirely free to do as he pleased. In this way it would be quite possible to combine a German with a Scottish experience during a stay of two years in Europe. (7) These regulations apply absolutely in all the Scottish universities.

The fees and other expenses are moderate. A scientific student, doing work in a laboratory, would likely find that \$75 are a high estimate of his probable university dues; while a literary or philosophical candidate might be called upon to pay so little as \$35 to \$50. The system is non-residential. Outside the walls of the university buildings the student is

completely his own master. The custom is for students to find rooms and board in the same house. They may either take lodgings, as the phrase is, and the landlady will supply meals to each lodger in his own room; or they may board—*i. e.*, take up residence with a family. On the whole, the latter may be slightly cheaper; but there can be very little question that, for a worker, the former is the preferable plan. The cost of rooms with board is never exorbitant. It varies somewhat, but on an average is much nearer that at such a place as Ann Arbor than at any of the Eastern university cities. The probable total expense for the winter session ought not to be more than from \$200 to \$300. I have known students who kept it down to as little as \$130, but I need hardly say that this is not advisable, except when it cannot be well avoided. All expenses, then, ought to be covered, and comfortably covered, for a sum ranging between \$250 and \$350. In the case of married men, who were accompanied by their wives, arrangements at similarly moderate rates could easily be made. The universities are open to women on the same terms as men. The Scotch student is hospitable and friendly, and Americans could readily have a very "good time."

Although their theological faculties are Presbyterian, the universities are practically non-sectarian, neither the professors nor the students being subjected to any religious tests whatsoever. In this they present a strong contrast to the English universities, which the Anglican Church surrounds and permeates with its subtle atmosphere at every turn. Indeed, it is safe to say that they are perceptibly freer in spirit and tone than many American colleges that are described as non-sectarian. St. Andrews, Aberdeen, and Edinburgh—I name them in order of seniority—are more attractive places of residence than Glasgow, although the great city of the West is pervaded by a more metropolitan tone than even the titular metropolis, and is, in many respects, more like an American city than any other town in Britain. But their climate, especially during the spring months, is

much more rigorous, and can hardly be recommended to any who have a tendency to lung weakness. Once more, though governed by precisely the same regulations laid down by the same authority, each university has its own peculiar characteristics, upon which it would probably be dangerous for a member of any one, or even for a member of two, like myself, to particularize. The old catch phrase, at any rate, no longer holds good. It used to be a familiar saying that, of the Scotch universities, St. Andrews is the oldest, Glasgow is the richest, Aberdeen is the best, and Edinburgh is the largest. St. Andrews cannot, of course, alter the fact of its age; and Edinburgh still enrolls the largest number of students, thanks mainly to its medical school; while Glasgow, in proportion to the number of its alumni, is probably still the richest; but it cannot be said that any one is the best. All possess special departments in which they are traditionally—that is, perhaps they are, perhaps they are not—stronger than their neighbors. St. Andrews might claim theology to-day, and certainly marine biology; Glasgow, naval architecture, engineering, and speculative philosophy, while, as long as Lord Kelvin remains, her physical department must enjoy unique reputation; Aberdeen is the ancient home of psychology, and under Professor W. M. Ramsay is prominent in classical archæology; while in Edinburgh, the scientific department, especially as related to medicine (public health and chemistry, for instance), is eminent; she has also superior facilities in music, in astronomy, in Oriental languages, in law, and in education; since Sir William Hamilton, too, her philosophical teaching has been characterized more by the soberer methods of the British than by the more or less “romantic” tendencies of the German school. But, obviously, in making a choice, the special objects and interests of each student would require to be taken into careful consideration.

These being the prominent facts, I may be expected to say a few words with respect to the advantages that, as I think, would accrue to American students were they to essay this new departure.

In the first place, all who possess the experience entitling them to an opinion will agree that, for those who intend to pursue the higher scholarship, acquaintance with varied methods and systems is most desirable; nay, in most cases, indispensable. The exceptionally talented, who are able by their own force to rise above such necessities, come at long intervals. Furthermore, German practices have been so far and so successfully introduced here that the information to be gained in Berlin and the others is not so entirely novel. Less supervision and more self-reliant individual work is the Scotch keynote. It might be a happy experience for many to pass through this kind of training. And, as I have hinted already, the American student who can devote two years to European institutions—and no one should be satisfied with spending less—is at liberty by the Scotch regulations to combine continental with insular work. He could be in Germany from April till October. The time occupied in transit is inconsiderable—thirty-six hours from Leith to Hamburg, thence anywhere in a day. It would be an auspicious and stimulating thing thus to have an opportunity of getting a purview of two systems so widely contrasted—the one turning out scholars all very much on the same model, the other, for the most part, molding distinct individualities. The individualism, too, of the Scottish universities seems not only well suited to the American temper, but also, in view of our assimilation of German ideas, not without important complementary advantages.

Again, the benefits of communication in one's own language are apparent. Even those well equipped in German must, perforce, miss something alike in social and academic intercourse by reason of unfamiliarity, if not with the vocabulary, then with the subtleties and almost imperceptible nuances of a foreign tongue. This difficulty, as many must be perfectly aware, has the almost imperceptible effect of causing foreigners to flock together in a strange land. Witness the American "colonies," with their peculiar customs, in the larger German universities. In so doing they natu-

rally miss some opportunities, and never come to realize the existence of others. If it be necessary—as I am of opinion it is, if all advantages are to be derived—to avoid one's own countrymen like the plague when abroad, there must be compensating points of contact with the people by whom one is surrounded. These alone steel one, so to speak, to forego the pleasures of daily companionship with the old familiar faces. Of these aids language is unquestionably the chiefest. It alone promotes that perfect freedom of intercourse so indispensable to taking up all that a strange social medium has to offer. Moreover, touching now upon the particular conditions, the student loses nothing of the information his instructors have to impart, and is at once ready to confer with them free from the embarrassments that those of us who have spent a period on the European continent remember so vividly as the features of the early days and weeks, and maybe months. Besides, it is by no means uncertain that the differences of speech do not occasion appreciable psychological effects. It has often been alleged that the German universities do not exact the same attainments for their doctorate from foreigners as from natives. Were this literally true, it would be the reverse of complimentary to the non-German beggarly elements. But its truth lies to some extent to the impression which, owing to difference of environment and associations, accentuated by diversity of language, the foreigner often makes without contriving to make it. One would rather believe that the German universities did not treat American students as American universities sometimes do their Chinese alumni, let us say, by giving them a degree, if not as a matter of course, then as a matter of something like compassion, and hold, on the contrary, that the impression of originality made by the American on the Teuton, due mainly to difference of tongue, leads to appraisal of the stranger at more than his real worth. Whether this be the whole truth or not, an actual danger of the kind clearly exists, and its results can be observed or gathered in conversation by anyone who cares to investigate

a little. There would be far less danger of this decline to "middlingness" in a country where a common language formed the medium of communication. And in this respect, as everyone must recognize, the fact of obtaining a degree would be more satisfying to all concerned. For instance, to refer to what has actually happened, there would be much less danger of a thesis being accepted that had previously been rejected in America. And, in addition, the well-known Scotch trait of not being imposed upon by certificates and official documents, so dear to the German mind, would guard against some miscarriages. I do not contend that the degree would be more difficult to achieve, but I do say that fortuitous circumstances would be less likely to influence decisions. And this would in itself be a great gain to the true scholar, however it might affect the mere petitioner for a title.

Finally, it is a thousand pities that intercourse between the two great English-speaking peoples should still be so lacking in the salt of inwardness. True, Americans and British meet on the European continent, but unfortunately the types, which, after all, are not typical, only too frequently repel one another, and for reasons which it would not be for edification to particularize. There are also relations of a commercial kind, confined too much, it is to be feared, to the medium and extending too little to the persons. True, too, that American heiresses are imported, or import themselves, into certain circles of British society, and that some few British students pass to the United States, attracted by the superior instruction in dentistry. All these are possibly of the kind that go not out except by prayer and fasting. But here matters come to an abrupt end, greatly to mutual disadvantage, unless on occasions, to further disadvantage, an Irishman or a piece of Monroeism intervenes. In short, a common ignorance of inner spirit reigns almost supreme; there is not even a competent perception by the one people of what is presently transpiring with the other, the variegated information purveyed by the newspapers notwithstanding. In Britain some vaguely recognize, for example, that

higher education in the United States is not stationary. But there is hardly any appreciation of the marvelous strides recently made by the American universities; none of their system, of their influence, or of their extent. The fact that numerous mediocre schools, calling themselves colleges, confer titles looms large; the other fact, that the principal universities might read many a lesson to their British counterparts, is literally almost unknown. And, on the other hand, simply because they have achieved so much in so brief a space, Americans forget that this accomplished change has not yet had time to impress itself upon their cousins beyond the sea, and so tend to misinterpret the British temper toward them. They identify lack of information either with superciliousness or with effrontery. To members of both nations who know enough to know, all this appears to savor of gross absurdity. One way of elimination would be the fostering of that inwardness of spirit which first-hand knowledge, acquired in actual intercourse, alone can produce. Were a constant stream of the select minds of America to be directed toward Scotland, the results could not fail to be of most fortunate augury. I say, deliberately, Scotland. For here, more than in England, the American finds himself at home. Partly by temper, partly by force of circumstances, the Scot is a citizen of the world. This is the main reason why he is so popular with Americans. Perhaps, too, they regard him as a member of a nationality that has been downtrodden by the English. But I would remind them that Scotland has been subdued twice, and only twice. John Knox conquered her head, and Robert Burns won her heart. Otherwise she stands still where Wallace and Bruce put her, and this is yet another reason why the free people of the great republic find it easier to come to terms with her sons. More cautious, and for a little seemingly less approachable, the Scot has none of the Englishman's *morgue*; poorer and less the prey of social conventions, he is, if not a more pleasant, then a more suggestive companion. There is more "to him," as the expressive phrase has it. These characteristics have passed from

the nation into the university system. Nowhere has so much been accomplished on so little; the income of the four universities is but a bare half of that enjoyed by Oxford. And this has been done by individual effort. This must always be an attractive feature to the quick and independent American. Scotland is for him the best gateway to an understanding of the inwardness of the British people. And I can only conclude by expressing a hope that the considerations I have been privileged to urge, may lead first a few, and then many Americans, to take advantage of the provisions Scotland has made for their reception. They will find a warm welcome, and this implies that what can be carried away is not academic merely. They may make fast friendships, and by them put an end to much international folly. If I can help in preliminary difficulties, by talking with those who are near, or by communication with those who are distant, I shall be glad, knowing that, to some extent, my object has moved toward accomplishment.

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II

THE PEABODY EDUCATION FUND

Among the benefactors of education none have surpassed George Peabody in the timeliness and utility of his gift. On February 7, 1867, he placed in the hands of trustees of his own selection one million of dollars, the income of which was to be used and applied "for the promotion and encouragement of intellectual, moral, and industrial education among the young of the more destitute portions of the Southern and Southwestern States of the Union," "my purpose being that the benefits shall be distributed among the entire population, without other distinction than the needs and the opportunities of usefulness to them." On June 29, 1869, he added another million. Included in the two gifts, additional to the sums mentioned, were Mississippi bonds amounting to \$1,000,000, whose validity had never been questioned, and \$384,000 of Florida bonds. These States have refused to meet their obligations, for reasons which, however unsatisfactory, need not now be considered. These large and patriotic gifts were not unpremeditated, for in one of his confidential conversations with his chief adviser, the Hon. Robert C. Winthrop, he said: "This is no new idea to me. From the earliest years of my manhood I have contemplated some such disposition of my property."

Mr. Peabody was most sagacious in the selection of the original trustees, only one of whom, Mr. Evarts, now survives; and in his suggestion that, in filling vacancies, they, a self-perpetuating body, should keep in view an "equality of representation so far as regards the Northern and Southern States." Mr. Winthrop was most wisely chosen as the leader of this company of distinguished men, for then and afterward there was no one more universally accepted as the link be-

tween the old and the new of the Republic, and none whose counsels were more readily heeded. In the thirty years of its life the board has never failed of a quorum, and Mr. Winthrop's introductory addresses, models of pure English, outlined the policy and work of each session, for he was in fullest sympathy with the trust and kept himself intimately acquainted with what the general agents did and thought. It is doubtful whether there ever was in this land an association of men more distinguished for personal worth, large ability, varied experience in public life, and the enjoyment of high official station. Among the trustees have been three Presidents, Grant, Hayes, and Cleveland; two Chief Justices, Waite and Fuller; two Secretaries of State, Fish and Evarts; one admiral, Farragut; two bishops, McIlvaine and Whipple; financiers like Riggs, Drexel, and Morgan; famous generals of both armies, Cabinet ministers, Governors, members of Congress, of State judiciaries, lawyers, and men of business. A few years ago, on the suggestion of the general agent, it was thought advisable to introduce a practical and scholarly educator, and the President of Johns Hopkins University became an invaluable member.

Dr. Barnas Sears, President of Brown University, Rhode Island, who had had experience with common schools as the successor of Horace Mann, was chosen as the first general agent. With masterly skill he outlined a comprehensive policy to be pursued in the execution of the trust, and by a rare combination of personal, moral, and intellectual qualities, up to his death in 1880, he discharged with consummate success and marvelous tact his delicate and onerous duties.

No gift could have been more timely, or supplied a more imperative need, and very naturally and properly a statue to the South's greatest benefactor, to be placed in the old Hall of the House of Representatives, is meeting with the cordial approval of Southern legislatures. In 1860 the total assessed value of property in the South was \$5,200,000,000, which in 1870 had decreased to \$3,000,000,000. After the surrender at Appomattox, the whole South land, the scene

of military operations for four years, was a desolation; industries had been paralyzed; labor was disorganized, an untrained and strange element of citizenship had been created, bitterness of feeling existed, friction between races and sections was sharp, and pacification and reconstruction seemed to require long years for their growth.

Mr. Peabody longed for the restoration of harmony, to make "the prosperity more than superficial," and with the instinct of a statesman and a master's hand he seized a coveted opportunity for doing something practical and effective toward removing alienation, consolidating the Union, and putting the South on the road to the development of her moral and material resources. While seeking to be a blessing to the Southern States, he expressed an earnest desire that his gifts should be a boon "to the whole of the dear country which he had ever loved so well, and never so much as in his declining years." Never were patience, prudence, and wisdom more needed than in carrying out the design of the trust. In looking back over the history of the fund, in no one respect can its influence be seen to have been more potential for good than in its conciliatory and placating effect upon the South and in attaching the Southern people to the Union by new and loving bonds.

The primary and main work was to aid the States which had suffered "from the destructive ravages and not less disastrous consequences of civil war," in their "own exertions to diffuse the blessings of education and morality." In order to appreciate the difficulty of the undertaking and the usefulness of the trust, it must be borne in mind that, at the close of the war, not a single State within the field of operations had a system of free public schools. While colleges and academies had done an excellent work, and from a "poor school fund" were doled out pittance of relief, there was no organized, nor approximately adequate, provision made for the education of the white children. When to these were added the negro children, now equally citizens, the educational status can scarcely be even feebly apprehended. The

trustees resolved to confine their grants to public schools, and so they wisely and early made a vigorous and persistent effort to induce the States, as organized bodies politic, to include free and universal education among their permanent obligations, and the effort has been rewarded with the most gratifying success. Solicitations numerous and demands imperative were and are still made by private and denominational schools, by communities, by peripatetic mendicants, by representatives of all sorts of schemes, for large and small, permanent and occasional, contributions, and it has required no small patience and courage to resist these appeals and pursue the prescribed path. It has been done, and in carrying out the established policy and purpose, the simple rule has been inflexibly acted on of helping those who help themselves. When towns or cities asked for aid the grant was never made except on the condition that town or city should do as much or more. When States have established normal schools or teachers' institutes and sought Peabody assistance, the same rule has been rigidly applied. It has not been easy to adhere to the requirement of free tuition and support of schools by local or general revenues, but the adherence to it has indicated its wisdom. Now every State has incorporated into its organic law a system of public education, under State control and supported by taxation. In requiring such substantial pecuniary co-operation, the fund has more than trebled its power. During the thirty years of its existence, \$2,415,509 have been spent as the income from the two millions left by Mr. Peabody. Two years from the origin of the trust, the power to expend any portion of the principal expired. Mr. Samuel Wetmore was the first faithful treasurer; Mr. J. Pierpont Morgan is the second, and his wonderful skill and genius in finance have been exhibited in the management of these trust funds as well as elsewhere. School statistics for 1870, the earliest we have, are very meager, but a comparison of them with those for 1894 shows a marvelous progress in the States which have been beneficiaries of and been stimulated by the Fund.

In 1870 the pupils, white and colored, aggregated about 750,000, and in 1894 the white pupils were 3,835,593 and the colored were 1,420,995. The school attendance has increased more than twice as fast as the population, although the South has a larger proportion of children in its population than any other section.

From the organization of the trust to the present time, the agents have been constantly consulted by legislators and school officers and teachers about laws, school organization, institutes, selection of teachers, and the multitudinous questions that arise from putting into operation untried systems. One of them has had the unique experience of having addressed more American legislatures than any other one person on the continent. These addresses have generally been published at the expense of the States and widely circulated. It is probably not too much to say that no single agency in the Southern States has accomplished more than the Peabody Education Fund in molding and elevating educational sentiment, in securing advanced school legislation, in lifting up the profession of teaching, in making the free education of both races a recognized civil obligation. School superintendents have made frequent and cordial expressions of their indebtedness to the fund, and Dr. Harris of the Bureau of Education has put on official record this high testimony: "It would appear to the student of education in the Southern States that the practical wisdom in the administration of the Peabody Fund, and the fruitful results that have followed it, could not be surpassed in the history of endowments." Mr. George William Curtis, in *Harper's Weekly*, of November 22, 1890, was equally emphatic: "One of the most benevolent and ably administered public trusts upon a private foundation in this country. The effective annual distribution of the fund demands comprehensive knowledge of the condition and necessities of education in the Southern States and sympathy with the people of those States, and not less a general knowledge of the contemporary movement of education in every country, that every

improvement of method and every step of progress in every direction may be made available for the purposes of the trust."

A permanent result of the administration has been the building up to its great usefulness of the Peabody Normal College at Nashville, with its five hundred students, and the various most valuable normal schools in all the States. Another traceable influence of Mr. Peabody's benefaction is that it was the suggestion and stimulus of other immense gifts. Mr. Slater and Mr. Tulane, in so many words, make honorable acknowledgment to the credit of Mr. Peabody. One who best knows ascribes the great university in Baltimore, in part, to the same persuasive source—and it is well known that those connected with the Hirsch and other charitable endowments sought freely the counsel and advice of the Chairman and of the general agents.

By the express terms of the letter of gift, two-thirds of the trustees were empowered, after the lapse of thirty years, to close the trust. In this as in other matters, Mr. Peabody gave an "absolute discretion" to those in whom he had placed such full confidence. The time at which the trust might be extinguished occurred in February. In anticipation of the possibility, the trustees, in 1895, appointed a committee consisting of Mr. Evarts, the Chief Justice, and Messrs. Choate, Henry, Porter, and Curry to report on the subject. At their last meeting in October, in accordance with the recommendation of the committee, it was unanimously decided that it was not expedient to terminate the trust. In their judgment the time had not come for withdrawal from the field of usefulness, and this decision was sustained by the intelligent opinion of all the State superintendents of education. It can hardly be questioned that the finances will be better managed by the Board than by the States, and that it would be far from wise to deprive Southern education of the moral power and the directive and stimulating agency of such an association of trusted and capable men.

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III

ORGANIZATION OF CITY SCHOOL BOARDS

If it were required to describe the typical organization of an American city school system, the following outline might be given: A board of education is created by law, whose members are elected by the people, serve without pay, and have full legal power to establish, maintain, and control free public schools for all children of school age in the limits of the city.

They make estimates in detail annually of the amounts of money required for the schools during the next coming year, which estimates are submitted to the city council. That body appropriates money for those purposes named in the estimates which they think necessary and proper in view of all other needs of the city's government, and of the expected revenue from the taxes which they consider it expedient to levy. The money, once appropriated, is controlled by the board of education, who buy sites, build and repair school-houses, purchase supplies, hire and pay the necessary officers and teachers.

They make regulations for the management of the system and employ as their principal executive officers a secretary and a superintendent: the former to look after the details of their business affairs, and the latter to have especial care of all matters relating to instruction. The superintendent is presumably an experienced educator, well versed in all that pertains to school management, and a thorough student of education on its philosophical side; he is selected, moreover, with reference to his administrative ability. The course of study is largely the handiwork of the superintendent and embodies his ideas. The teachers are appointed by a committee of the board, acting with the superintendent. New teachers must be graduates of the city normal school or of

an institution of at least equal grade. If the latter, they must pass an examination before the committee.

The schools themselves are (1) elementary, with a course of study covering eight years; (2) high, with a four-year course, and (3) a normal school, with a year of professional study for intending teachers. A child is supposed to begin the course at six years of age and to complete it at eighteen, but in practice the average is about a year greater than this. Evening schools are maintained during the winter months, and there may be kindergartens and a separate manual-training high school, but these, though growing in popular favor, are not yet sufficiently numerous to have a place in the type system.

In a general way this may be taken as representative of the systems of the majority of American cities; but it may be that there is not a single one in which all the details are combined precisely as I have set them forth. The possible variations are as great in number as the combinations on the chessboard, and with respect to every feature there are instances of radical divergence from the type described.

SCHOOL BOARDS

IN regard to the number of members of the board there is not, nor can there be, any uniform rule. It is sometimes held that there should be some relation between the size of the city and the size of the board, but whether this is necessary depends wholly on the extent to which executive powers are confided to paid subordinates, who are supposed to be trained experts in their particular lines. The New York board controls the schools of over a million and a half of people, yet it numbers only 21 members, while Pittsburg, with a population of about a quarter of a million, has 37 members in a central board and 222 in local boards. There are 7 members of the Minneapolis board, while Hartford, with only a third as many inhabitants, has 39 school visitors and committeemen. Such contrasts are numerous.

The methods of selecting the members of the governing

boards are exceedingly varied. Ward politics is the great bugbear of the city school law-maker, and any amount of inventive genius has been exercised to devise a way of choosing school boards that would make it impossible for the ward boss to interfere. Incompetent principals and teachers chosen to "encourage" political henchmen; contracts corruptly given to fatten the treasuries of partisan organizations; assessments of teachers for campaign funds; unseemly intrigues, strifes, and bickerings within the schools themselves by adherents of different parties; the son of some local heeler allowed to be habitually unruly, to the detriment of general school discipline, because the teacher fears for his position if he attempts to assert his authority—all these evils and more are feared by those who have seen the results when local politics has had undue influence.

Where there is a school board clothed with due authority, whose members are not influenced by political considerations, these things cannot be. Hence the solicitation for a board "above politics."

The first boards were chosen at popular elections and the members were ward representatives. This has not always worked well. The local feeling in members has often prevented them from appreciating any interests other than those of their own districts; and local politicians of small caliber have crept in from out-of-the-way wards, and have made things very unpleasant in various ways. To avoid these things, in many cities the board is elected from the city at large and not as representatives of any particular locality. In other places the mayor appoints the board, often with the advice and consent of the council. But, alas for human devices! instances have often occurred in which both these methods of selection have proved to be as objectionable as ward elections, for there are big politicians as well as little politicians, and the big ones are no more disinterested than the little ones; the city machine may dictate the board members at large just as the ward machine may elect the board members from the wards. And mayors

are not always above appointing their personal and political friends, even if they are not the most desirable men for the places; so these plans also have been discarded in some places, as in Philadelphia, where the board is appointed by the judges of the Superior Court, and in New Orleans, where they are in part appointed by the Governor of the State and in part elected by the city council.

All of these schemes come from efforts to take the schools "out of politics." But, after all, there is but one way to do that, and that way is by the creation of a general sentiment demanding clean and honest administration of the schools, without regard for any consideration save their best good. It would be difficult to prescribe a general recipe for bringing about this desirable condition of affairs; vigorous and well-meaning efforts often fail, and sometimes do actual harm by unduly discrediting the schools in popular estimation, and by throwing them into a state of feverish uncertainty, without accomplishing the reforms desired. But it is certain that in very many places the sentiment in favor of good schools is so general, and the habit of having them so firmly fixed, that even the worst political tricksters vie with the "best citizens" in their earnest support. With such a sentiment, the worst law, apparently, may be satisfactory; without it, the best law may fail. Examples to prove this are not hard to find.

The law that relates to Savannah, Ga., would probably be the very last to be copied by a modern city school law-maker. There we have a unique instance of a board that is a self-perpetuating close corporation, handling public funds, holding public property in its own corporate name, and managing public schools. This would be considered, nowadays, a very dangerous power to put in the hands of what is practically a private corporation; but the Savannah board was established in 1866, and during the entire thirty years that have passed no change has been made in the law governing it, save to extend the field of its operations. The members have usually been professional and

business men, and have always been of high standing in the community. The list has embraced Protestants, Catholics, and Jews, Democrats, Republicans, and Independents; but it appears that no action of the board has ever been tainted with a reasonable suspicion of improper motives.

Washington, D. C., is often described as the best governed city in the United States; yet there is probably no place on the face of the earth where men are governed by written laws in which the laws themselves are in a more chaotic condition. The laws that regulate the school trustees are past finding out; the members themselves do not know what their legal powers are. Nevertheless, the schools are harmoniously and successfully conducted, and deservedly stand high among the systems of the country.

On the other hand, the name of another city will readily suggest itself in which a half dozen reasonably good laws have been in force in the last thirty years, and not one of them has succeeded in giving the city a system free from the evil eye of the politician. But, until recently, evidences of any general interest in the management of the schools were hard to find. A gentleman prominent in the last year or two in the agitation for school reform, according to his own statement, had practiced law in the same city for twenty-six years before he had been conscious of seeing a school building. His explanation of the unsatisfactory condition of the schools was that the indifference which he himself had felt was general among a very large proportion of the best class of citizens. If good citizens turn the administration of the laws over to schemers and self-seekers, how can even the best statutes accomplish good results?

But while it is true that the public opinion behind a law is the principal factor in the success of its operation, the importance cannot be overestimated of so constructing the statutes as to provide for those times which may come to any city when the public shall become less watchful through long security, or when the chosen officers shall be beguiled by influences not of the best.

SOME NOTEWORTHY SYSTEMS

In some cities that relic of rural school organization, the local trustee system, is still retained. In Hartford, Conn., the organization is nothing more nor less than that of every country township in the State; and a very complicated organization it is, with its selectmen, school visitors, joint board of selectmen and school visitors, district committeemen, town meetings, district meetings, and a few other things. In Pittsburg, Pa., the ward trustees are even more powerful than the district committees in Hartford, for in the former city the trustees may levy taxes for the purposes which they control, while in Hartford the district taxes are laid in district meetings. The central board in Pittsburg has more complete control over the High School than do the school visitors of Hartford, but on the other hand the superintendent is appointed by the visitors in the latter city, while all the trustees vote for the corresponding officer in the former. Philadelphia also retains its ward trustees, but their powers are somewhat less extensive than in Pittsburg. In all three of these cities the central authorities examine and license teachers, while the local boards select and appoint them. The overthrow of the local trustees in New York city is still fresh in the minds of all; this year is the first in their history in which all the common schools have been controlled by a single board.

There are comparatively few plans of organization now in operation which are not products of evolution, but in a few notable instances schemes have been brought into being and enacted into law which had little or no local precedent on which to build. The most conspicuous of these in late years has been the so-called "federal system" of Cleveland, O. The provisions of a legislative body without executive functions and a single executive officer who is directly and solely responsible to the people for the administration of the schools, are novelties in American city school organization, and up to this time the example of Cleveland remains

unique. The plan has met with considerable favor. It received the indorsement of the Sub-committee of Five of the National Educational Association's famous Committee of Fifteen, and will undoubtedly influence school legislation in the future. Unquestionably, as long as the director is a paragon and his principal appointee, the superintendent, is above criticism, such a system as this will be conspicuously successful. But time, and time alone, will show the results of one-man power in school management during revulsions of popular favor causing sudden radical changes, or relaxations of public watchfulness resulting in the election of men of doubtful fitness. These things do occur, and such possibilities must always be taken into consideration.

School District No. 1, Arapahoe County, Colo., which embraces the greater part of Denver, is another Minerva among school organizations, and its system has been widely copied, especially in the West, with modifications to suit local conditions. The school board is supreme in school matters, and owns no allegiance to any other local authority. There are but six members, and two are elected each year for three years, at a special election. In the twenty years that the system has been in operation it has been unusually successful. The policies of the board have been subjected to no sudden deleterious changes, and the progress of the schools has been uniform and consistent. As Cleveland has had only one director under its present system, so this district of Denver has had but one superintendent, and that a strong man, who exercises great influence in shaping the course of the schools' affairs. In neither case, therefore, can the excellence of the schools be necessarily ascribed to the system as such. To say that it was the system of organization that made it possible for these good men to retain their positions for so long, and that therefore the system itself is responsible for the good schools, would be erroneous. Other superintendents now in office have held on for just as many years, or more, under systems that are conceded to be bad. Nevertheless, the Denver plan is entitled to a full measure

of respect, for it has operated successfully in other cities as well as in Denver, and the score of years during which it has served without change is, after all, a long time in the history of city schools, for few systems are as old as fifty years.

The present laws that relate to the school committee of Boston contain nothing especially remarkable, but their history is full of things which it would be well to avoid. The primary schools were managed prior to 1855 by a committee which had grown from 36 to 190 members. They filled their own vacancies, and were generally a law unto themselves. At the same time there was a general school committee of 24 members, two elected by the people of each of the twelve wards. When the primary school committee was abolished, the general committee was increased to 72, or six members from each ward. With the annexation of more territory to the city, the school committee grew to 116 members. It was so unwieldy as to interfere with the proper prosecution of business, and in 1875 the number was cut down to 24, elected from the city at large. They had formerly no authority to determine the location or character of the schoolhouses, that power being exercised by the city council till 1875. Then the school committee was given a voice in the matter, but the division of authority was equally unsatisfactory in practice, and in 1889 the entire control of the erection of buildings was turned over to the school committee, though the money must first be appropriated by the council.

The mayor is *ex-officio* a member of the board of education in some places, as in Atlanta, Ga., and in others he is *ex-officio* its president. The latter was formerly the case in Washington and Boston. A rather unusual provision is made in a few cities, of which Rochester, N. Y., and Detroit, Mich., are examples, by which the approval of the mayor is necessary to validate acts of the board of education. In cases of this kind the board may generally override the mayor's veto by a two-thirds vote.

The single instance of a city—Buffalo, N. Y.—without a board of education is well known. All local school legislation there is done in the city council, and the superintendent, an officer elected by the people, is the head of the city department of education. But it is probable that Buffalo's unique distinction will soon disappear, for a movement is on foot to remodel the system, and without doubt a board of education will be included in the new scheme.

Though there is no exact parallel to the Buffalo plan of organization, there are other cities in which the school board is the creature of the city council, and is so subordinate as to have no authority whatever save that which the council chooses to delegate. Precisely this is the case in Atlanta, Ga. The mayor and council have legal authority to maintain a system of public schools, and to "provide for appropriate agencies to regulate, improvise, and carry on said system of schools, and render the same efficient." All the rest is in their discretion. To their credit be it said, however, the mayor and council have provided a board of education with very full powers, practically the only power retained being the appropriation of money. It is a matter of pride to the city that the board of education has always been composed of men of high character, that they have the hearty support of the rest of the city government, and that they are permitted to perform their duties without vexatious interference.

Substantially the same power over the schools is given to the council of Baltimore, Md., though the city school board is provided for by State law. The board of St. Paul, Minn., has been since 1891 constituted somewhat similarly, though its functions are more minutely specified by law. The St. Paul board has full power to appoint teachers, and to divide between them the money appropriated for salaries, but in Baltimore nearly every act of the board may apparently be reviewed, annulled, or altered by the council.

The contrast between the Minneapolis and the St. Paul boards is striking. Though the two cities are practically

one, on one side of the narrow strip of land that divides them the school board has very large powers, even to the right to levy its own taxes, while on the other side the board is not a corporation, cannot hold property, and does not even purchase its own supplies.

CONTROL OF REVENUES

The best criterion of the power of a school board is the degree of their independence in money matters. If they must prepare detailed estimates that may be refused as a whole or in any item by some other body, their functions are so restricted as to be almost entirely ministerial. They cannot introduce any novelty or provide for any extension without the concurrence of the authority which holds the purse strings. This is usually the state of affairs, and, as tending to conservatism and economy, it has especial advantages when a board develops an inclination to foster expensive fads. But that can seldom be charged; it more often happens that the board is deprived of funds urgently required to provide for the actual needs of the children in the way of buildings and teachers.

The theory that there should be a balance wheel somewhere in the city government, to keep all its parts running smoothly and uniformly, is a sound one. The experiment of allowing each municipal board to levy taxes for every purpose its members think necessary has always resulted disastrously, for the aggregate is sure to be excessive. The common council is logically the body which should act as the balance wheel in so adjusting the expenditures of the several branches of city government as to bring them all within reasonable bounds; and from the standpoint of the student of city government in general, where the schools are distinctly municipal affairs, no valid objection can be urged to lodging the power of appropriation of funds in the council. To be sure, many instances of neglect and injustice to the schools have occurred under this method of organization, but the same is true of other departments.

To allow the board of education to levy its own taxes, while withholding the same right from the sewer commissioners, police, fire, and park boards, is to assume that the school men are superior beings to their official brethren, and deserve especial consideration. That would not be admitted.

The way that this whole question is often avoided is to take the schools entirely out of municipal control. The charters of some of the big cities do not mention schools at all, or only briefly and incidentally, while the school boards are separately chartered, with full powers of taxation, within prescribed limits. The powers of the Western boards, with respect to finances, are usually much greater than those of the East. St. Louis, Denver, and Minneapolis are types of cities whose school boards enjoy the right to levy whatever tax they require without submitting their estimates to any other body. In Milwaukee, Wis., a variation is introduced by which the school board determines the amount of the levy unless the city council decides otherwise by a two-thirds vote. In Detroit all money asked by the board for current expenses must be granted if it does not exceed a certain fixed sum per pupil, but if that is not sufficient the council decide whether the desired funds shall be appropriated. Estimates for buildings and sites must run the gantlet of both the council and the city board of estimates.

THE SUPERINTENDENT

The selection of the city superintendent is another point upon which there are interesting differences of practice. He is usually elected by the school board; but in San Francisco, Buffalo, and some other cities he is a city officer, and is elected at a popular election. A man must be a good politician, as well as a good educator, to succeed in obtaining office under these conditions, and the field of choice is necessarily narrowed to men well known and popular in the city. Such a thing as securing as superintendent a man who had made his reputation in another city would be out of the question. Philadelphia secured both Mac Alister and Brooks

from other places; Cleveland, O., brought Draper from New York and Jones from Indianapolis; and so many other of the most successful superintendents have found their widest fields in places far distant from the scene of the beginning of their careers; but this style of selection is not for San Francisco or Buffalo. Nevertheless, the list of superintendents of those cities embraces several names prominent in educational circles.

In some of the New Jersey cities the same plan of popular election of superintendents prevails, and the result has been in many cases the choice of men without even the pretense of an expert knowledge of school matters. The law undoubtedly contemplated that the superintendent elected should perform the usual duties of the office, but this has not proved advisable in some instances. In one city the board of education has appointed a supervising principal, who is, to all intents and purposes, the superintendent in the ordinary sense of the term, while the superintendent, officially so called, and elected as such by the people, is but little more than the treasurer and maker of reports.

The most powerful city superintendent in the country, so far as the law can make him so, is Mr. L. H. Jones of Cleveland, O. With absolute control over all that relates to instruction, he has the full power of examination, appointment, and removal of teachers. He himself is the appointee of one man, the director, though he must be confirmed by the school council. This plan is an experiment, at best, and it remains to be seen whether time will prove it to be wise. It may or may not lead to more frequent and sweeping, and therefore harmful, changes in policies and personnel than does the usual practice of making the superintendent amenable to the government of a continuous board. The same man has been director since the beginning of the present system four years ago, and both the superintendents whom he has appointed have been not only men of ability, but have been believers in the same general educational policies; so that the "Cleveland plan" has not yet been put to any real test.

In Washington, D. C., the same authority which appoints the members of the school board also appoints the superintendent, and the latter does not depend for his official position upon the former. The relations between the board and the superintendent have been in the main cordial and harmonious, but at one time a bitter controversy arose between the first superintendent and the board, which was very demoralizing to the schools. The board sought earnestly to change the method of choosing the superintendent, urging that if he were their own appointee such disputes would be impossible. They failed in this, but secured the removal of their antagonist.

SELECTION OF TEACHERS

Next to the actual instruction of pupils, the selection of teachers is the most important duty connected with the schools. A certificate of fitness of some description is always required before appointment, and that certificate is, or should be, good evidence that the holder will perform reasonably satisfactory service. Selection from certificate holders would therefore seem to be attended with but little risk. But the examination for the certificate is at best only a partial test, and many pass it who could scarcely be rated as mediocre teachers, and some fail who are capable of doing good work in the schoolroom. The examination is a help in the work of selection, but no more. It narrows the field, but does not designate the individual.

Commonly the examination and choice of teachers are given by law to the school boards, and the details are left for local regulation. No matter what the rules might be, the judgment of the superintendent is, under normal conditions, treated with a deference that practically amounts to putting the choice in his hands. It has been said of one superintendent that he has planned every schoolhouse built, and has selected every teacher appointed, in his city for the last twenty years. This, if literally true, is exceptional, but it is natural and proper that the man who directs the work of

the teachers, and is to a great extent responsible for its character, should have a voice in their selection. In many cases the choice rests wholly with the superintendent. The absolute control exercised over examination and appointment by the superintendent at Cleveland has already been mentioned. Formerly the superintendent at Buffalo had powers equally as great in this respect, but now the mayor of the city appoints a board of five examiners, whose tests candidates must meet before the superintendent may appoint them. In some places, as in New York and Cincinnati, the superintendents nominate the teachers, and the boards make the appointments. The superintendent is nearly always a member of the examining board or committee.

There is good reason to believe that the appointments made by local trustees, in cities in which there are such officers, are not always the best. District committees at Hartford have often employed persons as teachers and then sent them to the school visitors to be examined; and one case is mentioned in a recent report of a person who was found teaching in the schools without a license, and was directed by the visitors to present herself for examination. It was only after repeated attempts, and by the exercise of great leniency because of a desire for harmony, that she was able to pass at all. This merely illustrates the difficulties that are liable to occur when separate boards have concurrent jurisdiction over the same subject.

TABULAR EPITOME

The table appended presents an epitome of the organization of 23 city school boards. All boards in cities of over 200,000 inhabitants are included, and those of some smaller places are given because of especial features in each case which make them interesting specimens of school organization.

JAMES C. BOYKIN

BUREAU OF EDUCATION
WASHINGTON, D. C.

TABULAR EPITOME OF THE ORGANIZATION OF THE SCHOOL BOARDS OF 23 CITIES—PART I

CITY.	POPULATION IN 1890.	NAME OF SCHOOL BOARD.	NUMBER OF MEMBERS.	HOW CHOSEN.	SELECTED FROM THE CITY AT LARGE, WARDS, OR DISTRICTS.	TERM OF OFFICE.
1	2	3	4	5	6	7
1 New York, N. Y.	1,515,301	Board of education. { 35 boards of school inspectors.	21 5 each.	Appointed by the mayor. do.	At large. Inspection districts, defined by board of education.	3 years; one-third appointed annually. 5 years; 1 appointed each year.
2 Chicago, Ill.	1,099,850	Board of education.	21	Appointed by the mayor, with the approval of the city council.	At large.	3 years; one-third appointed annually.
3 Philadelphia, Pa.	1,046,964	Board of public education. { 37 boards of directors of sections, or wards.	37 13 each.	Appointed by the judges of the court of common pleas. 12 elected by the people; 1 member of board of education for the ward is <i>ex officio</i> member of sectional boards.	Wards. Sections, or wards.	do. 3 years; one-third chosen annually.
4 Brooklyn, N. Y.	806,343	Board of education.	45	Appointed by the mayor.	At large.	3 years; one-third appointed annually.
5 St. Louis, Mo.	454,770	Board of president and directors of St. Louis public schools. School committee.	21	Elected by the people.	7 at large; 14 from districts defined by courts.	4 years; one-half chosen at each biennial election.
6 Boston, Mass.	448,477	Board of commissioners of public schools.	24	do.	At large.	3 years; one-third elected each year.
7 Baltimore, Md.	434,439	Board of education of the city and county of San Francisco.	22	Elected by city council. ¹	Wards.	4 years; one-fourth elected each year.
8 San Francisco, Cal.	298,997	Board of education.	12	Elected by the people.	At large.	2 years; all chosen at the same time.
9 Cincinnati, O.	296,908	Board of education.	30	do.	Wards.	3 years; all chosen at the same time.
10 Cleveland, O.	261,353	Board of education.	1 director; 7 members of sch l council.	do.	At large.	2 years; 3 councilors elected one year and 4 the next.
11 Buffalo, N. Y.	255,664	No school board; schools controlled by mayor and council directly.	.....	.....	.....	.....

¹ A matter now in dispute and awaiting judicial decision.

12	New Orleans, La.	242,039	Board of directors.	20	8 appointed by the governor of the State; 12 elected by city council.	At large.	4 years; one-fourth chosen annually.
13	Pittsburg, Pa.	238,617	Central board of education.	37	Elected by the several boards of directors of sub-districts.	Sub-districts or wards.	3 years; one-third elected annually.
14	Washington, D. C.	230,392	37 boards of directors of sub-school districts. Board of trustees of public schools.	6 each.	Elected by the people of the several sub-districts.	do.	do.
15	Detroit, Mich.	205,876	Board of education.	16	Appointed by the Commissioners (or general executive officers) of the District of Columbia.	At large.	Varies; determined by the commissioners.
16	Milwaukee, Wis.	204,468	School board.	36	Elected by the people.	Wards.	4 years; one-half elected at each biennial election. 3 years, all chosen at the same time.
17	Minneapolis, Minn.	164,738	Board of education.	7	Appointed by the aldermen of the several wards, subject to confirmation by city council.	do.	6 years; 2 elected at each of 2 successive biennial elections, and 3 at the next.
18	St. Paul, Minn.	133,156	Board of school inspectors.	7	Elected by the people.	At large.	3 years; 2 appointed each year except every third year when 3 are appointed.
19	Denver, Colo., District No. 1.	75,000	Board of education of school district No. 1, Arapahoe county.	6	Appointed by the mayor.	do.	3 years; one-third elected annually.
20	Indianapolis, Ind.	105,436	Board of school commissioners.	11	Elected by the people.	do.	do.
21	Charleston, S. C.	54,955	Board of school commissioners.	10	do.	Districts defined by school commissioners.	do.
22	Hartford, Conn.	53,230	Board of school visitors.	9	6 elected by the people; 4 appointed by governor of State, two of whom are nominated by trustees of Charleston High School and 2 by trustees of College of Charleston.	6 elected from districts, each comprising two wards; 4 appointed at large.	4 years; all chosen at the same time.
23	Savannah, Ga.	43,180	10 district committees. Board of public education of the city of Savannah and the county of Chatham.	3 each. 12	Elected by people in town meeting. Elected by people in district meeting. A self-perpetuating, close corporation as to 9; 3 appointed by the mayor, with consent of city council, the mayor to be one of the three, unless he is already a member.	At large. Districts defined by selectmen of town. At large.	3 years; one-third elected annually. do. Not specified by law as to 9; 3 appointed annually.

TABULAR EPITOME OF THE ORGANIZATION OF THE SCHOOL BOARDS OF 23 CITIES—PART II

CITY.	PRINCIPAL SOURCE OF SCHOOL REVENUES.	TITLE TO SCHOOL PROPERTY IS VESTED IN	MANNER OF SELECTING CITY SUPERINTENDENT.	AUTHORITY CHARGED BY LAW WITH EXAMINATION AND CERTIFICATION OF TEACHERS.	AUTHORITY CHARGED BY LAW WITH APPOINTMENT OF TEACHERS.
1	8	9	10	11	12
1 New York, N. Y.	Appropriations by city board of estimate and apportionment.	City.	Elected by board of education.	Board of superintendents.	Board of education on nomination of board of supts.
2 Chicago, Ill.	Appropriations by city council from school tax levied by them.	City, in trust for the use of the schools.	do.	Board of education.	Board of education.
3 Philadelphia, Pa.	Appropriations by city council, board of education apportioning funds to sectional boards.	City.	do.	do.	Board of education for high schools; sectional boards for ward schools.
4 Brooklyn, N. Y.	School tax levied by city council.	Board of education.	do.	do.	Board of education.
5 St. Louis, Mo.	Tax levied by board of directors.	Board of directors.	Elected by board of directors.	Board of directors.	Board of directors.
6 Boston, Mass.	Appropriations by city council.	City.	Elected by school committee.	School committee.	School committee.
7 Baltimore, Md.	do.	do.	Elected by school commissioners.	Superintendent, in conjunction with a committee of school commissioners.	School commission-ers.
8 San Francisco, Cal.	Tax levied by city and county board of supervisors.	Board of education, in trust for city and county.	Elected by the people; is a city officer.	Board of 5 examiners including supt.; appointed by board of education.	Board of education.
9 Cincinnati, O.	Tax determined by board of education.	Board of education.	Elected by board of education.	Board of 6 examiners; appointed by board of education.	Superintendent, with approval of board of education.
10 Cleveland, O.	Tax determined by board of education.	Board of education.	Appointed by school director, with approval of school council.	Superintendent.	Superintendent.
11 Buffalo, N. Y.	Appropriations by city council.	City.	Elected by the people; is a city officer.	Board of 5 examiners; appointed by the mayor.	Superintendent.

12	New Orleans, La.	Appropriations by city council.	Board of directors.	Elected by board of directors.	Board of directors, with aid of superintendent.	Board of directors.
13	Pittsburg, Pa.	Taxes determined in amount by central board of education for teachers, etc., and by local boards of directors for buildings, etc.	High schools, etc., in central board; ward schools, in local boards of directors.	Elected by convention of all school directors in the city.	Superintendent.	Central board for high schools, etc.; local boards for ward schools.
14	Washington, D. C.	Appropriations by U. S. Congress, one-half derived from taxation of the District of Columbia, and one-half from Federal Treasury.	District of Columbia.	Appointed by Commissioners of the District of Columbia.	Committee of school trustees with aid of superintendent.	Board of trustees.
15	Detroit, Mich.	Taxes determined by city council and city board of estimates.	Board of education.	Elected by board of education.	Board of education.	Board of education.
16	Milwaukee, Wis.	Tax specified in amount by school board unless city council determine otherwise by a two-thirds vote.	City.	Elected by school board.	Superintendent, with a committee of the school board.	Superintendent, with a committee of the board, subject to approval of board.
17	Minneapolis, Minn.	Tax levied by board of education.	Board of education.	Elected by board of education.	Board of education.	Board of education.
18	St. Paul, Minn.	Appropriations of city council.	City, in trust for purposes of education.	Elected by school inspectors.	Board of inspectors.	Board of inspectors.
19	Denver, Colo., District No. 1.	Tax levied by board of education.	Board of education.	Elected by board of education.	Superintendent.	Board of education.
20	Indianapolis, Ind.	Tax levied by school commissioners.	Board of school commissioners.	Elected by school commissioners.	School commissioners.	School commissioners.
21	Charleston, S. C.	Tax specified by State law.	City.	do.	do.	do.
22	Hartford, Conn.	Town tax laid in town meeting; district tax laid in district meeting.	High schools in the town; elementary schools in the several districts.	Superintendent is one of the school visitors, assigned to that duty by the board.	Board of school visitors.	District committees.
23	Savannah, Ga.	Appropriations by city council.	Board of education.	Elected by board of education.	Board of education.	Board of education.

IV

THE SENTENCE-DIAGRAM

Those who attempt to justify the use of the sentence-diagram in the teaching of grammar commonly do so upon one of two grounds. Either the diagram represents the actual structure of the sentence, but fleshless, articulated, so that the student may see plainly its anatomy as he cannot do in the living body; or the diagram, though not in any real sense representing the actual structure of the sentence, yet serves as an arbitrary mechanical device for expressing visually the parts of speech contained in the sentence, with their relations to each other, as the science of grammar has ordained them. The use of the diagram implied in the first defense may be termed logical, that in the second formal.

Let us examine the first of these conceptions of the diagram. We shall all agree that a diagram which truly represents to the eye the actual logical or psychological structure of the sentence is a desideratum. An X-ray photograph of the sentence is needed. Such the diagram purports to be, but can its claims be allowed? If we assume that the horizontal, straight-line diagram represents with any degree of accuracy the structure of the sentence, what must we conclude as to that structure? First, that the sentence is a definitely fixed and bounded thing, about which we have no concern save to know that it now is, and that it can be chopped up into small pieces for rearrangement in a set pattern called the diagram. Any sense of its origin in the mental processes of one individual, or its destination in the mind of another, is excluded. It is enough to know that the sentence is here, printed in a book, and that it may be broken up by him who has the skill to do it into minuter fragments. But, in the second place, the very coexistence of these separately named fragments in the sentence implies the problem,

How did they come to be here together? Did they develop successively out of the inchoate sentence, as a psychological fire-mist? Is the history of the sentence that of the solar system—first, a nebulous whole, out of which, one by one in the process of development, emerged the various members? That is, does the sentence, psychologically, precede the separate words? Or do the separate words pre-exist in their isolation, these being gathered up by the speaker and joined each to each to form the sentence? The latter conception is that which has always been held by our grammarians, and which underlies our use of the straight-line diagram. The teacher, and at least the brighter pupils, understand that in diagramming we are but undoing the work of our hands, in order that we may the more clearly see just how we have done it.

This, then, is our conclusion from the premise that the diagram accurately represents the structure of the sentence—that the sentence comes into being not as the natural outcome of psychological or social conditions, growing and differentiating according to biological laws, but that it is more or less an arbitrary thing, once consisting of separate words, which were selected, perhaps, from a dictionary, and laboriously tacked together by someone who set out to make a sentence—it may be even with the malign intention of printing it in a book, to be diagrammed! More briefly, the structure of the sentence is mechanic rather than organic. It has not grown, but has been manufactured. Stated so baldly as this, the conclusion is manifestly absurd. Yet we have been so long accustomed to regard the sentence from the standpoint of formal grammar—that is, as a thing dead and static, a manufacture instead of a growth—that it will not be superfluous to discuss briefly what the living sentence actually is.

Let us say, in the first place, that the sentence is any form of words which conveys an idea from one person to another. It may, then, not be more than one word—such a word, for instance, as an interjection. We often hear a

boy who cuts his fingers while whittling say, "Ouch!" "Cracky!" "Jiminy!" or use some other favorite exclamation of surprise and pain. He may, very likely, in another instant add, "I tell you, that hurt!" but we do not need to be told that. His exclamation has already conveyed his thought to us. And, in the same way, the girl who comes unexpectedly upon one of her companions says "Good gracious!" or "Mercy sakes!" adding, as soon as she gets her breath, "How you scared me!" But in this case, as before, we do not really need this added sentence to tell us that the girl is frightened. That we know from the first exclamation. The interjection has, in both cases, conveyed an idea, complete, though primitive. We gain from it the speaker's half-formulated sense of a certain state of things, felt in the one case as pain and in the other as fright.

That the interjection does represent a state of things dimly perceived by the speaker will become more evident if we try to determinè, in so far as we can, just what is this thought of the boy and the girl that the exclamation has conveyed to us. And perhaps we can best do that by going back to memory for it. If you can remember just what you thought at a certain time when you were hurt, and cried out with some exclamation such as our whittling boy used, you will find that at first, just as you cried out, you did not think anything distinctly. You had a confused feeling of pain that made you say "Ouch!" but for the shortest possible time you didn't know what had made it, or how. Then, in another instant, you had realized that you yourself had caused this pain, and in half a second more that you had caused it by cutting yourself with your knife. In this way your thought grew out of the confused feeling of pain. It has two parts now, yourself and the cutting, while before there was only one—the confused feeling of pain. These two parts were in the one feeling all the time, but you could not see them at first. Only as your thought grew did it divide so that you could see its two sides or aspects.

So a child's thought grows, by successive differentiations

from a homogeneous whole. A very young child knows only that it is comfortable or uncomfortable. If it is uncomfortable it cries, but it does not know that the sun hurts its eyes or that a pin is pricking it. Its thought has not divided into the sun and its mode of acting on its eyes, nor into the pain and its mode of acting on its flesh. The child's thought is hardly yet a thought at all, but a vague, undifferentiated feeling. But by successive experiences of comfort and discomfort, it learns, as we say, to distinguish—that is, to separate out of this jelly-like mass of feeling the chief agent of the feeling and the way in which it has acted to produce that

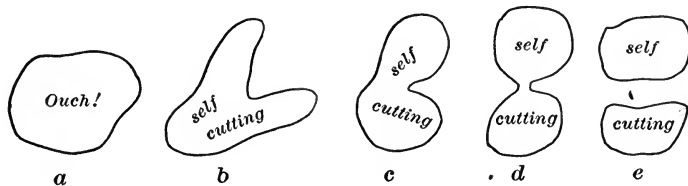


FIG. 1

feeling. The thought has grown, and divided as it has grown.

The first nebulous idea of a state of things is like the seed in which lies folded, yet indistinguishable, the entire tree. Unless you are a scientist, you cannot tell by looking at the acorn which part will be the trunk of the tree, which the roots, and which the leaves. When it begins to grow, you see a green shoot rising from the ground. This, too, is one, like the seed; but after a while it unfolds into two leaves; its stem grows and finally becomes the trunk of the tree, which divides into two main branches, these each into two again, and so on until, as you look up into the tree, you find its smallest twigs have divided off two and two from the next larger, and so on to the trunk itself. The tree has divided as it has grown. And so with every thought. It is at first one and undivided; a confused sense, perhaps of pain, which, as it grows, sends off its two main branches—the thought of the chief agent in producing the state of

things felt as pain, and the thought of the way in which this agent acted to produce that pain.

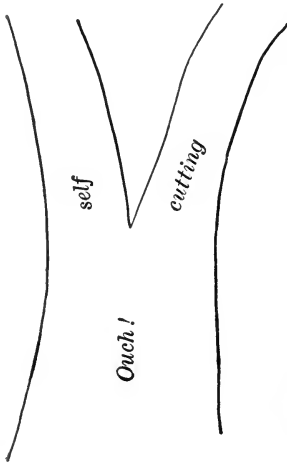


FIG. 2

If thoughts divide as they grow, we should expect to find also that sentences, which convey thoughts, do the same thing; for otherwise, how could a thought that had begun to divide be communicated to another person? It would need to be expressed just as if it were still undivided. But we know that we do express, by means of sentences, thoughts that have already divided. You say "Ouch!" at the moment when the knife slips, and you feel the pain of the cut without thinking clearly what has happened or what has caused it; but when someone

asks, "What's the matter?" your thought has had time to grow and divide; you realize you are hurt, and by a cut from your knife, and answer, "I cut myself with my knife." Your thought has by this time divided into the two thoughts: yourself that has been hurt on the one side, and the way in which you have been hurt on the other; and so the sentence also divides. Anyone who heard you say "Ouch!" knew at once that you had been hurt; but, as your thought grew, it divided more distinctly until you could say plainly: "I cut myself with my knife." The "Ouch!" has grown and divided into a sentence with two parts. Let us consider another dividing sentence. Let us suppose, for instance, that you are a child set to take care of your younger brother, and have let him play in the yard while you tried to read and watch him at the same time, and suddenly you looked up to see that he was nowhere in sight. Your first sentence, if you stopped to say anything at all, would probably be something like this: "Why! Fred's run away!" When you said "Why!" you did not think anything clearly,

but were shocked, startled. Something had happened. But in an instant this vague sense of something wrong had divided itself into the thought of the person who had caused the shock and the way in which he had done it. That is, you thought "Fred" on the one hand, and "has run away" on the other. Or, if you went home from school some afternoon and found the corn all trampled down, and cattle tracks on the ground, you would probably exclaim in dismay: "Oh, my! The cows have been in the corn!" Your first "Oh, my!" meant dismayed surprise at the state in which you found things; but in an instant you realized that this state of things was occasioned by the cows, and that they had done the damage by being in the corn. And so your sentence split up, as your thought had done, into two parts—"the cows" and "have been in the corn." It is not so easy to see that all sentences develop like these from a nebulous, ill-defined consciousness of a state of things into a two-branched thought of the agent of that state of things and its method of action; but if there were time to analyze each variety of sentence separately, we should be convinced that the same fundamental method of growth is characteristic of all those expressed judgments which we call sentences. Let us pause to analyze just one variety—such as is represented by the sentences, "The knife is sharp," "The milk is sour," "That chimney is hot,"

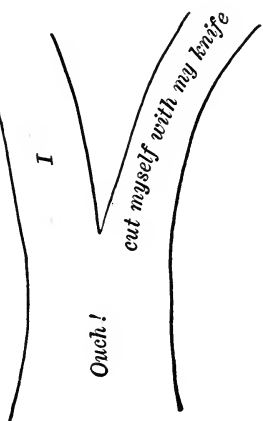


FIG. 3

"My ankle is lame." This is the kind of sentence with the analysis of which formal logic is wont to begin; hence its fallacious conception of the copula as a coupling pin. When once we come to study sentences as live, growing things, warm from the speaker's mind, we must see that the copula-sentence is a shorthand reduction from some

earlier, livelier saying. It is a petrification, or a desiccation of the verbal sentence. This will, however, become more apparent in the course of the analysis.

The whittling boy, of whom we have previously spoken, would say "Ouch! That knife's sharp!" for precisely the same reason that he said "Ouch! I tell you that hurt!" He has cut his finger with the knife, and, in saying "This knife is sharp," he says "This knife acts sharp," "This knife acts as sharp things do," that is, "This knife acts in such a way as to show that it has a good edge." These facts he expresses in short form by saying, "The knife is sharp." The pain of which he is conscious in his cut finger divides itself into that, on the one hand, which had most to do in producing the pain, "The knife," and, on the other, the way in which the knife produced it, "is (acts) sharp."

In the same manner, if you touch the chimney on a lighted lamp, you will at once draw back your hand with the exclamation, "Whew! that's hot!" But by this you evidently mean that the chimney has burned you, or has acted upon

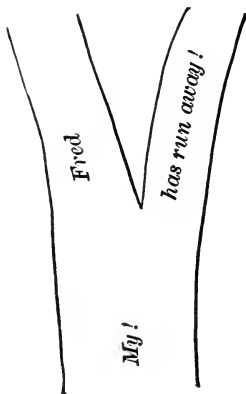


FIG. 4

your hand as hot things do. You are conscious, in exclaiming "Whew!" of a state of things, a pain, which divides straightway into the chimney as the thing most active in bringing about this pain, and the way in which it acted to bring about the pain. It acts as if it were hot, it acts as hot things do, it is hot. We continually reduce in this way a verbal to a copula-sentence. The first time John comes to a decision without due deliberation, we say charitably, "John acted hastily in that matter." But when John has acted

hastily, not once, but half a dozen times, to our personal knowledge, we shorten the judgment process by affirming not, "John acts as hasty persons do," or "in a hasty manner," but "John is hasty," "John's a hasty fellow."

In the same way we learn to say, "The report of the gun was loud," rather than "It jarred the ground under our feet and deafened our ears"; "My medicine is bitter," instead of "It puckers up my face," and "The sun is bright," for "It dazzles my eyes."

We have become so accustomed to this shorthand method of expression that we do not realize that it was ever anything else with us. We find it difficult to get back into the habit of the savage and the child, who naturally think of persons and things as always acting in some way, as always doing something. Here, however, the scientific attitude will help us. It is our scientist who now habitually thinks of every object in the natural world as somehow acting upon every other. He recognizes that things are said by us to be round, green, or smooth because they act in a certain way upon our eyes; that a ribbon is declared to be red because it acts in such a way (that is, by stopping all the yellow, green, blue, and violet rays of the sun, and allowing only the red ones to pass to us) that it produces a state of things recognized as red.

When we can put ourselves back in our own experience, or in that of the race, to a period in which the copula-sentence was fluid, we find it, like the verbal sentence, a doubly branching development out of a single state of things dimly perceived by the speaker.

If there were time, it might be shown that the various kinds of sentence—declarative, interrogative, exclamatory, and imperative—grow in the same manner; their differences being matters of the extent of their growth rather than of its method. We should also find, as we might indeed expect, that the sentence does not stop growing when once it has divided into two main branches, any more than

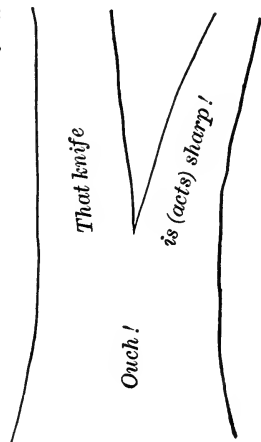


FIG. 5

the tree does. As the two main limbs of the tree keep dividing into smaller branches, then into twigs and leaves, so does the sentence. The subject and the predicate divide and subdivide into clauses, phrases, and finally into words.

Now it is clear that if we are to represent adequately the vital structure of sentences regarded as products of growth, we shall need some device other than the straight-line diagram. This diagram will of necessity convey the notion that the subject and the predicate have been taken from different quarters and set arbitrarily alongside each other ready for adjectives, adverbs, phrases, and clauses to be successively tacked to them. But this is, as we know, very far from the truth of the matter. The interjection has expressed for us in a single word the whole sentence, albeit yet undeveloped. We have almost seen it grow before our eyes. Putting ourselves imaginatively

in the place of the speaker, we have traced the twofold branchings of this embryo thought, and have seen the subject and the predicate unfold almost simultaneously out of the sentence-germ. This unfolding we may, if we choose, represent by such a figure as the amœba, with its tentative outreachings. A blackboard full of amœbas, while perhaps somewhat shocking to the sensibilities of the old-fashioned grammarian, is yet several degrees less absurd, and infinitely less misleading than the network of prim straight lines in which we are wont to encase the several members of the sentence. The amœba diagram would not, however, carry us very far. As the subject branches, and the predicate in its turn begins to divide, the amœba must be abandoned for a more highly

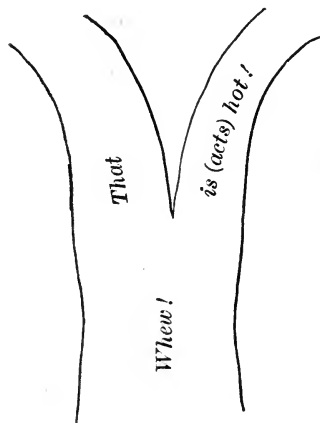


FIG. 6

developed structure, such as that of the tree. This, with its ramifications, is capable of figuring the most complex sentence likely to grow from a human mind. But it is not necessary to insist on the tree. The active-minded teacher may use a hundred diagrams, the more the better, if only they be true to the thing they claim to represent. They will not, however, be truthful representations of sentence-structure unless, like the amoeba- or the tree-diagram, they take account of the growth of the sentence, figuring it as a natural development rather than as a mechanical construction.

It is surely high time that this idea of growth, now dominant in other fields of investigation, dawn upon the darkness of grammar. We have been too long bound by the mechanical notions of an earlier and a cruder philosophy. Before the evolutionary hypothesis gained credence in biology, and while the animal was still regarded as a compound of his various members, these being joined each to each in some little-understood way, then logic, using the conceptions furnished by science, held the judgment to be a hitching together of the particular and the universal, and grammar had no theory to account for the sentence except that it was a similar tacking of predicate to subject. But biology has long since discarded the notion of a mechanical splicing of part to part as the genesis of the animal structure, to adopt the theory of successive differentiations of the various members from one homogeneous jelly-like mass of protoplasm, wherein lay the promise and potency of the developed creature. Logic, following this cue, has, in our own day, substituted for the notion of the judgment as particular plus universal, or percept plus concept, that of the vague, nebulous feeling of a state of things which divides, on the one side, into the agent of that state of things, and, on the other, into that agent's method of action. And grammar, which has hitherto embodied the conceptions of the old logic, may now fairly be expected to follow the later philosophy in its less artificial notions of the structure of thought, thus breathing new life

into the traditional forms of syntax. The new point of view is inevitable. As it has come to prevail in science and philosophy, so must it in the study of language. And of its advent we surely need seek no further sign than the widespread revolt against the use of the old diagram in the teaching of grammar.

To conclude the argument: The old diagram does not represent the actual structure of the sentence, as our best psychology has it. Therefore it cannot be justified as the visual representation of sentence-anatomy. And still less can it be justified as a mechanical device, convenient though inexact. For, far as we must with all our best efforts come from imparting to our pupils right conceptions of any subject, we dare not willfully mislead them by the use of any "device," however temptingly "convenient," that does not truthfully represent, so far as we can judge, the reality which it symbolizes.¹

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¹ The organic character and growth of the sentence is suggested by scattered observations in Romanes' *Mental evolution in man*, and, more explicitly, in Jespersen's *Progress in language*. The last paragraph of the preface to Bosanquet's *Logic* hints at this conception, but the body of the work develops it no further. The foregoing suggestions have, however, been for me *ex post facto*. But I am genuinely indebted, for my fundamental notions of the logic of the sentence, to certain implications in unpublished lectures on the Logic of Ethics, delivered by Professor John Dewey at the University of Chicago, October to December, 1895, and to some investigations into the psychology of the judgment-process made at the time by Dr. A. F. McLennan, the Fellow in Philosophy at the University of Chicago. Finally, in rhetoric, a parallel conception is found in the just-issued *Composition-Rhetoric* of Professor Fred Newton Scott of the University of Michigan, the lessons entitled, "How paragraphs grow."

V

THE THROAT OF THE CHILD

I

In the very wide and interesting field of child-study, not enough attention has been given to certain abnormal conditions within the throat, and their relations to the physical and mental condition of the child; and, further, in the matter of child-study the physician should hold a leading place.

It is for the exposition of these ideas that this paper is written. It is not the intention to cover every abnormality which might exist within the child's throat. I shall ask attention to but two conditions, the one known commonly under the name "adenoid vegetations," the other known as enlarged tonsils. I am aware that these conditions are familiar to most investigators; but, with the person who has not had a medical education, this knowledge is only superficial. It is my desire to cover these subjects very completely, in language devoid of technicality, that these things may be appreciated by those whose life study is that of the child; and that I may show my appreciation of the value of child-study.

I have said that in child-study the physician should be first. The reason is obvious. The ignorant man, looking upon the face of a watch, does not understand why the hands move; and even if he uncovers the works and can see their every movement he is still ignorant. To understand he must know the composition of each part, its relation to the other parts, and the cause of the activity of the whole. So with the child. The man best familiar with the make-up of the organism, and understanding its liability to pathology, is best able to study it. He can trace cause and effect better

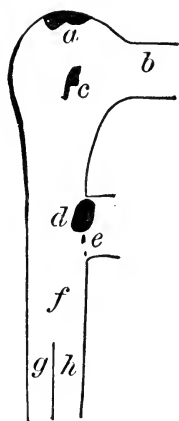
than one who has merely an external acquaintance with the organism. The man who, having no understanding of the internal child, gives a positive opinion based upon the observation of a few objective trifles, is a myopic ignoramus. He sees the machine; but he is too near-sighted to discover the God in the machine.

II

It seems fitting to give, at this point, a brief outline of the normal throat of the child.

The pharynx is the throat proper. It extends from the vocal bands below up to the base of the skull. At the top it is arched; this locality being called the vault of the pharynx. It is lined throughout by mucous membrane—that is, a membrane in which the tissue cells are arranged to form these structures; on the surface there is a single layer of cells packed closely side by side; underneath this the cells are collected in certain fashion into groups. Of these groups there are two kinds: one, a mucous gland, from which comes the mucous secretion; and one, a lymphoid tissue, from which is supposed to come a fluid that destroys all germs entering the throat from without. The glands discharge through minute ducts piercing the outermost layer of cells. Beneath this layer, and to a certain extent holding the other structures together, is another arrangement of cells called connective tissue. This last is properly the foundation of the whole and it carries the larger blood vessels and nerves. The vessels are freely supplied, in microscopic branches, to the layers above. The mucous membrane is in several locations bunched up into well-marked glandular structures called tonsils. The pharynx connects with the external world through two openings—the nose and the throat—and it is at these openings that we find the more important of the tonsils. In the center of the vault, just above the nasal opening, is the tonsil of the vault; and it is here that the growth known as “adenoid vegetations” occurs. At the point where the mouth opens into the

pharynx the tonsils proper are situated, one on either side of pharynx as one looks in through the mouth. There are, in reality, five openings from the pharynx: two below, one into larynx leading to the lungs and one into the tube leading to the stomach. But these do not concern us here. We have to consider but three: the ones into nose and mouth, and one other leading from the vault to the ear, the eustachian tube. These may be shown roughly in the following diagram:



This representation of the pharynx is, of course, only diagrammatic. The pharynx may be likened to a tube vaulted at the top, with openings along anterior side for nose and mouth. In the diagram the letter *a* is in vault and just above it is shown the tonsil of the vault; *b* is nasal opening; *c* is orifice of eustachian tube leading to ear; *d* is tonsil; *e* is openings into mouth; *f* is pharynx leading below into esophagus (*g*) and larynx (*h*).

In the normal child the membrane of the throat is of a delicate moist pink color; there is no oversecretion; the tonsils are of a proper size, that is, just large enough to be seen; and the breathing space is ample and unobstructed. In the child with abnormal pharynx the contrary is the case. The membrane becomes pale; there is much thick discharge; the tissue in the vault may increase to such an extent as to shut

off the nose, and the tonsils proper may increase to the extent of shutting off the mouth.

III

We have seen above that the lining membrane of the throat has a certain structure, and that in special locations this membrane is increased to form tonsils. These tonsils being, therefore, nothing more than collections of the small structures, common to the membrane, thrown out in greater number. I now go a step farther and say that the "adenoid-vegetation" tissue has the same structure; that this tissue presents the same arrangement of structure as does the membrane from which it springs. The only difference is in the increased amount of tissue, and, therefore, in the increased number of microscopic structures.

The name "adenoid vegetations" is improper. It should be named, according to its composition, adeno-lymphoid tissue. It was at first thought that it contained only one form of tissue, but we know now that there is present a varying amount of the two varieties. I have myself verified this by aid of the microscope, and I am of the opinion that this tissue is simply normal tissue which some abnormal impulse has urged beyond its natural limit.

Almost always when this overgrowth occurs there is present also an overgrowth of the tonsils proper. We have seen that tonsil tissue and "adenoid vegetations," having sprung from the same membrane, are practically the same tissue. Being similar, it must be expected that a cause affecting one will be felt also by the other. In fact, there seems to exist a belt of this tissue within the pharynx, extending around both its external openings; and this tissue in the young takes on extra activity upon the slightest provocation.

It is thought that, since these tonsils are situated as they are, they exist for the protection of the organism; some even going so far as to say that because of this fact any increase in the tissue should not be disturbed. It must be granted

that the tonsil tissue has a function, and that the tonsils do protect. But it is quite absurd to say that, when this tissue is increased so greatly as to obscure surrounding landmarks; that when the organism gives an hundred signals of distress because of its presence; and that, when every sign points to harm, it is there for good! I repeat, this view of the matter is absurd. This tissue overgrowth exists for harm; it is of no value to the child.

IV

The causes of these growths are many. The tissues of the child are of extreme sensitiveness; the cell is very impressionable at this period of life, and responds to the slightest irritation. This is readily seen if we recall how quickly children react to internal disturbance. They are very prone to convulsions, especially when teething. Any slight indigestion throws them into a high fever, seemingly out of all proportion to the disturbance. To their especial diseases they are very susceptible; they flare up quickly, and as quickly subside. This same quality may be observed, too, in their daily life. Pleasure and pain are to them acute. Anger is sudden and sharp; joy is intense. They live acutely, in the moment.

We are not surprised, then, to find the throat responding to any irritation which may be present. This irritation may come from without, but in the greater number of cases it exists in the blood. The throat, be it remembered, is lined by a membrane extremely sensitive, in which the blood supply is free. It, therefore, quickly responds to any abnormal condition of the circulation. In fact, the child's throat is a mirror in which one may read the child's general condition.

Among the external causes of these conditions may be mentioned: frequent colds in the head, catarrh, and living in damp and poorly ventilated houses. I doubt if these are really so much the causes they are said to be. I have never seen a case that could be traced to such causes. It is true

they do have an influence upon the growths when the growths are present; but that is no proof of causation. Living in damp rooms has, of course, an effect upon the individual's general condition. I doubt if it has any direct effect upon his mucous membrane. Catarrh and "colds" are due usually to the "adenoids," and vanish when the condition is overcome.

The really potent causes may be found in circulatory conditions. A specific poison present in the blood, or irritating half-products of a faulty tissue chemistry, or a depleted circulation, quickly show their effect in the child's throat. In the first class may be mentioned children of syphilitic parents. Where this exists as a direct inheritance its causation cannot be denied. Some hold that syphilis having been present in a remote generation may be cause for "adenoids" in the present. This I deny, for I do not believe that syphilis can hold its potency through so many dilutions. In the third class we may put children of tubercular parents, or of parents suffering from any wasting disease. In the second class I think we have the most important cause, and the one most common. This cause we name diathetic. Diathesis is from a Greek word meaning "to be disposed"; that is, having a tendency toward certain diseases. When we say that a person has a rheumatic diathesis we mean that he is inclined toward rheumatism: he has always present every factor but one necessary to bring on an attack of rheumatism. The one thing necessary is an exciting cause; and such is found in undue exposure to cold, overexertion, or overeating. A diathesis may be inherited by the child, or it may be acquired during its life.

In my opinion the diathetic is the cause most often underlying these pharyngeal overgrowths in the child. This is so at least, in my experience, for I have been able to trace this origin in the greater number of my cases. If we understand this condition it will not be difficult to see the reason in this statement. Suppose we have a child one of whose parents has the rheumatic diathesis. This means that in the parent

there is some fault by which his organism creates too much of certain waste products: or that this waste is not properly eliminated from the blood by the liver and kidneys. Either of these conditions, or both, may be present. Suppose, then, that the child inherits this parental fault. From the very moment of conception this condition begins to impress the new being. In consequence these waste matters, which are profoundly irritating to delicate tissues, are constantly accumulating in the child's circulation. The blood, loaded with irritating matters, becomes a constant irritant; and the blood supply to a part, being renewed with every heart-beat, keeps the irritation always present. It is small wonder, then, that delicate mucous tissue, saturated with blood, and made up of cells whose main characteristic is irritability, should respond to this irritation. This they do, and we find thrown out increasing areas of this same tissue, which only ceases when the irritant is removed. This goes on from conception to birth and the child usually carries into the world some small portion of this tissue overgrowth. From birth the growth may increase without limit. It is not often recognized early, parents being very blind in this respect; but, when the objective signs of this growth become so marked that even stupidity may note them, they may be recognized.

With the acquired diathesis we see precisely the same result, with the difference that these manifestations are noticed a few years later, instead of at or near birth. The forming of a diathesis requires some years; but in the child it is not difficult. All that is needed is a constantly overloaded circulation to induce in certain organs a habit of non-function. That is, the demand upon these organs is so constant and so great that they soon tire and refuse to do their proper work. This, carried on for years, soon settles into a diathesis, for, if these organs cease to functionate, the same waste matters are found present in the circulation that were found there with the inherited diathesis.

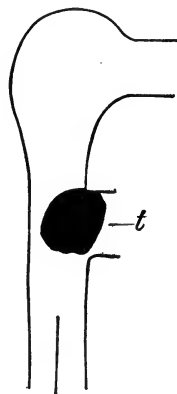
The sins of childhood lie mostly in the stomach. Children

are constantly feeding: and their activity requires this. But in the pleasures of eating their natural hunger soon degenerates into a craving. They are not always hungry, though they seem to be; it is an abnormal craving which they seek to satisfy by constant eating. This is especially noticed in the desire for candy and for sweet foods. Most children have sole direction over what they eat. The consequences are obvious. Being constantly stuffed with rich food hard of digestion, the digestive tract has to labor to the best of its ability with the burden. It is soon upset, the liver refuses to work, constipation is present, and we have started a train of circumstances which readily and rapidly lead to the diathetic habit.

V

In this section I shall illustrate the harm done by these conditions, by means of cases and diagrams. The cases will be more impressive than mere words, and I feel sure they will be found of interest.

The first case is that of a boy aged six years whose tonsils were enormously enlarged, as shown by this diagram:



' t, location of enlarged tonsils, one on either side of tract at opening into mouth—opening into vault nearly totally obstructed—as was also that into mouth.

His tonsils had been growing slowly for a number of years; lately had become so large as to threaten his health.

He was very nervous, had no appetite, and his sleep was disturbed by nightmare. He presented a fairly typical picture. His throat was so well filled with tonsil tissue that he had trouble in getting air through the nose, so the mouth was called upon for help. His skin and mucous membrane were very pale; under the eyes the skin was dark and sunken. He was given chloroform and both tonsils amputated. Recovery was prompt, and improvement in general condition was marked in a short time.

The second case is that of a girl aged five years, whose vault was completely filled with "adenoid vegetations," as shown here:



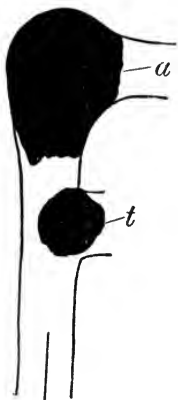
a, represents adenoid-mass in vault of pharynx. By comparison with diagram in Section II. it will be seen that topography of vault is completely obliterated—the nasal opening and orifice of eustachian tube are completely covered.

This girl suffered much from earache and sore throat. She breathed entirely through mouth and was thin and delicate. She was given chloroform and the mass removed from vault. She made a good recovery; there was no further earache or sore throat.

The third case is that of a boy who suffered from the effects of enlarged tonsils added to that of "adenoid vegetations," as shown in diagram on p. 270.

This boy had trouble with throat for several years. Had had sore throat with cough for weeks; there was complete

closure of nose, and almost of the opening into mouth. He was very weak, pale, and without appetite. All of the obstructing tissue was removed under chloroform; and his



This diagram shows a combination of the conditions in the two going before—the two explanations will do for this.

return to normal was remarkably prompt, the cough leaving him, not to return.

Let us review these cases carefully, that we may impress ourselves doubly with the manner in which harm is done by these growths. In the first case the condition is not so very grave; still it might become so if an acute inflammation occurred in the already large tonsils. It would probably shut off the breathing channel completely, and the child would suffocate. The mere presence of the overgrown tonsils is a source of irritation. They produce headache, catarrh, nightmare, and a number of nervous phenomena. In the next case we have a simple condition, but one which does great harm. Existing in the vault, it does this: It obstructs the tube leading to the ear, producing earache, and it may produce very serious middle-ear disease, leading to deafness. It closes the nose completely so that the child has to use the mouth for breathing purposes. This, of course, is improper. The nose is for respiratory purposes: the mouth cannot perform the function of the nose. The nose has a very important function in preparing the air for

the lungs. It frees it of micro-organisms, and regulates its temperature and its moisture. We may expect to find here, too, an indigestion due directly to the mouth breathing. With the nose closed mastication is performed hurriedly, for there is a nervous desire to empty mouth that breath may be taken. There may be, also, a profuse catarrh of nose and throat consequent upon the presence of the "adenoids." In the last case we have a combination of the two conditions. Either one is burden enough for a growing child, but when combined they form an extra heavy burden. All the symptoms of the two may be found in the one, and it is not difficult to pick out a child, so embarrassed, by merely looking at the face. The mouth is open, the eyes vacant, and the whole physiognomy is that of stupidity—in some cases almost idiocy. And the mental condition of the child seems to be no better than that indicated by the face. He cannot hear readily, and the mental action is slow; consequently, he appears in every respect stupid. At school he is a constant worry to his class and to his teacher; at home his parents lament that he is such a fool. But the fool is only a temporary fool; he but awaits the coming of proper treatment, when he throws off his stupidity to become a bright and useful child. How clearly is treatment indicated in these cases! No longer is the child backward and the despair of parents and of teacher; he develops into the proper child, and, under careful supervision, goes on to become a proper man.

VI

In conclusion, a word in regard to treatment. The best procedure is to operate under chloroform, removing all offending tissue at one sitting. This is, in my opinion, the only way to do, but parents are fearful of an operation and always desire to try other methods first. One may attempt to reduce the growths by local application of constringing drugs, or by the application of electricity. In my hands these measures have proven unsatisfactory. Drugs do not reduce the tissue; electricity can be made effective, but the

child objects to its use. There is considerable pain attendant upon its use, and there is much apparatus for the child to see. These alarm him and he does not submit quietly, if at all. Objection is made to the giving of chloroform that it makes dangerous an otherwise simple operation. I have never found it troublesome when given properly. I have done many of these operations, having used chloroform in every one, and have not had the least trouble. Perhaps I have been lucky; but I think the "good luck" has been due to these precautions: the use of nothing but the best and purest chloroform, properly prepared for anæsthesia; preparation of the child for the operation; and care in administering the anæsthetic.

Treatment does not begin and end with the operation. In those cases where the cause may be clearly defined it is not enough to remove the tissue. If the cause still exists the growth will recur. If the cause be in a syphilis, a tuberculosis, or a diathesis, measures suitable to overcome these must be instituted.

In many cases these growths can be prevented. Proper attention to the child's diet and daily life will do much toward this. If the formation of the diathetic habit can be prevented, these tissues will not increase. That is a task for the mother. She should be instructed in these things. She should be told of the harm that may come to her child through these growths: and she should be told what part errors of eating play in their causation. The child must no longer be allowed to fashion his manhood in his own way. He needs intelligent direction that the mistakes of nature may be avoided. Brought up properly, in such manner, he becomes as the stoutest tree in an old orchard, sturdy and fruitful. He is a blessing to himself and a joy to his fellow-beings. Allowed the riot of his own thoughtless will, he grows up as a veritable upas tree—of no value to himself, and poisoning his whole environment.

HENRY J. MULFORD

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VI

AN INTERVIEW WITH THE SHADE OF SOCRATES

One evening last winter I was sitting alone in my study, quietly enjoying a mild cigar and giving myself up to what St. Piron calls "that pretty laziness which is classically known as the rapture of contemplation," when presently I became aware, "by soul or ear," of somewhat other than myself in the apartment; and, turning my eyes, I saw, across the room, immediately opposite to where I lay, half reclining, in my easy chair, the figure of an old man, seated. His hair was long, white, and considerably disheveled. His ample beard fell down upon his broad breast, and he looked, from top to toe, the re-embodiment of the ideal sage and philosopher.

Wondering at the sight, I turned to see if by any means the lamplight could have reflected the image of my old friend Walt Whitman from its frame, where it hung upon the wall just over the mantel, into the chair where sat this reverend form before me. But apparently discerning my thought from my action, to my utmost surprise the vision spoke:

"By Zeus, there is a resemblance between us! and perhaps in more ways than one; but that is neither here nor there;" and the bright and eager eyes twinkled just a trifle as the old man gave utterance to these words.

With this introductory oath as a key to his identity, I knew that my visitor was none other than the shade of Socrates; and hoping that the old man, as was always his wont, had come to talk, unobserved, with my foot I pressed the electric button which is on the floor under my table, and thus signaled my stenographer to take her place quietly

and without disturbance behind a screen in the corner of the room, just in the rear of where Socrates sat. The girl appeared promptly and noiselessly, and it was but an instant till I received from her the telegraphic signal, "O. K.," which she made by tapping the point of her pencil lightly upon the table. She reads the Morse alphabet, as also do I, and we often use it between us. I tapped back, rapping with my finger nail on the arm of my chair: "I have a visitor here to-night and I think he will talk. If he does, I want you to write down all the conversation of the evening."

I got her "O. K." in reply, and then I knew that all was well.

All this occupied much less time than it takes to tell it, though, indeed, there seemed to be no need of haste, as the venerable form in the room seemed to be filled with rest and content, and made no sign of desire to depart. The old man sat there quietly looking about, as though he were measuring my apartment and myself, and just as I got the second "O. K." from behind the screen he spoke again:

"You fellows of these days take things very easy when you are off duty, don't you? Now in my time, not even our tyrants, who for the most part gave themselves up to luxury, and always so when they were not fighting, could boast of so easy and restful a chair, for instance, as the one you are now lounging in."

This he said not reproachfully, but rather as though he would congratulate me, and I replied:

"Why, I had hardly thought this to be luxury. Certainly it is not extravagant; or, if it be so, there is much like it all over this land. This chair is only one such as we make many thousands of, every week, at our factory, No. 106 Commercial Street, and we find a ready market for all our product, even among the common people; for we make them so cheaply that all can afford to have them."

"At what price can you sell such a chair as that?" inquired the sage, showing more interest in my business than

I had supposed he possibly could; for, from what I had learned of him when I was at school, I had come to think that the old philosopher never got his mind down near enough to mundane affairs to even imagine that there was so material a thing as money value to anything in this world, much less that he would care to ask about it. But since he had asked, I replied—I always reply to one who asks the price of our goods—and said:

“We sell these chairs to merchants at nine dollars per dozen, and they retail them at one dollar each, and there is scarce a family in the country too poor to buy one or more of them.”

The old man raised his shaggy eyebrows a trifle and, rising, moved a little toward the center of the room, where he seated himself in the mate to the chair I occupied, and spent a moment in settling himself into its easy embrace; then he said:

“Thus, even thus it is, O most excellent William! This chair is but a type of all else in this, your age and generation. In these days you can make all material things in such quantities and sell them at such prices that all who are fairly industrious can have them, even in profusion. Have you ever reflected on the significance of such a condition of affairs?”

I told him that I had thought something about it, but that I felt sure I had never followed the train of reflection to its ultimate conclusion. I also intimated that, if he had anything to say upon the subject, I should be exceedingly glad to hear from him.

Being thus challenged to show his wit regarding things modern, as it were, the old philosopher threw his hands over his head, grasping the back-top of the chair, and said:

“By Zeus, I have considered it much! but though I had the heads of Hydra, and in every head the tongue of a silver-voiced Demosthenes, and though they should all speak at once, yet they could not, together, express the things that I have thought concerning this wonderful age in which you

live—no, not even though they should talk till Charon came again to row them once more into the land of the Shades, beyond the river Styx.”

Instinctively I felt that the “divine sign” had come to the old man again, and rejoicing that I could hear the pencil of my faithful stenographer, as it flew over the pages behind the screen, I blew a little whiff of smoke into the air, and set myself to listen:

“This chair, as I have already said,” he continued, “is but an index, or key, to the whole modern situation. For this was made, throughout, I take it, by machinery.”

I nodded assent, and he went on:

“It is your machinery that gives this age a character and its people an environment such as this earth has never before seen; and I doubt if you who live in the midst of it all fully realize the difference which this new factor in the world’s economy is bound to make, as it forces its way into all human affairs. I cannot stop for details, nor need I do so in the presence of all the easy means of reference which you have for posting yourself on this point,” and he glanced at the rows on rows of books that are ranged upon the shelves that line my study walls—books on all manner of subjects—and went on:

“It is your machinery that makes your age what it is on its material side; but back of this there is a factor which, though unobserved by the many, is far the more potent. Indeed, it is the primal cause of all your mechanics, the very source from which everything in this line has come. I refer to your philosophy, which is, indeed, the basis of everything, in the last analysis.”

At the mention of this talismanic word, philosophy, as it fell from the lips of the master, I threw my cigar into the grate; for I felt certain that, if he should enlarge on that topic, it would require the full power of an unnarcotized brain to keep within sight of him. Imagine my surprise when my guest continued, as follows:

“I say your philosophy, that is, the philosophy of your

age, this age; the philosophy which works by inductive methods, and which ultimates in positive science intellectually, and in useful mechanical appliances materially; a philosophy which has for its corner stone the sublime truth that the only reason for the existence of anything, in this world, or any other, is use; and that the continual betterment of everything, everywhere, is the only excuse for continued existence, the only motive that can be honestly urged for continued endeavor!"

As he said this he raised himself up in his chair, and for some time thereafter sat erect as he spoke. I had it on the point of my tongue to ask a question, but the old man cut me off:

"Oh, you need not speak! By Zeus, and all Olympus, I know what you want to say! You want to ask me what becomes of all my talk in the Agora, and at the lyceum and academy if this last remark of mine be true. You need not blush because I read your thought so well, nor am I ashamed to answer. For, in truth, I always held it as a primary virtue that every man should speak the honest thoughts of his own heart, and that whenever one found himself in the wrong it was but true manhood for him to acknowledge his fault. I therefore both excuse you and exonerate myself. For, of a truth, I have, in these last years, learned that the great bulk of what I once believed to be the true philosophy is far from being all I thought it to be! I grant that it had its elements of strength, but too often it was pressed beyond bounds until it became a mere sound of empty words, filled with vagueness and abstraction, leading to nothing that was definite and of actual use, either to soul or body. Indeed, I now know that those twin sophists of my day, Euthydemus and Dionysodorus, were but extreme expounders of the philosophy which I myself held in their time. Nevertheless, I am not filled with regret, nor am I ashamed either of my professions then nor of my acknowledgments now. I lived then, as I do now, true to the light by which I had vision, and that is enough."

I nodded approval of the sterling integrity of soul which his words portrayed, and tried to indicate by a look that I should be pleased to have him continue his discourse on modern times and affairs. He seemed to read my desire intuitively, and presently he said:

“ This definite philosophy of yours, which works by induction, has revolutionized the world. It has discerned the actual laws of nature as they work all through the universe. It has made known an astronomy that is without a flaw; a chemistry that is no longer guesswork, and has worked itself out in the material world in a million mechanisms that go to serve mankind. It has unfolded to the mind of man the law of evolution, which is the fundamental principle on which all creative energy works; and it has revealed the God of heaven and earth as absolutely the Omnipotent, the one who doeth all things well, and at whose hand not even the least shall ultimately suffer harm. It has eliminated from human thought the idea that evil is a positive entity, and has led men to a faith that even death and the grave are provided for in the eternal inherence of things! ”

The old man glowed as he spoke, and his eye shone with a light such as it was wont to emit whenever his famous demon was in command. He paused a moment, as though to give me a chance for a word, if I desired to speak, and I said:

“ But do you not fear, O Socrates! the outcome of this mode of thought and procedure which, if I remember rightly, you once so strenuously opposed? ”

“ By no means, ” he replied, “ for when I held this opposite view, I indeed saw little in the concrete world worth living for—a fault which arose in my mind because of my misconception as to the origin and value of all things! In those days we looked upon all nature as arbitrarily made by the gods, as whim or fancy possessed them; and according to our theory as to how this or that came into being, we counted it of great or of little worth. But in your day, you know that the source of all things is the same, and hence you

force the issue of use upon everything, and thus get out of all, the good which the Author of all has embodied in everything. To us (and it has remained much the same until your philosophy has overthrown it in the last half of this century) the gods (you perhaps would say God) were always interfering with human affairs, and interposing their power to set at naught their own well-established laws. Believing this, we felt that we could never tell what was going to happen, no matter how diligently we strove to compass a given end. But it is not so with you. If you turn the key on that electric lamp, so as to break the circuit, you know that the light will go out. Or, if it be out, and you join the circuit, you know what the result will be. In my day we knew nothing about such definite knowledge as that, but all was counted as uncertain and indefinite, even as the chances of battle or the blowing of the winds. The result was our philosophy, which it was but natural the uncertainty of our minds should have given rise to."

"But were you not then searching for the truth, O Socrates!" I said, "even as we are now?"

"Most certainly we were," he replied; "but we had small conception of the meaning of that word then. To us truth was an abstraction, absolute, indefinable, and not to be comprehended."

"And is it not even so?" I rejoined.

"Yes, in essence it is," answered the sage, "but that is neither here nor there, so far as the finite mind of man is concerned. It is not the absolute and infinite that the human mind has to deal with when conditioned in its earthly environment. It is toward these that it moves, but the means by which it approaches them are concrete, and of the earth, earthy."

"But is not the soul contaminated by contact with that which is baser than itself?" I asked.

"By no means," my guest replied, "if only that which is subordinate be kept in its proper place, and made to serve the end whereunto it was appointed. Indeed," he con-

tinued, "here lies the secret of true virtue, which, while I dwelt upon the earth, I was never able to define, though often I essayed to do so; namely, that thing or man is truly virtuous which thoroughly fills the place in the economy of life which it or he is ever set to serve. This is according to your philosophy, which makes use the ultimatum of all things, as it truly is."

My stenographer had taken a fresh pencil at the beginning of the last paragraph, and just as the old man spoke the final word of the last sentence the point of her Faber broke, with a snap. The sage started a little, looked about as if he hardly knew what to make of the noise, and then, as if his train of reflection had been broken, he took up a fragment of it, as follows:

"Now, as you may have observed, O most excellent William! all these modern affairs interest me greatly, and I have not hesitated to change all my former modes of thought and doctrine in conformity with the truth as I now see it really exists. And the thing that distresses me is that so many of my so-called followers still stick to the ways which I have abandoned, even when reason and their own good sense ought to show them the folly of so doing. And, more than all, do I regret that the men who do this are the very ones who essay to be leaders of the minds of their fellows—your teachers, professors, and those who count themselves the educational chieftains of this age. Many of these are still straining their eyes to learn what I once said, or did, or thought, rather than to learn what they ought to say, or do, or think, now and in the future. Nay, more, many of them are still striving to use my ways of teaching and my modes of study, which are as foreign to the true spirit and needs of this age as my old sphenodona is out of date by the side of a Winchester rifle!"

I saw that he was well into his subject now, and so kept perfectly still while the old man proceeded:

"And the thing that grieves me most of all is, that so many millions of the youths of this age have to suffer for

that which I ignorantly did, and which my disciples still refuse to abandon. Why, are you aware, O William! that a very large part of all that is taught in your public schools to-day is based on my antiquated philosophy; and, worse than that, that the methods of study and the means of acquiring knowledge which I used twenty-three hundred years ago are still the ones chiefly in vogue in these schools, though scarce one of them has a rightful claim to such place under the new dispensation? By all the gods at once," he exclaimed, "it has made me turn in my grave more than occasionally, this untimely condition of things; and can there be no help for it?"

He bent upon me almost an agonizing gaze, and I ventured to say:

"Perhaps, O Socrates! if you should name definitely some of the changes that you would like to see in our schools and their ways of working, what you have to say might be reported, and some of our teachers might try, for a little, at least, to see what could be done to rectify the wrong which you so much deplore."

"And that I will," replied the sage. "Perchance though but a single one should hear and heed, even that one shall be to me as precious as the dew upon Mount Ida, or as the nectar of Hebe to a thirsty god.

"Let me say then, first," he continued, "that too much I held to the direct acquirement of abstract ideas. That there are such, I admit, but I now know that they are only to be attained to through the concrete; and that, therefore, the material world is of equal import with the spiritual, since it furnishes the foundation by which the latter alone can be reached. I charge, hence, that your schools have much to do with materials and the actual doing of things (not the playing at doing things, for in this there is no substance, but with the veritable doing of things), if they would truly train your youths in the ways of positive virtue.

"Now this is only done in small measure, as your schools are managed to-day. Your children are set tasks in books,

which they are asked to commit to memory; and if they do this, and can say over, in their classes, the words of the book, even from the first to the end of their course, they are counted as educated! But how shallow a thing is this, O William! in the presence of the real acquisition of positive truth. A memory of words is not the possession of knowledge—no, not even be they ever so well learned and ever so often recited.”

“But,” I ventured to suggest, “does not this drill in the learning of words tend to develop and strengthen the memory, which is one of the chief of intellectual powers?”

“No, by Zeus! it does not,” replied Socrates; “at least, not as it is practiced in your schools to-day. On the contrary, it makes a sieve of the mind, through which everything runs, in time, leaving nothing but emptiness where there should be abundance! Why, think, O William! how these things are done in your schools. Three-fourths of all the time that your children are pursuing knowledge in the schoolroom, or college, they devote to memorizing words from books; and this means such a mountain of matter for the mind to carry that it can by no means sustain the load. The result is, it takes on each burden with the purpose of only carrying it till it can get rid of it; and it throws it off its shoulders at the first opportunity. And so it is that the mind is constantly loading and unloading, and yet retains nothing for itself. Why, I have been shocked beyond measure, a thousand times, as I have seen your young men and maidens go through the process of what they call ‘cramming for examinations.’ For a few days before the test of their attainments they pore over their books, filling themselves with words, even as a toad fills herself with wind, till it would seem that the addition of another iota would burst them. And then they sit down and write for an hour, using what of the pent-up matter within them they may be able to command, in their present distended condition; after which, the ordeal over, they open the safety valve of forgetfulness, and in a week after they are as lank and flabby on

the subject, and as unable to stand alone and say their say regarding it, as an empty meal sack is without ability to erect itself, and out of its nothingness to fill the bin."

"But," I ventured, "O Socrates! have not these methods been in vogue ever since your day; and is it possible that a thing of so long standing has been wrong, even from the first?"

"It was not wrong from the first," he replied. "I taught my pupils through their memory, chiefly, because it was the only receptacle in which they could preserve my words. Books we had none, in those days, and therefore was there need that we hold in the memory the words and sayings of another. And this is why I taught my boys to hold in their minds what I said, but I did not say so very much for them to thus hold. Nor is it strange that the habit should have become established; for it was more than two thousand years after my time before the printing press was discovered, which made books for all a possibility. But now, why now, O William! you make books by the millions; they are everywhere. Look at your own shelves, where you have the wisdom of thousands of men for hundreds of years, all in black and white, and within arms' reach, almost without getting out of your chair! Now would it not be stupid if you were set to memorize what is in all these books, when you can utilize their contents without such fearful and useless strain upon what is, at best, a very treacherous and unreliable mental faculty?"

"But, O Socrates!" I said, "I make no effort to memorize what is in these books. I read them for the pleasure I get by so doing, and for enlightenment in that which I do not already know."

"And in that you do well," the old man rejoined, "for such is the mission of books, and the true art of using them. And yet they are not so used in your schools, whose aim it ought to be to teach the true use of books. Instead of doing this, for the most part they make of them mere reservoirs for the holding of supplies of stuff with which to gorge

the memories of pupils. And this is what I rebel at. Thus, if you desire information in chemistry, or history, or whatsoever, here you reach out your hand, and upon due search you find what you want, and utilize according to your needs; and, being able to do this, you have used the book to advantage. But your son, who is in school, though he has this same book, will be set to memorize it, from first to last; and at the close, he will be expected to answer ten or twenty questions, taken from it at random, which test is supposed to be proof that he has the whole volume by heart; and yet this is such a test as he will never be again required to undergo, if once he fairly endures the strain which these antiquated, and not to say barbarous, methods put upon him. If, ever after, when he gets into the field of actual work, he needs knowledge which this book contains, he can go to it, and utilize it, as you do now."

"But, O Socrates!" I said, "he may indeed again have to undergo such a test; for, if he ever become a teacher, he will have to pass examination in all these studies again, even after he has forgotten most of them; and this will be only a memory examination, without books, or the use of books, a veritable lifting of a dead weight, at the very arm's length of memory, as it seems to me. Why, even our oldest and wisest, most experienced and most successful teachers have to stand this strain if they wish to secure the highest honor in their profession—a State certificate!"

"By Zeus!" cried the sage, "say no more, or you will drive me mad. When I hear of such abominations as these, which are perpetrated in the name of the universal dissemination of knowledge, I long for the shovel and dung fork and strength of our mighty Herakles, that I might, like him, if possible, make away with the filth that now so much clogs the halls of true learning," and he shook his shaggy head and sturdy frame till the windows rattled, and a brand fell forward in the grate. Upon this he rallied and composed himself somewhat, after which he continued:

"Yes, the purpose of your public-school system in your

country is truly great—the greatest and most beneficent that the world ever saw. But, unfortunately, these schools have been projected on faulty lines, and if they ever realize the hopes of their founders and their friends, they will have to be much reformed, in harmony with the spirit and needs of the times in which they exist.”

He paused a moment, as if pondering, and then:

“The chief error in the plan of your schools lies in the too narrow view of education which their founders held to. These men were all graduates of American colleges, of the scholastic sort; and such American college is but a pattern of the scholastic English college, which, in turn, is largely fashioned after the style of scholastic learning as far back as my day, even in Athens, as I knew it more than two thousand years ago. Now our schools were never made for the common people, but they were designed to suit the needs and fancies (largely the fancies, as I see it now) of a certain mentally aristocratic class—a sort of word-memorizing guild or sect, as it were, and as such they have continued, even to this day. Now that such schools were fairly well suited to the class for which they were made, I do not deny; but that they adequately meet the needs of the great mass of the children of the American populace to-day—this I am thoroughly convinced they do not do. And again, the tendency of such schools always has been to cause the possessors of their particular form of learning to look down upon, not to say, in a measure, despise those not having it, no matter how wise, in other ways, these may be.”

“But none the less, these schools are open and free to all our children, even the very poorest,” I exclaimed, eager to defend the system under which I had grown up.

“True,” replied the sage; “but what of that? Can you rear cattle as you do chickens; or will you say to the fish, lo, here is air, or earth, a world of it and free; swim therein, and be happy! Nay, by Zeus! your kine need hay and your poultry need meal, and your fish need water in which to disport themselves and grow. Even so the various and varied

sons and daughters of men need, each after his own kind, a food and environment, for body, and mind, and soul, such as their Maker designed each should have."

"But," I urged, "it is a fundamental principle in our nation that all men are born equal, and, if they are, should they not all receive the same things? This was the logic of the founders of our schools, and they surely meant well, for they were great and honest men."

"Yes, truly they were great and honest men," said the old man; "but, as in many cases besides, their deductive reasoning led them astray. It is true that all men are born equal before the law, but it by no means follows that they are therefore alike in all other respects! And here is where the fatal folly of your present system of public schools began. The formula ran thus:

"'We are men and have had a scholastic education, which consisted largely of memorizing words from books.

"'All men are our equals, and hence all men should have what we have had.

"'We have been to college and got good thereby; therefore all men should go to college and get good thereby.'

"And so they planned. You may remember that it was the boast of these founders of your public schools that the system offered the possibility of going to college to every American child, be he rich or poor. But the fact is that, though every American child has such an opportunity, less than ten per cent. of the children who enter your public schools find such a book-memorizing collegiate course at all suited to their educational needs. These schools were set up to make book-professional men—preachers, lawyers, doctors, teachers, and so on; and they breed after their own kind. But you have no need for all your people to pursue such courses of life. Yet your whole public-school system is organized with the avowed purpose of fitting all your children to enter such colleges, which not one in twenty of the children who enter these schools will ever reach; nor are they, indeed, fitted, either by nature or desire, to reach such

an institution. And so it is that ninety per cent. of your children leave the public schools before they reach their fifteenth year, because the things taught in these schools are not suited to their needs. But yet, during much of the time, up to the hour of leaving, they have been forced to pursue studies which are, for the most part, suited to collegiate-course purposes; and all this by antiquated methods of memorizing words out of books. Thus are the interests of the great mass of your common children made subservient to those of a very small number. Can this be just and right, O William?"

While I struggled for words which did not come, whereby I might justify our present ways with our children in our public schools, seeing the straits I was in, the old philosopher came to my relief:

"But fear not," he said. "Time and endeavor will yet work success where there is already so much to commend, and where the fundamental purpose is so lofty. For, of a truth, not only was it the desire of the founders of your schools that all the children of your land should become educated, but it has also always been the hope of your populace that they might become so. The purpose is right, its execution only is at fault; and this is a thing much easier to remedy than as though the trouble lay further back.

"What you need is to let the light of modern thought shine into your schools with the same clearness that it now throws upon nearly all things else in modern affairs. For, having failed to do this, in the past fifty years, your institutions of learning have now fallen from a first to a second place as an educational means for developing the minds of the children of your populace. As a matter of fact, your railroads, telegraphs, newspapers, and magazines do more to educate your common people and their children to-day, and they exercise a larger influence upon the masses, at this moment, than all your schools combined. Now this ought not so to be, for your schools should be so well suited to the needs of all your people that they would ever keep the front

rank in the educational forces of your country. But this they never can do until they broaden their ideas as to what constitutes true knowledge and the possession of genuine scholarship. Your teachers must learn that a memory-knowledge of books does not make a scholar, nor is true scholarship for the masses ever to be attained by methods that look toward such an end."

"But, O Socrates!" I said, "would you have us undertake to establish schools of different callings to suit all the varied bents of mind which our legions of common children possess?"

"Yes, even so," replied the sage, slowly and thoughtfully, "but not too hastily, nor expecting too much at once; but it is toward this that you must strive, for this is the only thing that is fair to all your children, in view of the spirit which underlies the foundation of your government. In harmony with this spirit, you have no right to tax all your people for the sake of building up schools that are chiefly suited to the needs of a book-memorizing part of your people (which your present system shows to be less than ten per cent. of all your children) unless, at the same time, you build up schools which are equally calculated to serve the needs of the remaining ninety per cent., on all the lines which their special endowments from God may demand."

"But, O Socrates!" I said, "think what an outlay of money this would involve."

"That has nothing to do with the question," he replied, a little testily. "By Zeus! it is not a question of money but of right," he added. "And, indeed, when it comes to that, you need have no fear as to the money part of the problem; for that will be by far the easiest to manage. For when did the American people ever refuse all the money that might be needed for educational purposes, if only its expenditure could be shown to subserve the interests of their children? So waste no fears on that, O William! The hard thing to find will be ways and means for expending money, so as to stimulate the minds of those who are now left uncared for

after they have left the earlier grades of your public schools.

“And it is these—these children of your common people, who have no genius for the college courses of to-day—that you must look to if you would have your nation long exist,” said the old man, raising his hand like a prophet as he spoke. “In the form of government you have undertaken, your success must come, if come it ever does, not from your treatment of the scattered few whom your college education now makes provision for, but from the successful education of your whole populace, on all the lines of life which they may severally pursue.

“I repeat”—and the old man rose as he spoke, and stood at his full height, his massive form showing like a giant in my little den of a library—“I repeat,” he said, “you must educate the children of your populace if you expect your nation to long endure. You can college-educate but a small fraction of them, but you must educate them all, and each as God meant he should be educated. This you must do. You, in this new Western world, have undertaken to make a democracy succeed under circumstances which have never before existed. For democracy, definite philosophy, and machinery are three factors which have never been taken together till now. What the product shall be, who can tell? But this is certain: it can never be right if, by such involution, the interests of the multitude are made subservient to the selfishness of the few; and whether such a thing be done by mistake, or with malice aforethought, will make small odds in the issue. It is the education of your populace, on all the lines of life which they may severally pursue, and not the imparting of a memory-knowledge to a select few, that shall lead your nation to success, to glory and honor. It is the status of the average man in your society, and not the high memory-attainments of any few among you, that can ever realize the hopes of the founders of your great republic.

“But I believe, I believe,” said the old man slowly, “that such a great outcome is written by the Fates for this nation.

Time, and patience, and the genius of your people will find the way which is as yet hid. Already there are many signs of progress. Some industrial schools are already established, and university extension courses are the result of an honest effort to educate your whole people."

"And do you look for rapid changes toward a better condition?" I asked.

"By no means," said the sage. "All things that endure are of slow growth. Nor do I look to any system to effect the final grand result. These things will grow as a tree grows. Gradually, here one and there another, your teachers will begin to try ways and means which shall be in harmony with the new order of things. They will make mistakes, but out of their errors the truth shall come. My thought is that much of this first work will be done in your smaller schools, and by your humbler teachers, because they live closer to the hearts and lives of their pupils than is the case in your large schools, especially as they are now organized.

"And here, here, finally, is the secret of all," said the old philosopher; "the prime secret in all teaching, or learning whatsoever; the secret of what must make your great democratic experiment succeed, if ever it does succeed—namely, to live close to the hearts of those with whom you have to do. It is love, personal love, that must season all if there is to be any salvation. Without this, philosophy is but barrenness; and, lacking it, the possession of all knowledge is but the ashes of dung. But with a faith in all, even the weakest; and with a hope for all, even the lowliest; and with a love for all, even the worst; and with a labor for all, to make the most of everyone, as God designed each to be—on this basis, your democracy shall come to full fruition, and be what it shall then deserve to be, the pride of all the ages, the joy of the whole earth!"

And when I looked, lo, the form of the old man had vanished out of my sight!

WILLIAM HAWLEY SMITH

VII

A NORMAL SCHOOL IN FRANCE¹

Taking as an example one of the *écoles normales* for girls in the southwest of France, a description of the college and its situation may show to what an extent the hygienic surroundings, as well as the intellectual life of the students, is taken into account, as forming an important element in their training. The college, a spacious white building, standing on its own grounds, is built a short distance outside the chief town of the department. It stands on a slight eminence, and commands an extensive view of the surrounding country. Except in the immediate neighborhood of the college, there are few trees, and, although this detracts from the beauty of the country, it gives an agreeable sense of space and air. The same impression is felt in traversing the broad corridors and staircases of the building. Large windows render every part beautifully light, and the lofty ceilings and white walls give a pleasant sensation of spaciousness. The floors are polished a light brown, which, while taking off the cold aspect of the bare boards, preserves the feeling of airiness. The dormitory, an immense room, running the whole length of the building, is arranged on the cubicle system, a great advantage over the open dormitory in giving to the girls an interest and greater feeling of privacy in their miniature rooms. The classes are held in bright, airy classrooms, while private study and preparation are, for the most part, carried on in the large schoolrooms. There is a laboratory for scientific experiments, and a large room is specially reserved for the drawing classes. The finest room in the college is, perhaps, the library, which contains a good selection of classical works for the use of both professors and pupils. For recreative reading, the latter have also

¹ From the *Journal of Education* (London), January, 1897.

the use of a well-selected little library of light literature, where not only the novelists of their own country find a place, but where translations of well-known foreign authors may also be found. The gardens are by no means the least attractive part of the establishment. Behind the building is a large kitchen garden, but the ground in front, which boasts some fine lime, acacia, and chestnut trees, is devoted to the cultivation of flowers. The north and south wings of the building are principally reserved for the apartments of the *directrice* and the professors, who, it may be explained, are ladies. Mention should also be made of the *amphithéâtre*, where the entertainments given by the pupils are held, and where striking instances of the natural ability of the French in the histrionic art may be witnessed. The refectory of the pupils is a bright, cheerful room, out of which leads the dining room of the professors. Opening on to the playground, which adjoins the kitchen garden, is a large *salle de récréation*, where the girls spend the leisure time when the weather does not permit of their using the playground. The whole building, with its stone walls, red-tiled roof, and picturesque foreground of trees, has a fine, cheerful, and at the same time homelike appearance.

Already the happy possessors of the *brevet simple*, the girls enter the *école normale* at the age of sixteen or seventeen for three years of steady work and training to qualify themselves for becoming teachers in the elementary schools of their country, and with the view of obtaining the certificate awarded to them at their final examination at the end of the three years, the *brevet supérieur*. The students are arranged in three divisions, according to their year of residence in the college, and each year's work is tested by the terminal, half-yearly, and yearly examinations to which they are subjected. Three years is by no means too long a period for them to get through the programme of work, both in science and letters, which they have to prepare for the *brevet supérieur*. However, they have the advantage of most able professors, thoroughly conversant with their particular sub-

jects, whose lessons cannot fail to be both interesting and instructive even to an outsider. Provision is also made for their education in practical teaching, though, from an English point of view, it is perhaps here that their training seems the most deficient. A sort of model school, the *école primaire annexe* under the management of a *directrice*, is attached to the *école normale*. Here the students of the *école normale*, each in turn, take a week of teaching. If, however, the number of students in a division is large, the turn of each student will come only once or twice in a term; thus it happens that she gets only a week's practical experience in a year; and, in spite of the really excellent studies made in psychology and pedagogy, the means of applying them do not seem sufficiently frequent. Of course, the question of time arises here, and in a short course of three years there is little time to spare from personal study. Also, the argument may be used that there is plenty of time for the gaining of practical experience after the college course is finished, when they are fully launched in their profession. Still, it is evident that, if more time could be given to practical work during the years of training, much blundering and incapacity would be spared on the part of newly-fledged teachers.

The hours of study are long, with here and there short intervals of relaxation, and the diversions are not numerous to an English mind. The principal recreation through the week consists in rambles in the country, under the leadership of a professor, on a Thursday, which is the general holiday in France, and on a Sunday. Apart from these, the students rarely leave the precincts of the college. The first Sunday of every month is the day of the *grande sortie*, and all who live near enough are allowed to spend the day with their families. The walking costumes of the students are obliged to be of a uniform material and color, though the style of dress is left, to a certain extent, to themselves. During the classes they all wear long plain black pinafores which hide the dress.

During the winter, the short after-dinner recreation is spent in dancing; in summer, in strolling about the gardens or in playing croquet. Now and again a musical or literary entertainment is given, and, if theatricals form a part, it is almost sure to be a success. Here, at any rate, the French have not been overrated. In English school and college plays, however well the youthful actors may represent their parts, they seldom lose altogether their girlish or boyish individuality, which, by the way, does not necessarily take away from the enjoyment of the performance. But the French, even as little children, seem to have an inborn talent of putting aside their own personality, and of representing their borrowed character with such a perfect imitation and such a perfect ease of manner and gesture that one can scarcely believe they are merely boys and girls who are acting.

Physical exercise plays too small a part in the recreation of the students in the *école normale*. One misses also the athletic clubs, debating societies, etc., which form such an important feature of English school and college life, and which give the pupils such a personal interest in the daily life of the place. Besides forming a pleasant break in the long routine of classes and study, they may be made an important factor in the training of the girls, in widening their lives, and in giving them experiences which they will gain by no amount of study. Innovations such as these might be introduced with advantage to the students, and could not fail to give a new zest and interest to their collegiate life.

At the same time, the advantages of their training are obvious. Three years of continuous study, undisturbed by distractions from outside, should build up the foundation of a solid education, and engender habits of studious application which must have a strong influence, directly and indirectly, on their future professional life.

VIII

REVIEWS

Herbart's A B C of sense-perception and minor pedagogical works—Translated, with Introduction, Notes, and Commentary, by WILLIAM J. ECKOFF, Ph. D. (Columbia), Pd. D. (N. Y. U.) Vol. xxxvi of the International Education Series. New York: D. Appleton & Co., 1896. P. xxxi + 292. \$1.50.

This book has been prepared by one who believes heartily in "strict Herbartianism" as the "proper solution for the difficulties of to-day." In the Introduction Dr. Eckoff gives a very clear-cut and decided historical setting to Herbartian pedagogy. Briefly stated, it is this: Modern education begins with Locke, who "placed the child, instead of the branches of instruction, into the forefront of pedagogic consideration. . . The great deed of Locke was written up; it revolutionized Europe. Rousseau calls Locke's pupil Emile, and instead of Locke he says I. . . The educators were called away from the wrong end of the telescope, and at once there opened a glorious view of the possibilities of education." The great problem that remained for Pestalozzi, Froebel, and Herbart was "the great Sphinx riddle which history has propounded to every race—how to perpetuate its civilization without petrifying it." Rousseau's beautiful dream was put into reality by Pestalozzi and Froebel, and "molded into a logical whole by Herbart. . . The great mass of our public-school teachers are still in the Pestalozzian stage. They have learned to believe in the Keppler, so to speak, of pedagogy. . . The Newton in the case will be Herbart. It is not right to say that his system is the best system of pedagogy. It is the *only one*. . . If it plays us false, as the Ptolemaic system did in astronomy, we shall have to begin all over again."

Every fair-minded reader will agree with the caution with which the Introduction concludes: "The only way to understand an author is to read him, not in an attitude of hostile, destructive criticism, but in a spirit of sympathetic,

constructive appreciation." Such an enthusiastic devotion to Herbart as will gain from him his best thoughts, and their fullest application in school work, is good for every teacher, provided only that he afterward gets over the mania and recovers his "equilibrating interest" again.

Part I opens with Herbart's introductory lecture at the University of Göttingen, in 1802. It is full of interesting and valuable points on such ever-new themes as the use of educational history, relation of ideals and means, value of *a priori* principles, tact, relation between character and tact, and, finally, the method of pedagogical inquiry. Chapter ii, on Pestalozzi's *How Gertrude taught* [teaches?] *her children*, gives Herbart's views of Pestalozzi's work, including some criticism of his *A B C der Anschauung*. Then follows an address delivered by Herbart in Bremen, in 1804, on the "Proper point of view for judging the Pestalozzian method." The next two chapters contain a paper prepared by Herbart at Königsberg, on the subject of "Pedagogical discussions and the conditions under which they may be useful," and Herbart's comments on an essay presented by Court Preacher Zippel before the Pedagogical Society of Königsberg. These two chapters give us a glance into the activity of Herbart's Seminary at the Königsberg University.

Chapter vi is "The æsthetic presentation of the universe as the chief office of education," and is of more value perhaps than any other single chapter in the book. It is, therefore, particularly unfortunate that the translator has not availed himself of the opportunity to improve upon the really good translation of this treatise already at hand in Felkin's edition of Herbart's *Science of education*. Felkin's translation is much superior to the one here presented, and would have furnished a basis for a still clearer and more reliable rendering; but Dr. Eckoff seems to have ignored it utterly, and has introduced many new ambiguities and Germanisms, making the chapter very unattractive reading. Indeed, one feels like repeating Dr. R. M. Jones's recent good-humored comment on the American Herbartians in general, to the effect that they should learn to write better

English. Perhaps if they will get their wives to join with them in the work, as Messrs. Felkin and Van Liew have done, they will yet find that the best and purest English is quite capable of expressing the deepest German thought.

The body of the book is taken up with the *A B C of sense-perception*, followed by a concluding chapter on the "Dark side of pedagogy." Sense-perception is capable of cultivation: the Chinese invented the most beautiful colors, the Greeks the most beautiful forms; color at the expense of form is a characteristic of all tasteless ornamentation, and the cardinal fault of the uneducated consists in adherence to color (p. 133). It is attention to form to which our vision requires to be especially educated. The senses must be controlled through the mind. "All that the greatest minds of all the ages have done toward the apperception of form through concepts, we find gathered into a single great science—mathematics." Hence, the cultivation of the sense-perception (?) falls within the sphere of mathematics. The proper preparatory exercises herein set forth should be followed in the middle grades by geometry, trigonometry, and lower algebra, articulating in the upper grades with higher mathematics. The first of these three periods, occupying about three-fourths of a year with one lesson daily, should come in the eighth, ninth, or tenth year. The second mathematical period, lasting a year and a half, should be provided for in the twelfth, thirteenth, or fourteenth year; and, finally, the third period for higher analysis will come in the eighteenth, nineteenth, or twentieth year. This allows for pure mathematics only, which should thus extend a real influence throughout the whole period of the pupil's development. Such a concentration of the mathematical instruction into periods is required in order to avoid mixing the mathematical consciousness "with the mental tone necessary in seeking with youthful hope philosophic wisdom, or lovingly investigating ancient history, or giving one's self up to the songs of the poets. The states of feeling are not changeable from hour to hour, like clothes. Students whose interest has become fractionally excited for all of these and for several other branches, would feel only still more confused by

the priestess of definiteness and clearness—mathematics.” This is a point to which current pedagogy should give a great deal more attention than it does. The fundamental question of the curriculum, from Aristotle down to Herbart, has been in regard to sequence of subjects. Recent discussion of correlation has only served to draw off the attention from the main point. Courses of study are nowadays made up on the theory that all the main groups (*e. g.*, Dr. Harris’s five) should be taught simultaneously throughout all the grades. Such an idea leads to one of the worst pedagogical blunders of which we are at present guilty.

The elementary exercises for the A B C of sense-perception have, in addition, two other purposes: to assist education and to prepare for the higher mathematics. Indeed, Herbart confesses that, between sense-perception and mathematics, “the bond is very loose” (p. 166), and I agree with him. I cannot see much edification for anything else than mathematics in all the “charming work of measuring triangles” and training the eye to a ready skill in accurately apperceiving triangular figures, from the time when the three yellow nails are driven into the board hung up before the baby’s cradle (p. 180), through the still current and very uninteresting drawing of combinations of three straight lines on the slate, up to the latest work with sines and secants. In fact, it is all mathematics, and the treatise ought to be called the *A B C mathematical forms*. It has, I think, very little to do with training in sense-perception. Any child would learn all sorts of forms twice as fast through drawing and modeling them as through studying trigonometry.

Moreover, Dr. Eckoff has translated the German word *Anschauung* by too broad a term. In this case, it does not include all sense-perception. As Dr. Harris points out in his Preface, sense-perception requires an alphabet of color, as well as of form addressed to the eye; another alphabet of musical tones addressed to the ear; an alphabet of tastes; another of odors, and even an alphabet for the muscular sense. Besides these, the alphabet of the greatest im-

portance of all is not yet mentioned—the alphabet of æsthetic form. Herbart never meant to put his trigonometrical devices as the basis of all of these. What he wrote about was the A B C of mathematical form; what the word *Anschaung* primarily means, is visual sense-perception. To set children to drawing and measuring triangles instead of making, handling, hearing, and seeing the actual things in the world around them, would be to misunderstand Herbart. He was a mathematical fiend, it is true, and, like some of the present advocates of mathematics in psychology and child-study, he thought that the only way to get clearness and truth into a subject is to subject it to mathematics.

Herbart was, indeed, led into some very perverted ideas by his mathematical twist, just as Pestalozzi had been before him. For instance, in drawing he tells us the pupils must not be allowed “to make the beginning on pictures of organized beings. Everything is too round, too soft.” They must have something angular, like landscapes with evergreens. But the best of all objects are plain triangles. If Herbart were alive to-day, no doubt he would be a warm friend of the systems of drawing that begin with geometrical type-forms. Indeed, he says (p. 271) “these model forms ought to be the well-draped and ever firmly holding, sustaining skeleton of all drawing.”

In zoölogy, sense-perception (?) “would most especially study the skeletons” (p. 273); because, forsooth, these are most suggestive of the geometrical ghosts of ideas.

We are glad to welcome all possible aids to the right understanding of Herbart, and Dr. Eckoff's book presents to English readers for the first time a number of the most suggestive of the minor pedagogical writings of the German philosopher. The selection and grouping of these papers are admirable. The Introduction, however, with its intense belief and enthusiasm for the master, is the best reading in the book outside of Dr. Harris's characteristic Preface.

HERMAN T. LUKENS

BRYN MAWR, PA.

IX

EDITORIAL

For a variety of reasons that need not be detailed here, the present session of Congress was a particularly unfortunate time to procure legislation in aid of the Bureau of Education. Before that can be successfully undertaken a carefully matured plan must be worked out, and it must be one that will be cordially supported by teachers in all parts of the country. Yet when, on December 9 last, the Secretary of the Interior sent to the House of Representatives a strong plea for an increase in the salary of the Commissioner of Education (without that official's knowledge) from \$3000 to \$5000, supported by a cogent argument from Assistant Secretary Sims, based upon equity and the dignity and importance of the work of the Bureau, there was nothing to be done but to support the recommendation of the Secretary, ill-timed though many believed it to be. Therefore, the leading educators of the country both wrote and spoke in favor of the proposition, with the result that an increase from \$3000 to \$3600 was agreed to by the Senate and is now pending in conference between the two houses.

Agitation to elevate the Bureau of Education to a Department of Cabinet rank is, in our judgment, very unfortunate and harmful. Were such a step taken, the head of the Department would always be a politician chosen because of party services or representative character, and such an administration as Dr. Harris is giving the country would be out of the question. We believe the true policy to be to urge (1) making the Bureau of Education a Department with rank and organization similar to the Department of Labor over which Colonel Carroll D. Wright now presides, (2) increasing the Commissioner's salary to \$5000, and giving him adequate appropriations for the work that he has to do,

and (3) transferring the Bureau or Department to a proper home, preferably in the new Library of Congress building.

There are grave and well-founded objections to using any portion of the new Library for government offices, and Senator Morrill's solicitude on this point has been quite justifiable. But the objections do not seem to us to hold in the case of the Bureau of Education. Its large collection of books would be better cared for and more useful in the Library than elsewhere, and the work of the Bureau and the Library are both, strictly speaking, educational and interdependent.

President McKinley and the incoming Congress will undoubtedly be asked to deal with this whole matter in a large way, and teachers should give it careful thought.

The New York city superintendents are beginning to come out of their official shell. Mr. Marble was on the programme at Indianapolis, and both Mr. Marble and Mr. Shimer addressed the New York State Art Teachers Association on February 27. This is as it should be.

The Bureau of Education has compiled the following statistical table to show the number of resident graduate students taking either non-professional or professional courses of study in American colleges and universities. The figures are taken from the official publications of the several institutions named for 1895--96. Slight analysis would show that in some respects the figures are misleading because they are recorded from different points of view. One institution, for example, includes the attendance at its summer school; another counts as resident graduates persons who are enrolled in a separate institution in the same city or town for the primary purpose of pursuing a professional or technical course of study, but who attend university lectures for one or more hours each week. Obviously such statistics need much interpretation. But this table is a most valuable one, and is now published for the first time. The figures in the third column show the number of resident graduates enrolled in the American equivalent of the historic Philosophische Fakultät:

STATISTICS FOR 1895-96

POST-OFFICE ADDRESS	NAME OF INSTITUTION	RESIDENT GRADUATE STUDENTS	PROFESSIONAL STUDENTS HAVING DEGREE	TOTAL
1	2	3	4	5
Berkeley, Cal.....	University of California.....	115	84	199
Stanford University, Cal.....	Leland Stanford Junior University..	102	..	102
Boulder, Colo.....	University of Colorado.....	20	..	20
Middletown, Conn.....	Wesleyan University.....	15	..	15
New Haven, ".....	Yale University.....	176	199	375
Washington, D. C.....	Catholic University of America.....	34	22	56
" ".....	Columbian University.....	40	56	96
" ".....	Georgetown University.....	12	62	74
Champaign, Ill.....	University of Illinois.....	26	..	26
Chicago, ".....	University of Chicago.....	628	182	810
Evanston, ".....	Northwestern University.....	20	194	214
Bloomington, Ind.....	Indiana University.....	54	8	62
Iowa City, Ia.....	State University of Iowa.....	47	56	103
Lawrence, Kan.....	University of Kansas.....	26	..	26
New Orleans, La.....	Tulane University.....	87	..	87
Brunswick, Me.....	Bowdoin College.....	..	16	16
Baltimore, Md.....	Johns Hopkins University.....	253	88	341
Amherst, Mass.....	Amherst College.....	3	..	3
Boston, ".....	Boston University.....	129	208	337
Cambridge, ".....	Harvard University.....	269	604	873
" ".....	Radcliffe College.....	44	..	44
Wellesley, ".....	Wellesley College.....	45	..	45
Williamstown, ".....	Williams College.....	2	..	2
Worcester, ".....	Clark University.....	42	..	42
Ann Arbor, Mich.....	University of Michigan.....	59	130	198
Minneapolis, Minn.....	University of Minnesota.....	137	58	195
University, Miss.....	University of Mississippi.....	6	..	6
Columbia, Mo.....	University of the State of Missouri..	25	2	27
St. Louis, ".....	Washington University.....	..	46	46
Lincoln, Neb.....	University of Nebraska.....	38	16	54
Hanover, N. H.....	Dartmouth College.....	9	27	36
Princeton, N. J.....	Princeton University.....	119	..	119
Clinton, N. Y.....	Hamilton College.....	1	..	1
Ithaca, ".....	Cornell University.....	151	26	177
New York, ".....	Columbia University.....	207	405	612
" ".....	New York University.....	76	124	200
Poughkeepsie, ".....	Vassar College.....	10	..	10
Syracuse, ".....	Syracuse University.....	23	7	30
Chapel Hill, N. C.....	University of North Carolina.....	7	14	21
Cincinnati, Ohio.....	University of Cincinnati.....	30	..	30
Cleveland, ".....	Western Reserve University.....	13	28	41
Columbus, ".....	Ohio State University.....	29	12	41
Delaware, ".....	Ohio Wesleyan University.....	25	..	25
Bryn Mawr, Pa.....	Bryn Mawr College.....	52	..	52
Easton, ".....	Lafayette College.....	27	..	27
Philadelphia, ".....	University of Pennsylvania.....	172	324	496
Providence, R. I.....	Brown University.....	29	..	29
Knoxville, Tenn.....	University of Tennessee.....	9	7	16
Nashville, ".....	Vanderbilt University.....	39	55	94
Austin, Tex.....	University of Texas.....	14	36	50
Burlington, Vt.....	University of Vermont.....	2	14	16
Charlottesville, Va.....	University of Virginia.....	20	51	71
Madison, Wis.....	University of Wisconsin.....	80	..	80

Dr. Conaty, the distinguished and scholarly man who succeeds Bishop Keane in the rectorship of the Catholic Uni-

versity at Washington, expounded his conception of a university in his inaugural address, in these words:

This university takes its place, and is alone in the position, as the complement and crown of Christian education in our country. Aiming at the revival of the glory of the golden age of education, it is destined in the providence of God to equal and surpass the best that is chronicled. That our country, with its boasted advance in general education, should have a Catholic University where all undergraduate studies should be set aside is no little credit to the ambition of our episcopate for the higher education, in the true sense of the word. It is the rival of no college or university, but the complement of them all, demanding as it does the work of college and university alike as an entrance condition. It completes and crowns the work of our best universities. It and Clark University, of Worcester, are the two universities which claim to be, and are, the only purely post-graduate schools in this country. Clark is limited to certain branches of science, but the Catholic University goes beyond Clark in this, that while it deals with post-graduate sciences, it has also its post-graduate divinity, technology, and law, and in time will have its post-graduate courses in medicine. Alone it stands upon the mountain top, in the Capital of the nation, beckoning to all votaries of higher knowledges to come to its halls for the highest culture in all branches of intellectual endeavor, under the inspiration of the great mother Church, to whom was given by the Savior the commission to teach the world all truth for all time.

This university stands as the gift of Catholics of wealth to the Christian education of the leaders of the people in all fields of life. It is the university of no class nor section, but your university, the University of the Catholic Church in these United States, where our American youth, lay and clerical, may find much of that which men have been hitherto obliged to seek after in European higher universities. Hence, as Dr. G. Stanley Hall, the learned President of Clark University, has said, it is pre-eminently the university of America. The Church desires an educated clergy, fully equipped intellectually and scientifically, as well as morally, for the great battle of our age of truth against error. She seeks for the complete education of her laymen, that in the professions, in literature, in business, they may be leaders and not followers, yet leaders strengthened and fortified by the knowledge of higher science, acquired in an atmosphere of faith and true religion. Hence in this land, where instruction is the privilege of the many, where colleges and universities crowd one another, the Catholic Church has made the supreme effort of building a university above and beyond them all, where the latest and deepest researches of science and the fullest development of Christian ethics are placed within the reach of the leaders of thought, in science and religion, proving to the world that between religion and science, properly understood, there can be no antagonisms. Truth is one, as God is one, and truth is one, whether you seek for it in the moral or scientific order.

The inauguration, on January 27, of Edwin Anderson Alderman as President of the University of North Carolina

was an occasion of unusual importance and interest. The legislature adjourned over for the ceremony—an event without precedent in North Carolina—and more than one hundred members went from Raleigh to Chapel Hill, by special train, in order to be present. Governor Russell was upon the platform, and formally inducted Professor Alderman into his new office. The hall was filled to overflowing with a distinguished company, and the exercises were of the most dignified and inspiring character. No false note was struck, and President Alderman's inaugural address was a marvel of lucidity, force, and eloquence. For more than an hour and a half he held the undivided attention of his audience.

The enthusiasm that prevailed was most significant, because of the fact that for some time past a group of sectarian busybodies have been going up and down the State attacking the university as a godless and unnecessary institution, and endeavoring to divert its State appropriation to other purposes. The inconceivable narrowness and folly of such a movement had not prevented it from making some headway; but the exercises of President Alderman's inauguration, his own lofty and cogent address, the cordial support of the influential newspaper press and of the leading public men of the State, are emphatic assurance that the crusade of bigotry and pettiness has exhausted itself.

President Alderman, President McIver of the Normal School at Greensboro, and the loyal group of public-school men by whom they are supported, are bringing about an educational revival in North Carolina that will be epoch-making in its history.

In concluding a review in these pages, a month ago, of the conditions surrounding the preparation of the educational chapter of the Greater New York charter, it was stated that some changes in the draft as then outlined would perhaps be made. The changes have been made, and the complete charter has been transmitted to the Legislature.

President Low was overborne by numbers, and so far as they affect Brooklyn these changes are altogether

bad. They permit the continuance of the present unwieldy and talkative Board of forty-five members, with its local committees and their patronage, and they hedge about the superintendent and his associates, as now, with restrictions and limitations that greatly interfere with the progress of the schools. Thus far, the changes are a distinct victory for Brooklyn's group of political principals and for their allies in the Board of Education and among the ward workers. But, from another point of view, the situation is not so hopeless as at first appears. While the evils of the present Brooklyn system are not removed, yet no step can be taken by Brooklyn in the future save in the direction of the present New York law; and when such steps are taken, they are irrevocable. That is to say, Brooklyn is headed in the right direction and then walled in on both sides and behind. The worst that she can do is to stand still. A thoroughly good mayor or a progressive majority in the Board of Education could very shortly, without further legislation, put the appointment, promotion, and transfer of teachers on a professional basis, and so, by robbing the local committees of their patronage, reduce to a minimum the ills that follow from that thoroughly demoralizing system. It need hardly be said that the most thoughtful and intelligent of Brooklyn's citizens are grievously disappointed that their schools are not to benefit by the new charter. The letters that reach this REVIEW are ample proof of that. Yet it may not be amiss to point out that these men and women have only themselves to blame for their disappointment. Had they organized, as did their fellow-reformers in New York, and had they carried on an aggressive campaign, Brooklyn might to-day have been even better off than New York is. The work of the Citizens' Committee on Public-School Reform and of the Public Education Association, both of New York, ought to be imitated in Brooklyn. The same public spirit and energy that built up the Froebel Academy and put the kindergarten movement in Brooklyn on its feet, could abolish the local committees and circumvent the political principals if they would. Organized effort of this sort cannot be undertaken too soon. It would meet with a surpris-

ingly large support in the Board of Education and among the more studious and efficient teachers. So long as this desire for better things does not voice itself, just so long will the Brooklyn newspapers and the Charter Commissioners find a plausible excuse for believing that that city is unanimous in demanding the retention of a demonstrably ineffective and political system of school administration. Only a year ago, when a New York principal cited the Brooklyn local-committee system, at a public hearing at Albany, as evidence that where ward-trustees did not exist substitutes for them had to be invented, Senator Brush of Brooklyn broke in with: "The local committees are the one feature of Brooklyn's school system that all good citizens want to have abolished." Now is the time for those good citizens to begin work toward that end. If the new charter becomes a law, they have only to persuade a Mayor or a majority of the school board, in order to put their wishes into effect.

In its final form the educational chapter of the charter has been rearranged and carefully rewritten, and it is now substantially free from the errors and ambiguities that abounded in the first draft. The Boroughs of Manhattan and the Bronx (comprising the present city of New York) are not to be separated for educational purposes, but the two Boroughs are to have a single school board of twenty-one members as now. One unfortunate effect of the change is to retain Superintendent Jasper in office until 1902; but, on the other hand, the present excellent Board of Education serves out its full term and appoints a majority of the members of the Central Board of Education. This fact ought, of itself, to insure a good City Superintendent of Greater New York for the first term of six years. Then, too, in June of this year, and each year thereafter, the Board of Education will have an opportunity to remove some of the dead wood from the Board of Superintendence. To see Gove of Denver, for instance, substituted for Stewart and Blodgett of Syracuse for Elgas, and such men as Carroll of Worcester, Jones of Cleveland, and Greenwood of Kansas City put in the place of some of the other members of the present Board, would

be worth waiting for. By strengthening the Board of Superintendence and by so improving the administrative system that not even a partisan board would ever dare to destroy it, the present Board of Education, under President Hubbell's lead, can do a great deal of good for the children of the city, despite Mr. Jasper.

One very important provision in the final form of the charter is that which prescribes qualifications for superintendents, associate superintendents, and supervisors. These qualifications are so carefully worded that no mere politician is likely to get into any of these places.

It is provided that

“No person shall be eligible for election as City Superintendent, Borough Superintendent, or Associate Superintendent who has not one of the following qualifications: (a) Graduation from a college or university recognized by the University of the State of New York, together with at least five years of successful experience in teaching or supervision since graduation; (b) ten years' successful experience as Superintendent, Supervising Principal, or Teacher in a graded school.”

For supervisors the charter makes this provision:

“No person shall be eligible for election as supervisor of a special branch, as music, drawing, kindergarten, etc., who is not (a) a graduate of a high school or of an institution of equal or higher scholastic work; and (b) a graduate from a course of professional training of at least one year in the special branch that he is to supervise or teach; and (c) a teacher of that special branch with at least three years of successful experience.”

From the large number of letters that have reached us from Brooklyn commending and indorsing the statements made a month ago in this REVIEW regarding political influences in the school system of that city, space can be found for a few brief extracts only.

“Thank God, there is someone with courage to speak out about the abuses in our Brooklyn schools. I think I can name the ‘political principals’ to whom you refer, and certainly could tell you more about their disgraceful intrigues than you dream of. If only some Brooklyn paper would reprint your editorial it would set people over here to thinking and do an immense deal of good. But only our ‘political principals,’ as you properly call them, seem to have access to the newspapers.”

"I have read your luminous exposition of the attitude of the public-school officials of Brooklyn toward the Greater New York Charter with great satisfaction. As Erasmus said of Luther, you have hit the board on the head and the principals in the belly.

"In my conversation with principals I find them ready to admit the weakness and rottenness of the present system. Several have told me that they have had incompetent teachers in their schools whom they have tried in vain to oust. And yet, when it comes to a question of reform, they seem to stand so much in fear of losing their own positions that they fall into line and join the chorus of praise for the present system.

"I trust that your incisive editorial may help to stiffen up the backbone of some of these gentlemen and make them better representatives of educational ideals."

"Having watched the way in which a trap was set in this school business for Mr. Dutcher and General Woodford, and also the way in which they fell into it, I can indorse every word of your editorial, and only wonder how you managed to find out about it. Both men have been weak tools in the hands of bold and clever politicians. I did hope that this time the big board and the local committees would go, but it seems not."

"Your account of the way in which the Brooklyn Board and their principals bedeviled the charter business is sound as a dollar. *I know it to be so.* Only you don't tell half of it. Why, I heard one of these men say that no matter what Low wanted they would overrule him, because they had 'fixed' nine men on the Commission, all the members of the Legislature from Kings, and even Platt himself. Nice business for school principals to be in, isn't it? But you will be lucky if you don't get pitched into by the Brooklyn papers. These fellows can get at all of them."

Many inquiries have reached this REVIEW from all parts of the country as to the local-committee system of administering the schools of Brooklyn, that has been the subject of so much adverse criticism during the past four or five years. A somewhat careful observation, extended over a number of years, of the practical workings of this system, combined with a study of the official publications of the Brooklyn Board of Education, together with side-lights thrown more or less unwittingly from time to time by the Brooklyn newspapers, enables us to answer these inquiries in the following fashion:

The local committees are made possible by the untoward size of the Brooklyn Board of Education. It consists of forty-five members—at the present time, forty men and five women. The local committees are not established by statute, but by by-law. The authority under which they are

appointed, and operate, is found in Article vii, § 1 of the by-laws of the Brooklyn Board of Education (p. 33, edition of 1895). This section reads in part as follows:

“§ 1. A Committee shall be appointed to take particular charge of each school district.

“The Committee shall have power to cause any repairs to the school buildings that may be necessary, not exceeding twenty dollars in any one month. Local committees may appoint teachers temporarily, who have been duly licensed to teach, but such teachers shall not be continued for a longer period than four weeks, unless their appointment is sanctioned by the Teachers' Committee. . . They shall also have the power to suspend a teacher for gross misconduct or neglect of duty, but shall forthwith report the facts upon which their action is based to the Teachers' Committee, who shall fairly investigate the case and report their conclusions to the board.” . .

By the provisions of Article xiii, § 1, the local committees also appoint janitors, subject to the approval of the Schoolhouse Committee and the certificate of the Chief Engineer.

In other words, here is explicit provision for the lay or amateur, and irresponsible, government of the schools. President Draper, Mr. Fitzpatrick, Mr. Gove, or any other competent authority on school organization, could tell at once just how such a system will work in a large city, because they know perfectly well how it always has worked.

Professional control, by the superintendent of instruction on the one hand and by the superintendent of buildings on the other, is carefully excluded. A local committee composed of high-minded men and women would consult these professional superintendents and act only under their advice. This would temporarily abate the evil. But the average local committee does nothing of the sort. It goes its own way, and appoints, transfers, and promotes just as if it really knew something about the delicate educational considerations that are everywhere at stake in these processes.

Brooklyn is divided into 84 school districts, the boundaries of which are described on pp. 145--166 of the report of the superintendent for 1895. A number of other districts are mentioned there as “not defined.” Excluding the president, there are 44 members of the Board of Education to be distributed among the 84 local committees. (There

are no fewer than 20 standing committees, in addition, and 11 committees on industrial and orphan asylum schools.) Therefore there are 84 local-committee chairmanships, or an average of 1.9 to each member. Of places other than chairmanships there are on these committees 180, or an average of 4.1 to each member of the Board. To state these facts is to condemn the system in the eyes of any efficient business man or administrator. To lay bare some of the work that has gone on under the eyes of these committees and with their connivance, would be to tell the usual story of spoils, politics, and local influence. The poor children and the highest interests of the city must come in where they can. Personal and political obligations must be paid off first, when possible.

It is conceivable that persons occupying a different point of view may explain the same series of facts differently. What one man may ascribe to "politics," another might dismiss as "mere coincidence." For example, in 1893, the Brooklyn Board of Education elected as its president a man who was believed by many to stand for political influences in school administration. When his local committees were appointed, the newspapers and the official records disclosed the following "coincidences":

	CHAIRMAN OF LOCAL COMMITTEE ON	MEMBER OF LOCAL COMMITTEE ON
Mr. Ferris.....	Schools Nos. 28, 35, 73, 87.	Schools Nos. 26, 56, 57, 70, 75, 85.
Mr. Hubbs.....	Schools Nos. 75, 85.	Schools Nos. 24, 26, 52, 53, 56, 57, 73, 74, 86, 87.
Mr. Lynch.....	Schools Nos. 18, 20, 49.	Schools Nos. 17, 22, 23, 24, 31, 34, 48, 51, 52, 53, 59, Boys' High School.

Since the names of these men are not known outside of Brooklyn, it may be necessary to add that they sympathized with the ideas of the new president, and actively promoted his election. Both they and the president belonged to what is locally described as the "ring."

Other members of the Board who opposed the president's election, and yet who, by standing and service, were among the most efficient members, found themselves confronted by this "coincidence":

	CHAIRMAN OF LOCAL COMMITTEE ON	MEMBER OF LOCAL COMMITTEE ON
Mr. Higgins.....	School No. 42.	.....
Mr. McNamee...	Schools Nos. 19, 50.	.....
Mr. Teale.....	Schools Nos. 15, 47.	School No. 11, Training School.

Nor does the "coincidence" end here. Mr. Ferris and Mr. Hubbs together, as the first table given above shows, controlled the patronage of schools Nos. 26, 56, 57, 73, 75, 85, and 87. Mr. Hubbs and Mr. Lynch together controlled the patronage of schools Nos. 24, 52, and 53. Now it so happens—and this is a matter that specialists in the theory of probabilities ought to look up—that four large schools were newly opened in Brooklyn in 1893-94. Principals and a full equipment of teachers had to be provided for each of them. They were Nos. 26 (20 classrooms), 85 (26 classrooms), 86 (26 classrooms), and 87 (24 classrooms). The appointments in Nos. 26, 85, and 87 were controlled by Messrs. Hubbs and Ferris: those in No. 86 by Messrs. Hubbs and Lynch. These facts are all taken from the published records, and are accessible even to the Brooklyn newspapers. But it would not interest the country at large to pursue the analysis any farther. It must suffice to say that the president for that year showed a wonderful grasp of that now neglected portion of mathematical science known as Permutations and Combinations, and that the "coincidences" continued to be extraordinary all the way through the committee list.

This is the system that some persons in Brooklyn, including the newspaper editors, feel is indispensable to a "natural and indigenous" school system. Perhaps so.

Mr. E. H. Babbitt has reprinted from *Dialect notes*, published by the American Dialect Society, his very interesting and suggestive paper on "English pronunciation of the lower classes in New York and vicinity." It is to be hoped that he will now find time to extend his philological inquiries to Brooklyn, and give us an unbiased scientific opinion as to whether "pedigogical" and "vindictiveness," as used in the headlines of Brooklyn newspapers, are due to the local-committee system of school government, or exist in spite of it.

The Summer School at Harvard has increased in numbers very rapidly during the last ten years. In 1887 it had concluded twenty years of existence, but the attendance during those years ran from a minimum of 25 to a major limit of 98 (in some years only one course was taught). In 1887 chemistry, botany, and zoölogy were on the list, with an attendance of 93 persons. The number of students has steadily increased since then, until it reached 600 in 1895, and 630 in 1896. During these ten years the authorities have added courses continually until now the number is 34, and these embrace almost all the subjects taught in the university.

Miss Gladstone has, for family reasons, resigned the vice-principalship of Newnham College, Cambridge.

A number of Berlin professors, including Paulsen, Wagner, and Harnack, have asked the Academic Senate of the University of Berlin to take steps toward the organization of "volkstümliche Hochschulkurse," which are after the fashion of our misnamed university extension work. The reasons given by these professors for their memorial are of more than usual interest. In brief, they are that the spiritual unity of the German people has been weakened by the trend of the population toward cities and their rapid growth, and by the decline of the influence of the Church; and that, therefore, the attempt must be made to weld together again the now separated classes of the population. The signers believe that higher instruction for adults will contribute to that end.

EDUCATIONAL REVIEW

APRIL, 1897

I

STATE UNIVERSITIES OF THE MIDDLE WEST

The recent conference at Madison, Wis., of the presidents of eleven State universities in the middle West has naturally attracted some attention, and served to remind the country again of the strong development attending these State institutions in nearly all parts of the Union, save in the North Atlantic division.

The States represented in this conference were all of the North-Central division, and all the States of that division were represented except the two Dakotas. Indiana was represented by the president of Purdue University, as well as by the president of the State University; for Purdue is a State institution based upon the Morrill Land Grant Act. So there were eleven members of the conference, representing ten States. The number of presidents in attendance led some newspapers with profane tendencies to make frivolous remarks about a new football combination, but the significant number was not necessary to raise the apprehensions of many people about what might be done concerning the great college game. However, the conference was held without any particular reference to athletics, but for the consideration of a wide variety of topics touching many phases of university administration and growth. Held under the roof of the distinguished president of the University of Wisconsin, and therefore in an atmosphere as delightful and bracing as generous hospitality and vigorous thought could

make it, free from the stilted oratory, the endless papers, and the profound bottomlessness which weigh so heavily upon educational conventions just now, it was a conference which was helpful in the largest measure to the younger members at least, and one which will surely be gratefully remembered by all.

As recently pointed out by President Adams, American pioneering conditions are specially calculated to enlist the interest of the people in education. Pioneers sacrifice present comforts for future prospects. They live in anticipation and plan liberally in order to make realization as certain as possible. They have great pride in public institutions and support public enterprises with all their strength. Sometimes their enthusiasm leads them to be overconfident, and to plan more than they can carry out; but ordinarily the stern experiences of pioneer life develop sturdy characters able to execute what they undertake. All this generates civic pride and lays strong educational foundations. It works, as intended, to the great advantage of their children.

Aside from the pioneer conditions, it is traditional with the people west of the Alleghenies that education shall be supported in all possible ways. They found declarations and requirements to this end in their original charters. Their fathers accepted homes from the older States and the general Government, and in turn agreed that education should be fostered; and succeeding generations have kept that agreement.

The people in the newer States are more uniformly interested in education than those in the older States. By this it is meant that all the people are more interested and that they are more interested in all grades of education, and that they cheerfully sacrifice more, according to their means, to support lower and higher education alike. Individualism is stronger: everyone seeks the highest possibilities, and is ambitious for leadership; and everyone is disposed to seize upon and support whatever promises to be of educational advantage to the community.

This general disposition led them first to seek the national grants to education, and then to seize upon and make the most of them. They have as a general thing administered these grants wisely, and supplemented them generously from their own resources. This has led to the development of great State institutions of higher learning; and, what is still better, it has led the multitudes to have pride in these institutions, and to think that their children ought to have the advantage of them.

A few figures will show quickly the extent of this development. The ten States represented in the Madison conference have, of course, gone farther than the newer States beyond them, except, perhaps, California; but what they have done shows what is going on throughout the entire West, and what has already attained considerable proportions in many of the States in the South. These figures will not show all that these ten States have done, for in several of the number, besides Indiana, the land-grant college is separated from the State University, and in such cases it is not included in the figures. The figures are for the years 1895-96, and if given for the present year would be considerably enlarged. Of course, none of the normal schools are considered in the statement, but nearly all of these States have many and most excellent normal schools. No preparatory schools are included in the table, and the number of instructors and of students refers to those engaged in collegiate, technical, and professional courses alone. In some cases the figures are lacking, and doubtless there are errors in others; but still the statistics are reasonably accurate and sufficient for the present purpose.

The conditions of admission and of graduation in these State universities are high, and their curriculums cover every phase of college and university work. Some excel in one line and some in another, but all are forging ahead in innumerable directions and with an irresistible impulse. The following table will be some indication, but only an indication, of what they are doing:

	DATE OF OPENING	FORCE OF INSTRUCTORS	STUDENTS	BUILDINGS	COST OF BUILDINGS	VOLUMES IN LIBRARY
Indiana.....	1820	62	879	6	\$184,000	23,000
Indiana (Purdue).....	1874	58	643	12	325,000	6,739
Michigan.....	1837	155	2,922	23	951,000	105,547
Missouri.....	1840	50	723	14	649,000	25,000
Iowa.....	1847	101	1,307	12	367,000	42,000
Wisconsin.....	1848	110	1,600	18	1,109,000	45,000
Kansas.....	1866	51	895	8	400,000	25,611
Illinois.....	1868	99	815	16	670,000	30,500
Nebraska.....	1869	85	1,100	8	372,000	33,000
Minnesota.....	1869	168	2,467	27	1,026,000	54,200
Ohio.....	1870	68	969	13	410,000	19,307
		1,016	14,320	157	\$6,463,000	409,904

The University of Indiana has had in private benefactions \$60,000; Purdue, \$310,000; Michigan, \$504,000; Kansas, \$207,000; Nebraska, \$80,000; Minnesota, \$154,000; and Ohio, \$20,000.

In 1895-96 legislative appropriations for running expenses were in Indiana (both institutions), \$60,000; Wisconsin, \$118,000; Kansas, \$100,000; Illinois, \$90,000; Minnesota, \$254,000. In the same year Wisconsin gave for new buildings \$60,000, besides providing for a magnificent new State library building on the university grounds, to cost \$360,000. Illinois gave her university \$243,000; Nebraska, \$73,000; and Minnesota, \$223,000, for the same purpose.

In a number of these States the income of the university, provided by the State, is in large part derived from a fixed State tax, and this is not included in the foregoing figures. In Indiana the State University received \$80,000 from this source last year; Michigan received \$188,000; Wisconsin, \$255,000; Ohio, \$175,000; and Nebraska, \$75,000.

None of these figures include the income from endowment or the later Federal grants.

Fees from students are nominal, except in the professional departments, which aim to be self-supporting. In some cases tuition is without any fee whatever.

Nearly or quite all of the State universities receive students from approved high schools upon their diplomas or

VALUE OF COLLECTIONS AND APPARATUS
(EXCLUSIVE OF FURNITURE)

NAME	Applied Mechanics	Architecture	Art	Astronomy	Biology	Botany	Chemistry.	Civil Engineer- ing	Electrical Engineering	Mechanical Engineering	Municipal and Sanitary Engi- neering	Music	Physics	Pharmacy
University of Indiana...	.....	.....	.....	.....	\$ 10,000	\$ 4,000	\$10,000	.....	.....	.....	.....	.....	\$ 6,000	.....
Purdue (Indiana).....	\$20,000	\$1,000	\$ 2,000	\$ 500	2,500	2,000	4,000	\$6,000	\$20,000	\$75,000	\$ 500	.....	1,575	\$3,500
University of Michigan .	1,500	.....	267,000	16,861	12,000	4,376	19,300	5,792	.....	20,496	9,687	\$10,000	17,297	.....
University of Missouri..	.....	.....	4,000	4,200	12,000	2,500	8,200	3,100	6,500	10,500	.....	.....	6,000	.....
University of Iowa. ....	.....	.....	.....	3,000	7,500	45,000	5,500	5,000	.....	.....	.....	.....	11,000	3,000
University of Wisconsin	75,000	.....	.....	30,000	10,000	4,100	1,700	5,000	12,000	12,500	.....	500	10,000	2,900
University of Kansas....	.....	.....	3,247	1,360	112,045	3,938	4,612	5,213	12,900	.....	.....	900	7,628	3,238
University of Illinois....	4,158	5,000	2,000	8,000	24,585	5,418	10,000	9,500	11,000	24,000	6,830	2,000	9,500	4,000
University of Nebraska.	7,500	.....	300	500	1,650	11,500	10,000	2,000	20,000	.....	.....	.....	14,000	.....
University of Minnesota .	.....	.....	804	8,800	15,000	25,000	8,249	3,800	8,834	13,403	.....	500	14,200	3,500
University of Ohio.....	15,000	.....	.....	10,500	10,000	4,000	20,000	3,000	3,000	10,000	.....	.....	10,000	3,000

certificates. In many of the States the universities appoint an official visitor, who goes from place to place advising the secondary-school teachers in efforts to make a connection between the end of their work and the beginning of the academic work in the university. Upon the favorable report and recommendation of this officer, schools are placed upon what is called the accredited list of the university, and thereafter students are received from such schools without examination. The tendency of this is to make a perfectly articulated State educational system, beginning in the lowest elementary work and ending in the graduate school of the university. In Illinois there is a system of State scholarships exactly like the New York plan concerning Cornell University. Indeed, the Illinois statute is as near as may be a copy of that in New York. Under this statute examinations are held at all the county seats at the same time, and conducted by the county superintendents of schools, and the honorary scholarships are awarded to the most proficient applicants, provided they meet the university requirements. This relieves the holders from the payment of all small fees, and is looked upon as a tribute of honor to exceptional scholarship. These examinations also serve the purpose of entrance examinations to the university, open to all and held near the homes of the applicants.

This hasty statement will give some idea of the strong foothold secured by the State universities. It will hardly convey an idea of the spirit of their work. They are in touch with the "plain people." They have broken out the roads for a great movement in world history. They have carried the advantages of higher learning to the homes of the multitude. Here and there, for generations, a youth has broken through the conditions which were holding him down and has made the most of himself and of the opportunities which he has been able to seize and has secured the advantages of liberal learning, but it remained for the newer States of the American Union to organize a movement which should lead all youth of the land to consider

the question whether or not they would go to college, and to make the road smooth and continuous and practically free, in order to induce them to pursue it to the end, and to enable them to pursue it easily.

The students in the State universities are the best in the world, for they have been sifted out of the multitude and are the foremost products of the great, hardy masses who have always done the most to bear the world's burdens and push on the world's progress. In moderate circumstances as a general thing, looking at life as a serious matter, inured to work, steady, ambitious, and resolute, they mature with rapidity, take on the graces with remarkable facility, and assume conspicuous relations to learning, to society, to affairs, and to government with surprising aptitude.

The Morrill Land Grant Act had a distinguishing purpose in view. That was to carry the advantages of higher education to those engaged in the manual industries. The older colleges had all pointed toward the time-honored learned professions. Congress recognized the industrial changes consequent upon the introduction of machinery, the advent of steam and electricity as elements in industrial progress, and the material development incident to the Civil War. In exacting conspicuous attention to the industrial in addition to the professional arts, when providing for college training in the newer States, the Federal Government broadened the scope of college work by just so much. By taking the grants and complying with the fortunate conditions on which they were made, and at the same time giving enthusiastically from their own store to combine therewith the disciplinary and culture studies, and supplementing the whole with provision for the old and many new professional courses, the newer States laid the most comprehensive university foundations the world has seen. If copying is the highest of compliments, there is no lack of evidence of the abundant appreciation of that fact.

One of the conditions of the Congressional act is that institutions founded in part thereupon shall teach military

science. For this purpose an officer is continuously detailed from the United States Army. The act was passed in 1862, and the cause and object of this provision are both obvious. The condition is met by requiring tactics and drill of the lower-class men, and the result is a martial bearing among the young men which is greatly to their advantage, and a degree of patriotic enthusiasm in the whole mass which is both gratifying and inspiring.

Any question about sex has long since been lost sight of in the State universities. The young men and woman work together in the same classes, and associate freely in the social life of the institution. Naturally their tastes lead them to exercise the right of election between the courses with different ends in view. The rapid enlargement of the scope of womanly activities in the world creates the demand for new lines of work in the universities. But aside from this the sexes stand upon a perfect equality, and mingle freely together; and the free and natural life, with physical and mental vigor continually growing, is a serious reflection upon the strained and severe order of things which used to be universal, and is one of the most charming and reassuring results of modern educational work.

In a State university religious training must be within limits which cannot be objected to on denominational grounds. This fact has led to some misapprehensions, if it has not caused some erroneous representations. People who lack the power of discrimination have said that the American school system is godless. There could be no greater mistake. The Church is perhaps the greatest institution of government, and religion is a part of the common law of the land. Complete toleration of religious opinion, and not the absence of spiritual life, is a corner-stone principle of the American State and of the State school system. The world is rapidly coming to believe that there is more godlessness in denominationalism run mad than in that toleration which encourages the unrestricted flow of spiritual life.

The Young Men's Christian Association and the Young

Chancellor Snow,
Kansas.

President Draper,
Illinois.

Chancellor MacLean,
Nebraska.

President Smart,
Purdue Indiana.

President Schaeffer,
Iowa.

President Smith,
Indiana.

President Canfield,
Ohio.



President Northrop,
Minnesota.

President Angell,
Michigan.

President Adams,
Wisconsin.

President Jesse,
Missouri.

PRESIDENTS OF STATE UNIVERSITIES IN THE MIDDLE WEST

Women's Christian Association of the University of Illinois recently undertook to interview students touching their religious affiliations. Without fixing the status of all, they secured results shown by the following table, which, I am informed by Professor Kelsey of the University of Michigan, who has given the matter much attention, are in close accord with the facts in other State universities.

	CHURCH MEMBERS		ATTENDANTS		TOTAL
	Men	Women	Men	Women	
Baptist.....	23	5	21	1	50
Christian.....	20	5	12	1	38
Roman Catholic.....	12	3	..	..	15
Congregational.....	30	11	31	8	80
Methodist Episcopal.....	76	36	76	18	206
Presbyterian.....	69	24	49	11	153
Lutheran.....	10	..	4	..	14
Episcopal.....	15	4	7	..	26
Universalist.....	3	..	6	..	9
Protestant Methodist.....	3	1	2	..	6
Unitarian.....	..	1	..	..	1
German Evangelical.....	3	1	..	..	4
Church of Christ.....	..	1	..	..	1
Union.....	2	..	..	..	2
United Brethren.....	1	..	..	..	1
United Evangelical.....	1	1	..	..	2
Christian Science.....	1	..	..	..	1
Friends.....	3	1	..	..	4
Hebrews.....	..	..	2	..	2
Dunkards.....	1	..	..	..	1
Adventists.....	..	..	..	..	0
	273	94	210	39	616

The fact doubtless is that there is no place where there is a more tolerant spirit, or freer discussion of religious questions, or a stronger, more unrestrained, and healthier religious life than in the State universities.

My friend Captain Pratt of the Carlisle Indian School has a favorite remark that "education is what results from the contacts of people." Nowhere does it find more abundant illustration than in the contacts between the representatives of all the social planes, all the religious sects, all the political parties, in the free and bracing air of a State university.

The State universities enjoy all the modern improvements in the way of organizations. They have literary societies, technical clubs, musical organizations, Christian associations, athletic teams, Greek letter fraternities, and Women's sororities galore. Everyone finds something to his taste, and has his taste cultivated by what he finds. Lectures, concerts, debates, athletic meets, receptions, exhibitions, etc., relieve the drudgery of college life, and perhaps at times afford more relief than is necessary. In intercollegiate contests, either intellectual or physical, the State university ordinarily expects to triumph, and is not very frequently disappointed.

Even now the young State universities, most of them in their first generation, rank all of the institutions of the land save four or five of venerable history, and in time they will radiate a no less telling influence than these, because they are imbued with the spirit of the people and the age, and because they are endowed with the sympathies, the possessions, and the sovereign authority, touching educational questions, of the people of their States.

The State university is the logical outcome of the theories which became universal years ago in the United States touching public education. When the American people advanced to the point of providing schools managed by public authority, and supported at common cost, for all the people, it should have been easy to see that it would not be long before the American spirit would extend the scope of their work to the point where it must include the most and require the best the world could give. And in the reasons which led it, in conception, in structure, in its broad purpose to uplift the life of all the people, in its high ambitions and undoubting confidence, in its tolerant spirit, its free life, its endless opportunities, and its patriotic impulses, the State university is the highest and the best, and the most typical exemplification of the American spirit in the world.

There are some new and great social, economic, and political questions pressing upon the people of the country for a more thoughtful and unprejudiced investigation than they

have yet had. They are more urgent in the West than in the East. The East has just heard of some of these questions, but as yet has not been able to see more than one side to them, or that they are urgent at all. But more will be heard of them, and they will have to be met. They must necessarily be settled in accord with the foundation principles of republican government, and in the interests of the multitude, and it seems more and more obvious that scholars trained in the atmosphere of the State universities will exert the largest influence in working out their solution.

The Madison conference was a suggestive, if not an historic, event. It looked back and it looked forward. For the first time ten States conferred together to extend and uplift higher education under the management and support of the State. Competition is being supplemented by co-operation. Indeed, the growing disposition to be helpful to all grades and branches of learning was doubtless the moving cause which produced the conference. The heads of these universities met to secure a common understanding by which requirements may be equalized or made more nearly equivalent, relations more closely cemented, State educational systems better articulated and strengthened, and all possible help given to every instrumentality which in any way contributes to the common ends toward which all education tends. In this the conference was measurably successful, and because of this it will doubtless be remembered and its influence felt later on.

Perhaps it should be said, in conclusion, that President Adams presided at the conference; that no permanent organization was effected; that no attempt was made to legislate for others; that no time was fixed for a future conference; but that it was agreed that when circumstances seemed to make another conference desirable, it should be called by a committee named for that purpose, and should meet at the University of Illinois.

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UNIVERSITY OF ILLINOIS,
CHAMPAIGN, ILL.

II

WHY ART AND LITERATURE OUGHT TO BE STUDIED IN ELEMENTARY SCHOOLS

All questions relating to the course of study in the schools must be taken first into the court that decides on educational values, and next into the court that settles the order of sequence—the former investigates the meaning of the proposed study in the light of civilization, and the latter the place of its introduction into the school programme. The first proceeding is to place the question in the light of all human learning, and the second is to place it in the light of educational psychology.

Our present question, therefore, must be examined with a view to see what art and literature mean in our civilization—what they have meant in the past, and what they must necessarily mean in the future that shall be. Then, having settled its degree of importance, we may turn to educational psychology and ask where in the education of man can this profitably be introduced, what stages of growth it presupposes as already attained, and what methods are best for the results we wish to accomplish.

By the term art I designate sculpture, painting, architecture, and music. By literature I mean chiefly poetry—epic, dramatic, and lyric. I include also such prose writings as critical miscellanies which furnish reflections on the same general themes that poetry treats. Above all I include the novel, the romance, or the story. While the epic poem has for its theme the conflict of nations, the novel treats of conflicts in civil society and in the family, and has been called the epic of the bourgeois.

In order to see what we have to do with in art and literature, let us look for a moment at its place among the funda-

mental activities of the soul. (Parenthetically I explain that I group together art and literature under one definition as the province of æsthetics; and hence I sometimes use the pronoun *it* or *its* to refer to them.)

The highest idea that man reaches is his thought of the divine as the first principle of the universe. There are three forms in which he attempts to express this idea. First in religion, second in art, third in philosophy; this highest idea appears necessarily as the good, the beautiful, and the true. We call the effort to celebrate the divine and realize it in good deeds religion; the effort to give visible forms or audible forms to it gives us the various branches of the fine arts and literature. The attempt to explain the world by the divine idea and to comprehend ultimate truth is philosophy. Thus we are to regard art and literature as having the same theme as religion and philosophy. The idea that sculpture and painting, music and poetry have no other use than amusement must give way to the view which regards them as among the most serious and worthy occupations of the human soul.

All that man does contributes to a revelation of human nature in its entirety, but art and literature lead all other branches of human learning in their capacity to manifest and illustrate the desires and aspirations, the thoughts and deeds of mankind. Hence the educative value of these things. In the presence of the conflict of moral ideals, the struggle of passion against what is rational, the attacks of sin and crime on the divine order of the world, all that is deepest in human character is manifested. Art and literature portray these serious collisions, and like the mountain upheavals that break and tilt up the strata of the crust of the earth and reveal to the geologist the sequence of the formations from the most primitive to the most recent, so these artistic situations reveal to all men the successive strata in the evolution of human emotions, ideas, and actions. Thereby the single individual comes to know the springs of action of his fellow-men.

I have already named the four provinces of art—architecture, sculpture, painting, and music; and the three general divisions of poetry—epic, lyric, and dramatic. There are, moreover, three great historical epochs of art and poetry, corresponding to the three great stages of advancement of the nations of the world into conscious freedom. For the art and literature of a people reflects its degree of enlightenment and is, in fact, next to religion, the chief means by which its civilization is preserved. We accordingly have as the lowest stage the art of nations that have reached only the freedom of the social world without reflecting it in the individual. The citizen is buried beneath a mass of customs and usages, laws and prescriptions which he has had no hand in making and yet cannot refuse to obey. This form of civilization is only a little above a condition of slavery for its citizens. Its art accordingly does not create forms of free movement, but represents by appropriate symbols the crushing out of individuality. Such is the art of the great nations of Egypt, Eastern Asia, East India, Persia, and Western Asia. It has been described by Hegel, whose *Æsthetik* is by far the most satisfactory philosophy of art, as *symbolic art*. Its works of art *adumbrate* or *hint at* what they do not adequately express.

The highest form of art is reached by the so-called classic nations—Greece and Rome. They arrived at the expression of freedom in the body—freedom in its pose and freedom in its action. This is properly called gracefulness. The limbs of the body are obedient to the will of the soul. When the limbs are in the way, when the soul does not know what to do with them, we have awkwardness as a result, and not gracefulness. The Greek artist would not paint a family group with their arms folded, or their hands folded. Their hands and arms would be in action obedient to some purpose of the soul. But some Dutch painters would show us peasants embarrassed by their limbs, peasants who would evidently feel greatly relieved if their arms could in some way be detached from their bodies—perhaps unscrewed or

unhinged in some way and hung up on the hat-rack outside the room, with their overcoats and head covering. Greek art seizes for its theme some moment of life when all the limbs are required to express the purpose of the soul, as, for instance, in the Apollo Belvedere. If it takes for its theme a sitting figure—the Olympian Zeus—it poses the body in such a way that we see the full control of the will over the limbs. The sitting Zeus could rise instantly and hurl his thunderbolt. The “classic repose” of which we hear is ever a graceful repose; graceful because the whole body is pervaded and controlled by the soul.

The third stage of art is Christian art; or, as Hegel calls it, romantic art, which at first is occupied in showing the superiority of the soul to the body, and for this purpose selects for its subjects examples of steadfastness under severe trial—martyrs, and especially the sufferings of Christ. It goes so far in this as to set itself in opposition to classic art, and sometimes indicates its contempt for gracefulness in order to accentuate its preference for inward freedom and spiritual elevation. It portrays freedom *from* the body, while Greek art shows freedom *in* the body. In the later development of Christian art we see the attempt to represent gracefulness without losing the expression of the predominance of the inner life of the soul over its corporeal life.

In Fra Angelico’s paintings we see Christian martyrs with tortured bodies, but meekness and peace in their faces—a peace that passeth understanding; for they are at one with the divine. There is no longer the expression of the desires of the body, but only the religious longing for spiritual perfection. Classic art showed us the soul in the body and with bodily desires and passions, but purified by subordination to social restraints. Christian art shows, in this first stage, the opposite of Greek art—not freedom in the body, but the renunciation of the body.

Then there is a second and later phase of romantic art, represented by such artists as Raphael, Murillo, Da Vinci, Michael Angelo, Correggio, Holbein, and Rubens.

Gracefulness has been more or less restored by these, but not the classic repose of the Greeks. For there remains, even in the latest forms of Christian or romantic art, the portrayal of a longing or aspiration of the soul for something beyond what it has achieved.

Here we can pause for a moment and consider the reason for giving the rank of highest phase of art to the Greek.

We have seen that religion realizes the divine in the good, while philosophy defines it in a highest principle and attempts to explain all things by it, but that art manifests the divine in material forms, or at least by images of material beings; so that we may say that art is the union of the spiritual and the material, while religion is the emancipation from what is material.

Now classic or Greek and Roman art is the perfect realization of this union of the material and spiritual; hence the highest type of art as art. Christian art, representing as it does the struggle of the soul against its physical environment, is a form of art that looks toward religion. It is, therefore, a transition from art to a higher form of the realization of reason—namely, religion. But art is not a mere transitory phase of human culture; it belongs to all subsequent ages of human history after it has once come into being. Moreover, the classic form of art will more and more come to be admired in all the future Christian ages because it portrays freedom in the form of gracefulness. The earliest Christian ages could not admire Greek art without falling back into sensuality. It had not yet attained a persistent hold of the spiritual. But when the Christian idea had been evolved in history to a point where natural science could be pursued in a free and untrammelled manner, then came the age of inventions, labor-saving, and knowledge-extending—inventions that enable us to conquer nature and emancipate ourselves from that drudgery which had been necessary for the sake of food, clothing, and shelter. We are now in this age of productive industry which is the sequel to inductive natural science. We see all about us the

triumph of wealth. Wealth in the form of capital enables not only its possessors to obtain large shares of food, clothing, and shelter, and means of access to knowledge, but it enables the unthrifty of the community, to the last man of them, to obtain a proportionately greater share in creature comforts and spiritual privileges. At the beginning of this century the average total production per inhabitant in the United States was only ten cents a day, and, of course, the share of this must have been very small for the poor. But in 1890 the average production had risen to nearly or quite fifty cents per day, and the share of all had proportionately increased.

In the presence of this development of power over nature we desire to see a reflection of our material freedom, and we accordingly gratify ourselves by reproducing Greek art with its graceful forms. The perennial image of free control of bodily forms pleases us as it did the Greeks, but it does not excite in us a feeling of worship as it did in the Greeks. For we worship a transcendent God, one who cannot be fully revealed in graceful forms like Zeus and Apollo, but who needs religion and philosophy for his revelation. For the Christian civilization needs not merely piety of sense-perception, which is art, but piety of the heart and piety of the intellect. We have varied our spiritual wants, and we have a place for art in our lives as a reflection of our freedom.

Literature and art, in passing over from the classic type to the romantic, become more fully pervaded with the expression of motives and delicate shades of feeling. They show us in a more complete manner the subjective or inner life of the individual. In modern art we can see all of the successive stages by which a blind desire in the mind of a character becomes at length an emotion, and then a well-reasoned thought, and later on a conviction, and finally an action.

The greatest works of art ought to become the most familiar ones to the people. Care should be taken therefore, in the school, to select these great works and to lead

the pupil into an understanding of the motives of their composition, and next to point out the artistic means and devices for the expression of the thought or idea portrayed. For I have said that a work of art is the union of thought and matter. The senses perceive the material object, but a higher faculty of the soul perceives the work of art and enjoys the spiritual suggestion in it.

By successive stages the teacher will carry forward his elementary pupils into an appreciation of the great works of art, and thereby cultivate their taste and make them wise with a knowledge of human nature.

The literary characters painted for us by Homer, Sophocles, Dante, Molière, Shakspeare, and Goethe are better known by the people than any historical characters, and they are thoroughly understood. People learn to do their thinking with them. They furnish keys to our everyday experience. For the great poets have given us characters that are types representing the chief classes of men and women in our civilization. Moreover, the situations in which these typical characters are placed involve the difficult problems of life and furnish their solution. The ambition of Macbeth, the jealousy of Othello, the indulgence of sudden gusts of wrath by Lear; furnish us vicarious experiences of life and widen our knowledge of self. The retribution that overtakes sin and error is seen by us with purifying effect. Aristotle has remarked that this purification through sympathy and terror is one of the chief uses of the drama.

The wrath of Achilles and the selfish pride of Agamemnon; the long-delayed return of Ulysses and the steadfastness of Penelope; the cycles of heroes and heroines of the *Iliad* and *Odyssey*, have furnished literary categories for European thought for nigh three thousand years. They have grown into great ganglia of apperceptive ideas, and one has to become acquainted with Homer simply to understand the contents of his own literature.

Dante's *Divine Comedy* gives five hundred biographies, foreshortened in the perspective so as to show the life of

each sinner or saint as determined for weal or woe by his own deed.

Goethe's *Faust* depicts for us the life of the modern agnostic who tries to live up to his theory, but finds in the end that the world of human history presupposes the Christian theory of the Absolute. God must be a divine reason rather than a blind, persistent force.

What a large family of men and women, heroes and cowards, learned and simple, moral and immoral, Walter Scott has motived in his poems and novels! It is a liberal education to be familiar with his works.

The school readers do not contain these works that I have here named, but they offer fragments of some of them. Moreover, they prepare the way for an understanding of the greatest works, by widening the pupil's vocabulary from the merely colloquial one that he brings with him to school, by enriching it with choice selections from Tennyson, Wordsworth, Longfellow, Whittier, Bryant, Carlyle, Emerson, Hawthorne, Swift, Webster, Gray, Campbell, Wolfe, Byron, Shelley, and more than a hundred others.

The pupils of our elementary schools become familiar with at least two hundred felicitous literary works of art, containing expressions of thoughts and feelings that would otherwise remain dumb and unutterable in the pupil's mind. The school must, above all, see to it that the pupil makes incursions into great works of art in his home reading. He may be led to read the *Merchant of Venice* or the *Midsummer night's dream*; or some part of the *Iliad* or the *Odyssey* or the *Aeneid*, or especially Walter Scott's *Ivanhoe* or *Rob Roy*, and certainly *The lady of the lake*. Once a taste is formed for a work of the great author, a culture is begun that will go on through life.

The photographic art has made possible schoolroom instruction in the great works of architecture, sculpture, and painting. The greatest works should be selected rather than third- and fourth-rate ones. In the Metropolitan Museum of New York City there is a model of the Parthe-

non twelve feet long. Mr. Prang of Boston has reproduced for us in colors, for schools, the Eastern façade on which is the pediment group of Phidias, restored by archæologists from the fragments that have been preserved. It shows the scene on Olympus after the birth of the goddess Athene from the brain of Zeus. On the left the god of the Sun is urging his steeds up from the waves; in the east and on the right Selene, the moon, is driving her terror-stricken steeds into the western waves—for day is to ascend into the sky for Athens, and night depart. The patron goddess has been born. The Three Fates spin the thread of life for her; the gods and goddesses of the Attic land turn their heads joyously to the newly born Athene, as Iris hastens toward them with the glad tidings. For dignity and repose in action, these figures of the Parthenon surpass all art known to us. Taking the Parthenon for one specimen of architecture, add a large photograph of the Cologne Cathedral for Christian architecture—all of its lines aspiring toward the heavens, and seeming to be supported from above rather than from the earth below.

For painting, let the school get good photographic reproductions of Raphael's "Transfiguration," "Sistine Madonna," and "St. Cecilia"; of Holbein's "Dresden Madonna"; of Coreggio's "Holy Night," and Da Vinci's "Last Supper." On stated occasions, say twice a month, explain to the pupils the motives that the artist has depicted in the composition of his pictures—for the composition is the first thing to study in a work of art. The pupils will become skillful in interpreting pictures after the analysis of a few famous ones from the great masters.

For sculpture, besides the figures on the Parthenon, get photographs of the "Apollo Belvedere," the "Laocoön," Michael Angelo's "Moses," and the Medici marbles, and also of the antique busts of "Zeus Otricoli" and "Hera Ludovisi."

If these photographs of architecture, sculpture, and painting are made to adorn the walls of the schoolroom, they

will produce a permanent effect on the pupil's mind in the way of refining his taste, even if no studies are made of the motives that the artist has brought into their composition. But of course the composition lessons should be provided for in the programme of every school.

As to music, our high-school pupils learn to perform selections from Mendelssohn, Rossini, Schubert, Mozart, Beethoven, Wagner, and Schumann. There ought to be studies made of the motives of a piece of Beethoven or Wagner, corresponding to those made on Raphael or Da Vinci.

It is by this study of the motives of the artist, and his use of them in creating what is called the organic unity of his work of art, that the pupil can be made to see that art is as serious as history, and even more truthful, as containing a logical consistency in the return of the deed upon the doer.

Art and literature preserve for us the precious moments, the elevated insight of seers who are, next to the religious seers, the greatest teachers of the human race.

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III

THE CORRELATION OF EDUCATIONAL FORCES IN THE COMMUNITY

The energies of school supervision have hitherto been largely employed in perfecting the organization of teaching and in bringing it into true pedagogic form. We have treated the school as though it were sufficient unto itself and somewhat independent of all other factors. I believe the time has come when we may wisely give more attention to the utilization of forces outside of the school to the end that community life and effort may be richer, better directed, more economically employed, and that the schools may gain the commanding position that rightfully belongs to them. Henry Ward Beecher uttered a great truth when he said that in America there is not one single element of civilization that is not made to depend in the end upon public opinion. I care not how skillfully and thoroughly school supervision does its work, unless the interest and confidence of the people are enlisted so that they believe in the value of what is done, much of the labor goes for nothing. There may be much of indifference and apathy, but there is never strict neutrality in public sentiment. A community that is not thoroughly committed to a broad educational policy and active in sustaining it is likely to assume an unfriendly attitude, if the slightest provocation arises. Much energy has been wasted in trying to perfect a school system while the people were ignorant of the motives and aims that animated its directors and were incapable of understanding and approving the methods employed. There are plenty of communities that have never yet been reached by the spirit of modern education. They are like those broad stretches

of thickly populated country in India or China where, here and there, a single missionary is trying to break the ice of Paganism with scarcely any perceptible success. In such cases the schools are as good as they can be under the circumstances, but there is no enthusiasm concerning them and the well-to-do people, knowing nothing of their excellences, send their children to private schools often of an inferior character. There are many instances where the conditions are right for the development of an educational spirit in the community, but those in charge make no effort whatever to bring about this most desired end. Some years ago a young man was called to take charge of a group of schools in one of our pleasant New England boroughs. He had his own ideas and carried them out. He made no study of the community to see what synthesis could be made of existing forces. He enjoyed the privacy of his own room better than the exactions of social life. He made few acquaintances and few people knew him or cared for him. At length a single indiscretion on his part in connection with a case of discipline aroused the hostility of the local newspaper. Having no public opinion in his favor he lost ground rapidly, was soon compelled to resign, and the good work he had done in the schools went for nothing. I venture to assert that this is a type of many cases occurring all over the country which give to educational supervision the character of instability and Bohemianism.

Moreover, the failure to work constructively for healthy public opinion is not the only shortcoming of our craft. The apparent inability of some men and women to recognize the unity of all moral and social aims, and to justly value the work of forces other than the one to the service of which they are especially committed, is a difficulty no less serious than the one already indicated. Herbert Spencer, in one of the closing chapters of his work on *Illustrations of universal progress*, calls attention to the fact "That the different parts of the social organism, like the different parts of an individual organism, compete for nutriment and severally obtain

more or less of it according as they are discharging more or less duty." Unless the several agencies which operate in community life for the improvement of the conditions of living and the elevation of society are made conscious of each other's claims, this sort of competition, to which reference has been made, is likely to work harm in preventing some forces from achieving all of which they are capable.

Let us consider briefly the principal factors that, speaking broadly, contribute to education in the community. They are the church, the home, the school, the public library, the newspaper, the art museum, where there is one, and the civil state with its laws protecting life and property, its provisions for public health and convenience, and its orderly conduct of all civic affairs. We should mention also the opportunity of hearing good music, the operations of commerce, the daily miracles of science as applied in mechanics and electricity securing rapid travel, communication, etc. Now, in the general work of education, each of these forces has its own peculiar task. It does what none of the other forces can do. The Church, by its constant appeals to the higher spiritual nature, by consecrated self-denial, lofty example, and helpful ministrations must be regarded as a mighty educational factor. The presence all over the Christian world of imposing church edifices conceived in the highest types of architectural art, with their towers pointing upward, is simply the visible expression of those deeper sentiments that are inspired and developed through the ministry of the Church.

The home, with its tender parental nurture, its solicitous care and wise guidance, contributes a fundamental element to education. Especially is it true when an air of culture pervades the home, that it often becomes, as Holland describes it, "The sweetest type of Heaven." What it does no other power can do. Deprive a child of a good home and you blast the very flower of his opportunities. It was observed in connection with a series of articles by eminent persons published a few years since, on "How I was edu-

cated," that each and every writer paid a high tribute to the potency of the home as a factor in his own education.

The school holds a central place. More than the Church or even the home, it moralizes the child and establishes his character upon the foundations of good habits. Its regular routine, continued day after day, and the constant appeals made to the best efforts of the child make the school pre-eminent among educational forces.

The public library, or people's university, as it has been called, is a reservoir of knowledge and inspiration for the entire community. Rightly supported by the Church, the home, and the school it supplements them all in their efforts to elevate and refine society. Without speaking in detail of other educational forces, it seems strange that devotees of any of these agencies are blind to the relative importance of the others, as well as to the fact that the highest success of any one of them depends upon the support it gets from the others.

I shall venture to refer again to the Church, in this connection, in the way of mild criticism. Mr. Brooks Adams, in a recent monograph on the *Law of civilization and decay*, finds that "the fundamental idea in religion is fear, which, by stimulating the imagination, creates the belief in an invisible world and ultimately develops a priesthood." To such an extent have the world religions taken advantage of this principle that their history has been a record of tyranny and darkness. Under the same influence the light of Christianity became so obscured that the work of freeing the human mind from its slavery has been only partially begun; and, even in this most democratic of countries, whose foundations were laid by those seeking religious freedom, we often find the Church arrogating to itself rights and powers which it does not possess, and pretending to accomplish results which it never has nor ever will accomplish. The minister too often forgets that the pulpit is a means to an end, and that its highest function is to dignify and sweeten human service of every sort and establish the brotherhood of man

and the unity of all work for the cause of truth, to the end that there may be mutual co-operation. Only recently one of our most liberally-minded clergymen, in naming to a body of young people the benefits that have come through the Christian dispensation, made no mention of the Christian school. Too often schools are entirely omitted in prayers from the pulpit or in pastoral ministrations. It is because of the influential position of the Church that I feel compelled to emphasize this omission. It seems to me to be entirely opposed to the spirit of him who came upon earth and went about doing good. The love of the Master for children is unquestioned. I have often thought that, were he to be among us again, he would be seen quite as often in our schools as in our churches.

No less lack of co-operation has often existed between the home and the school. Here are two forces operating to the same end, yet often so antagonistic that the impressionable child is trained in ways of discourtesy and disloyalty, his school life is made wretched and his childhood is clouded. Dissension in the home is bad enough, but strife between teacher and parent is fatal to those finer results for which the home and school should aim. Is it not about time that the traditional schism between parent and teacher be bridged over? Should we be contented with the relation of armed neutrality which so often exists? The importance of the issue at stake demands mutual sympathy and co-operation. The teacher greatly needs the respect, the confidence, and the esteem of the parent. He needs information concerning the child's home life, his tastes, habits, etc., The parent, on the other hand, should have the frankest statements from the teacher concerning the child's interests as displayed in the schoolroom. Through such conference teacher and parent are able to supplement the efforts of each other.

There is something to be said about the place the schools should hold in the opinions and good wishes of the people. As the most influential of the forces in education, as the prime factor in determining the civic intelligence of the com-

munity, they should be held in high honor and esteem. They should be regarded with generous feeling and interest, and every citizen should feel a personal obligation to contribute to their efficiency. The late President Garfield once said that "The best system of education is that which draws its chief support from the voluntary effort of the community." It is worth a good deal to have the school taxes paid cheerfully, but we want something more than a passive interest. This brings me to the point of announcing two principles that deserve to be recognized everywhere. First, the social and educational forces of the community should be brought into correlation. There should be the fullest mutual readiness to co-operate. Second, the school, better than any other factor, may become a center for this correlation. It exists for all the people, is unhampered by creed or sect, and at the same time stands for the very highest aims to which human efforts can be directed. In an article written for the *Atlantic Monthly* of January, 1896, Horace E. Scudder urges the propriety of making the schoolhouse the center of community life and concludes by declaring that the school system holds the key to the situation in any problem we may encounter when considering the momentous subject of American civilization. There is little that is new in these propositions. Indeed, there has been a growing recognition of their importance during the last few years. The so-called institutional church is an attempt to utilize various educational forces to supplement preaching so that we often find now, organized under the roof of one church, various means for physical, intellectual, and moral cultivation. The same idea expresses itself in missionary endeavor, but the most significant illustrations are those local societies that have been formed in various cities with the avowed purpose of helping on the cause of education. Some years ago the Public Education Society of Philadelphia began a career which has resulted in many educational reforms. In fact, it is said that the establishment of the kindergarten, the reorganization of the school system with the employment

of a superintendent of schools, the introduction of manual training, and the broadening of all courses of study have been the indirect results of the labors of this society. A similar organization in New York has enlisted the active assistance of the influential citizens of the city, some of whom are social leaders. What appeared to many to be almost a hopeless undertaking has already borne excellent fruit in the well-known reform measures which it is to be hoped are the beginning of a thorough reformation of the school system of that city. A striking instance of what a local society may do is seen in the work accomplished for the Boston schools in a single year by the Association of Collegiate Alumnae acting in co-operation with the officers of the Institute of Technology and certain school officials. There was undertaken a thorough investigation of the schoolhouses of Boston to determine their condition with respect to health and sanitation. A vigorous report, made at the conclusion of the task, has resulted in a thorough awakening of public interest on this subject and will ultimately result in larger appropriations for the correction of defects pointed out.

One of the best illustrations of social co-ordination is seen in the Twentieth Century Club of Boston, which has been in existence a little more than three years. The avowed purpose of the club is "to promote a finer public spirit and a better social order." Among its founders were such men as Phillips Brooks, Dr. Edward Everett Hale, and Dr. George A. Gordon. Its membership of three hundred includes about an equal representation of lawyers, ministers, journalists, artists, teachers, and business men. Among these are many names well known as philanthropists and social reformers. Under the skillful management of its president, Mr. Edwin D. Mead, its meetings, which are held on alternate Wednesday evenings, have presented a remarkable instance of a perfectly free platform where any subject—social, religious, or political—could be discussed with the utmost candor and in the best spirit. A lunch is served to

the members of the club at its rooms on Saturday, after which some topic of living interest is brought forward and a most interesting comparison of views follows. It is generally recognized by the members of the club that its purposes are distinctly educational, and the interests of schools and colleges have been given a prominent place in its deliberations. It is impossible to estimate the good that such an organization may accomplish. The fact that woman's clubs throughout the country are making public schools a special object of study, and that at Louisville last May the Federation passed resolutions recommending such study, is full of significance and promise.

In response to request, I will now speak particularly of the purposes and work of the Brookline Education Society. The inhabitants of Brookline are widely scattered and are not especially homogeneous. The town, territorially, is a part of Boston and is nearly surrounded by that city. As in the case of ancient Rome, all the tram lines lead toward the city, and the several parts of the town are not connected by public conveyance. It is a community where, previous to a few years ago, the well-to-do people patronized private schools, of which there were excellent examples both in the town and just across the city line. Hence, Brookline cannot be regarded as a place to be easily organized with public education as a center aim. The high intelligence of the people and their generous public spirit of course favored such an attempt. The public schools for several years have been conducted with special reference to the union of the home and the school. Parents have been taken into consultation upon every possible occasion, have been invited to co-operate, and the course of study and the school life have been made both acceptable and attractive. There was plenty of conservatism to overcome and the customary hankering after the leeks and onions of the old régime. All this has been largely overcome by the *dictum*, oft repeated, until it was at the tongue's end of every teacher, that the aim of the school was moral character building and that

nothing could serve this end but a broad, elastic curriculum entirely free from quantitative standards. It was the recognition of the validity of these aims as seen in actual results that did more than anything else to help on the Education Society. It was fortunate from the start in having social leaders among its officers and active members. The society has been in existence less than two years and has a membership of more than five hundred. Its purpose, as announced in the constitution, is "to promote a better knowledge of the science of education, a better understanding of methods now employed, and a closer sympathy and co-operation between the home and the school." It holds regular meetings once in six weeks with such special meetings as the officers may think desirable. All arrangements of programmes, etc., are made by the executive committee of seven persons, including the president and the secretary. Pains have been taken to offer for discussion at the regular meetings those vital questions that lie between the home life and the school life, such as "The home care of children," "Home study," "The reading of our boys and girls," "Works of art in schools," "The study of nature in the home and in the school," "Manual training and domestic arts," etc. In almost every discussion the conclusion has been reached that the home and the school must be in accord, and that the child in passing from one to the other should be in the same atmosphere of kindly sympathy and wise guidance, and that there should be agreement between parents and teachers in regard to sports, companions, books, and all other elements that enter into his life. There are special committees on child-study, physical training, history, science, music, art, school libraries, and lectures. Any member of the society may become an associate member of one or more of the committees and find an opportunity of rendering service therein. The child-study committee has encouraged the holding of mothers' meetings in all sections of the town in connection with the kindergarten and primary schools. A general meeting of this sort was held

in the autumn which was attended by no less than four hundred. Several syllabi, less abstruse and searching perhaps than some prepared by professional students of childhood, have been sent out.

The committee on physical training has given much attention to the best methods of promoting health in the home and the school, and has still a long list of problems for future consideration. The erection by the town during the past year of a fine municipal bathhouse with superb facilities for swimming, adjacent to the high school, has given occasion to this committee to consider swimming as a proper school exercise. An instructor has already been secured and a programme arranged for giving systematic lessons in swimming to pupils in the high and grammar schools.

The committee on history has undertaken several lines of work that are likely to make this study of much greater value than has been the case hitherto. Acting in connection with the public library, a collection of old letters and documents of value has been begun. Several tracts of information concerning old houses, historic roads, and Indian trails have been issued. Monographs upon Brookline's share in the Civil War and other important events have been written by pupils in the high school. Bulletins giving directions for excursions to historical localities in and about Boston have been issued. An afternoon course of lectures upon local history in the Civil War was given last winter to which all children in the town, twelve years old and upward, their teachers and parents were invited. Among the speakers were William Lloyd Garrison, Edward Everett Hale, Mr. Edwin D. Mead, and Mr. Charles Carlton Coffin. The lecture given by the last-named gentleman was his last public address. The committee has placed letter-file envelopes and boxes in the high and grammar schools for the collection of newspaper items. Several things are being planned for the current year, among them a course of illustrated lectures on general history, to be given at a time and place suitable for grammar pupils and their parents.

The committee on music has taken an advanced step in the direction of enabling young children, especially in the less favored sections, to hear fine music. Several excellent amateur musicians have, upon invitation of the school committee and with the approval of the school board, gone into the schools and given a half hour of vocal or instrumental music. It is hoped that this plan may be so well developed that once each week the younger pupils will be able to hear music of a high order. The committee has taken the ground that this is not done to entertain the children, but in order that the higher æsthetic nature may receive proper nutrition during that period of life when the child is impressible and receptive. They believe, with Bulwer Lytton, that music, once admitted to the soul, becomes a sort of spirit and never dies. Those persons who have had the pleasure of witnessing the effect of this experiment have become strongly convinced of its wisdom.

The work of introducing masterpieces of art into the schools was begun some years since by Mr. W. H. Lincoln, chairman of the school committee, who placed in the assembly hall of one of the grammar schools which had been suitably frescoed in dark, rich tints, a large portion of the frieze from the Parthenon and copies of several of the most famous heroic statues and casts. Local committees and the patrons of the schools in the favored sections of the town have continued this work successfully. Art works to the value of about five thousand dollars have already been donated to the Brookline schools. The art committee of the Education Society is about to undertake the introduction of pictures and objects of art into those school buildings whose patrons are unable to contribute to this purpose. It should be stated that considerable progress has been made in correlating pictures with the grade work of the several classes. Steps have been taken to organize a loan collection of pictures and objects of art, both for the sake of the people at large and in order that funds may be raised for the prosecution of the work mentioned above.

The report of the science committee, as published in the first Year Book, is rich in suggestions looking to the home as the partner of the school in making children intelligently familiar not only with superficial nature, but with the scientific aspects of our civilization which touch us on every side. Many parents have already become students of science with their children, and have helped them to fit up small laboratories at home for simple experimentation. It is proposed by the same committee that a "science museum be established for the reception and preservation of curios, mementoes of foreign countries, lantern slides of people, cities, and objects of interest in far-away lands as well as of noble mountains, majestic rivers, and yawning cañons of our own country."

The school library committee has prepared a valuable annotated list of books on each subject taught in the primary and grammar grades. These books are all in the public library, and the shelf numbers are given to enable the children to call for the books that interest them.

Two courses of lectures have been given on the broader educational themes. However valuable these lectures may have been during the early days of the society, it is doubtful if they will be regarded as an important part of its future work.

It may confidently be stated that the Education Society has already borne fruit. The attention of many people hitherto quite ignorant of educational problems has been turned in this direction. Parents have come to see, perhaps for the first time, that the education of their children is a deeper concern than houses and lands or the stock market. That type of man who journeyed ten miles every week to see a favorite colt in the pasture and who never visited his children's school is likely to become extinct. A powerful public sentiment is being developed in favor of the newer phases of education—especially art, manual training, and physical culture. During the past year the school yards and grounds have been placed in charge of the park com-

mission, which has already planted shrubs and flowers in nearly all of them. I suspect that this move was but an indirect result of the Education Society. The suggestion for an art commission made to the town authorities, and which has already received favorable attention, is traceable to the same source. Various objects, useful and ornamental, have recently found their way from the homes into the school-rooms, such as plants, collections of shells and minerals, photographs, etchings, casts, magazines, books, and best of all is the unqualified sympathy that is now apparent between the parents and the teachers. Some teachers receive so many grateful and complimentary letters that their faces are constantly wreathed with smiles, and they seem to be walking on air instead of performing a wearisome duty. When criticisms are made they are offered with such courtesy and consideration that one cannot help feeling thankful for them. So, when streams of appreciation and kindness flow in continually upon the superintendent and his associates, what under some circumstances would be dreary routine becomes delightful service.

Did time permit me, I would like to speak in detail of the work in the direction of high-school extension which has been successfully carried on by the head master of the high school. Courses of lectures and lessons in literature, astronomy, French, history, history of art, and popular science have been provided during the past four years and have met with the heartiest approval from all classes. Just now a course of lectures on economics is being given, the expenses of which are provided for by a distinguished citizen. Let it be understood that no stress is laid upon the name of the society or the particular methods just described. It is the idea that must be emphasized. Every community has its own peculiar conditions requiring special adaptations of means to end.

Although this paper is somewhat disconnected, it requires but little summing up. I am pleading for co-operation in community life, and this word expresses the one thought I

desire to impress. President Eliot, at the close of twenty-five years as president of Harvard University, when asked what had been his leading aim, replied, "To secure co-operation." There is no word in our language more highly charged with what is vital to human destiny. St. Paul the Apostle pleaded for it. The warp and woof of what we call modern civilization is made up of co-operation. We want far more of industrial co-operation, of religious co-operation, and of educational co-operation. The mission of the public school is closely related to all forms of social work. The methods found most successful in dealing with the defective, the vicious, and the neglected classes are such as have been tried advantageously in the school. On the other hand, the methods, aims, and humanitarian spirit of the social reformer are essential to the life of every good school. Hence it is readily seen that school supervision has something more to do than to grade classes, prepare courses of study, and see that principles of teaching are carried out. Teachers must become conscious of the commanding importance of the school as a social factor influencing every form of human endeavor, reflecting its spirit and aims in the life and conduct of the people, and, in turn, drawing inspiration and help from every department of the world's activity.

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IV

ARITHMETIC IN RURAL AND VILLAGE SCHOOLS

The object of the present paper is the application in an unpretending way of some of the methods of child-study to children of a larger growth, with a view to finding the present status of arithmetic in the rural and village schools. The normal schools of the country draw very largely from these sources, and for this reason, as well as on account of the maturity and experience of the students, the field of inquiry was taken in these institutions. Several thousand blanks were distributed among a considerable number of normal schools, and through the co-operation of the various principals some four thousand were filled out, representing nineteen institutions scattered from New England to California. There were sixty-two questions in each blank, so that the replies aggregated somewhere near a quarter of a million; a number so large as to preclude any attempt at a complete classification. This impossibility to classify is evident from the fact that not only is it an enormous task to summarize even a few,¹ but the interest lies largely (1) in the combinations of the answers to certain classes of questions, thus leading to the study of causes, and (2) in the consideration of the effects of local influences.

Since the reliability of the replies and the general value of the opinions expressed depend largely on the maturity and experience of those who contribute, it should be premised that the average age of the 3000 women was 19.8 years and of the 1000 men 20.7 years.

Not only are normal students more mature in years than

¹ For assistance in this arduous labor the writer wishes to acknowledge his indebtedness to certain of his professional students, and especially to Miss Elizabeth Newell Fairchild, one of his assistants.

is generally supposed, but they are more mature in professional experience. While comparatively few go into the rural schools after graduation, very many teach in these schools during their course, serving one year to get the means to carry on normal work the next. In general, 43 per cent. of those reporting had taught mathematics of some kind for a period averaging 2.25 years each. Numerous others had taught in high schools without teaching mathematics, so that probably 50 per cent. or more had had some professional experience.

In the compilation of these statistics it should be stated that there has been no thesis to defend. The object has been merely the securing of data from which all may draw such conclusions as seem legitimate. Much of the work may seem to contribute little to the stock of positive knowledge, but it is of value even to know what lines of inquiry are unproductive, while, on the other hand, for those who are "teachers of teachers," some of the replies may be at least suggestive.

In the first place inquiry was made to ascertain if a taste for the subject was to any considerable extent a gauge of success. This being *a priori* probable, it was then the purpose to ascertain the attitude of students toward mathematics, and the causes for, or at least some conditions of mind accompanying this attitude. It was found that 43 per cent. claim the power to readily solve new problems in algebra, and that of these 83 per cent. like mathematics, while of the 26 per cent.² who claim not to have this power only 54 per cent. like the subject. Of the geometry students 22 per cent. claim that they readily prove new propositions in that branch, 82 per cent. of these liking mathematics; 28 per cent. cannot readily attack new propositions, and of these only 62 per cent. like the subject. The relation between success in mathematics and a taste for the science is, therefore, what might have been anticipated.

² In all cases there were numerous indefinite answers; in this case 31 per cent. This accounts for the fact that in no case is the 100 per cent. fully reached.

Further inquiry into the question of taste for the subject yielded the following results: 70 per cent. state positively that they like mathematics, 22 per cent. that they dislike it, the other 8 per cent. answering indefinitely. As would naturally be expected, however, this dislike is less manifest among those who have taught the subject; of these, 76 per cent. have a positive liking for it, only 16 per cent. claiming an antagonistic feeling.

A series of inquiries was then made to ascertain, if possible, some of the causes for this disposition. It was found that before entering upon their normal training 53 per cent. were accustomed, in solving problems, to depend upon rules, the solution being largely mechanical, while 31 per cent. depended chiefly upon analysis. Of those who trusted to rules 66 per cent. liked mathematics and 27 per cent. disliked it, while of those who did not depend on this mechanism 77 per cent. liked the subject and only 16 per cent. did not. The number depending on rules naturally diminished to a great extent after entering the normal schools, becoming only 15 per cent. of the total, 71 per cent. trusting to some form of analysis.

Inquiry was then made as to whether a taste for the subject accompanies the ability to hold in mind somewhat elaborate calculations. Fifty-nine per cent. claim the power of carrying fairly long calculations in the mind, and of these 78 per cent. like and 15 per cent. dislike the subject. Of those who say they have not this power, only 57 per cent. like the subject, while 37 per cent. dislike it. Similar results appeared when students of geometry were interrogated as to their power to readily construct and hold in mind geometric figures. Thirty-seven per cent. claim to have this power, 13 per cent. saying that they do not possess it, and half of the total number answering indefinitely. Of those who claim the power, however, 75 per cent. like geometry, 17 per cent. disliking it; of those who assert that they do not possess the power, only 60 per cent. have a taste for the subject while 32 per cent. are antagonistic to it.

The relation of memory to success in mathematics was then considered. The absence of any definite standard of measurement in this as in other questions resulted in a large number of uncertain replies. Forty-seven per cent., however, claimed good memories, while 22 per cent. asserted that they were not thus favored. Of the first class only 67 per cent. like mathematics, while 25 per cent. confess a dislike toward the science. Of the second class, 73 per cent. like and 19 per cent. dislike the subject. In particular, of the 14 per cent. who find it necessary to memorize their proofs in geometry only 61 per cent. like mathematics, while of the 43 per cent. who do not have this misfortune 73 per cent. like the science. The question naturally suggests itself as to whether a good memory for formulæ tempts the possessor to memorize rules, proofs, and analyses, thus leading the student from the very goal which mathematics seeks.

Along the same line goes the inquiry as to the power to readily classify (group)—for example, to notice the likeness of persons, figures, formulæ, etc. Some 68 per cent. claim this power, 70 per cent. of these liking mathematics; while, of the 13 per cent. who assert that they recognize no such power in themselves, 74 per cent. like the subject. The difference is slight, but it harmonizes with the results of the inquiry on memory.

Rapidity of thought and speech do not seem at all necessary for success in this field. Twenty-nine per cent. claim this rapidity, and of these 67 per cent. like mathematics, while 42 per cent. say that they are slow in thought and speech, and of these 72 per cent. like the subject. The difference is not great, but it suggests that the more patient student is the one who succeeds in the subject.

On the other hand, the ability to quickly focus the attention accompanies success in the subject. Forty-seven per cent. have this ability, 72 per cent. of this class liking and 21 per cent. disliking the science; 20 per cent. are slow in focusing the attention, and of these only 67 per cent. like the subject, while 25 per cent. dislike it.

A question which is suggestive to those interested in the reform in the teaching of arithmetic is one relating to the taste of students for the various branches of elementary mathematics. Of those who have studied arithmetic, algebra, and geometry, nearly two-thirds express a decided preference for some one over the others. Nine per cent. like arithmetic best, 30 per cent. algebra, 24 per cent. geometry. Of those liking geometry best, a greater proportion like mathematics than of those expressing a preference for either of the other branches. The cause of this taste for one branch over the others might at first thought seem to be related to the ease of the subjects. This, however, is not the case, as will be seen from the following table:

	Liked best by	Found easiest by
Arithmetic,	9 per cent.	18 per cent.
Algebra,	30 per cent.	29 per cent.
Geometry,	24 per cent.	17 per cent.

Thus, while geometry is more difficult than arithmetic, it is liked by nearly three times as many students.

This statement of the relative difficulty of subjects suggests the question of cause. Of the two-thirds who gave definite replies, 35 per cent. felt that their preference was due to a natural bent of mind, 27 per cent. attributing it to superior teachers in the respective lines.

The question as to the way in which students think of number was, of course, suggested by Galton's investigations. Twenty-six per cent. say that in performing operations they pronounce the numbers to themselves, 33 per cent. visualize the numbers, 12 per cent. imagine themselves writing them. Only 20 out of the 4000 claim to have a color image, while especially curious forms are mentioned by only 8. None of these peculiarities materially affect the general average of taste for mathematics.

As to their early instruction, many confessed to have forgotten the first steps in arithmetic. Seventy-five per cent., however, believed that they were first taught to count

by merely learning the names, one, two, etc., without having any objects in hand. Since these replies chiefly relate to the work of the rural schools of twelve to fifteen years ago, the statements are probably not far from the truth. The taste for mathematics proved to be substantially the same for one class as for the other.

The question of taste for the various branches of learning was then considered. Students were asked which of these four branches they liked best, and with the following results in per cent.:

	Languages	Natural Science	Mathematics	History
Women,	21	11	29	19
Men,	10	21	30	21

An attempt was then made to ascertain the reason for this taste; one-third of the women, however, and two-thirds of the men, gave indefinite replies. Of the men whose answers could be classified into two groups—viz., those attributing their taste to natural bent of mind, and those attributing them to good teachers—the replies were as follows:

	Languages	Natural Science	Mathematics	History
Natural bent,	3	6	9	7
Good teachers,	1	1	4	2

The women replied:

Natural bent,	6	3	9	6
Good teachers,	3	2	3	3

The taste for mathematics undergoes a marked change for the better as the student passes from arithmetic, as taught in our rural and village schools, to the study of algebra. Half of those reporting said that their tastes had changed materially after studying algebra. Of these, 88 per cent. of the women and 92 per cent. of the men say that this change had been toward liking mathematics.

An attempt was then made to ascertain what was the greatest difficulty experienced in the early steps in the subject. The following question was asked: "As you recall

your early instruction in arithmetic, what seems the greatest difficulty which you experienced in learning the subject?" The replies were not very satisfactory, only 60 per cent. of the men and 52 per cent. of the women recalling their difficulties sufficiently to state them. Of these, 29 per cent. of the men and 33 per cent. of the women state that their greatest troubles were with the fundamental operations: 18 per cent. of each with fractions, about 14 per cent. of each with learning rules, and an equal number with formal analyses.

The question was then asked: "What seems to you the most objectionable way in which arithmetic was taught to you?" This was answered by about 70 per cent., of whom one-third were emphatic in their objection to the memorizing of arbitrary rules; about a fourth claimed that the work lost interest because it was made too abstract; 12 per cent. attributed the difficulty to the want of analysis, of the use of their logical powers; and about 4 per cent. or 5 per cent. were found for each of the following causes: The subject was not made to seem practical; pupils were confined too closely to the book and worked too exclusively for answers; the teacher failed to clearly develop the new subjects; a lack of thoroughness, and poor teachers. Without specifying other replies to this question, it is evident that those already noted are closely related. The ill-understood rule, the lack of practical application, the want of analysis and development and drill—the working merely for the answer—all this is so foreign to good work that the entire difficulty would seem to be removable by the easy efforts of a well-trained and earnest teacher. Only 14 men and 45 women out of the whole 4000 thought that too much work was required, although many joined in the general demand for a change in some of the subject-matter.

The preceding question naturally suggested the following: "What do you recall as the greatest excellence in your instruction by your best teacher of mathematics before entering the school which you now attend?" Of the 70

per cent. who replied, the more definite answers are as follows, in per cents.:

	Women	Men
Good analysis,	25	27
Clear explanation and development,	17	15
Thoroughness,	17	13
Practical, original,	10	14

The replies are not exact enough to be of great value, the others being along similar lines, and including patience, enthusiasm, accuracy, continued reviews, etc.

The question was finally asked of those who had taught the subject, as to (1) their greatest difficulty, and (2) the greatest need for reform in the work. Forty-one per cent. of the women and 46 per cent. of the men found their greatest difficulty with getting a clear analysis, and hence possibly with clearly understanding the subject themselves; some 10 per cent. had trouble in keeping up the interest of the pupils, and an equal number were not successful in making the work practical.

In the way of reforms, some 30 per cent. of those who replied claim that the most urgent need is for clearer analysis; 26 per cent. of the men and 18 per cent. of the women lay stress on making the subject more practical; some 12 per cent. feel that the work is made too abstract, while 10 per cent. demand more drill in teaching.

Thus, while the inquiry reveals little that is new, it may serve to emphasize the demand on the part of our leading normal schools and colleges for much more extended scholarship on the part of their graduates, and for a broader view of the pedagogy of the subject.

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V

THE PSYCHOLOGICAL ASPECT OF THE SCHOOL CURRICULUM

There is a rough and ready way, in current pedagogical writing, of discriminating between the consideration of the curriculum or subject-matter of instruction and the method. The former is taken to be objective in character, determined by social and logical considerations without any particular reference to the nature of the individual. It is supposed that we can discuss and define geography, mathematics, language, etc., as studies of the school course, without having recourse to principles which flow from the psychology of the individual. The standpoint of method is taken when we have to reckon with the adaptation of this objective given material to the processes, interests, and powers of the individual. The study is there ready-made; method inquires how the facts and truths supplied may be most easily and fruitfully assimilated by the pupil.

Taken as a convenient working distinction, no great harm is likely to arise from this parceling out of the two phases of instruction. When pressed, however, into a rigid principle, and made the basis for further inferences, or when regarded as a criterion by reference to which other educational questions may be decided, the view is open to grave objections.

On the philosophic side it sets up a dualism which, to my own mind, is indefensible; and which, from any point of view, is questionable. Moreover, many of the writers who hold this distinction on the practical or pedagogical side would certainly be the last to admit it if it were presented to them as a philosophic matter. This dualism is one between mental operation on one side, and intellectual content on the other

—between mind and the material with which it operates; or, more technically, between subject and object in experience. The philosophic presupposition is that there is somehow a gap or chasm between the workings of the mind and the subject-matter upon which it works. In taking it for granted that the subject-matter may be selected, defined, and arranged without any reference to psychological consideration (that is, apart from the nature and mode of action of the individual), it is assumed that the facts and principles exist in an independent and external way, without organic relation to the methods and functions of mind. I do not see how those who refuse to accept this doctrine as good philosophy can possibly be content with the same doctrine when it presents itself in an educational garb.

This dualism reduces the psychological factor in education to an empty gymnastic. It makes it a mere formal training of certain distinct powers called perception, memory, judgment, which are assumed to exist and operate by themselves, without organic reference to the subject-matter. I do not know that it has been pointed out that the view taken by Dr. Harris in the Report of the Committee of Fifteen regarding the comparative worthlessness of the psychological basis in fixing educational values is a necessary consequence of the dualism under discussion. If the subject-matter exists by itself on one side, then the mental processes have a like isolation on the other. The only way successfully to question this condemnation of the psychological standpoint is to deny that there is, as a matter of fact, any such separation between the subject-matter of experience and the mental operations involved in dealing with it.

The doctrine, if logically carried out in practice, is even less attractive than upon the strictly theoretical side. The material, the stuff to be learned, is, from this point of view, inevitably something external, and therefore indifferent. There can be no native and intrinsic tendency of the mind toward it, nor can it have any essential quality which stimu-

lates and calls out the mental powers. No wonder the upholders of this distinction are inclined to question the value of interest in instruction, and to throw all the emphasis upon the dead lift of effort. The externality of the material makes it more or less repulsive to the mind. The pupil, if left to himself, would, upon this assumption, necessarily engage himself upon something else. It requires a sheer effort of will power to carry the mind over from its own intrinsic workings and interests to this outside stuff.

On the other side, the mental operation being assumed to go on without any intrinsic connection with the material, the question of method is degraded to a very low plane. Of necessity it is concerned simply with the various devices which have been found empirically useful, or which the ingenuity of the individual teacher may invent. There is nothing fundamental or philosophical which may be used as a standard in deciding points in method. It is simply a question of discovering the temporary expedients and tricks which will reduce the natural friction between the mind and the external material. No wonder, once more, that those who hold even unconsciously to this dualism (when they do not find the theory of effort to work practically) seek an ally in the doctrine of interest interpreted to mean the amusing, and hold that the actual work of instruction is how to make studies which have no intrinsic interest interesting—how, that is, to clothe them with factitious attraction, so that the mind may swallow the repulsive dose unaware.

The fact that this dualistic assumption gives material on one hand such an external and indifferent character, while on the other it makes method trivial and arbitrary, is certainly a reason for questioning it. I propose, accordingly, in the following pages, to examine this presupposition, with a view to showing that, as a matter of fact, psychological considerations (those which have to deal with the structures and powers of the individual) enter not only into the discussion of method, but also into that of subject-matter.

The general tone of Dr. Harris's criticism of my monograph on *Interest as related to will* is so friendly and appreciative that it would be hypercritical and controversial for me to carry on the discussion longer without raising some deeper problem. I am convinced that much of the existing difference of opinion as regards not only the place of interest in education, but the meaning and worth of correlation, is due to failure to raise the more fundamental question which I have just proposed; and that the thing needed in the present state of discussion is, as it were, to flank these two questions by making articulate the silent presupposition which has been so largely taken for granted.

What, then, do we mean by a study in the curriculum? What does it stand for? What fixes the place which it occupies in the school work? What furnishes it its end? What gives it its limitations? By what standard do we measure its value? The ordinary school-teacher is not, of course, called upon to raise such questions. He has certain subjects given to him. The curriculum is, as we say, laid out, and the individual teacher has to do the best he can with the studies as he finds them. But those who are concerned theoretically with the nature of education, or those who have to do practically with the organization of the course of study—those who "lay out" the course—cannot afford to ignore these questions.

On the whole, the most philosophic answer which has as yet been given to these questions in America is that worked out by Dr. Harris in his deservedly famous St. Louis reports, and more recently formulated by him in the Report of the Committee of Fifteen, as well as in the articles which he has written opposing the Herbartian conception of correlation. In substance, we are told that a study is the gathering up and arranging of the facts and principles relating to some typical aspect of social life, or which afford a fundamental tool in maintaining that social life; that the standard for selecting and placing a study is the worth which it has in adapting the pupil to the needs of the civilization into which he is born.

I do not question this statement, so far as it goes, on the positive side. The objectionable point is the negative inference that this social determination is exclusive of the psychological one. The social definition is necessary, but is the psychological one less pressing? Supposing we ask, for example, *how* a given study plays the part assigned to it in social life? What is it that gives it its function? How does the study operate in performing this function? Suppose we say not simply that geography does, as a matter of fact, occupy a certain important position in interpreting to the child the structure and processes of the civilization into which he is born; suppose that, in addition, we want to know how geography performs this task. What it is that intrinsically adapts it to this and gives it a claim to do something which no other study or group of studies can well perform? Can we answer this question without entering into the psychological domain? Are we not inquiring, in effect, what geography is on the psychological side—what it is, that is to say, as a mode or form of experience?¹

Moreover, we must ask how the given study manages to do the work given it before we can get any basis upon which to select the material of instruction in general; and much more before we can select the material for pupils of a certain age or of a certain social environment. We must take into account the distinction between a study as a logical whole and the same study considered as a psychological whole. From the logical standpoint, the study is the body or system of facts which are regarded as valid, and which are held together by certain internal principles of relation and explanation. The logical standpoint assumes

¹I note that many critics have objected to the title of the book, *The Psychology of number*, on the ground that, as one objector put it, "Psychology is the science of mind, and hence this title virtually reads, 'The science of the mind of number,' which is absurd." Do these critics mean that quantity, number, etc., are not modes of experience? That they are not specific intellectual attitudes and operations? Do they deny that from the educational, as distinct from the scientific standpoint, the consideration of number as a mode of experience, as a mental attitude and process of functioning, is more important than the definition of number from a purely objective standpoint.

the facts to be already discovered, already sorted out, classified, and systematized. It deals with the subject-matter upon the objective standpoint. Its only concern is whether the facts are really facts, and whether the theories of explanation and interpretation used will hold water. From the psychological standpoint, we are concerned with the study as a mode or form of living individual experience. Geography is not only a set of facts and principles, which may be classified and discussed by themselves; it is also a way in which some actual individual feels and thinks the world. It must be the latter before it can be the former. It becomes the former only as the culmination or completed outgrowth of the latter. Only when the individual has passed through a certain amount of experience, which he vitally realizes on his own account, is he prepared to take the objective and logical point of view, capable of standing off and analyzing the facts and principles involved.

Now, the primary point of concern in education is beyond question with the subject as a special mode of personal experience, rather than with the subject as a body of wrought-out facts and scientifically tested principles. To the child, simply because he is a child, geography is not, and cannot be, what it is to the one who writes the scientific treatise on geography. *The latter has had exactly the experience which it is the problem of instruction to induce on the part of the former.* To identify geography as it is to the pupil of seven or fifteen with geography as it is to Humboldt or Ritter is a flagrant case of putting the cart before the horse. With the child, instruction must take the standpoint not of the accomplished results, but of the crude beginnings. We must discover what there is lying within the child's present sphere of experience (or within the scope of experiences which he can easily get) which deserves to be called geographical. It is not the question of *how* to teach the child geography, but first of all the question *what* geography is for the child.

There is no fixed body of facts which, in itself, is eter-

nally set off and labeled geography, natural history, or physics. Exactly the same objective reality will be one or other, or none of these three, according to the interest and intellectual attitude from which it is surveyed. Take a square mile of territory, for example; if we view it from one interest, we may have trigonometry; from another standpoint we should label the facts regarding it botany; from still another, geology; from another, mineralogy; from another, geography; from still another standpoint it would become historical material. There is absolutely nothing in the fact, as an objective fact, which places it under any one head. Only as we ask what kind of an experience is going on, what attitude some individual is actually assuming, what purpose or end some individual has in view, do we find a basis for selecting and arranging the facts under the label of any particular study.

Even in the most logical and objective consideration, we do not, therefore, really escape from the psychological point of view. We do not get away from all reference to the person having an experience, and from the point of how and why he has it. We are simply taking the psychology of the adult (that is to say, of the one who has already gone through a certain series of experiences), of one who has, therefore, a certain background and course of growth, and substituting the mature and developed interest of such a person for the crude and more or less blind tendency which the child has. If we act upon this distinction in our educational work, it means that we substitute the adult's consciousness for the child's consciousness.

I repeat, therefore, that the first question regarding any subject of study is the psychological one, What is that study, considered as a form of living, immediate, personal experience? What is the interest in that experience? What is the motive or stimulus to it? How does it act and react with reference to other forms of experience? How does it gradually differentiate itself from others? And how does it function so as to give them addi-

tional definiteness and richness of meaning? We must ask these questions not only with reference to the child in general, but with reference to the specific child—the child of a certain age, of a certain degree of attainment, and of specific home and neighborhood contacts.

Until we ask such questions the consideration of the school curriculum is arbitrary and partial, because we have not the ultimate criterion for decision before us. The problem is not simply what facts a child is capable of grasping or what facts can be made interesting to him, but what experience does he himself have in a given direction. The subject must be differentiated out of that experience in accordance with its own laws. Unless we know what these laws are, what are the intrinsic stimuli, modes of operation and functions of a certain form of experience, we are practically helpless in dealing with it. We may follow routine, or we may follow abstract logical consideration, but we have no decisive educational criterion. It is the problem of psychology to answer these questions; and when we get them answered, we shall know how to clarify, build up, and put in order the content of experience, so that in time it will grow to include the systematic body of facts which the adult's consciousness already possesses.

This is a distinctly practical question—a question which concerns the actual work of the schoolroom and not simply the professorial chair. Upon the whole, I believe that the crying evil in instruction to-day is that the subject-matter of the curriculum, both as a whole and in its various stages, is selected and determined on the objective or logical basis instead of upon the psychological. The humble pedagogue stands with his mouth and his hands wide open, waiting to receive from the abstract scientific writers the complete system which the latter, after centuries of experience and toilsome reflection, have elaborated. Receiving in this trustful way the ready-made "subject," he proceeds to hand it over in an equally ready-made way to the pupil. The intervening medium of communication is simply certain external attach-

ments in the way of devices and tricks called "method," and certain sugar-coatings in the way of extrinsic inducements termed "arousing of interest."

All this procedure overlooks the point that the first pedagogical question is, How, out of the crude native experience which the child already has, the complete and systematic knowledge of the adult consciousness is gradually and systematically worked out. The first question is, How experience grows; not, What experience the adult has succeeded in getting together during his development from childhood to maturity. The scientific writer, having a background of original experience, and having passed through the whole period of growth, may safely assume them and not get lost; the subject-matter standing to him in its proper perspective and relation. But when this adult material is handed over ready-made to the child, the perspective is ignored, the subject is forced into false and arbitrary relations, the intrinsic interest is not appealed to, and the experience which the child already has, which might be made a vital instrument of learning, is left unutilized and to degenerate.

The genuine course of procedure may be stated as follows:

We have first to fix attention upon the child to find out what kind of experience is appropriate to him at the particular period selected; to discover, if possible, what it is that constitutes the special feature of the child's experience at this time; and why it is that his experience takes this form rather than another. This means that we observe in detail what experiences have most meaning and value to him, and what attitude he assumes toward them. We search for the point, or focus, of interest in these experiences. We ask where they get their hold upon him and how they make their appeal to him. We endeavor by observation and reflection to see what tastes and powers of the child are active in securing these experiences. We ask what habits are being formed; what ends and aims are being proposed. We

inquire what the stimuli are and what responses the child is making. We ask what impulses are struggling for expression; in what characteristic ways they find an outlet; and what results inure to the child through their manifestation.

All this is a psychological inquiry. It may be summed up, if I am permitted to use the word, under the head of "interest." Our study is to find out what the actual interests of the child are; or, stated on the objective side, what it is in the world of objects and persons that attracts and holds the child's attention, and that constitutes for him the significance and worth of his life. This does not mean that these interests, when discovered, give the ultimate standard for school work, or that they have any final regulative value. It means that the final standard cannot be discovered or used until this preliminary inquiry is gone through with. Only by asking and answering such questions do we find out where the child really is; what he is capable of doing; what he can do to the greatest advantage and with the least waste of time and strength, mental and physical. We find here our indicators or pointers as to the range of facts and ideas legitimate to the child. While we do not get the absolute rule for the selection of subject-matter, we do most positively get the key to such selection. More than this, we here have revealed to us the resources and allies upon which the teacher may count in the work of instruction. These native existing interests, impulses, and experiences are all the leverage that the teacher has to work with. He must connect with them or fail utterly. Indeed, the very words leverage and connection suggest a more external relation than actually exists. The new material cannot be attached to these experiences or hung upon them from without, but must be differentiated from them internally. The child will never realize a fact or possess an idea which does not grow out of this equipment of experiences and interests which he already has. The problem of instruction, therefore, is how to induce this growth.

The phenomena of interest, then, are to be studied as

symptoms. Only through what the child does can we know what he is. That which enables us to translate the outward doing over into its inner meaning is the ability to read it in terms of interest. If we know the interest the child has, we know not simply what he externally does, but why he does it; where its connection with his own being can be found. Wherever we have interest we have signs of dawning power. Wherever we have phenomena of a lack of interest, wherever we have repulsion, we have sure tokens that the child is not able to function freely, is not able to control and direct his own experience as he would; or, if I may use what Dr. Harris calls a "glib and technical term," does not "*express himself*" easily and freely. Once more, these phenomena of interest are not final. They do not say to the teacher: We are your final end, and all your energies are to be devoted to cultivating us just as we are. None the less, they are indices and instruments; they are the only clues which the instructor can possibly have to what experiences are such really, and not simply in name. They reveal the general standpoint from which any subject must be presented in order to lay hold on the child. The problem of the teacher is to read the superficial manifestations over into their underlying sources. Even "bad" interests, like that of destruction, are the signs of some inner power which must be discovered and utilized.

In the second place, in saying that these psychical phenomena afford opportunities, give clues, and furnish leverages, we are virtually saying that they set problems. They need to be interpreted. They have the value of signs, and, like all signs, must be interpreted into the realities for which they stand. Now it is the province of the subject-matter on its logical and objective side to help us in this work of translation. We see the meaning of the beginning through reading it in terms of its outcome; of the crude in terms of the mature. We see, for example, what the first babbling instincts and impulses mean by contemplating the articulate structure of language as an instrument of social communi-

cation, of logical thought, and of artistic expression. We see what the interest of the child in counting and measuring represents, by viewing the developed system of arithmetic and geometry. The original phenomena are prophecy. To realize the full scope of the prophecy, its promise and potency, we must look at it not in its isolation, but in its fulfillment.

This doctrine is misconceived when taken to mean that these accomplished results of the adult experience may be made a substitute for the child's experience, or may be directly inserted into his consciousness through the medium of instruction, or, by any external device whatsoever, grafted upon him. Their value is not that of furnishing the immediate material or subject-matter of instruction, any more than the phenomena of interest furnish the final standards and goals of instruction. The function of this ordered and arranged experience is strictly interpretative or mediatory. We must bear it in mind in order to appreciate, to place, the value of the child's interests as he manifests them.

Thus we come, in the third place, to the selection and determination of the material of instruction, and to its adaptation to the process of learning. This involves the interaction of two points of view just considered. It is working back and forth from one to the other. The transitory and more or less superficial phenomena of child life must be viewed through their full fruitage. The objective attainments of the adult consciousness must be taken out of their abstract and logical quality and appreciated as living experiences of the concrete individual. Then we may see what both subject-matter and method of instruction stand for. The subject-matter is the present experience of the child, taken in the light of what it may lead to. The method is the subject-matter rendered into the actual life experience of some individual. The final problem of instruction is thus the reconstruction of the individual's experience, through the medium of what is seen to be involved in that experience as its matured outgrowth.

We have two counterpart errors: one is the appeal to the child's momentary and more or less transitory interest, as if it were final and complete, instead of a sign of nascent power; as if it were an end instead of an instrument; as if it furnished an ideal instead of setting a problem. The other is taking the studies from the scientific standpoint, and regarding them as affording the subject-matter of the curriculum. As the phenomena of interest need to be controlled by reference to their fullest possibility, so the scientific content of the studies needs to be made over by being "psychologized," seen as what some concrete individual may experience in virtue of his own impulses, interests, and powers. It is the element of control which takes us out of the region of arbitrary tricks and devices into the domain of orderly method. It is the making over and psychological translation of the studies which renders them a genuine part of the *Lehrstoff* of the pupil. It is because of the necessity of this operation, the transfiguring of the dead objective facts by seeing them as thoughts and feelings and acts of some individual, that we are justified in saying that there is a psychological aspect to the curriculum.

In applying this to the actual studies which make up the present curriculum, no one would deny, I suppose, that language, literature, history, and art, being manifestations of human nature, cannot be understood in their entirety, nor yet fully utilized in the work of instruction, until they are regarded as such manifestation. But we must go a point further, and recognize that in education we are not concerned with the language that has been spoken, the literature that has been created, the history that has been lived, but with them only as they become a part of what an individual reports, expresses, and lives. Even in the sciences, where we appear to be dealing with matters that are more remote from the individual, we need to remember that educationally our business is not with science as a body of fixed facts and truths, but with it as a method and attitude of experience. Science in the sense in which we can find it stated

in books, or set forth in lectures, is not the subject-matter of instruction. Anything that can be found in these forms is simply an index and instrument. It sets before us our goal—the attitude of kind and mind of experience which we wish to induce; when it is read over, into psychological terms, it helps us reach our goal; but without the psychological rendering, it is inert, mechanical, and deadening.

Because the actual, as distinct from the abstract or possible, subject is a mode of personal experience, not simply an ordered collection of facts and principles, the curriculum as a whole, and every study in detail, has a psychological side whose neglect and denial lead to confusion in pedagogic theory; and in educational practice to the dead following of historic precedent and routine, or else to the substitution of the abstract and the formal for the vital and personal.

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VI

COLLEGE HONORS

It is an admirable saying of Robert Louis Stevenson's that "the world must return some day to the word duty, and be done with the word reward. There are no rewards, and plenty duties. And the sooner a man sees that and acts upon it like a gentleman or a fine old barbarian, the better for himself."¹

It is difficult to understand why educational institutions, even those that pride themselves on their conservatism, have been so slow in recognizing this truth and acting on it. Wise conservatism prevents revolution and iconoclasm, but unwise conservatism acts as a barrier to all progress. To return to the word duty, to abandon the policy of rewards, to act on the assumption that duty rather than reward must be the pole star in education as in every other walk in life, would seem to be marks of a wise conservatism. Yet those institutions most characterized by conservative influence are those that cling most tenaciously to a system of rewards and punishments and most persistently refuse to return to the word duty as an incentive in college work.

The honor system, as it prevails in many colleges, is not one that seems to belong indigenously to the college world—it is rather a survival of the "reward of merit" cards distributed so lavishly a generation ago in country district schools and in Sunday-schools. The fact that the college honor is a prize less gross, less palpable, less tangible than the "reward of merit" cards of the country school, and the etchings, china vases, gold watches, and gorgeously bound subscription books distributed by some private schools does not change its character, it only makes its influence the more deleterious.

¹ *Vailima letters*, I: 184.

The most obvious argument that can be urged against the honor system is the difficulty of finding any rational basis for it. It is usually measured by an arithmetical or an alphabetical gauge—students who reach a certain per cent. in the scale of one hundred, or who secure a certain percentage of A's, B's, and C's being considered honor students. But to measure intellectual attainments by arithmetical or alphabetical standards is much the same as selling watches by the pound or butter by the yard. There is no time when the average instructor feels more helpless than when attempting to translate into mathematical terms a student's progress during a week, month, or semester. "There is no intellectual unit," Maria Mitchell once said, and without it no measurement of intellectual progress is possible. Nothing would seem more absurd than an attempt to fix a unit of measurement for growth in character—to give, for example, 3 for unselfishness; 4 for unselfishness and truthfulness; 5 for unselfishness, truthfulness, and self-control; 6 for unselfishness, truthfulness, self-control, and prudence; 7 for unselfishness, truthfulness, self-control, prudence, and patience, and 10 for all the cardinal virtues. Yet such an attempt would be no more absurd than the attempt to gauge, without this intellectual unit, accuracy, observation, judgment, alertness of mind, and quickness of mental perception. All intellectual growth, like all physical growth, must be gradual. It is possible to measure neither the one nor the other, day by day or week by week.

Another objection to the honor system is the fact that it puts a false standard before a student. It is putting a premium solely on intellectual attainment while many other things enter into a college education. Not only does the college seek to develop its students intellectually, but it aims to make them efficient, capable, and self-reliant; to give them the power of accomplishing whatever they undertake; to make them constructive rather than destructive in their work. The college also aims, and it must be the chief aim, to develop the character of its students,

to give them higher ideals of life, to encourage them to reach these ideals, to give them positive help in their attempts to reach them. Of these three aims of the college—the intellectual, the practical, and the ethical—the honor system takes into account but the first. Sometimes a student gains more in the intellectual than in the practical or the ethical direction; sometimes more in the practical than in the intellectual or the ethical; and sometimes more in the ethical than in the intellectual or the practical; honors are given only for intellectual growth. It happens not infrequently that a shy, diffident, reserved student, who as a schoolboy had been absorbed in his books and had few companions, when he has responsibility put upon him for the first time, loses his shyness, gains confidence in himself, and becomes an efficient chairman of a committee, editor-in-chief of a college paper, or business manager of the college glee club. The diffident boy has developed into the capable young man with ability “to bring things to pass.” He has become a much more valuable member of society, but the college honors do not take into account this side of his development. It sometimes happens that a student enters college with a low moral standard. He has been unfortunate in his home surroundings and in his school life. His impulses are to cheat, to shirk, to prevaricate, to disregard the *meum* and *tuum* line, not because he is willfully or consciously a fraud, a liar, or a thief, but because he has had no ethical training whatever and has never made nice discriminations between right and wrong. Until he enters college his ideas of uprightness of life are in a state of arrested development, but he learns in college the value and nobility of honor, truth, honesty, and manliness. He leaves college a manly man, upright in character and with firm convictions of right and wrong that make him a power for good in all struggles against evil. The college gives no honor for the development of character. Again it may happen that a student enters college having but one standard—the intellectual—by

which he measures every success or achievement. He selfishly refuses to take any part in the general work of the college, he is unwilling to serve on a class committee, to spend half a day in decorating a room for a college entertainment; he is not above using "devices" on an examination; he may play the part of a hypocrite, yet if he attains through any means, honorable or dishonorable, the required per cent. or the requisite number of A's, he is known as an "honor" student. It must certainly be said that this is only an assumption—college students are not cheats or hypocrites, and as a rule students who win intellectual honors have won them by fair intellectual means. The incongruity of the honor system lies in the fact that the college has a threefold aim—to train its students intellectually, to make them efficient practically, and to develop them in character. When at the close of a four years' college course it bestows honors on the intellectual basis alone, it virtually abandons the practical and ethical aim and puts its seal of approval on one only of its three aims. The natural result is to put before the student, in effect, whatever may be the theory, the intellectual ideal, unaccompanied as it should be by the practical and the ethical one. A false standard is the result.

One result of this false standard, and another evil effect of the system, is the bad result that it often unconsciously has on the student himself. He naturally magnifies the intellectual at the expense of the practical and the ethical end of education. He may become the veriest bookworm and know absolutely nothing of the practical affairs of life. He affects an equal contempt for good-natured fun, frivolity, dissipation, athletics, practical efficiency—everything not purely intellectual. One young woman who secured an "honor" was unwilling throughout her college course to room alone because she needed a room-mate less intellectual than herself to sew the buttons on her shoes, mend her gloves, and do for her the sundry necessary things she was not inclined to do for herself. One young man never had

time to keep his boots blacked or to attend to various details of his personal appearance because "the intellectual life appealed to him more strongly than the practical."

Not only does the honor system place a false standard before the student, but it places a wrong motive in work before him. Education, like virtue, must be its own reward. "Virtue, to be virtue, must be followed for virtue's sake," said Professor Andrew Seth in a recent lecture on *Optimism and pessimism*; "the virtuous man is virtuous because he finds his happiness in being virtuous. He would be virtuous therefore even though he had no horizon beyond this earthly one." In a similar way, in the educational and the intellectual world, "work for work's own sake," not for the sake of either tangible rewards or intangible honors, must be the watchword of the student. Unless a student can say this, his intellectual as well as his moral equipment is at fault—unless he can say this, while he may acquire information he will never be a scholar. There can be no keen zest in intellectual pursuits if the reward sought is honor, as in a similar way the enjoyment in athletic exercises for their own sake is lessened if a prize or a contest is the end in view. The prize belongs to the bicycle race, to the tennis tournament, to the sporting world, not to an educational system the heir of the wisdom of the Greeks. How the system seemed to the mind of one pre-eminently gifted person is seen from the journal of Maria Mitchell, where she says: "I start for faculty, and we probably shall elect what are called the 'honor girls.' I dread the struggle that is pretty certain to come. The whole system is demoralizing and foolish. Girls study for prizes and not for learning, when 'honors' are at the end. The unscholarly motive is wearing. If they studied for sound learning, the cheer which would come with every day's gain would be health-preserving."²

The honor system is not only often responsible for false standards and wrong motives in work, but it is sometimes responsible for low ideals. Action is equal to reaction, and

² Maria Mitchell, p. 194.

working for honors is one of the things that bring discredit in the eyes of some collegians on doing even fairly good work—if one may trust the stories of college life with which the press has of late been teeming.

The honor system is also defective because it fails to take into consideration the fact that many persons mature very slowly in an intellectual way. It is still a disputed question whether the number is greater of successful persons who gave evidence of precociousness in early life or of those who gave no indication of unusual ability during their college course.

The honor system is also at fault because it does not take into account the changed purposes of a student. It may be said with all reverence that a person may be born again intellectually as well as spiritually. The coming of a new inspiration in work, a new motive in study, a new purpose in life—all these may affect the standing of a student and cause one to rank high during the last year of work who had in the three years previous been careless and indifferent. This change of purpose, intellectual and moral, certainly seems as well worthy of recognition, if recognition is to be given, as is the maintenance of an average high standard which is not necessarily a result of the highest ideals and motives. The scriptural parable relates that the laborers who began work at the eleventh hour received the same compensation as did those who began earlier in the day.

The honor system is bad again, because it appeals to the spirit of competition—a feeling that arises from selfishness and can never be productive of the highest and best moral results. A company of gentlemen who were recently trying to analyze their interest in the game of golf decided that one explanation of the strong hold it had on all players was the fact that the element of competition was eliminated—each person plays against himself, not against an opponent; he endeavors to lower his own record, not that of a rival player. In a similar way the college student must find his pleasure, not in surpassing a less fortunate com-

panion, but in surpassing his own efforts. "The lesson," says John Burns, "inculcated in American text-books—from the log hut to the White House—is injurious and immoral. It is a lesson which inculcates the duty of rising above one's fellows, when the lesson needed is the lesson of helping one's fellows to rise." It does not seem too much to ask that educational institutions should teach charity, unselfishness, and helpfulness, rather than competition, strife, and rivalry; yet the honor system gives encouragement to the lower rather than to the higher motives.

It is sometimes said in defense of the system that it is right to differentiate the students who do well from those who do not, and distribute honors on this basis. But if recognition is to be given, it ought to be given by a relative not an absolute standard. If a student receives an honor because he has reached a standard of eighty per cent., when he could have reached a standard of ninety, he has received an honor unjustly. If a student has done the best he possibly can and reaches only a seventy-five per cent., when eighty per cent. is needed for an honor, then he is unjustly deprived of one. The decision as to whether or not a student has done as well as he is capable of doing can be answered only by the student himself. "It is far better to live without recognition and through merit be worthy of the highest, than undeservedly to be raised to the highest, great before the world and small before one's self." The college student cannot learn too early in life that popular applause, temporary popularity, and the clamor of the multitude often follow specious and shallow attainments while real worth goes unrecognized. The names are countless of those who in every walk in life have found recognition only after death, while in other instances the favor of the populace has been but a fleeting show. The demand for recognition is but the demand of vanity and personal ambition, and has no place in the intellectual life.

It is also sometimes urged that a "stimulus" is needed. This is the same argument that a few generations since justi-

fied the use of the rod. The honor is a more refined form of stimulus, but the principle at the basis is the same. A vigorous boy needs no stimulus to eat his dinner, an active man requires none to enjoy a brisk walk, nor does a young woman dance for honors. There should be the same keen enjoyment of mental as of physical exercise, and there would be, if rewards and punishments could be eliminated from the educational system. A college student once apologized for the system on the ground that a stimulus for work was needed and naively added, "In college one has so many things to do that he lets the work slip if he is sure of getting his degree." But if the temptation away from college work exists, it would seem reasonable to flee from the temptation, not to urge one past it by the offer of a reward at the end.

Again, it is urged in defense of the system that an honor is like a fellowship and hence the object of a praiseworthy ambition. But there is a radical difference between the two. The honor is a reward for the past, the fellowship is a prophecy of the future; the honor is often the epitaph that marks the close of a career, the fellowship marks its beginning; the honor belongs to the generation that in academies chose for class mottoes *finis coronat opus* and *palma coronat opus*; the fellowship is a certificate of good intellectual character, testifying that the holder has the qualifications fitting him for research work. More than one person has been content to go through life known as an honorman; no one who has held a fellowship can free himself from the responsibility of contributing through his investigations to the sum total of human knowledge.

It is also urged in favor of honors that they are like degrees, and that if the one is abolished the other ought to be. One cannot indeed grow very enthusiastic over the use of degrees, but they do stand very definitely for certain things. B. A., B. S., C. E., Ph. D., M. D., are recognized everywhere as indicating that those having these degrees have done certain kinds of work. One does not apply for

medical advice to a person whose business card bears the degree of M. E., or look for a civil engineer in one who writes M. D. after his name, or expect to find a theological student in a B. S. The degree indicates the kind of work done, and if there were more uniformity in its use, it would everywhere be recognized as standing always for these kinds of work; the honor attempts to characterize the way in which work has been done, but breaks down in the attempt because of the inherent impossibility of finding an intellectual unit by which work can be gauged.

It is also said that the fact that a student has won an honor is of service to him in securing a position in business or in teaching. But the mere fact that a student has gained an honor does not of necessity commend that student to a stranger—the test applied in business life is not, what does he know? but, what can he do? If a student has been truly educated, if he has had his intellectual powers trained and developed, if at all times he has command of himself, then he will stand the test; if he has acquired information rather than education, then he may fail.

The honor system seems in the eyes of many, instructors and students alike, a distinct hindrance to educational progress because it does not belong to the college system of education, it has no rational basis, it sets up a false standard, it puts before students a wrong motive in work, it is often responsible for low ideals, it is defective in that it cannot take into consideration slow maturity or change of purpose and because it appeals to the spirit of competition; it cannot be successfully defended on the ground that recognition for work should be given, that a stimulus for work is needed, that an honor is the object of worthy ambition, and that it is of assistance after leaving college. The practice of giving honors seem pernicious and demoralizing, and, if it could be eradicated from the educational system, a long step in advance would be taken.

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VII

THE NEW FRENCH UNIVERSITIES ¹

The efforts that have been made during the past twenty years to organize and develop the system of higher education in France, deserve to be widely known and appreciated. New faculties of law and medicine have sprung up in all parts of France, and the number of professors and students has more than doubled. In all university towns, large and convenient buildings have been constructed at great expense. Some of these are veritable academic palaces, and all are well arranged and equipped with libraries and laboratories. The administrative system governing the faculties has also been greatly modified by a number of laws. Without gaining complete independence, which is incompatible with our system of centralization, the faculties have now *la personnalité civile* (the right to receive gifts and legacies) and the administration of their own revenues. By the law of 1893 faculties under the same academic control, up to this time isolated, were united into a *Corps de Faculté* having the right to receive legacies, with a General Council as their representative. This council consists of the rector, the president, and the deans of the faculties, and two professors from each faculty, chosen by their colleagues. The French universities were thus organized. They had been in existence and were expanding and prospering, but they had no distinguishing names. By a strange accident France, which during the Middle Ages had given to the world the model for all universities, in the University of Paris, was the only country without educational institutions bearing that title. The law of August 10, 1896, did away with this curious anomaly. The first clause declared that

¹ Translated from the author's manuscript.

the *Corps de Facultés*, created by the law of August 28, 1893, shall hereafter be known as universities.

As a result France has now fifteen universities, not equally rich or powerful, but which contribute with varying resources to the work of higher education. The first plan was to create six or seven universities to be established in the most important and popular cities, so that all efforts in behalf of higher education might be concentrated. This would have been a better solution, and one more in the interest of higher education; but it was bitterly opposed by those cities which, during the past twenty years, had at great sacrifice, and with great encouragement of the state, given their faculties commodious buildings and good equipment, and hoped to have the title of university conferred on them. So the rights which it was planned to restrict, when conferred, were extended, and the present scheme was worked out to the satisfaction of all concerned. The smaller universities, which had been threatened with extinction, were overjoyed to have their existence recognized and perpetuated by law, and the large centers, such as Bordeaux, Lille, Lyons, Nancy, and others, in their satisfaction at the realization of their long cherished and frequently disappointed hopes, forgot all jealousies.

The best proof of the satisfactory character of the law, as finally revised, is found in its reception by Parliament. In the present state of division and opposition between parties which characterizes French politics, and which is one result of free government, it is exceedingly difficult to gain a majority of votes in the Chamber for any reform measure. The law creating universities met with but slight opposition. It was passed by the Chamber of Deputies on May 5, by a unanimous vote of 518—an exceedingly rare event at the Palais Bourbon, and which can only be counted upon when patriotism or national defense is involved. In the Senate the success of the law, while not as astonishing, was never in doubt. On July 7, 223 Senators voted for the adoption, and 29 voted in the negative. Most of the latter were mem-

bers of the Right—reactionaries who always vote against measures introduced by a republican government.

Thus under the happiest auspices, and upheld by a strong popular sentiment, the French universities are to be reorganized. Some will revive names that during the Middle Ages were highly honored. Others, by no means the least important, have developed rapidly among favorable surroundings, and will become centers of usefulness and influence. All are situated in towns rich enough and far enough apart to make the future of each university secure.

In America most of the universities bear the honored names of founders noted for their generosity or their love of science and letters. Harvard, Yale, Cornell, Johns Hopkins, Clark, Tulane, Stanford, and others, are examples. In France, following the traditions of the Middle Ages and the common usage of all European countries, the fifteen universities are designated by the name of the town in which they are situated: Paris, Aix-Marseilles, Besançon, Bordeaux, Caen, Clermont, Dijon, Grenoble, Lyons, Lille, Montpellier, Nancy, Poitiers, Rennes, and Toulouse.

There is little doubt that in the future the intellectual tendencies of the town in which a university is situated, and its commercial and industrial interests, will influence the development of the university and so diversify the type of our institutions of higher education. Why should not we follow the example of the United States, and have universities, like Johns Hopkins and Clark, where science is paramount, as are letters at Harvard and Yale; and others of a more technical and professional character, like Cornell?

Without laying less stress on the fundamentals of all university training, it is most important that each university adapt itself to present needs, and, profiting by its surroundings, prepare a curriculum that no sister-university can hope to rival. All branches of human knowledge must be taught, else the university's proud claim to represent the universality of science would be false; but having accomplished this, there is no reason that the usefulness of the university

to the community should not be demonstrated by developing professional and technical schools in response to the industrial interests of a particular region. The university should be the home of the ideal, the mouthpiece of all discoveries, the close student of all truth, the encouragement of all individual work among professors and students; while giving the latter the fruits of the tree of knowledge. This is the first duty, but the university has another mission. Her influence must reach beyond her walls, science must be made popular, knowledge must be spread among the people. The university must be not only an intellectual leader, but a promoter of material prosperity. French universities are fired with the noblest ambitions, but they do not forget that they are first professional schools and that they must educate the doctors, the lawyers, and the professors of the land. By conferring different degrees in medicine, law, letters, and science our universities fulfill this part of their task. But seven of the fifteen universities, however, have the four faculties of law, medicine and pharmacy, letters, and science. These are Paris, Bordeaux, Lille, Lyons, Montpellier, Nancy, and Toulouse. Aix-Marseilles, Caen, Dijon, Grenoble, Poitiers, and Rennes have no medical school. Medical studies are taken up in the secondary schools, and the students enter the faculty of medicine in one of the seven universities just mentioned. Our smallest universities, Besançon and Clermont, have but the two faculties of letters and science.

All these universities are under the same administrative control. The law of July 10, 1896, did not alter existing conditions, and some foreign publicists were mistaken in fancying that under the new régime the universities were to be independent. They are still dependent upon the central government. It names their professors, and supports them from the public funds. The salary list, the current expenses of laboratories and libraries, and so on, are all provided for by the annual subsidy paid to each university by the State. The *Conseil Général des Facultés*, now known as the *Conseil*

de l'Université, retains its powers. Its decisions are final upon certain matters, such as the programme of courses, conferences, laboratory work, the administration of the revenue of the university. On other matters it deliberates and advises, with the consent and approval of the Minister of Public Instruction. It also disciplines the students. But all its actions are under the control and subject to the authority of the rector of the academy, who, as President of the Council, is the head of the university.

At one point, however, the new law has modified the old order of things by granting to each university, besides the subsidy received from the state, the control of its own income, which, consisting as it does principally of the fees which students pay, varies with the number. The fourth clause of the law reads as follows: "From January 1, 1898, the budget of each university shall be credited with the fees for instruction, for matriculation, for the use of library and laboratory paid by the students in accordance with the law. These receipts can only be used for the following objects: current expenses of libraries, laboratories, and collections; construction and repair of buildings; creation of new chairs; undertakings for the benefit of the students. The fees for examinations, for certificates of ability, for diplomas still go to the state. In other words, the more students the university has, the richer it will be. The state still claims the fees paid for examinations, but each university retains the money that is paid by the students for instruction, for matriculation, and for the use of library and laboratory. From this provision, which is the most important part of the law, several results are hoped for. Each university is encouraged to increase the number of its students, while the more prosperous universities can develop their resources, for they can count upon a large annual income at once. These incomes are not now great; but they will increase rapidly in the popular universities, which will attract to their different schools students of all classes. Even now, a few, particularly favored by the positions they have already attained, will find

in the income which they can control the means to a wider development.

A careful calculation has been made to discover what the income of each university will be, from the fees above mentioned. The figures of 1890 have been taken as a basis of calculation. As a result, it was found that some of the universities will have quite a large amount to their credit when the law goes into operation on January 1, 1898. As the annual subsidy from the state is to be continued, the new income may be considered the "pocket money" of each university. Some, of course, gain little. They have few students, are poor, and will remain so, unless individuals in the towns in which they are situated come to their relief. Paris, of course, retains her power and superiority. She will receive from the fees, when collected, as much as all the other fourteen universities together. That is 646,000 francs out of a total of 1,229,000 francs. Lyons is second, with 128,000 francs, an amount equal to the incomes of the eight least important universities. Between these and Lyons come Bordeaux (105,000 francs), Montpellier (85,000 francs), Lille (53,000 francs), Toulouse (42,000 francs), and Nancy (41,000 francs).

The new law is more than a mere change of hands. It marks the beginning of a decentralization and has sown a seed of autonomy in each university that will develop in the future. France is not America, that country of fabulous gifts for education. We have never seen and shall probably never see such benefactors as the Rockefellers, the Stanfords, and the many others who have given millions to higher education. But there are indications in France that private endowments for the universities will be added to the subsidy received from the state. The *Faculté de Médecine* at Montpellier has profited by the *Brisson* legacy of 1,500,000 francs, a legacy hampered by no conditions, but which can be spent at the discretion of the *Faculté*. I hope that this example may have many imitators.

Be this as it may, the condition of some of our provincial

universities is most satisfactory. Take as an example the University of Lyons, the second university in size and resources in France. In 1895 she had 2288 students—339 in law, 1434 in medicine and pharmacy, 210 in science, 255 in letters. The number of chairs was 106. There were 13 professors in the law faculty, 50 in the medical faculty, 20 professors in charge of courses and conferences in the faculty of science, 23 in the faculty of letters, and about 50 assistants. To give some idea of the annual expenditure, the *Corps de Faculté* of Lyons expended, in 1895, 1,025,517 francs, made up of the subsidy received from the state, with over 10,000 francs added, contributed by the Chamber of Commerce of Lyons, and the Société des Amis de l'Université Lyonnaise, which resembles, in some points, your alumni associations. After 1898 the annual income, increased by the fees mentioned above, will be nearly 1,200,000 francs. The cost of new buildings is not included in the estimate of the annual expenditure of the university. The University of Lyons is to erect a clinic which will cost 2,000,000 francs, including the site, the construction of the buildings, and its equipment, but the money is granted by the state, the Municipal Council of Lyons, and the Conseil Général du Département du Rhone.

The universities of Bordeaux, Montpellier, Toulouse, Lille, and Nancy resemble Lyons, but are smaller. They can also look forward with confidence to the future. Bordeaux, in 1895, had 1977 students; Montpellier, 1308; Toulouse, 1622; Lille, 1179, and Nancy, 981.

France has again taken the rank that belongs to her in matters of higher education. In 1885 there were but 16,579 students in her Facultés and secondary schools; in 1895 there were 25,887. And these figures will increase, particularly if students from foreign countries enter our universities in larger numbers. We have students from almost every part of the East, from Turkey, Bulgaria, and Russia. We hope that America will send us students as well.

GABRIEL COMPAYRÉ

RECTOR OF THE ACADEMY AND UNIVERSITY OF LYONS

VIII

REVIEWS

Aristotle and the earlier peripatetics—Being a translation from Zeller's *Philosophy of the Greeks*.—By B. F. C. COSTELLOE, M. A., and J. H. MUIRHEAD, M. A. London and New York: Longmans, Green & Co., 1897. Two volumes. 520, 512 p. \$7.00.

These volumes have long been awaited, and their publication puts within the reach of English-speaking students Professor Zeller's monumental *Philosophie der Griechen* in its entirety. In the whole history of philosophy there is no single achievement—Hegel's *Geschichte der Philosophie* not excepted—that equals this scholarly, sympathetic, and well-proportioned analysis and interpretation of the thought of a whole people. It is indispensable alike to the student of Hellenism, of the history of civilization, of the history of science, and of philosophy.

The studies of the nineteenth century are in many ways a vindication of Aristotle, Dante's *il maestro di color che sanno*. As Professor Fowler has insisted, "The Revival of Letters was marked by a strong reaction, amounting sometimes to a shrill invective, against the principle of authority, and this reaction generally took the form of an exaggerated, not infrequently an unintelligent, attack on the philosophy of Aristotle."¹ The study of nature, the development of sense-given knowledge, and the use of induction, were all insisted upon as if in opposition to the example of Aristotle; whereas, in fact, these were the very characteristics that made him what he was and that give him his commanding place in the history of human science. In our own time, too, a large part of the German study of Aristotle has been mere philological hair-splitting, well enough in its own time and place, but no substitute for philosophical interpretation. We shall do well to heed the warning of Jowett and fix our minds "on the thoughts which have had so vast an influ-

¹ Fowler, *Bacon*, pp. 148-149 (New York: 1881).

ence, and have so greatly contributed to the progress of mankind" rather than "enquire too curiously into the form of writing which contains them."²

Zeller's exposition of Aristotle is compact and well-ordered. The philosopher's life, the order and character of his writings, and the established canon are reviewed with admirable precision and brevity. The points of sympathy and agreement between Aristotle and Plato are touched upon, before their differences are developed. Aristotle is asserted to have followed out in all essentials, and to have perfected, the philosophic method which Socrates and Plato opened out (p. 171); but "with this dialectical process he combines at the same time a mastery in all that concerns the observation of facts, and a passion for the physical explanation of them, which are not to be found in Socrates nor in Plato either" (p. 173). Then follows a presentation and summary critique of Aristotle's philosophy in this order: the logic, the metaphysics, the physics, the practical philosophy (ethics and politics), the rhetoric, and the æsthetics. In two concluding chapters the history of the earlier Peripatetic school, through the second century B. C., is traced.

To follow the author's outline is as unnecessary as to commend it. It is a work of art as well as of scholarship, and must be found in every well-furnished library.

The translation appears to be unusually well done.

N. M. B.

A school algebra. Designed for use in high schools and academies—By EMERSON E. WHITE, A. M., LL. D. New York: American Book Company, 1896. 394 p. \$1.00.

This modest volume, from the hand of a distinguished educator, with whom teaching is not a trade, but a profession, we should expect to find constructed on sound pedagogical principles, lucid, methodical, and easy both to teach and to learn; nor is this natural expectation in any measure disappointed. But a book, no less than a man, has the defects of its qualities, however excellent these be. The barren formalism that so often reveals itself in teachers' conventions attests a disposition to attend too much to manner, too

² Jowett, *The Politics of Aristotle*, p. vi. (Oxford, 1895.)

little to matter, to emphasize the How and slur the What. The work under review illustrates such a tendency, though perhaps as slightly as one might in reason expect. It presents many praiseworthy features, not a few of them distinctive; a less grateful, but more useful, task is to point out certain imperfections.

The Introduction is excellent, and can hardly fail of its purpose, to arouse interest in the learner. The consistent and persistent use of the word "number" is noteworthy. The deductions of the ground-rules are, of course, mere plausibilities, as they must be without some open assumptions, as of Hankel's principle of the permanence of the formal laws, some exposition of the nature of inverse problems and of the gradual enlargement of the domain of number. Dr. White doubtless regarded such discussions as out of place, but would it not be better to assume boldly the ordinary rules, and for proof refer the student to an appendix, which he might read whenever he could understand it?

The laws of operation are stated, but seem unduly postponed, and it might have been made clearer that primarily they merely declare the equivalence of different ways of counting. Synthetic division is explained, very properly, but it seems more difficult, and theoretically far less important, than other matters omitted ostensibly as too abstruse. The rule for squaring a polynomial should be stated so as to emphasize the significant fact that its terms are taken in the product in sets of two. In some places the student seems trusted to induce a law from certain special cases, where it would be inexpensive, both of space and of thought, to prove it rigorously, as in Art. 172. The statement in Art. 196 might lead him to think there were quadratic trinomials not resolvable into linear factors. Case VII, "Trinomials having binomial factors with unlike terms," seems to split hairs, being readily reducible to Case VI. Imaginaries are mentioned, but declared to be "impossible"; the student is not made to see that they stand on the same logical footing, that they are quite as real in their way as negatives, fractions, surds, and all other annexes to the realm of natural numbers. The imaginary unit is still written $\sqrt{-1}$, instead of the estab-

lished *i*. The footnote to p. 234 does not seem to indicate the right mental attitude with respect to the laws in question. In Art. 442, "the root" for "a root" is misleading. In Art. 446 the definition of an imaginary root is inadequate. Deserved prominence is given to the "Method of solution by factoring." The type-form chosen, $ax^2+bx=c$, is doubly unfortunate. Much better is $ax^2+2bx+c=0$. The importance of this form should be very sharply accented, and the student should learn that the expression b^2-ac (or b^2+4ac , according to the author), on which so much hinges, is the discriminant. The definition of function (Art. 540) needs amendment. Correspondence in value is the essential fact, whether or not calculable or expressible; if $y=\sin x$, then x and y are functions of each other, though neither can be actually found when the other is given. The use of "antilogarithm" is very commendable. Chapter XXI treats "Undetermined coefficients" "for more advanced classes," but in manner not satisfactory. The note on convergency and divergency (p. 336) makes the common mistake about the fundamental notion of limit. It is not enough for the sum of the first n consecutive terms to approach close at will to a finite limiting value, as n is taken great at will; it is equally essential for it to stay close at will for all still greater values of n . The variable S_n may very well graze any number of finite values, as n increases, without ever settling down upon any. The introduction of Determinants into a school algebra is a most laudable innovation, due indeed much earlier, under simultaneous equations, Chapter XI. Curve-tracing is questionably in place. Permutations and combinations receive treatment neat though elementary, but no application justifies their presence; yet the binomial theorem for positive integral exponents affords a perfect example of combinatorial analysis.

In fine, Dr. White has produced an admirable book, and a new edition will doubtless soon offer a way of escape from even gentle strictures. The form is worthy of the substance, being a genuine joy to the eye from cover to cover.

W. B. SMITH

TULANE UNIVERSITY,
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Shakspeare's *The merchant of Venice*—Edited by FRANCIS B. GUMMERE, Ph. D., Professor of English in Haverford College. New York: Longmans, Green & Co., 1896. 196 p. 50 cents.

Shakspeare's *As you like it*—With an Introduction by BARRETT WENDELL, Assistant Professor of English in Harvard College, and Notes by WILLIAM LYON PHELPS, Instructor in English Literature in Yale College. New York: Longmans, Green & Co., 1896. 134 p. 50 cents.

Shakspeare's *A midsummer night's dream*—Edited by GEORGE PIERCE BAKER, Assistant Professor of English in Harvard University. New York: Longmans, Green & Co., 1896. 144 p. 50 cents.

These volumes of Longmans' English Classics are the three chief Shakspearean comedies. As to the wisdom of putting two comedies into one year of the college requirement, we need not inquire. It is, for present purposes, well that it was done, for it is now an interesting thing to compare the work of the four editors. They all show departure from the type of Shakspearean text with which we are familiar, but their paths of departure are in directions somewhat different.

Most academic of the four is Mr. Gummere; he has practically remodeled the ordinary school text in the light of a sane and broad scholarship. He is a modified German professor: the text of his excellent Introduction carries its own bulk of footnotes, and even at that, bibliography, language, meter remain as appendices to the notes. The scholarly apparatus thus furnished is sound, of good quality, and pleasantly put; it is by no means a pedantic exhibition of learning; the fact of the matter is that the book is meant to be studied, and Mr. Gummere wishes to indicate directions in which study may tend. But with all this material comes, in the suggestions for teachers, a bit of advice for study such as will hardly be found in another edition which has also the learning of Mr. Gummere's. If one reads the Introduction and notes only, one may exaggerate the scholastic side of the edition, but these suggestions will serve to keep the balance true.

Wholly different, as anyone might imagine, is Mr. Wendell's Introduction to *As you like it*. If Mr. Gummere is more or less German in his methods, and evidently has at hand all the information which has been gathered by preceding scholars, Mr. Wendell is more of the Englishman,

who, while he knows all about the matter, is apt to think it a bad form to allow anyone to suspect it. No such commonplace baggage as footnotes to Mr. Wendell's Introduction; the conventional Shakspeare student is as though he had never been, and even the conventional Shakspeare is blandly ignored. Mr. Wendell puts the play before his readers in an easy conversational manner, much as though he had happened upon a good comedy by some little-known contemporary. If adverse criticism is to be made upon the method it will probably be to the effect that it has very naturally been carried too far; the editor is not merely unpedantic, he seems even jaunty. His intention is plain and admirable, but it is an open question, whether his effect is really obtained. Whatever be the effect upon cultivated readers, we must doubt whether the reader for whom the book is intended will really understand an introduction better for having it, as one might say, in words of one syllable. Indeed it may be doubtful whether with any readers at all, quite the right proportion is obtained. "A man named Thomas Lodge"; in such a phrase lies the whole matter. Very possibly a student may get the right relation of Rosalynde and *As you like it* better from such a colloquial treatment than from more conventional methods. Mr. Phelps in his notes to the play adopts much the same idea, so far as practicable, and naturally enough, might be criticised in much the same way as Mr. Wendell. The work of the two hands is harmonious, and the book will make its impression without a blur.

Criticism of details is hardly to the present purpose: Mr. Gummere, in editing for study, aims to give the impression on the mind of a widely-read, well-balanced student; Mr. Wendell, in editing for reading, aims at the impression of the cultivated, appreciative man of the world. It is a good thing to have the two ideals.

Between the two, or, more exactly, in a sort of triangular relation, stands Mr. Baker. He does not conceal from the reader that other things have been written about the play which may be read with profit, nor does he believe that the only way to study a play of Shakspeare is to carry it by

assault with regiments of authorities. His idea is that the reader is first to be interested in the play, and that with an intelligent interest. To this end he throws overboard the routine Introduction, and we have, instead, a piece of fiction; an account of the play as it might have seemed to an eye-witness. It is an interesting side-light upon the relations of scholarship and imagination. Not a word, to start with, on author, text, plot, characters. Instead, the talk of an Englishman of Elizabeth's day, who is taking a friend to the theater to see *A midsummer night's dream*. More particular matters of bibliography and so forth are put into a few pages later on. The thing is well done and ingeniously, and besides being entertaining, gives much of the information it affects to supplant. Someone said (or may have said) of Lander's *Citation of Shakspeare*, that only two men could have written it, the man who did write it, and the man of whom it was written. Such things rarely escape a touch of artificiality. Mr. Baker's has its failings, but it hits the nail on the head, for all that. It does have the effect of interesting the reader at the start, and that was the end to be obtained.

These books, then, as we reconsider them, are seen to have one admirable element; namely, ideas. A teacher, or anyone else for that matter, who studies them, will get something new about the teaching of English. A good teacher will do better work with them, not only in these particular plays, but along the whole line, through a certain ferment of the imagination, a vitalization of thought, which comes to pass in studying these volumes. Such, indeed, is the main service rendered by this series as a whole. An examination of the ten volumes already published impresses one strongly with a feeling of life and vigor. No two volumes are exactly of the same pattern, and yet one can see that each editor has a good deal to say for himself and his methods. With this independence and individuality we have also the advantage of a general plan and general supervision. The work of the general editor is one of the strong points of the series, nowhere showing to better advantage than in his selection of responsible editors for the separate

volumes. They are a very representative set of men—representative, that is, of the younger set of teachers of English literature.

The series as a whole, then, has great pedagogic value for the English student. The Suggestions to Teachers, as developed by the ten different editors, would make an admirable comment on the report of the Conference on English to the Committee of Ten. One volume or another may not fall in very well with one's views, but when one considers them all, one cannot deny that they offer a very inspiring and suggestive display of scholarly work.

EDWARD E. HALE, JR.

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A French grammar—By LOUIS BEVIER, JR., Ph. D., Professor in Rutgers College. With exercises by Thomas Logie, Ph. D. New York: Henry Holt & Co., 1896. 341 p. \$1.00.

The interest felt in this country in the French language; and the real or supposed difficulty of its acquisition, are attested, according to the files of the Copyright Office of the Library of Congress, by the 268 grammars, readers, methods, and systems that have been published within fifty years; in addition to the previous stock and all importations. Naturally, the greater part of these contain little that is both new and valuable. With scarcely an exception, the authors have been content to take the language as an existing fact, without inquiring how it arose. Yet, in 1881, Mr. Buckingham gave to the American public Eugene's *Comparative grammar of the French language*, which illustrates the speech of to-day by the Latin of literature. But the distance is great between the language of the great conqueror of Gaul and the modern Tribune; and it has been one of the tasks of modern philology to discover what lay between. The field is a vast one, with landmarks scanty and sometimes suspicious, while large spaces between ascertained facts have to be filled up by inference. Yet the main lines of development may be considered as settled. Their exhibition is the special feature of Professor Bevier's work, and will deeply interest all who are not satis-

fied with the philology of a parrot. Many must be puzzled to find a Latin original for such forms as *celui-ci* and *ça*, *avec* and *chez*, or to connect *habebo* and *aurai*. Such may now have a large part of the difficulty removed by Professor Bevier's careful and scholarly epitome, which will in a great measure supply the place of the extensive works of Diez, Gröber, Brachet, and Schuchardt.

The work is thorough, yet condensed. Each example is followed by a reference to the author from whom it is taken, thus not merely illustrating, but proving the rules. The lists of infinitives (pp. 184-187), with their accompanying prepositions, will be found very useful; while Professor Logie's exercises make the book applicable to classroom drill. The thirty-six pages on phonology, while valuable to the phonetician as a convenient synopsis, will be found by the student to be the most perplexing and least satisfactory part of the work—reasoning, as it does, from the unknown to the unknown, resembling too much the equation $x=y \frac{m}{n}$.

M. M. RAMSEY

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The heart of oak books—Edited by CHARLES ELIOT NORTON. Boston: D. C. Heath & Co., 1895, 6 vols. 96 p., 25 cents; 268 p., 45 cents; 308 p., 55 cents; 370 p., 60 cents; 378 p., 65 cents; 367 p., 60 cents.

These volumes present "a collection of traditional rhymes and stories for children, and of masterpieces of poetry and prose for use at home and at school, chosen with special reference to the cultivation of the imagination and the development of a taste for good reading."

The first volume is intended for children beginning to learn to read. It contains the best of the traditional stock of rhymes and jingles "which have been sung or said by mothers or nurses time out of mind." The editor believes that these rhymes and jingles constitute not only sufficient but the best material with which to teach children to read. He would dispense with all artificially constructed sentences and all artificial methods of learning to read. He would have the rhymes and jingles read to the children and gradu-

ally read by them, as their eyes and ears became accustomed to the forms and sounds of the words. But he will find few teachers to agree with him. Many bright children, particularly those who come from families in which culture is hereditary, have learned to read in this way; but while the majority of children will readily memorize the rhymes and jingles and recognize them from their place on the page, they will fail to recognize the same words when presented in another connection or on another page. In other words, the method indicated does not, except in a slow and comparatively ineffective way, confer the power of making out new words at sight. The exercise of this power gives wonderful pleasure to the child. It is safe to assume, therefore, that the artificial sentence and the artificial method will not immediately lose their places in teaching the art of reading. On the other hand, every progressive teacher will welcome this book as a most important auxiliary in her work. The artificial sentence, while it may have its uses, has been too prominent in the classroom; the rhyme and jingle have been too sparingly used both in reading to and reading by the pupil. The stories in this book should become part of the mind of every child.

The second and third volumes contain fables, legends, fairy tales, "which form the traditional common stock of the fancies and sentiment of the race," concluding with Charles Lamb's *The adventures of Ulysses*. The fourth, fifth, and sixth volumes contains selections from the best historical and imaginative literature in the language—prose and poetry. Each selection is a unit in itself and worthy of study for its own sake.

The editor has compiled these books under the conviction that one of the main objects in teaching reading is to create a taste for good reading, to stimulate interest in literature. "To make good reading more attractive than bad," he says in his Preface, "to give right direction to the choice, the growing intelligence of the child should be nourished with selected portions of the best literature, the virtue of which has been approved by long consent. These selections, besides merit in point of literary form, should possess

as general human interest as possible, and should be specially chosen with reference to the culture of the imagination."

The possession of human interest and adaptability to the cultivation of the imagination have, then, been the principles on which Professor Norton has made his selections. However teachers may differ as to the "grading" of some of the selections,—a very unimportant matter where there is so rich a field to choose from,—all who examine these books will agree that every selection possesses these two qualities—human interest and adaptability to the cultivation of the imagination.

Professor Norton has rendered a most genuine service to elementary and secondary schools by bringing to bear on the compiling of these books his rich experience as a teacher, his unsurpassed knowledge of literature, and his profound critical insight. The child who has steeped himself in this intensely human and intensely artistic literature, will possess the "touchstone" wherewith to try the metal of all other literature. The man who did not learn while at school to appreciate literature, but who desires to acquire the taste, cannot do better than "give his days and nights" to the study of these books.

W. H. MAXWELL

BROOKLYN, N. Y.

History of English literature from the fourteenth century to the death of Surrey—By BERNHARD TEN BRINK, edited by Dr. ALOIS BRANDL. Translated from the German by L. DORA SCHMITZ. Vol. II. Part II. New York: Henry Holt & Co., 1896. 309 p. \$2.00.

At last the third and final though, alas! not the completing volume of Ten Brink has appeared in English, and no greater praise can be given it than to say that it is on the same high level of excellence as its predecessors. To be sure it has not the special claim to attention of the volume containing the Chaucer studies, but throughout it is marked by the same scholarship and keen critical power for which the lamented Dutch student was so eminently distinguished.

To single out all the noteworthy features of the present volume would require far more space than the pages of this

journal would permit; but some of these may with advantage be briefly touched on: First of all, a feature too rare among scholars, the conservative attitude toward iconoclastic literary theories. Of à Kempis the author says, "The name of à Kempis I make use of here only as a familiar symbol, and do not mean to express any literary convictions: books with which I have been intimately acquainted from early youth. . . I have never made the subjects of learned inquiry." Of Maundeville, while admitting the reasonableness of the supposition that he is merely a type, he says, "Nevertheless, it is difficult to believe that the tradition of Maundeville's travels does not contain some nucleus of historical truth." The added remark that the final solution of the question cannot be reached until the appearance of the critical edition of the French text is a wholesome warning against hasty literary judgments that many investigators might profitably heed. Finally, in the appendix to the earlier part, with which this volume concludes, he says, "With regard to the year of Wyclif's birth I adhere, meanwhile, to the traditional date, 1324." This conservatism is not at all to be confounded with the amateurish slighting of recent investigation shown by some other writers on English literature. His judgment is reached only after the most careful sifting of all the evidence *pro* and *con*.

In his presentation of the individual writers Ten Brink shows a marked tendency to use the comparative method, and the groupings are invariably suggestive. Probably no clearer idea has ever been given of the style and literary limitations of Tyndale than in the brief comparison of the English reformer with Luther, on p. 179. Ten Brink, by the way, is inclined to attribute less influence on Tyndale's translation to Wyclif and the Vulgate than is usual. The long parallel between Luther and the English humanists describes the position originally assumed by More, Colet, and Erasmus in the most admirable manner. Of the purely literary contrasts may be specially mentioned that on p. 252 between Wyatt and Surrey. "Surrey's love-poems exhibit outwardly less fullness and variety than Wyatt's; but in inward richness, in originality, they surpass them. They shine less

by what is called intellect than by depth of feeling. Simple truth is their distinguishing feature. . . Surrey stood closer to nature, Wyatt to cultured life: this accounts for the fact that in Surrey's poems we do not meet with anything comparable to the satires of the elder poet, and that his lyrics contain few things beyond his love-poems." This whole discussion of our two early lyrists, covering the last fifty pages, is by no means the least valuable feature of the book. The suggestion of a connection between one of Surrey's poems and the nature descriptions in *L'Allegro* and *Il Penseroso* is, it is believed, presented here for the first time. As Dr. Brandl has pointed out, the closing words of the book may be regarded as having an unconsciously prophetic reference to the writer. "Great things he [Surrey] might still have accomplished, but what he did accomplish has not been lost to posterity."

Almost epigrammatic are some of the summaries of writers. Of More's political romance it is said, "The impulse which induced More to write his *Utopia* was his keen sensibility of the conflict between the ideals he bore within his own breast and the harsh realities of life." In the following crisp paragraphs he sums up Capgrave's style: "Capgrave's English prose is simple and unaffected, but clear and graphic, and at favorable moments exhibits vivid coloring." The estimate of More's character and attainments, though admirable, is too long for quotation.

The only fault that can be found with the book in its present form is the English rendering. Many of the constructions are hopelessly German, and there is but little literary finish to the version as a whole. In the matter of German translation, however, many are called, but few are chosen.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

Mr. Greenridge's *Handbook of Greek constitutional history* is a scholarly compendium of information that teachers of Greek will find extremely useful (New York: The Mac-

millan Company, 1896. 276 p. \$1.25).—It was an extremely happy thought that suggested the making of an abridged edition, for school and college use, of Mr. Bryce's classic *American commonwealth*. In its preparation Mr. Bryce has been assisted by Professor Macy of Iowa College, and the result is a capital text-book, of convenient size and form, that ought to be widely used (New York: The Macmillan Company, 1896. 547 p. \$1.75).—Mr. H. W. Bowen, consul of the United States at Barcelona, has done a useful service in compiling a survey of *International law*, that is both accurate and convenient (New York: G. P. Putnam's Sons, 1896. 165 p. \$1.25).—Professor Heilprin's *The earth and its story* is a book of unusual merit. It is a sketch of geology and physiography that is both well-conceived and well written (Boston: Silver, Burdett & Co., 1896. 267 p. \$1.00).—Professor William Ramsay has done an excellent service for the general reader in his attractive and easily written book on *The gases of the atmosphere*. The story of the investigations and discoveries concerning the composition of the air we breathe, from the time of Boyle to Lord Rayleigh's discovery of argon, is told in instructive outline (New York: The Macmillan Company, 1896. 240 p. \$2.00).—The third volume of *Old South Leaflets* contains Nos. 51 to 57, inclusive, and has, among other State papers, President Monroe's Message of December 2, 1823, on which the Monroe Doctrine is so largely based, and Hamilton's report on the coinage of January 28, 1791. These volumes are a mint of material for historical students and ought to be within reach of them all (Boston: Published by the Directors of the Old South Work, 1896. \$1.00).—Professor Kingery of Wabash College has edited, with a careful introduction and notes, the little-read *Medea* of Seneca (Crawfordsville, Ind.: Published by the Author, 1896. 90 p. 25 cents).—Dr. Rolfe has given his Shaksperian scholarship a very attractive form in his new book on *Shakespeare the boy*. Teachers of literature will find it both entertaining and helpful (New York: Harper & Brothers, 1896. 251 p. \$1.25).—Professors Marquand and Frothingham of Princeton have, in co-operation, provided the

third volume in Professor Van Dyke's attractive College Histories of Art series. It is a *History of sculpture*, profusely illustrated (New York: Longmans, Green & Co., 1896. 293 p. \$1.50).—The revised and enlarged edition of the *History of modern education*, by Professor Samuel G. Williams of Cornell, offers an opportunity to direct attention again to this excellent text-book. The corrections of typographical errors, the addition of new chapters dealing with contemporary movements, an analytical index, and a syllabus for guiding study, make the new edition a marked improvement upon its predecessor (Syracuse, N. Y.: C. W. Bardeen, 1896. 482 p. \$1.50).—Miss Mead of the Winona (Minn.) Normal School has made a practical and helpful book in her *English language and its grammar*. It deserves careful examination by teachers (Boston: Silver, Burdett & Co., 1896. 265 p. 65 cents).—Professors Brandt and Day are to be congratulated upon the thoroughly representative character of the contents of their *German scientific reading*. Students of science will be glad to use it as an aid in acquiring a German technical vocabulary (New York: Henry Holt & Co., 1897. 269 p. 85 cents).—Archbishop Ireland needs no introduction to American teachers. They gladly recognize in him the uncompromising churchman, the scholarly prelate, the patriotic citizen, and the inspiring orator. His collected essays and addresses, entitled *The church and modern society*, deserve to be widely read (New York: D. H. McBride & Co., 1896. 413 p. \$1.50).—In *Our little books for little folks*, by W. E. Crosby, a good deal has been both attempted and accomplished. It is a delightful book for very young children to use and to own (New York: American Book Co., 1896. 106 p. 30 cents).—The third volume of the English translation of Holm's great *History of Greece* brings the story down to the death of Alexander. In clearness of style, conciseness of statement, and accuracy this work is unsurpassed in its field (New York: The Macmillan Company, 1896. 456 p. \$2.50).—Professor Wenley, who has lately come to the University of Michigan from Glasgow, has just published a very acute and

thoughtful book entitled *Contemporary theology and theism* (New York: Charles Scribner's Sons, 1897. 202 p. \$1.25).—A popular and very instructive summary of recent special literature on the various abnormal and extraordinary psychical states known as hypnotic, telepathic, and so on, is given by Dr. R. Osgood Mason in his *Telepathy and the subliminal self* (New York: Henry Holt & Co., 1897. vi+343 p. \$1.50).—M. Charles Gavard was for six years from 1871 a member of the French embassy at London, and his letters and notes as they appear in *A diplomat in London* are both entertaining and helpful in gaining a nearer view of the tangled politics of the period (New York: Henry Holt & Co., 1897. ix and 328 p. \$1.25).—New numbers in the well-printed, well-bound, and cheap Riverside Literature Series are Trent's edition of Macaulay's essays on Johnson and Goldsmith, on Milton, and on Addison (Boston: Houghton, Mifflin & Co., 1896. 25 cents each).—The new edition of *Physiology for beginners*, by Professor Michael Foster and Dr. Shore, is an excellent text-book—simple, clear, well-arranged, and up to date. The fanatics will not admit it into the common schools, for it makes no compromise with their pet twaddle about stimulants and narcotics (New York: The Macmillan Company, 1897. 247 p. 75 cents).—Miss Sawtelle has compiled a laborious book for her doctor's degree at Yale, entitled the *Sources of Spencer's classical mythology* (Boston: Silver, Burdett & Co., 1896. 128 p. \$1.00).—A scientific work of the first importance has been completed in the *American text-book of physiology*, edited by Professor Howell of the Johns Hopkins University. Among the editor's collaborators were Professors Bowditch and Porter of Harvard, Curtis and Lee of Columbia, Donaldson of Chicago, Lombard of Michigan, Reichert of Pennsylvania, and Lusk of Yale (Philadelphia: W. B. Saunders, 1896. 1052 p. \$6.00).—The translation, by Professor Field of Brown University, of Hertwig's *General principles of zoölogy*, brings a most excellent and useful work within the reach of American students and teachers (New York: Henry Holt & Co., 1896. 226 p. \$1.60).—Professor MacMechan of Dalhousie College has made for the

Athenæum Press Series a new edition of Carlyle's *Sartor Resartus* (Boston: Ginn & Co., 1896. 428 p. \$1.40).—Professor Wundt's *Outlines of psychology*, translated by Mr. Judd of Wesleyan University, will be a capital book to give to students hearing a course on psychology for the first time (New York: G. E. Stechert, 1897. 342 p. \$1.75).—Professor Tarr of Cornell University has made a most excellent and well-proportioned text-book of *Elementary geology*. It is not only abreast of the latest work in that science, but its emphasis upon the dynamic elements in geology makes it educationally sound and helpful (New York: The Macmillan Company, 1897. 499 p. \$1.40).—*The English constitution*, by Professor Jesse Macy of Iowa College, is a successful attempt to do for England in a small way what Mr. Bryce has done on a much larger scale for the United States. The book is most attractively written, and, so far as we have observed, is very accurate.—In his *Problems in elementary physics* Mr. E. Dana Pierce has collected a large number of simple numerical exercises in illustration of the principal physical laws and formulæ. The book is designed for schoolboys (New York: Henry Holt & Co., 1896. 194 p. \$1.00).—Professors Nichols and Franklin continue their *Elements of physics* in a second volume on *Electricity and magnetism*. The work requires more mathematical training than is usual for an elementary work. The order of topics is unusual, but perhaps more in harmony than the common one with the present views of electricity (New York: The Macmillan Company, 1896. 272 p. \$1.50).—Mr. Merz, well known for his excellent monograph on Leibniz, has just published the first volume of an extremely important book entitled *History of European thought in the nineteenth century*. It will be noticed at length hereafter (Edinburgh: William Blackwood & Sons, 1896. 458 p. \$2.00).—The Open Court Publishing Co. continues its praiseworthy policy of bringing important German and French monographs before English and American readers in translation. The latest publication of this character is Dr. Ernest Mach's *Analysis of the sensations* (Chicago: Open Court Publishing Co., 1897. 208 p. \$1.00).

FOREIGN EDUCATIONAL PERIODICALS

Revue Internationale de l'Enseignement, January 15, 1897

L'Oeuvre Scholaire de la jeune Hongrie, 1868-1869, by J. Kont.—An outline of recent educational development in Pesth. The higher education of Hungary is given at two universities, Buda-Pesth and Clausenburg; a technical school; 10 law schools; 49 theological seminaries; a school of mines (at Selmcez), and a school of agriculture (at Oedenburg). The university of Buda-Pesth is the center of the country's intellectual life. In 1895--96 it had 4002 students. The income is now 795,241 florins, of which 290,000 florins come from the university funds, the remainder from the state. The Faculty of Law has 2313 students, and consists of 18 professors, 7 associate professors, and 14 docents. The law course is a very broad one and offers far more than a mere preparation for the bar examination. It embraces political economy and social science. The *Zeitschrift für ungarisches öffentliches und Privatrecht* is edited by members of the Faculty. The Faculty of Medicine is very active, and includes pharmacy in its scope. Two journals are edited by its members: *Ungarisches Archiv für Medicin* and *Ungarische Beiträge zur Augenheilkunde*. Women are now admitted to the study of medicine. There were, in 1895, 832 students. The Faculty of Philosophy has 409 students enrolled. It is made up of 33 professors, 5 associate professors, 34 docents, and 16 assistants. The Faculty is organized in 9 divisions: philosophy and education, history and geography, classical philology, mathematics, chemistry and physics, natural history, comparative philology and Oriental languages, Hungarian languages and literatures, and other modern languages and literatures. Secondary education is based upon the law of 1883. Since 1890 the study of Greek has been elective in the Gymnasia. In the large cities the school session lasts from 8 A. M. to 1 P. M. In 1895 there were 156 gymnasia and 33 real-schools. The treatment of elementary education is reserved for a subsequent article.

La Commission de Moscou pour la propagation de l'instruction supérieure au moyen de lectures faites à domicile, by W. Lon-

guinine.—This article describes a Russian counterpart of the American reading-circle. The courses are very systematically laid out, and have been successful in reaching large classes of the population.

In the editorial departments descriptions are given of the exercises in November last, at the formal opening of the Universities of Lyons, Lille, Nancy, Clermont, Poitiers, and Caen, as well as of the Franco-American students' banquet, at Paris, a few weeks ago.

Academische Revue, January, 1897

Die Gehälter und Kollegiengehälter der Universitätsprofessoren in Preussen, by Professor Lexis of Göttingen.—A series of statistical tables. Of the 492 ordinary professors, 96 (19.5 per cent.) have salaries of 4000 M. or less; and 201 (40.8 per cent.) receive less than 4801 M. Salaries of 8000 M. and upward are paid to but 41 men (8.3 per cent.). The maximum salary paid in Berlin is 12,000 M. In students' fees, 44 per cent. of the ordinary professors receive less than 1000 M., and only 6 receive from this source more than 12,000 M.

Die Geschichte der deutschen Universitäten, by Professor G. Kaufmann.—The author writes of the plan, scope, and method of his book (of which the title is the same as of this article), the second volume of which has recently been published. The third volume of the work, which Professor Kaufmann hopes to complete in the near future, will continue the history to the foundation of the University of Strassburg, after the Franco-German war.

Deutsche Zeitschrift für Ausländisches Unterrichtswesen, January, 1897

The training of teachers in the United States, by Miss Hughes of the University of Wales.—A concise and unusually accurate paper. It treats American agencies for the training of teachers as: A. Normal schools or colleges (1, State; 2, city; 3, private). B. Pedagogical departments in universities. C. Summer schools and teachers' institutes.

The Belgian common school law of September 15, 1895, by Professor Hoffmann of the University of Ghent.—A second and concluding paper describing the details of this extremely important measure.

IX

EDITORIAL

The programme prepared by President Gilbert for the meeting of the National Department of Superintendence, held in Indianapolis, February 16--18, was remarkable for three things—the great variety of subjects discussed, the prominent place assigned to women in the discussions, and the large use made of the so-called “round table” method of conducting meetings. The subjects discussed embraced nearly every conceivable plan of school work, from child-study to college entrance requirements, and from the three R’s to the correlation of educational forces in the community. Among the women who spoke were Miss Sarah L. Brooks of St. Paul, Minn., who read an admirably practical paper on “Supervision as viewed by the supervised”; Miss Ida C. Bender of Buffalo, N. Y., who discoursed on the “Relation of citizens and teachers”; and Miss Arnold of Boston and Miss Cropsey of Indianapolis, who took a prominent part in the discussions. The “round tables,” twelve in all, which were substituted for the regular afternoon sessions of the Department, raised the question in many minds as to what a “round table” is. Those who expected free discussion of a topic, at the hands of a small number of experts, were disappointed. In at least two cases the “round tables” developed into mass meetings, so large were the audiences. One of them was the meeting conducted by Professor O’Shea on child-study; the other was that on the three R’s by Mr. J. M. Rice. Professor O’Shea’s meeting was chiefly remarkable for the vast preparation made by the chairman for the enlightenment of his audience, no less than fourteen papers, to say nothing of subsequent discussion, being presented in one afternoon; Mr. Rice’s meeting by the lack of such preparation, the chairman contenting himself with asking questions, which remained unanswered. The former was marked by a redundancy of detail; the latter by a paucity of ideas.

Tame is perhaps the best word by which to describe the character of the discussions. While many excellent papers were read, and many good speeches made, there was little of that clashing of minds and theories which has rendered former meetings of the department entertaining as well as instructive. A stranger who listened attentively to the proceedings would have been apt to conclude that at least the school superintendents, if no other division of the educational host, are now in substantial agreement on all questions of theory and method in school management. That such is not the case is well known. The apparent unanimity of sentiment may, however, be accounted for in two ways: first, the attendance of teachers and the outside public at the general meetings was so large that the active participants, whether consciously or unconsciously, stood on dress parade the greater part of the time, and scarcely ventured to make serious attacks; and, second, most of the vexed questions were transferred to the "round tables," which were attended, in almost every instance, chiefly by persons whose opinions did not differ materially from those of the chairman. The undeniable fact, however, that the discussions were tame raises the very serious question whether the Department of Superintendence has done wisely in imitating the methods of the parent body, the National Educational Association, by going from one city to another and attracting large audiences to its meetings. The local benefit derived from one of these meetings is not at all comparable to the general benefit that would result were the meetings smaller, the papers and speeches less general in scope and rhetorical in tone, and the discussions more spontaneous and genuine. The good old days when the Department was kept small and met regularly at Washington are often referred to by its members, and the desire expressed to go back to them.

A good illustration of the effect of side-tracking a debatable subject was furnished by the "round table" on college entrance requirements. The chairman, Dr. A. F. Nightingale of Chicago, President Schurman of Cornell, and Professor James of the University of Chicago, presented

the proposition that the colleges should admit students from any course of four years in the high school, provided that course contains subjects continuously pursued, and whether or not it contains Latin or Greek. To assert this proposition is, in the eyes of many, to assert the equivalence, as means of intellectual and moral training, of all subjects taught in secondary schools. Now, it is safe to say that there is no proposition in education that is calling forth more strenuous opposition than this very assertion of the equivalence of studies. Yet there was barely a murmur of opposition at this meeting. The speakers on the affirmative side had the matter all their own way. The reason, evidently, was that those who do not believe in the equivalence of studies were not present. It would be unsafe to conclude from so one-sided a performance that the best educational thought of the country is setting strongly toward the position taken by Dr. Nightingale, President Schurman, and Professor James. As to whether that position is one in advance or one in retreat, there is still much difference of opinion, and it does not affect the present argument.

Dr. W. N. Hailman, superintendent of Indian schools, presented the report of the special committee appointed at Jacksonville in 1896, on "Plans to collect data concerning methods and courses of work in primary schools tending to promote a vital connection between school studies and the educational development of the child and of man." The report is a masterly argument in favor of establishing "a vital connection of school studies, not only with the child's individual development, but also with his social development." It recommended the appointment of a committee whose "entire attention and energy should be given to the presentation of examples of successful modes of procedure, and to the deduction from these of reliable rules of action and criteria of method at every step, from the simplest lesson in the language to the critical study of Shakspeare; from the simplest exercise in drawing to the construction of a machine or the execution of a work of art." The following committee of seven was appointed to undertake this enormous labor: W. N. Hailman, Washington, D. C.; John

Dewey, Illinois; S. T. Dutton, Massachusetts; L. H. Jones, Ohio; Sarah L. Brooks, Minnesota; Sarah L. Arnold, Massachusetts; Alice H. Putnam, Illinois.

Other important papers were presented by Superintendent Jones of Cleveland, O., on "The province of the supervisor," in which he outlined the province of supervision and made a strong plea for helpful rather than destructive criticism of teachers' methods; by Superintendent Dutton of Brookline, Mass., who described the plan by which the people of his city have come to re-enforce the efforts of the teachers in the public schools¹; by Superintendent Gove of Denver, who showed to what useful purpose school buildings might be put when not occupied by classes; by Commissioner Harris, who discussed art as related to education¹; and by Superintendent Maxwell of Brooklyn, N. Y., who entered a plea for founding the teaching of art on the observation of nature.

Chattanooga, Tenn., was selected as the next place of meeting. Dr. N. C. Schaeffer, State Superintendent of Pennsylvania, was elected the next president. It is unnecessary to say that Superintendent Gilbert made an admirable presiding officer, keeping the speakers within the time limits and preserving order in the large assemblages.

Resolutions were adopted requesting the National Educational Association, at its meeting in Milwaukee, to consider the advisability of appointing a commission of its members to visit the World's Fair of 1900 in Paris, and to report on the display of educational material and product; approving the enactment of compulsory education laws; requesting that the National Bureau of Education be placed "on a level with other bureaus of the Department of the Interior"; and authorizing the appointment of a committee on requirements for State teachers' certificates, to consist of sixteen members as follows: The Commissioner of Education, the present president of the N. E. A., the present president of the Department of Superintendence, four State superintendents, three normal school principals, two principals of local training schools, two presidents of boards of education, and two others.

¹ This paper is printed in this issue of the EDUCATIONAL REVIEW.

Now that the ward trustees have disappeared in New York, and the local committee system of Brooklyn is under a fire that is certain to cause its destruction sooner or later, Philadelphia is the only large city remaining with the obstructive system of local or ward school boards. But in that city the press, enlightened public sentiment, and the best representatives of the teachers are all outspoken in condemning the system, and in demanding as a substitute something like that recently established in New York. So fortunate a situation as this is unusual, and speaks volumes for the independence and character of the Philadelphia teachers. Their exceedingly dignified and ably conducted organ, *The Teacher*, speaks out very boldly in a recent issue, and with a directness that would have frightened a New York teacher to death a year ago, when the "school machine," now happily ditched, let us hope forever, was running at full speed. The division of authority between the central and local boards is protested against; a considerable number of the school directors are alleged to be mentally and morally incompetent, and this incompetency is due to the vicious system of choosing the nominees for these offices; needed repairs and necessities are delayed or refused; excessive bills for small amounts of work are presented and paid; there is continued interference of the non-professional element in what is strictly school work; and so on. It is the old story that experience tells every time that this method of administering school systems is attempted. The good citizens of Philadelphia, and the progressive sentiment that, animated by wise leadership, pervades the teaching force, ought readily to bring about a long-needed reform and give that great city a thoroughly efficient and modern system of school administration.

Dr. James Ward, fellow and tutor of Trinity College, Cambridge, has been appointed to the new professorship of mental philosophy and logic in Cambridge University. Dr. Ward is best known by his article on "Psychology" in the ninth edition of the *Encyclopædia Britannica*. A work on epistemology from his pen has long been promised.

The present session of the New York Legislature is remarkable for the number of attempts that have been made to break down and override the admirable regulations regarding professional and higher education that are the result of the efforts of the past eight or nine years. For example, at least a dozen bills have been introduced authorizing individuals named therein to be examined for admission to the bar without being required to pass the preliminary Regents' examination in general scholarship. As might be expected, the persons for whom these privileges are desired are usually ignorant politicians; and in one case, at least, the individual named in the bill is a barkeeper. No self-respecting person would make the public confession of incapacity and ignorance that such propositions necessarily imply. Happily there is small chance of the passage of any of these bills, for the Legislature has been flooded with protests against them and their indefensible character is now pretty well understood by the public at large.

Another bill of the same general character is that to incorporate the New York Law School, with full degree-conferring powers, and to authorize it to grant the degree of LL. B. after a two-years' course of law study. Under the terms of the University Law, which is the crystallization of the educational policy of the State, all charters for higher and professional schools and colleges are to be issued by the Regents; and the conditions on which, alone, degree-conferring power may be granted are carefully specified in the law. These conditions include adequate provision for buildings, books, and apparatus, and an endowment of at least \$500,000. Every student of education, and every man or woman who has had cause to blush for American academic degrees and to feel the contempt in which they are so generally held, knows why these restrictions are not only wise but essential. Why, then, should any respectable institution wish to evade them, and to seek special legislation in its own behalf?

Only one answer to the question is possible. It is that the institution that makes such an attempt wishes to operate in defiance of the Regents and of the colleges and universi-

ties of the State, rather than in co-operation with them. The New York Law School is now in existence and successful operation. It has no endowment, and conducts its exercises in rented rooms. It gives the smallest amount of instruction of any law school in the State or perhaps in the world. It is an adjunct, and an extremely profitable one, of the law offices of the city of New York. It has a charter from the Regents, issued in accordance with the terms of the University Law, and the Regents hold the examinations of its students and confer the degrees upon those who pass successfully. At the bar examinations students from this school have stood among the lowest, and the percentage of failures is reported to have been abnormally large.

There is nothing especially discreditable or unbecoming in any of the statements just made, save that no university could afford to have them made of it, and it would be the greatest unwisdom to except from the policy of the State an institution of which they can truthfully be made. At a hearing before the judiciary committees of the Senate and Assembly these arguments were urged by representatives from Columbia, New York, Syracuse, and Rochester Universities, Vassar and Union Colleges, and others. As a result of the hearing it is believed that the bill will not become a law, especially as it is wholly within the power of the Regents to meet the wishes and hopes of the really disinterested friends of the New York Law School without any legislation whatsoever. It seems probable at this writing that the whole discussion will have that outcome.

An extraordinary incident occurred, however, when, on March 1, the Regents convened in special session to consider this matter. A small number of that body, chosen, be it remembered, to conserve and develop the higher educational interests of the State, pronounced flatly in favor of low standards and educational anarchy, defied the law, and made a series of assertions that ranged all the way from the demonstrably untrue to the preposterously inane. Since the session was executive, no exposure of this intellectual and moral nakedness would have been made to the public, had not the Brooklyn *Eagle*, whose chief editor is a Regent,

published on March 2 a long dispatch from Albany revealing the secrets of the executive session and twisting them to suit the views that the Regent-editor hastened to proclaim as his own. Vice Chancellor Doane made a dignified protest against this utterly indefensible and discourteous act, and gave his assurance, which was promptly accepted by the public, that the *Eagle's* interpretation of what occurred was incorrect and misleading.

But the harm had been done. A feeling of indignation and resentment swept over the State, followed by a sense of shame and of alarm at the discovery that such petty narrowness and such an antagonism to higher education had crept into the body that legally represents higher education before the State and the country. The fact that on March 18 the Regents acted much more sanely than on March 1 is encouraging; but the disgrace of what happened at the earlier meeting still remains.

Two strong utterances have been made recently on the subject of college discipline that have deservedly attracted wide and favorable attention. The first was contained in a letter to Mr. C. W. Bardeen of Syracuse, N. Y., from President Draper of the University of Illinois, published in the *School Bulletin* for March. The second was contained in the annual report addressed to President Eliot by Professor L. B. R. Briggs, Dean of Harvard College. Both deserve to be read by every college professor and by every parent in the land.

President Draper's characteristically manly and direct letter read as follows:

"I am of the opinion that unless the common tendencies toward irresponsible conduct in college life are checked, parents will begin to doubt whether it is best to send their children to college. The older I grow the more deeply I feel that it is the duty of all people charged with any responsibility for the guidance of youth to co-operate with all others having any share in that responsibility, to the end that the young may make the most of themselves. I know of nothing which will contribute to that end more largely than to require them to respect others and the established institutions of their country. I would permit the largest freedom of individual action, on the assumption that it will be within legitimate bounds. I would not only tolerate, but I would sympathize with, and, when agreeable to them,

I would join with young people in all activities in which they may properly engage. Certainly I would encourage manly and womanly sports. I would have pleasure in all amusements or frolics which do not outrage decency, endanger persons, injure property, or interfere with the orderly progress of affairs. When one transcends these bounds he should be punished, and no more useful lesson can be taught to students than that they stand upon no different footing from all other people in this regard.

"The theory upon which university authorities commonly absolve themselves from all responsibility for offenses committed by students away from university grounds, or not in the immediate presence of the faculty, is a very convenient one, but, in my judgment, it is a very unsound one. Of course it is neither possible nor desirable for university authorities to assume responsibility for the acts of students in the community. It is the business of the committing magistrates and of the police to carry by far the greater share of that responsibility. But college officers are bound to bear a hand in that matter, for they are bound to rid the student body of vicious characters, support the municipal authorities, and help maintain the common security; and they are particularly charged with doing all that in them lies to help parents attain the higher ends for which they sacrifice much in order to send their children to college.

"It is sad to see the extent to which college students think it is unmanly for them to reveal the gravest offenses committed by their associates, and even to lie in order to shield them. Tattling about ordinary shortcomings, or any of the small affairs of college life, is to be scorned. But when an offense stains the character of an institution and violates the law of the State, the time has come for every true man's hand to be raised against the offender. And student and community sentiment upon this, as upon other matters, must be much influenced by university action or university indifference.

"The recent outbreak was a surprise to us, for nothing similar had occurred in the last three years. The freshmen disregarded the offer of a room and university protection for their annual supper. Attempting to hold it in an adjacent city they were assaulted by sophomores. A foul-smelling and dangerous chemical compound was used to break up the gathering. One young lady received it in her eyes. The common report that her eyesight was destroyed is happily untrue. For days the result was uncertain, but her recovery is now substantially complete. Other phases of the affair were thoroughly disgraceful, and the matter is made no better by applying to it any less disagreeable term.

"The next day a convocation of all connected with the university was held and an appeal was made to the sense of right and decency always to be found in a large body of people. It was not without avail. The offenders were asked to come and admit their part in order that there might be some possible excuse for leniency, but none came. A letter, of which I inclose a copy, was sent to the public prosecutor of the county, asking for his co-operation and promising him our support. Then the council of administration began a deliberate investigation which consumed ten days. For days it seemed as though we might never be able to locate the responsibility with certainty. We were at once confronted with the unwillingness of students

to testify, and were forced to take the position that students known to have knowledge which they refused to reveal upon demand would be expelled, just as the courts punish witnesses for refusing to testify. Upon what other basis can society or universities exist?

"In time we had laid the facts bare. One man was suspended for the rest of the year and eight were expelled. So far as possible a premium was put upon telling the truth. This drastic action involved the performance of a very disagreeable duty, but the fact that cheered the university authorities was that we were rendering the greatest service to the greatest number of people. Since then about all the members of the freshmen and sophomore classes have joined in written assurances that they will not engage in any future assaults upon students and will sustain the officers of the university.

"The general sentiment of the State condemned the university very strongly for the outbreak, and it commends us as strongly now for the way in which it was treated. Our faculty and students are bound together more closely than ever before in efforts to promote all the great interests which center in the institution. University sentiment is upon a higher plane because a serious matter was treated seriously, and university people feel a new confidence in the future.

"I fear this letter sounds boastful, but it is not so intended. There was nothing heroic in the course pursued; it was only natural action which it was imperatively necessary to take, or hand the control of the university over to the disorderly elements and forfeit the confidence of the community. In what was done there was only regret and sorrow for the university authorities, humiliation for the accused, grief for the parents and friends. If all could have seen all of these troubles there would be no danger of a repetition of the conduct which caused them. Without doubt the lesson has been salutary at this university.

"Parents too frequently withdraw the home influence from a boy when he goes to college. Public officers are too liable to mistake their duty or lack the courage to perform it. College officials are too apt to be apprehensive of the rebellion of whole classes. But co-operation between these authorities, with confidence in the sense of decency and right which is surely to be found in the student body, will make things reasonably secure; and that co-operation is to be offered and asked, and that confidence may safely remain unshaken."

The most significant passages in the admirable report of Dean Briggs are these:

"The most anxious disciplinary work of the year was not the closing of probations, though that is never effected without wear and tear, but the struggle for the suppression of dishonesty in written work. This kind of dishonesty has baffled the authorities. How it undermines the sense of honor in a college community was clearly shown last year by the experience of a neighboring university in its effort to purge itself of this evil; how it dulls the moral perception of what we call 'good fellows' in our own college may be seen in the lightness with which many of them talk about it. That

every one of eighteen hundred men shall be honest is too much to expect ; but that any considerable part of public opinion should wink at this form of falsehood is scandalous. Two years ago the board undertook to bring about, through conference with students, a gradual change in public opinion ; but soon, and with some impatience, it abandoned the undertaking and issued a kind of proclamation in these words :

“ ‘ The Administrative Board of Harvard College, holding that the handing in by a student of written work not his own is dishonorable and unworthy of a member of this university, proposes hereafter to separate from the college a student guilty of such conduct.’

“ The proclamation was designed, first, to give fair warning to offenders and, secondly, to point out the real nature of the offense. At Harvard College a liar, clearly known as such, is ostracized ; a student who hands in as his own writing what he has copied from another man’s writing may be, for social purposes, as good as ever. Few students approve of the theme-buyer and the theme-vender (who, by the way, feel a lofty contempt for each other) ; and few defend the student who tries with copied work to get scholarships, prizes, or honors ; but if a companion is hard pressed by initiations or theater-parties or athletics, if his standing with the Faculty is precarious, if he is in danger of losing his degree—he may copy something now and then in sheer self-preservation. Looked at critically, he has missed an educational opportunity ; but the loss is his only, and need not worry the Faculty ; if detected, he cannot expect credit for his composition ; but to suspend him is monstrous. He himself affirms that he did what everybody does ; that he ‘ had to hand in something,’ was not well, and was short of time ; that his name on the theme is a mere label, quite non-committal as to the question of authorship—perhaps that he copied from a book which the instructor ‘ could not help knowing,’ and that therefore he could mean no deceit (he ‘ agreed with Thackeray’s ideas and could not improve on his language’). He adds that he learned to ‘ crib ’ at school. Soon he is re-enforced by a father who assures the Dean that the young man is the very soul of honor, and that this ‘ breach of the rules ’ is the thoughtlessness of a mere boy, which will never show itself again.

“ If a man, invited to lecture before a society of gentlemen, reads, without acknowledgment, another man’s work, everybody knows where to put him. His offense is not ‘ breach of the rules ’ but fraud. He may not say, in words, ‘ I wrote this lecture ’ : his very presence says it ; and if he did not write the lecture, he is a dishonest man. The motive may be money, or glory, or pressure for time and dread of failure—no matter. Those gentlemen have done with him. So with a student who hands in as his own, for his own credit, marked with his own signature, a composition copied from another man’s work. No matter what his motive ; no matter how agreeable he is ; no matter how much he is benumbed with the torpor of public opinion ; no matter whether he is generally upright with his fellows and is going by and by to be upright with everybody ; for the time being and in this particular act he is a liar. If he admits that in one of those weak moments which come to shame all men but the strongest he has done a dishonest act which he bitterly repents and for which he is willing to bear the penalty, he may be respected ; otherwise, though by friends he may

well be forgiven, he must not, till time and thought have changed him, be counted trustworthy. . .

"The curse of college morals is a double standard—a shifting, for the convenience of the moment, from the character of a responsible man to the character of an irresponsible boy. The administrative officers accept without question a student's word; they assume that he is a gentleman and that a gentleman does not lie; if, as happens now and then, he is not a gentleman and does lie, they had rather, nevertheless, be fooled sometimes than be suspicious always (and be fooled quite as often). Frankly treated, the student is usually frank himself; our undergraduates are, in general, excellent fellows to deal with; yet so much is done for them, so many opportunities are lavished on them, that the more thoughtless fail to see the relation of their rights to other people's, and, in the self-importance of early manhood, forget that the world is not for them alone. Students of this kind need delicate handling. They jealously demand to be treated as men, take advantage of the instructors who treat them so, and excuse themselves on the ground that, after all, they are only boys. This double standard is seen in both theme-copying and sign-stealing, Its moral effect is probably more insidious in the former than in the latter; for whereas persons more or less mendacious pass muster in all society but the best, no decent community, outside of college, will put up with a thief. In college, both offenses have been tolerated, through the pernicious doctrine, held by some respectable persons, that the life of every young man—or at least of every young gentleman—takes in a period of engaging anarchy, during which period almost anything short of murder may be winked at as boys' fun. Fun, and not crime, is doubtless the motive; and the fault is no more in the young men than in those staid citizens who boast of their own early escapades and are content that their sons should behave no better than they did. Yet, wherever the blame lies, the real nature of these acts is so plain to anyone, however young, who suffers himself to open his eyes, that the usual slow processes of education may perhaps be effectually discarded. Sign-stealing, for example, received a sudden check when the corporation removed stolen signs from the dormitories, and when Judge Almy, himself a Harvard man, spread widely the announcement that the student next convicted of stealing a sign should go to jail. The rapidly educational effect of this announcement suggests a royal road to the suppression of cheating. What we want is a penalty that educates, and educates not the offender only but the easy-going college public, which in this matter has been persistently blind.

"No penalty can educate the public unless known to the public; and college penalties have long lacked educational effect, through secrecy. A man is dismissed from the university; and the student public, which either does not hear of his dismissal or understands that he has gone home for his health, is none the wiser. Accordingly the Administrative Board of Harvard College has attempted to reach public opinion by announcing a new penalty:

"The Administrative Board of Harvard College, holding that the handing in by a student of written work not his own is dishonorable, proposes to separate from the college a student guilty of such conduct, and to post his name on the college bulletin boards."

EDUCATIONAL REVIEW

MAY, 1897

The sixth annual meeting of the Harvard Teachers Association was held at the University on Saturday, March 6, 1897. The papers and discussions dealt with various phases of the subject first named below.

I

THE RATING OF STUDIES IN COLLEGE ADMISSION EXAMINATIONS

I shall discuss this matter particularly with reference to Harvard College and the schools which contribute most largely to Harvard College. But I have this to say upon the general subject—that we now have to consider options offered by the schools and allowed by the colleges for admission, much more extensively than we had to consider them a few years ago. The most significant feature of the programmes put forth by the Committee of Ten is greater freedom, wider option. As soon as we allow options we must have relative values, in order that one subject may be readily exchanged for another.

Now, upon what basis shall the rating be made? I think that President Eliot a year ago suggested, *Upon the basis of the time spent in the schools upon the several subjects*. Many of us are inclined to favor that proposition as on the whole the most hopeful one (provided due allowance is made for the greater value of an hour in the later years, as compared with earlier years, of the school course). It puts aside the question of the relative educational values of the several subjects. It puts them all on an equality; begging the question, you may say, as to their relative value.

But before we accept the proposition to count everything according to the amount of time (or attention) devoted to it in the schools, it is well to have more definite information in regard to the practice of the schools than most of us have had. I have, therefore, prepared a table. [See pp. 420--421.] I propose to explain it, and to leave the discussion of it largely in your hands. All suggestions that I may make are put forth entirely on my own responsibility.

In columns I--V you will find an exposition of the methods of admission to Harvard now in practice. In the first column we have the relative weight now given to each subject or study. These relative weights correspond to the amount of time given to the various subjects in the admission examinations, except in the case of laboratory examinations. For instance, elementary English has two hours; we therefore count it 2; elementary Greek, two hours; advanced Greek (authors), two; advanced Greek composition, one hour; and so on down the list. No one student offers all the subjects.

The second column illustrates our method *a*—all the elementary subjects and two advanced subjects. Those two advanced subjects are usually Latin and Greek. They need not be these. They may, for example, be advanced French and advanced German, but commonly they are advanced Latin and advanced Greek, so that we get as a common case under method *a* that which is set down in column II. It sums up 16 points.

Method *b*, column III, omits one of the modern languages, usually German. It replaces that by one advanced subject, making three advanced subjects, and as the elementary subject omitted counted 1, while the advanced subject which replaces it counts 2, the total is 17.

Column IV illustrates method *c*, where Greek or Latin is omitted. Elementary Latin counts 2; elementary Greek counts 2; and if either is omitted, two advanced subjects must be put in its place. So in that column we find four advanced subjects, and the total of points is 18.

Finally, in column V, we have method *d*, which omits, we will say, German and Greek, and has five advanced subjects, making the total 19 points.

Certain questions are familiar to those of us who are in the habit of considering these matters, and I will state those questions in order to give definiteness to our discussion.

First, many of us believe that all of the advanced subjects are counted too high, or overweighted, by all of these methods. Second, some of us believe that Greek is counted too high in comparison with Latin. Third, some people believe that the substitute required for elementary Greek is more than equivalent to the Greek itself. (The substitute required for elementary Greek is one *mathematical* advanced subject, such as solid geometry and logarithms and trigonometry, which, taken together, make what we call one whole advanced subject—and one other advanced subject, which must be mathematics, physics, or chemistry. It is a very common belief that the substitute thus required takes more time in the school, or is harder to give, at any rate, than the elementary Greek which it is allowed to replace.) Those three questions, then, I shall ask you to have in mind: Whether the advanced subjects generally are overrated or overweighted, as compared with the elementary subjects. Whether Greek is overweighted, as compared with Latin. Whether the substitute for elementary Greek is more than equivalent to the Greek.

The data which I have used in making columns VI--XII were recently obtained for this especial purpose from twenty-one schools,¹ which present a large number of candidates

¹ The circular, requesting information concerning the amount of time given to each study in the last six years of the school programme, was sent to thirteen public schools and thirteen private or endowed schools. The public schools applied to were, in general, the public schools contributing most largely to the college. The private or endowed schools applied to were, in general, the private or endowed schools contributing most largely to the college.

Three of the schools addressed made no reply to the circular. Two sent replies too late for use in the construction of the table. The twenty-one schools furnishing the data used in the table are:

Adams Academy, Quincy; Boston English High School; Boston Latin School; Browne and Nichols's School, Cambridge; Cambridge Latin School; Cutler's

Totals obtained by giving to each last year hour a weight " 2d " " " " 0 " 3d " " " " " 8 " 4th " " " " " 7 " 5th " " " " " 6 " 6th " " " " " 5	Numbers in column XIV divided by 1000	Totals obtained by giving to each last year hour a weight " 2d " " " " 7 " 3d " " " " " 6 " 4th " " " " " 5 " 5th " " " " " 4 " 6th " " " " " 3 " " " " " " 2	Numbers in column XVI divided by 650	Totals obtained by giving to each last year hour a weight " 2d " " " " 6 " 3d " " " " " 5 " 4th " " " " " 4 " 5th " " " " " 3 " 6th " " " " " 2 " " " " " " 1	Numbers in column XVIII divided by 500	Suggested relative ratings
XIV	XV	XVI	XVII	XVIII	XIX	XX
4182	4.2	2562	4.0	2022	4.0	4
3099	3.1	1983	3.1	1611	3.2	3
1592	1.6 } 5.4	1112	1.7 } 5.5	952	1.9 } 5.9	2 } 6
676	0.7	466	0.72	396	0.79	1
4710	4.7	2790	4.3	2150	4.3	4
1790	1.8 } 7.2	1244	1.9 } 7.0	1062	2.1 } 7.2	2 } 7
713	0.7	498	0.77	413	0.83	1
2297	2.3 } 4.3	1463	2.2 } 4.3	1185	2.4 } 4.7	2 } 4
1951	2.0 } 4.3	1354	2.1 } 4.3	1155	2.3 } 4.7	2 } 4
2580	2.6 } 4.4	1593	2.5 } 4.5	1264	2.5 } 4.7	2 } 4
1830	1.8 } 4.4	1272	2.0 } 4.5	1086	2.2 } 4.7	2 } 4
2260	2.3	1378	2.1	1084	2.2	2
2364	2.4 } 4.4	1437	2.2 } 4.2	1128	2.3 } 4.4	2 } 4
1965	2.0 } 4.4	1287	2.0 } 4.2	1061	2.1 } 4.4	2 } 4
720	0.7 } 1.5	504	0.78 } 1.6	432	0.86 } 1.8	1 } 2
790	0.8 } 1.5	553	0.85 } 1.6	474	0.95 } 1.8	1 } 2
950	1.0 } 1.8	665	1.02 } 1.8	570	1.14 } 2.1	1 } 2
760	0.8 } 1.8	532	0.82 } 1.8	456	0.91 } 2.1	1 } 2
1963	2.0 } 4.7?	1336	2.1 } 5.0?	1127	2.3 } 5.5?	2 } 4
2700?	2.7 } 4.7?	1890?	2.9? } 5.0?	1620?	3.2? } 5.5?	2 } 4
1769	1.8	1232	1.9	1053	2.1	2
..

every year for admission to Harvard College. I have taken the data and have made an average for each subject. In making this average, I have given just as much weight to a school which sends five boys a year as to a school which sends twenty-five boys a year. It seemed to me that, on the whole, this was the fairest thing to do; it certainly was the easiest thing to do. We get in this way the judgments of twenty-one different school principals or school boards— whoever the people may be that regulate the programme of the school. We take the average judgment (as shown by the average practice). That average practice is represented in columns VII--XII inclusive.

Column VI tells the number of schools offering the particular subject. For instance, twenty-one schools—all of them—offer elementary English. Twenty offer elementary Greek, not always, but at times—generally. Twenty of them at times offer the advanced Greek (authors). Only fifteen of them are in the habit of offering the advanced Greek composition. All offer the Latin; all but one the advanced Latin. Down the list the numbers become smaller. Only four of them are in the habit of offering analytic geometry. Only two are in the habit of offering advanced physics; so I have attached an interrogation point to the averages obtained in the case of that study, the basis of the average being so small.

School, New York; Durfee High School, Fall River; Groton School, Groton. Harvard School, Chicago; Lowell High School; Newton High School; Noble & Greenough's School, Boston; Phillips Academy, Andover, Mass.; Phillips Academy, Exeter, N. H.; Portland High School; Rogers High School, Newport; Roxbury Latin School; Sachs's School, New York; Saint Mark's School, Southborough; Somerville High School; Worcester Classical High School.

These twenty-one schools sent nearly sixteen hundred boys to Harvard College during the years 1886-95.

The most important parts of the circular issued to the schools were the following paragraphs:

"The information expressly asked for is the number of *school periods per year* for each of the studies mentioned, including recitations, lectures, and laboratory work, but not including hours of preparation for these exercises."

"Some of the facts called for will evidently be a little difficult to give; for instance, the division of time between elementary Latin and advanced Latin. Perfect accuracy in such cases, or in any of the cases, is not expected, but only a fair estimate."

If we now begin at the top with English, you will see, from VII, VIII, IX, etc., that English is studied, in some schools at least, every year for the six years previous to admission. Elementary Greek is studied not at all in the last year in any of these schools. It is studied in the next to the last year, and still more in the year before that; then very little in the fourth year, and not at all in the fifth and sixth years before admission. Greek composition is studied mostly in the last two years, especially in the last year. As we go down the list, we find similar features in the other subjects. For instance, Latin—the last two years. If we come down to the mathematical advanced subjects—solid geometry, logarithms and trigonometry, advanced algebra and analytic geometry, we find them taken only in the last year. That fact must be borne in mind in estimating the amount of attention given to them. It is evident that an hour of the last year is worth a good deal more than an hour of the earlier years.

In column XIII we have, summed up, the number of recitation periods given on the average to the individual studies in the six years previous to admission to college. These recitation periods differ in the different schools; they vary from half an hour to fifty minutes, an average, perhaps, of forty-five minutes. We find for elementary English, 540 (possibly a slight overestimate); for the elementary Greek, 372; for the total Greek, 602, etc. The total Latin, you will observe, is 897, as compared with 602 for the total Greek. That bears upon the question whether the Greek is now overweighted, or overcounted, in comparison with the Latin. The Greek and the Latin count alike in admission. For the Greek we have 602 hours; for Latin, 897; but we must not decide at once from those figures, for the Greek ordinarily comes a little later in the course than Latin. I will not go farther down the list, except to call your attention to the very small total for the advanced mathematical subjects. I was surprised to find how small an amount of time is required for the advanced geometry and

logarithms and trigonometry, and also for the advanced algebra and analytic geometry, when these subjects are given.

Now the question comes, How shall we assign weights for the different years? It is very evident that an hour of the last year of the high-school period is worth a good deal more than an hour of the first year. I have here three different schemes set forth in columns XIV--XIX—schemes for weighting the different years. You will observe as to column XIV that it is made in this way: Multiply the numbers in column VII by 10; the numbers in column VIII by 9; those in column IX by 8; those in column X by 7, and so on. We begin with 10, and we end with 5; so that an hour in the first year of the ordinary four-year high-school course is by this method made to count seven-tenths as much as an hour of the last year of the high-school course. We get the totals by adding these various products. Those totals are very large, and so for column XV I have reduced them by dividing by 1000, that number simply being used for convenience. We find that, upon this method of rating, the attention given to English is 4.2; the attention given to elementary Greek is 3.1; the total Greek, elementary, advanced (authors), and advanced composition, 5.4. The total Latin, 7.2; total German, 4.3, etc.

But I am not quite clear that this makes the last year important enough in comparison with the first year, so in column XVI a different scheme is taken. I have taken a scheme which makes an hour in the first year of the ordinary high-school course count four-sevenths as much as an hour of the last year. Again, multiply columns VII, VIII, etc., by certain numbers, beginning with 7 and running down to 2; take the sum of the products, and get column XVI; divide by 650, merely to reduce to small numbers, and get for the relative weight or attention given to English, 4; to Greek (total), 5.5; the change here has been very slight in relative importance. For total Latin we get 7, and so on.

Even now I am not sure that I have gone far enough to

satisfy everyone, so I take one step more, and take numbers from 6 to 1. This makes an hour of the first year of the high-school course count just half as much as an hour of the last year. Multiplying columns VII, VIII, etc., by the numbers 6, 5, 4, 3, 2, 1, and taking the sum of the products, we have column XVIII. Divide by 500, merely for convenience, and we have as the relative attention paid to these subjects in the schools: for English, 4; for total Greek, 5.9; total Latin, 7.2; total German, 4.7, etc. The estimated relative attention given to the advanced mathematical subjects is rising, you see, because we are all the time multiplying the later years by the larger numbers, and these mathematical numbers are taken in the later years.

I am inclined to consider column XVII as being on a better basis than column XV or column XIX. That column, XVII, gives to one hour of the first year of the ordinary high-school course a weight of 4, and to an hour of the last year a weight of 7. But you will see that the numbers in columns XV, XVII, and XIX are not exceedingly different.

Finally, I have put in column XX a suggested scheme of ratings, which I put forth as agreeing fairly well, though not perfectly, with the relative attention given to the subjects in the schools. If we are to count by the time given in the schools, making a certain allowance for the later years as compared with the earlier years, a study of this table leads to something not very different from this last column, which would count elementary English 4; elementary Greek 3; advanced Greek (authors) 2; advanced Greek composition 1; would count Latin 4; advanced Latin (authors) 2; advanced Latin composition 1; would count elementary German 2; advanced German 2; elementary French 2; advanced French 2, and so on down the list. The greatest divergence between the indications from the schools and the suggestion in the last column is in the case of the advanced physics; this has, in column XVII, 2.9, in column XIX, 3.2; and yet I have put down here for that subject the weight 2, no greater than the weight given to the ele-

mentary history, for example, which is represented in column XV by 2.3; in XVII, 2.1; in XIX by 2.2. I suggest that weight for the advanced physics, in spite of the large number of hours given to that study in the schools, partly because the number of schools offering it is so small that we cannot put implicit confidence in the average obtained, partly because I think the work in that course is almost exclusively laboratory work. There is probably less outside work connected with the advanced physics than with most of the other subjects. And, again, it will be inconvenient for us in admitting to college to count advanced physics as more than advanced Latin, for instance; for we count them the same in college. That is, advanced Latin corresponds to one "course" in college, and so does advanced physics. We could not very conveniently count the advanced physics as 3 for admission, and advanced Latin as 2 for admission. It is probable, however, that advanced physics is the most formidable of all the advanced subjects, partly from the laboratory equipment it requires, and partly from the amount of time and special training it requires on the part of the teacher. At any rate, it is observable that very few schools offer it.

Perhaps I should say a word more in regard to the estimates for the advanced classical subjects. It is very difficult for any teacher to separate the amount of time given to the advanced Latin from the amount of time given to the elementary Latin, and it is probable that the estimate of hours for advanced Latin, both authors and composition, and so for advanced Greek, is smaller here than it should be; but if it were made larger it would be made so at the expense of the elementary Latin or Greek. If we added to the estimate of the time taken for advanced Latin and advanced Greek, we should have to take away from the elementary Latin and Greek hours to do it, so that the total given to the Latin, the total given to the Greek, would not be affected.

Our present method of admission to college counts Latin

and Greek the same, and the boy that offers elementary Latin, advanced Latin (authors), and advanced Latin composition, gets no more credit for these subjects than for the like subjects in Greek. But the amount of time given to the Greek is very much less than the amount of time given to the Latin; and with any reasonable weighting or estimate of the years, the attention given to the Greek is decidedly less than the attention given to the Latin. I don't see how we can escape the conclusion that the Greek is overweighted in comparison with Latin.

The table seems to me equally conclusive upon the question of advanced subjects in general as compared with corresponding elementary subjects. Our present counting, as set forth in column I, greatly overweights the advanced subjects. Accordingly, the twentieth column is made revolutionary in regard to the advanced subjects. For instance, advanced French counts twice as much as elementary French in column I. In column XX it is proposed to count it the same as elementary French. In column I, solid geometry and logarithms and trigonometry together count 2; elementary algebra and elementary geometry together count 2. In column XX the elementary algebra and geometry count 4; and the solid geometry and logarithms and trigonometry count 2. I have cut in two—divided by 2—the *relative* weights now given to the advanced subjects, as shown in column I.²

² The third question raised by myself, as to the equivalence of elementary Greek and the substitutes now accepted for it, I did not undertake to discuss at the time. No one familiar with Harvard matters needs to be told that the ease or difficulty which should attend admission to college without Greek is a burning question. Champions of Greek, looking at the table here presented, are likely to sum up the number of hours given to all the advanced mathematical subjects, 322, and the number assigned to elementary Greek, 372, and say, as one of them has said to me, "Your table shows conclusively that the substitute for Greek is no harder than the Greek." I believe that this conclusion gives scant weight to three important considerations—two which have been already mentioned, but may be repeated, and a third which has not yet been set forth. The first consideration is that the advanced mathematical subjects come in the last year of the course, whereas the maximum study of elementary Greek is in the second and third years before admission. The second is that the time assigned in the table to elementary Greek probably includes some time really given to advanced Greek. The third is,

Now, I hope that before the discussion ends, or is at its end, we may have a vote from the teachers who have had experience in this matter, as to which of these columns, XV, XVII, or XIX is on the best basis. Perhaps some of you would propose a different method of weighting the various years. It is evident that you cannot give to a period in the first year the same weight as to a period in the last year. But how will you weight them? I have taken three simple ways of weighting; in column XV, beginning with 10 and running down to 5 regularly; in column XVII, beginning with 7 and running down to 2 regularly; in column XIX, beginning with 6 and running down to 1 regularly. Which of those methods is the best, and is there a better method than any one of them?

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as teachers of experience will tell anyone who inquires, that the advanced mathematical subjects are offered by few boys, and these few are boys of more than ordinary ability for mathematical study.

II

SCIENCE IN THE SCHOOLS

If the average citizen, interested in public education, were asked what he understands by "Science in the schools," he would probably answer: "Botany, or physics, or chemistry." In contrast to this view, I wish to emphasize the dependence of true science rather on method than on subject. The essence of science is not that it deals with plants, animals, forces, elements, or compounds, but that *it leads to demonstrable knowledge*. Any subject that may be treated so as to lead to demonstrable knowledge is to that extent scientific. On the other hand, however thoroughly a subject, such as geology, is associated with "science" in the public mind, it may be so taught as to lead the student, at best, to nothing but demonstrated knowledge; and if so, it is, as far as the student is concerned, not science at all, but rank empiricism. A boy may learn the statement that the Colorado cañon has been carved by water and weather, without any appreciation of the strong argument that demonstrates this conclusion; and this is as if he learned that the sum of the angles of a triangle equals two right angles, without studying the logical demonstration of that valuable theorem. It may be well for him to acquire much information in this way, and I shall not for the moment consider what proportion such empirical knowledge should bear to scientific knowledge in his entire education; but neither of these statements about the cañon and the triangle, supported solely by the authority of text-book or teacher, adds to his scientific training or acquaints him with the essence of science.

The essence of scientific study is its dependence on reason and its independence of individual preference or prejudice. The result of simple, direct observation is scientific, if the

facts reported come entirely within the reach of observation. For example, the clear sky is blue; the bright part of the moon waxes and wanes. Likewise the results of observation under the special conditions of simple experiment are scientific. Quartz is hard. Water is less compressible than air. Logical argument based on assumed conditions instead of on observation is scientific; as when the geometer postulates the conditions of a problem and works out its conclusion: but manifestly the training gained in this kind of science is of a very different kind from that gained from observation or experiment. Such terms as pure, physical, and natural science are, therefore, often used to indicate different classes of demonstrable knowledge to which the above examples belong. Besides these classes we hear of linguistic and historical science, and various other kinds which I shall not here consider.

The difficulty of scientific study advances when some of the conclusions that it reaches are not discoverable by direct observation or experiment, but require for their discovery a maintained process that may be called investigation. Elaborate investigations have proved that heat is not a thing added to a cold body to make it hot, but the energy of molecular agitation. Likewise it has been shown that radiation is not corpuscular, but is accomplished by some manner of undulation in a highly elastic medium. Here we have to do with existing but invisible processes. Again, it has been demonstrated that stratified rocks, such as bedded shales, were deposited from suspension in water, and that crystalline rocks, such as basaltic lava flows, have cooled from a state of fusion. Here we have to do with processes that might have been observable enough at their time of action, but which are now long past.

Demonstration in investigations that involve ancient or invisible processes is a much more serious, but not a more scientific, undertaking than the counting of the number of legs on spiders and grasshoppers, or than the arguing that vertical angles are equal, and this brings me to the pith of what

I wish to say; namely, that scientific studies should be classified as elementary and advanced, according to the nature of the mental activities that they involve. To make this more clear, let me state briefly what seems to be the essence of a well-ordered scientific investigation of relatively advanced grade, and then point out how approach may be gradually made toward it.

The first steps in investigation are observation and description. Many facts are thus brought to our attention. The next steps are classification and generalization, whereby facts of a kind are placed together and recognized as individual members of a group; typical and individual features being discriminated. At any stage of the process thus far, inquiry may arise as to the meaning or explanation of the facts, and invention is then exercised to provide some way of accounting for them. When inquiry is planted on a field of previously accumulated, pertinent knowledge, invention flourishes; but it may spring up in an unexpected corner of the field at an unexpected time. Anyone who has tried to find out the explanation of a puzzling problem must know how little he can command his inventive power. It often proceeds as "unconscious cerebration," and furnishes him with a ready-made suggestion when least expected. The fruit of invention is hypothesis or theory; and this is nothing more than a formal attempt to state the unseen facts, which, together with the observed facts, shall make up the whole phenomenon and lay bare its explanation. The theory being stated, proof of its validity is asked for. Proof is gained only by making a logical deduction of all the consequences of the theory, and then instituting a deliberate comparison of the deduced consequences with the relevant facts. If the agreement is perfect, the theory stands; if imperfect beyond remedy, the theory falls. Nothing short of observation, generalization, invention, deduction, and comparison will lead the investigator safely through the dangers of mistaken belief.

In simple problems, involving no unseen facts, the whole

process of investigation may be reduced to observation alone—this leaf is green. An extension of observation permits generalization—most leaves are green; the sun rises and sets farther south in winter than in summer. Certain problems involving experiment and explanation may be treated so directly that, in the very statement of the explanation, the consequences and the facts are compared with hardly a conscious effort—the properties of the lever offer a good illustration of this stage. But as soon as problems of any intricacy are reached, every part of the process of investigation must be attended to carefully and consciously, if the work is to be rated as scientific.

Now, as far as science in the schools is concerned, we need a careful selection of problems from various subjects, arranged in advancing order, so that the real nature of investigation and proof shall be laid before the student in the high school and college. Due care should be given to the selection of problems that shall have the greatest amount of informational value. By classifying similar problems, much information may be given in the form of corollaries, under the type problem of each class, only one member of which is demonstrated by methods appropriate to its grade.

A valuable result of scientific study is the exercise that it gives to various mental faculties, all of which should be well developed in the broadly educated man. His observation should be quick and precise, well guarded against subjective errors. His experimental skill should reach a fair delicacy of manipulation. His power of description should rise to the level of accurate and terse statement in reasonably elegant form. His ability to generalize should be as well practiced as his ability to add and subtract. His awakened spirit of inquiry should arouse an agile inventiveness, nimbly leaping about through the more or less conscious memories of a well-stored mind. Reasonable skepticism—in its literal sense—must prevent his immediate acceptance of an invented theory. A keen use of logic must enable him to deduce all the consequences of the theory; a fair spirit of com-

parison must impel him to confront the deduced consequences with the generalizations induced from observation; and, at last, a watchful judgment must urge him to deliberate on their measure of agreement. A verdict of acceptance or rejection of the theory is then rendered without prejudice, and belief is altogether independent of preference. If exercises of these many kinds can be provided in connection with subjects that afford inherently useful information, so much the better; and I fully believe that they can. But if they could not I would still urge that every scholar in our schools should have some introduction to the rational, scientific method of investigation in some attractive field of study, just so that he may learn how to think.

The time may come when a special prescription will be made for each pupil to build up such faculties as are too little developed. If a boy is observant at fourteen, but illogical, he might study geometry. If logical, but unobservant, he might study mineralogy. If a boy of sixteen shows little power of "explaining things," let him be assigned problems whose solution involves easy invention and proof. If a youth is too prone to accept any haphazard solution that may be offered for a problem, let him be given tasks in which deduction and comparison are conspicuous elements. I do not mean by this that native powers should be neglected; on the contrary, they should be developed to the utmost, for it is in their direction that the boy will make the most useful man—or the girl the most useful woman; but education should also do something in the way of balancing up a lop-sided head.

I have lately been particularly interested to inquire into the possibilities of geography, meteorology, and astronomy with regard to the scientific training as well as to the useful information they may afford in secondary schools, and it seems to me that they all have high values in both directions. Astronomy is the least "useful" of the three, but it stands above the others in the majestic quality of its elementary problems. Geography is at first sight hampered by the small

amount of direct observation that it affords to most school children; but such is the verisimilitude of pictures, photographs, maps, models, and other illustrative material now or soon to be accessible in schools that I do not believe geography will suffer seriously in this respect; moreover, here as in many other subjects, much investigation must be based on observations not made by the investigator; observation is a very small part of scientific study, and it is a serious mistake to think that a scientific student must not base any of his work on the observations of others. All three subjects may be treated in high schools, as well as in colleges, in such a manner that their type problems may be analyzed into various stages of investigation as consciously as a chemical compound may be analyzed into its elements; and in this grade of teaching I believe that conscious analysis of method may be advantageously introduced, however silent the teacher should be as to the mental faculties while working with pupils in the lower grades.

Let me here say, emphatically, that a conscious analysis of method is a most harmful process in the mind of a teacher who has "learned" the methods of science by precept rather than by example. I do not believe that there ought to be any independent instruction in methods of scientific study; but that the intending teacher should, in the later years of preparatory study, be continually brought face to face with the quality of scientific work by his instructor. If room should be found in these later years for a course in scientific methods, I should at once use that time by putting in more science, not by teaching methods in the dry way. Nothing can be more deplorable than to allow a pseudo-scientific teacher to set forth the quality of the true scientific method; to descant on the value of invention and deduction and proof, without having himself gained a living knowledge of these processes by actual experience with them, instead of with their names.

Geography in particular will be benefited by scientific treatment, in contrast to the empirical treatment that it has

long suffered under. Not only are land forms, the natural scenery of history, susceptible of rational explanation, but the manner of man's inhabiting the earth may also be reasonably treated. A robin's nest may be studied, as to construction and location, and afterward the habitations of man may be likewise treated, much to the enlargement of the understanding. Very few young pupils ever imagine that the making of a tent or hut is to many races of mankind almost as much a matter of habit and as little a matter of originality as the making of a nest is to a robin; and that the variety among houses in civilized nations of to-day is a very modern innovation. A colony of swallow nests in a sand-bank suggests a cluster of houses in a village; and the reason for their location and the manner of their grouping in both cases deserve brief attention as natural phenomena susceptible of observation, description, generalization, and provisional or final explanation. Roads are particularly responsive to environment, both as to the needs that call for their construction and the physiographic controls of their location. Railroads are even more dependent on the form of the land that they traverse. Just as a robin takes advantage of the crotch in a tree trunk to build its nest, so a man takes advantage of a hill or cliff as protection for his primitive dwelling, of a harbor for his fishing boats, of a notch for his road across a ridge, of the neighborhood of a ford or of rapids for a village site. He is enslaved to physiographic conditions in his occupations and industries, every one of which is based at foundation on natural resources, and bidden or forbidden by climatic controls. There is hardly to be imagined a category of geographical phenomena that is not open to reasonable, explanatory, scientific treatment, and the future of geography plainly depends on the displacement of the old-time memorizing of names and places, that makes for stupidity, by rational study that makes for intelligence. Apparently arbitrary boundaries, such as those so often run on parallels and meridians in our country or in Australia, really exhibit the advantage that we have

taken of the form and motion of the earth in quickly parceling out lands newly opened to settlement; this may be observed as a habit of the animal, man, under certain peculiar conditions, and thus studied just as scientifically as the habits of web-spinning spiders or comb-making bees may be studied in another department of natural history. When explanations in teaching geography are given, the quantity of facts will be decreased to a much lower limit than obtains when memorized recitations are accepted; but the quality of the facts will rise to a much higher grade, and the profit to the student will be vastly increased.

It may be objected by some that the problems of geography are not susceptible of rigid demonstration, because they are not reducible to numerical or geometrical treatment, and that for this reason they should not be classed as scientific. But it may be fairly contended that this objection strains the definition of demonstration and of science. Geology is a science, although its conclusions should be regarded as extreme probabilities rather than as direct and rigid demonstrations. Take the case of stratified rocks containing marine fossils. The old hypothesis that the strata were hurriedly deposited from a flood and that the fossils are sports of nature is to-day displaced by the hypothesis that the strata were deposited from suspension in water with relative slowness, layer on layer, and that the fossils are true records of animal life during the time of deposition. The latter hypothesis has passed beyond the stage of inquiry to the stage of universal acceptance; and its conclusion as to the nature of past processes of deposition has taken a place among the well-established facts of modern science; not because the processes were directly observed, nor because their "demonstration" involves any rigorous mathematical argument, but only because its inferred conditions are shown to be closely accordant with the present order of nature, because these conditions are entirely competent to produce the observed results, and because the counter supposition is shown to involve extreme difficulties and improbabilities.

So with the geological and physiographical problems involved in the glacial theory. Innumerable facts of widespread observation are generalized. They lead to so curious and so complicated a series of phenomena concerning rock striations, erratic boulders, and drift deposits that any reasonable process that can closely account for them is taken to be excessively probable and essentially correct. Any theory whose consequences can match such a complicated array of peculiar facts is held to be a good theory, because the possibility of matching by chance is inherently improbable; hence the correctness of the theory is shown to be excessively probable, and this is accepted as its demonstration. So with the origin of bays, like Chesapeake, by the submergence of broad valley floors. This simple explanation is so far superior to its predecessors—the erosive action of the sea or of glaciers—that the occurrence of the bay is now taken as proof of the postulate of submergence. Yet submergence is only shown to be excessively probable. It is not directly observed as a process; but its consequences match so nicely with the existing facts that all are agreed that submergence actually happened.

In geographical problems, the location of settlements and the growth of cities at the head of navigation on rivers are repeatedly noted. By putting together all relevant facts it comes to be believed, in explanation of this habit of man, that settlements have been made at such localities because of certain advantages that they have over others; that cities have there grown up because of the persistence of these advantages. Yet this belief is based only on an explanation of extreme probability, for we cannot possibly secure direct evidence of the reasons that led one individual after another to live in these cities instead of going elsewhere. When we see the scanty population of a cliffed seacoast, it is explained as a result of the difficulty of maintaining maritime activities on so inhospitable a shore. The sufficiency of the demonstration in this elementary problem will depend largely on the fullness of knowledge in the mind of teacher and student

regarding the facts of geographical environment, and regarding the habits of mankind. One who is poorly equipped with this preparatory knowledge may contend that the explanations offered are insufficient, and that other explanations may be equally probable; but no hesitation will be felt by another who has walked along the crest of a sea cliff, and appreciated the consequences of its form, and who has at the same time learned from observation of many races in many regions how incessantly the habits of men and their manner of living are determined by the advantages that they bring; to him the explanation is sufficient.

Wherever a geographical fact is well accounted for, wherever good explanation comes into geography, we may be sure that someone has observed, generalized, invented, and proved his work. If his results are blindly accepted and blindly taught, the scientific element in them is lost; hence the competent teacher must be able to retrace the method of investigation in a good number of simple examples, and set it clearly before the scholars, so that both teacher and scholars may really appreciate and enjoy the study. Here enters the responsibility of the normal schools, to give to their intending teachers of geography a strong understanding of the nature of scientific inquiry by actual exercise on a good number of illustrative examples; and at the same time to give them a broad insight into the real nature of land forms, climate, and other factors of our physiographical environment, along with a fair acquaintance with the natural history of man. To the teacher thus equipped the study of geography—the earth in relation to man—becomes at once scientific and delightful. Geography, thus presented, will not be regarded as a dull subject by the pupils in the schools.

Quite as much may be said for meteorology and astronomy as for geography; but it should be noted that while geography, as above outlined, does not require some other scientific study as a preparation, meteorology rests on physics, and astronomy calls for a knowledge of geometry. All these studies are valuable in themselves, in one degree or

another; all may afford excellent training in real science. Their values, thus estimated, support the claim that the best method of assigning numerical counts to different subjects, when such reckoning is necessary, is by the time devoted to them. They are all so valuable, when well taught, that no fair discrimination can be made among them.

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Principal Daniel S. Sanford of the Brookline High School opened the discussion as follows :

Without doubt very much of the science teaching in the lower schools has been purely empirical, wholly unscientific. Chance impressions, scraps of information loosely strung together to form brief courses in all the natural sciences; in short, the accumulation of facts rather than fact-interpretation was, perhaps, the natural practice in a schoolroom where the teacher himself had no scientific training. And yet I think any candid observer of the elementary schools must acknowledge that this stage in science teaching is being left behind. The laboratory is a recognized part of the equipment of the secondary school; it has been provided for in some of the most recent grammar-school buildings; and, so far as my own observation goes, there is no class of teachers to-day who are more thoroughly trained than the teachers of natural science.

With the improved methods, however, there comes the danger of going to the other extreme and of putting too much emphasis upon exact experimentation. A university professor, who is making an extended study of the introduction of natural sciences into the elementary schools, when recently asked what he regarded as the chief fault of the movement, made the wholly unexpected reply: "The attempt to make it all laboratory work." And a celebrated physicist with whom I was talking recently, who is himself an investigator and discoverer of note, spoke most emphatically in condemnation of the too early introduction of quanti-

tative work in the elementary schools. I think everyone who has attempted to direct this early work in science must have learned that there is a very large class of pupils to whom this exact experimentation does not appeal. For them, the facts of the science—the results—are of supreme importance. There is another class, perhaps a still larger class, to whom it is not the method—it is not the abstract result—it is the result applied—it is the result as achieved by man—the discovery made by the discoverer—that interests. Fouillée, a French writer upon education, makes a most eloquent plea that natural science for the young, at least, should be humanized. He says "Great theories, instead of being lifeless and anonymous abstractions, should be human, living truths, each with its own history, like a statue by Michael Angelo, or like a picture by Raphael."

It is a popular notion at the present time, coming to us directly from the university laboratory, that all physics teaching in the lower schools should be quantitative—should consist of exact mathematical measurements. All the laws of nature are to be rediscovered, and by mere children. In natural history they are to study intensively, and as original investigators, but a limited portion of the subject. I have followed teachers who have been imbued with this idea. Their classes begin studying with the microscope, say the amœba. They work conscientiously, perhaps enthusiastically, for a half-year, and when the course terminates, they have not climbed the ladder of life far enough to catch sight of the first vertebrate. We must not allow the microscopic study of a tissue to crowd out of the elementary school the larger facts of the science.

As to Professor Davis's illustration concerning the tides, I may say that I have seen numerous attempts in the elementary schools to teach the influence of the moon and sun upon the waters of the earth, but I do not recall a single instance where the pupil arrived at the truth through his own efforts, or without the aid of a very large measure of faith. I am not sure

that I ever saw a teacher who, independently of the statement of the text-book, fully grasped the theory of tidal action. This does not prove, however, that it is not possible, under the direction of so skillful a teacher as Professor Davis. Bagehot tells us, speaking of history, that youth has a principle of consolidation; the whole comes to us in childhood, the details later; afterwards we learn the accurate littlenesses. "Those who begin late, learn only these." "But the happy first feel the mystic associations and the progress of the whole." For this reason, children should be introduced early to the large facts of the natural sciences, that they may acquire some sense of the proportions before they are given the exact training in experimentation which we all agree is desirable. This does not exclude progressive training in careful observation of some slight attention to quantitative as well as qualitative results. Either extreme is a mistake. If the purely empirical method is inadequate—and who can doubt but that it is?—the wholly scientific method for young children, or for pupils even in the secondary stage of their education, is unsatisfactory and inadequate. The school courses should represent a judicious combination of information and training. This is especially necessary, if we are to realize the indirect results in oral and written expression to which Professor Davis alludes; and, if proper introductory lessons could be given in the elementary schools, I am quite sure that we should be ready for such courses as he recommends—courses where the facts of the science, as matters of information, shall be subordinated to the scientific training that comes from the study of those facts. At the present time such introductory courses are not generally to be found in the elementary schools. So far as my observation goes, also, there are no such secondary school courses, as he recommends, recognized by the colleges for admission. In saying this, I do not forget the Forty-Experiment course for Harvard. It seems to me that that is to be criticised for being too rigorously scientific. Its experiments are made up almost en-

tirely of quantitative work. The *method* is unduly emphasized. The proportions are not observed. It gives the pupil no perspective view and comprehensive knowledge of the subject. And, finally—and this seems to me to be the most serious charge—it is not a course which is calculated to inspire a many-sided and permanent interest in the subject. And this objection makes it wholly unfit as a course for a public high school, where the majority of the pupils are not going to college, and where no subject should appear which is not to be valued because of its own intrinsic worth, quite irrespective of its value as a means of training for subsequent academic courses.

I suppose I should speak of secondary schools in general. I prefer to speak of the class of schools that I represent. In such schools—public high schools—the preparation for college cannot be the primary consideration. The development of a school which shall properly supplement and complete the school system of which it is a part, is an obligation superior to any other that rests upon us. It is far more important that we should establish the right connection with the elementary school than that we should meet the exactions made upon us by the higher institutions. I cannot conceive of any principle whereby may be justified the suggestion that is so frequently made nowadays, that we shall simplify our problem, relieve the congestion in the secondary schools, by thrusting down into the elementary schools certain subjects, solely for the purpose of better meeting the requirements of the higher institutions—requirements which are dictated by persons who are far removed from the problems of elementary education, and who do not and cannot correctly understand the needs of the elementary schools. There is a limit to this stuffing process. It is not “enrichment” in any sense of the term. While we may recognize, welcome, and profit by suggestions from without and from above, we must remember that education is evolution. It is an unfolding from within outward. It is growth from below upward, and, in the determination of admission re-

quirements, it is far more reasonable that the college and the university shall look to the schools than that the schools should look to the university.

Because this is so, I like very much Dr. Hall's proposed scheme of rating. It is to be commended, because it substitutes a rational method of estimating values for an arbitrary one. It is based upon the experience and practice of twenty-one different representative schools. As explained by him, the advantages are obvious. To give a single instance—according to the existing rating, Greek, which takes 602 hours, is allowed 5 units of value. Elementary mathematics, which takes 535 hours in preparation, on the average, is allowed 2 units in value. There is a difference of 60 odd hours only, and yet Greek is rated at $2\frac{1}{2}$ times the value of elementary mathematics. Dr. Hall's scheme proposes six units for Greek and four units for elementary mathematics. That is, Greek is to be estimated at $1\frac{1}{2}$ times the value of mathematics.

Another good thing about this scheme is that it gives a greater prominence to English than any other plan that has been devised. Four units are allowed for English—a far greater value, relatively to Latin and Greek, than is usually accorded, and one which is more commensurate with its importance. Some slight knowledge of the requirements of the Chicago University entrance examinations enables me to make a comparison which, however, necessarily lacks accuracy because of the difference in the conditions involved. In Dr. Hall's plan, I should say that English and physics are rated higher than at Chicago University; history and modern languages relatively lower. History still seems to me to be underrated—a fact which is, perhaps, to be in part explained by reason of its being offered earlier than some of the other subjects. Two units are accorded to elementary history; two units are accorded to advanced mathematics. Elementary history certainly consumes far more time in preparation than the advanced mathematics can do.

But, after all, this scheme only improves, and therefore, perhaps, prolongs the life of a system which is radically wrong. It does not strike at the root of the difficulty. The time allotted to these various subjects in the preparatory schools is predetermined by the emphasis that is put by the college upon them. There is no democracy of subjects here, where all have equal rights. The old aristocracy still reigns. Latin and Greek are still the tyrants. They are the time-consuming subjects, and one feels like asking why it is that 900 hours are still required to meet the advanced requirements for Latin at Harvard.

There are a great many questions one would like to ask. Why is it that Latin and Greek should not be begun in the college, as well as French and German? Why should there not be an opportunity at least to begin them there? Or, if that is too radical, and if the college instructors are unwilling to begin with *amo* and *ὄωλ*, why should not students be admitted to college on two years' preparation in Latin and one year's preparation in Greek? That is an arrangement which would make for simplicity and unity in many of the secondary schools. Certainly, it would restrict the prohibitory power of those two languages in the case of pupils—and there are many such—who, late in their school course, determine to go to college. It is unendurable—it is monstrous—that a boy who has been studying for four years conscientiously, and along well-directed lines, should find, at graduation from the public high school, that he is unqualified to enter college to the extent of four years of Latin, and to the extent of three years of Greek. Now, wisely or unwisely, certainly not unreasonably, when we consider the practical demands of life, a very large percentage of the pupils in our public high schools are showing a preference for courses which are distinctively modern, and it is a significant fact that, keeping pace with this tendency, there is a growing conviction, even among conservative educators, that these subjects, when studied seriously and for a sufficiently long period of time, are not inferior as culture

subjects—are not inferior as a means of intellectual training. So I am urging what you have so frequently heard urged from the standpoint of the English high school.

Dr. Hall's scheme of rating is then simply a palliative. It is an improvement upon the present system. It does not, however, give promise of any permanent relief. We are all awaiting the new requirements with interest and hope. We believe that there must be a fuller, more generous, recognition of modern subjects.

In conclusion, I will only add that it is my conviction that in many of the secondary schools to-day the best courses—courses which have been developed quite independently of the college and its influence—are those which are either wholly ignored, or are only partially recognized by the present admission requirements.

Dr. Frank A. Hill, Secretary of the State Board of Education, spoke as follows :

I was asked to say something about manual training, about its educational value, about its rating, if it ought to have any, in a scheme of college admission requirements. I have looked over very carefully Professor Hall's table, and I do not find manual training mentioned anywhere in it. Perhaps what I am about to offer will be in the nature of heresy. If so, the heresies of one time may possibly become the accepted views of another time.

Professor Hall has invited us to sit at his table. I do not find any plate here for me. Here I am—an unexpected visitor, an unwelcome visitor possibly—but if I may sit at a side table, or in the kitchen, for a few minutes, perhaps I may do so without opposition. Let me say, however, that I regard Professor Hall's table as an exceedingly instructive, clear, and valuable presentation of a situation, and of an improvement upon that situation. I like, in particular, the drift in this direction—toward increasing the relative values of the elementary subjects. For instance, in column I elementary Latin ranks as two-fifths of all the Latin; whereas,

in column XX elementary Latin ranks as four-sevenths. Now, four-sevenths is the larger fraction, and the movement that it indicates is a movement, I think, toward relieving to a slight extent some of the burdens that rest upon the humbler high schools of the Commonwealth and the humbler high schools elsewhere.

But, returning to my theme, manual training, let me say that I regard it as a sound proposition that a course of study in a high school that is four years long, and that is thought to be suitable to fit pupils, as the expression goes, for the work of life, ought to be good enough—is good enough, if faithfully and successfully pursued—to fit those pupils for admission to college. I think that the educational drift toward this proposition in this State, in New England, in the country, is clear and unmistakable. Think of the considerations that favor this proposition. There is the astonishing growth of our high-school system; I fear that we do not realize that. Then there is the duty that the higher institutions owe to the secondary schools—to foster their departments, to inspire them to better work. Then there is the folly, as it seems to me, that the higher institutions would show if they should persist in adhering to the policies that now cut them off from touch with the majority of boys and girls in our secondary schools. Moreover, we all know that the Committee of Ten has placed itself squarely upon this proposition. Whether manual training was considered when the proposition commended itself to them, I cannot say. The New England Association of Colleges and Preparatory Schools stands squarely upon the same proposition; but whether they have contemplated it as including manual training, I cannot say.

Manual training is becoming a very important factor in our high-school system. It is well-known that the State of Massachusetts requires manual training now in connection with high-school work in all cities whose population is twenty thousand or more. There are twenty-three cities under this requirement, and their population is one and

one-half millions. Fifteen of them have already responded to the law. Two or three more will respond just as soon as new buildings in process of erection are finished; and the remaining cities, I presume, are now wrestling with the problem. The Institute of Technology,¹ in an indirect way, is already recognizing this new sort of work in our high schools. It excuses graduates of the Mechanic Arts High School of Boston from certain work in drawing after they enter the Institute; and there is a readiness to excuse them from certain shopwork also. Thus the deck is cleared for a fuller and more extended enjoyment of the special facilities offered by the Institute. Now, all this, although it is only an indirect recognition of manual training, is a beginning in the right direction.

The educational value of manual training I cannot go into to-day, but possibly a glimpse can be given of two or three things suggestive of that value. Let us distinguish, at the outset, between what may be called pseudo-manual training and the genuine thing. The distinction is somewhat the same as that between the pseudo-kindergarten, which carries the name, but does not live up to the principles, and the genuine. The expression manual training is altogether too narrow for the field that it covers. I regret that there is no larger and better expression for the purpose. Some have suggested motor education. Somebody has coined the word *manumental* to fit the case.

Whenever and wherever, in educational history, educational processes have got separated from things, from natural forces, from human interests, from this real world in which we live, they have shown a tendency to run into subtleties and vanities, into puerile and useless things; and this tendency a few people have been wise enough in all ages to protest against. Rabelais made this protest four centuries ago; Comenius, three centuries ago; John Locke, during the seventeenth century; and Pestalozzi,

¹ Both the Massachusetts Institute of Technology and the Lawrence Scientific School will recognize manual training and drawing in their requirements for 1898.

at the beginning of the present one. The education of the child is at its best, these men saw, when the conditions are most favorable for the development of his self-activity—his inward and outward activity. Such development should be under discreet guidance, of course—a guidance that tends to lead the child from his natural up to his ideal self; that is to say, from play up to work, from interest up to will, from instinct up to deliberation, from lower things up to higher.

Just think of the deep foundations of this philosophy of learning by doing, for which these men and so many others have stood—a philosophy which lies at the foundation of our manual-training work in the schools. On the one hand, the child is in the thick of objects that interest him, and interest him deeply; on the other hand, as we all know, the child likes to do and to make things; he likes to make them as he sees others make them; he likes to make them better than others make them, and he likes to own the things that he makes. Here are two classes of things—objects outside the child, and promptings within the child to handle them; nature on the one side, and manual work on the other side. Now, it is in the rightly guided interaction between these two things that the child grows. The concepts that are gained in this way—I am indulging in some truisms—are of the clearer kind, of the more definite sort; they have a greater fixity and a greater permanence. If you train the child simply through his senses, only the sensory regions of the brain are developed. If you add manipulation, the motor regions are also developed. It is the coupling of these two activities that gives added strength to concepts. The coupling is physical, the coupling is mental; there is the growth of the nerve-cells of the two areas and of the associative fibers joining them; and there is the mysterious soul-equivalent of all this. I say it is in this greater clearness, permanence, of concepts that we find one of the great values in manual training. Everybody knows that the concepts acquired by actual experience with baseball, golf, tennis, boating, gunning, are of the strong

sort. I have often wondered what the result would be if boys should be taught baseball in school by book methods exclusively, not being permitted to play the game themselves, or to see the game played in the field, or to make diagrams of the game. Imagine an examination of boys upon baseball under those circumstances! And what should we say of a conclusion, reached by the examiner in such case, that boys are not competent to master that subject?

Dr. Holmes tells us somewhere that there is an idiot area in the brain, as there is a blind spot in the eye. I presume he is right about it. There are plastic stages in the development of the brain, particularly in the development of the motor areas, and if the development does not take place during these stages, it is not likely to take place at all; thus, in the long run there may be left these idiot regions—these barren, useless Saharas of the brain. There are oases here and there, doubtless, but they emphasize the desert all around.

Now, these motor centers have been neglected in our education. They are developed, of course, after a fashion, by children as they play and work, but it is a wild, partial sort of development, sometimes good and sometimes bad. Neglect of this field of motor education is a neglect of one of the finest fields in which fruitful school work can be done. They tell us that no new brain cells and associative fibers are developed after thirty; I suppose that is the scientific way of saying that you cannot teach an old dog new tricks. Considerations like these are at the foundation of the laboratory movement of the world. I presume that the most conspicuous improvement that has been made in modern education has been made through laboratory methods of procedure. I claim that manual training is simply the extension of laboratory methods to the constructive processes of the arts of production and design.

We are told that we cannot have ideas or sensations unless they are accompanied by action of some sort. This action may be thwarted and brought to naught; it may be

dissipated; it may be wasted. It is not exempt from the vicissitudes of other forms of energy. On the other hand, under suitable schemes of education, this energy may be concentrated and well directed. If there is not some sound training of the motor areas, some wise direction of the energy which comes from the action of the motor part of our cells, then education is to that extent one-sided and defective.

Think how much hinges upon right motor education. I believe this to be true, if I believe anything to be true, that persons who are brought up in strictly sedentary ways, in armchairs by their firesides, doing nothing but book-work, incline to look upon the great material enterprises of the world—the building of railroads, the laying of Atlantic cables, and all such enterprises—as things appalling. Again, what is habit but the persistent expression of human beings in action? Habit certainly belongs to the realm of motor education. If Herbart is right, that the supreme thing in education is ethical culture, and if the only expression of the will is through action of some sort, inward or outward, then the neglect of this field of motor training is the neglect of one of the great fields in which the character can be developed. Phillips Brooks tells us that character fades out in the inactive life, that we become builders by building, doers by doing.

And so, without going into the argument, but giving only glimpses of the ideas, let me say that the physiologist finds in the very growth and structure of the brain an invincible argument in favor of this whole laboratory movement in education, including manual training, drawing, modeling, sewing, cooking, and everything of that kind.

Perhaps it is said that manual training is not a good culture subject, because it is gross and material, because it deals with the shop, the store, and the earning of one's bread and butter. I claim that it may be an excellent culture subject. The highest expressions of human thought and feeling—those expressions that are eminent for their truth,

their fitness, their strength and beauty, that never cease to tell their impressive story, and are always suggestive of more to tell—these belong to the domain of art. The feeling for art, it seems to me, enlarges the field of human interest, of human happiness. It is a prerequisite to creative art. If you think of art for a moment, you will see two sides of it, the outer and the inner. If it is in the expression, it is also in the mind that prompts the expression. The mind may take in and enjoy what is artistic; it may, in rare cases, give out and do what is artistic. There is the passive, interior, receptive aspect of art; and there is its active, exterior, creative aspect: art subjective and art objective, art potential and art dynamic. The feeling for beautiful things is something that certainly can be cultivated in childhood, even though the execution may seldom come, or come not at all. It is enough to justify any education that fosters it.

This conception of art is something that applies to manual training, just as it applies to the study of English. There are the elements of English; there is its everyday language to be taught by every teacher—I am glad to hear that sentiment here to-day; and there are its masterpieces for the pupil to study, and, in turn, to equal if he can do so. In our modern thought there is a sense in which the elements, the everyday language, the masterpieces should be taken in successive years; there is also a sense in which they should be all taken in each and every year of the school. This conception of the teaching of English may be applied to any form of expression. Every form of expression has at its top an exalted something that corresponds to literature in English. Mr. Bailey will tell you that in the case of drawing there is a gamut from the child's crude scrawls up to Angelo; in the case of painting, from daubs of barbaric red at one end to Rubens at the other; in architecture, from the child's simple playhouses to St. Peter's at Rome. It is so not only with all the arts of design, but with all the arts of production—always crude, coarse, ugly at one end; always refined, well adapted, and elegant, at the other. The arts of

production and of design are intimately connected. Art has been well called the handmaid of the artisan, the beauty of his soul, issuing from his finger tips. It seems to me that the logic that frames ideals for instruction in English, such as I have alluded to, would frame similar ideals for instruction in handiwork. I presume the finest culture lesson this country ever received was from the beautiful White City three years ago, on the shores of Lake Michigan. What was that but an exhibition of human handiwork at its best? So I claim this—that in manual training, in improving one's own handiwork and studying the best handiwork of others, there are high possibilities for culture, as there are high possibilities for culture in English. You may say that all this belongs to a manual training not yet realized. It belongs, I admit, to the ideal manual training—the real, of course, is limping along behind, in its slow, awkward way. I have a suspicion that in its limping it is not unaccompanied by other subjects mentioned to-day from this platform.

And so, without attempting to give in full the educational value of manual training, I may say that it affords a new and rich field for excellent quantitative and qualitative work. I do not know of a better field for that genuine correlation that strengthens ideas. I might go on at a greater length, but will not weary your patience.

Ought manual training to be recognized in schemes of college admission requirements? I think it ought to receive some recognition. If it receives any, however slight, that will be a good beginning. How to test proficiency in manual training I hardly know. There is the certificate system; again, the candidate may submit specimens of work; or, finally, he may be subjected to tests at the bench, at the forge, or at the lathe.

If the subject has little educational value, we are all on the wrong track, here and in Europe; but if it has reputable value, it ought to be recognized in the admission requirements of the higher institutions. That recognition, in some form, I think, is in time destined to come. Certainly it

ought not to be denied a place in admission requirements because of any difficulty in devising tests of proficiency in it.

Mr. Charles S. Moore of New Bedford spoke as follows :

I can but unite with the other speakers in commending the schedule as presented by Professor Hall as a very great improvement upon the irrational system now in vogue. This has an attempt in it to equalize things. It does it very much more satisfactorily, and it certainly will afford a great deal of relief to many schools which now feel themselves seriously hampered by the present adjustment. Of course, it has been pointed out to you this morning that the predominance of the linguistic studies is very marked. In the final adjustment, under the various courses—*a*, *b*, *c*, and *d*—I have made a little calculation. Under the course *a* there is a total of 27 points, 19 being on the linguistic side. Course *b* is similarly apportioned. Course *c*, out of 28 credits, has 16 on that side. Course *d*, out of 28 credits, 12 on that side. This shows that the linguistic side still believes it has a prescriptive right to get from schools and from pupils twelve twenty-eighths to nineteen twenty-sevenths of their time and energy and labor. I think that is objectionable, in view especially of the great change in the modern conception of life and the increased means of adapting the pupils to it. The optional side, it seems to me, should be more fully developed in the line of the sciences. I can see no objection to the introduction of the subjects mentioned by Professor Davis, provided they can be enforced in the schools, and followed with the same earnestness and persistency with which some of the present studies are carried out. Certainly it will be a very great relief to have them as options. Educational matters are moving so fast that we might say that one increasing purpose runs through the decades now in this direction, and that is the purpose that is working itself out toward the end of the Committee of Ten, that a graduate of a good course in a high school shall be admitted to college. It seems to me that that is the point to which we are com-

ing, and toward which should tend all our efforts. It is nothing less than justice to hundreds, compared with the five or six who go the other way. I speak very sympathetically, and agree with Mr. Sanford in his attitude upon that very point—that the graduate of the high school should find himself in a position to enter college. A case in point occurs to me. The valedictorian of the graduating class of my own school has led his class for the entire four years. There has been no exception. He has decided within a few months to go to college, and finds himself debarred from Harvard without taking at least one more year. He is easily first, and yet he must take another year before he can be admitted at Harvard. I consider that a gross injustice. I do not conceive that it answers the question to say that he can go somewhere else. His desire to go there was based upon careful consideration. He is obliged to add twenty-five per cent. to his preparatory time to get there, and this is a very great damage. One of the remarks made by Mr. Sanford I should object to. That was his statement as to the motive which he attributed to the effort to put studies down into the lower grades. He said it was merely to relieve the congestion in secondary schools. It seems to me that is a mistake. The movement with regard to putting these studies in the lower grades is not based upon just that ground. It is because it furnishes the pupils of the lower grades that which they need for the broadening and enlivening of their training. We have a great many teachers who teach their subjects admirably, but who do not teach the pupils at all; and that idea of the personal consideration must enter more and more largely into our conceptions of what we can do for our pupils. We find that what is one man's food is another man's poison. If true of man, is it not true of boy or girl—of the brain as of the stomach? It seems to me that due allowance must be made for aptitude. We must insist upon that question of introducing into the opportunities for college a larger variety. With regard to the matter of experimentation in science, it is a question of the

teacher, not of the subject. I have in mind two teachers, one of them a graduate of the Massachusetts Institute of Technology, who had there a very high standing in all his work, studied afterward abroad, and came back and made a careful study of secondary work, especially in his own line. He has charge of a laboratory where pupils are prepared for Harvard. The other teacher is a graduate of a woman's college, and took only the scientific studies required, and did no further work, and is likewise in charge of students preparing for Harvard College in physics. The young lady has excellent success, the gentleman has not, in meeting the requirements in physics. His pupils are admitted, but not with credit. The young lady ascertained very promptly that there were certain definite pieces of apparatus which the pupils must be exactly familiar with, and must understand without the slightest hesitancy, and that they must be ready to do an experiment while the stop-watch is ticking, and the other teacher said: "No; that is not my idea. I do not conceive that I am giving my pupils the very best training in that way; I am not opening up to them the true spirit of scientific work." I would choose, as I presume you would, the product of the work of the man to the product of the woman's work. There is a great deal of that sort of work done. Teachers are generally tied down to prescriptions, and the more minute they are, the worse the situation is. We ought, therefore, to require that our pupils shall be made to show a general grasp of the subject, and ability in that line, rather than minute information or distinct methods of using particular pieces of apparatus.

III

DRAWING IN COLLEGE ADMISSION REQUIREMENTS

It seems to me wise to put before you in a concise form, by means of a little diagram, just what is included in that term—drawing. It means much more than it used to mean. In the last few years the course in drawing has been much enriched. At the present time drawing in public schools deals with nature and with the arts. We find that in considering any natural or artificial object, we may consider it as to structure, primarily, and when considering the structure of the thing, we have to consider certain elements of form. It is based upon a geometric solid or figure of some sort. We have to consider certain elements of beauty, if it is a beautiful thing, and then, if the pupil is to know just what that which he is studying signifies, if the educational process is to be complete, there must be, besides, some exercise by the pupil in structural design.

Again, we may consider natural or artificial objects with reference to their enrichment simply. The butterfly is colored and spotted; the building has ornament upon it. The enrichment may be by color only, or by certain form elements—geometric figures, leaves, plant forms, the human figure—either in outline or combined with color. Here then are two distinct topics implying a third, decorative design, as the motor exercise for the pupil.

But these same objects may be considered as to their appearance. Before we can appreciate appearances we must know something of the principles of perspective, and of how the masters of the graphic arts have managed to express themselves. Here are two new topics, again implying

a third, namely, pictorial drawing including pictorial composition.

Here are the topics as they stand to-day in the best courses:

NATURE AND THE ARTS	{	<i>Structure</i>	{	Elements of Form
		<i>Enrichment</i>	{	Elements of Beauty
			{	Structural Design
<i>Appearance</i>	{	Color		
	{	Decorative Form Elements		
	{	Decorative Design		
			{	Perspective Principles
			{	Pictures
			{	Pictorial Drawing

You will see how that course opens the windows of heaven and earth to the pupil. He deals with all the beautiful things in nature, with proportion and curvature and balance; he sees how these have influenced man in his work—in architecture and dress, in vases and other utensils, and in all things that we include under the head of the constructive arts. He deals with nature at first hand, discovering beauties of color and of decorative arrangement, through which are opened to him all historic ornament and the wealth of decorative design. In appearance, he deals with nature again, and here he catches a glimpse into the wonderful regions where Michael Angelo, and Leonardo da Vinci, and Raphael shine as stars forever. That means more than the arrangement of lines upon paper—it is an enriched course. Of the importance of such a course there is no doubt. Drawing has long ago been acknowledged to be a study of rare value in elementary instruction. I notice, in looking over this Report of the Committee of Fifteen, that over and over again they say it ought to have its place in elementary schools.

In spite of the fact that there are no penalties attached to the violation of the law requiring drawing to be taught in every school in the Commonwealth, we find this state of things: There are 353 towns in the State; 263 of these have regular instruction in drawing—95 per cent. of the school population of Massachusetts in the primary and grammar schools have such instruction. Of these 353, 135 have

special teachers of drawing—87 per cent. of the school population of Massachusetts have the advantage of special supervision and instruction in drawing. In April, 1892, the Board of Education passed a rule that, on and after a certain date, drawing should be required in the entrance examinations to the normal schools. This was the first move that was made to recognize drawing as a required study. Within three years from that time, I find that 20 towns who had before disregarded the law introduced drawing, and 12 more towns employed supervisors of drawing, simply because it was required in such entrance examinations. That law includes not only the elementary but the secondary schools.

What is being done in the secondary schools to comply with it? We have 258 high schools in the State. Of these more than 200 do practically nothing in advanced drawing. We find that when the law, or rather the rule, was passed by the Board of Education, requiring pupils to be graduates from high schools before presenting themselves to the normal schools, they could not draw so well as the pupils from the grammar schools. The power simply failed to increase during the four years in the high school. It is not required in college entrance examinations. I have here statistics from the catalogues of Brown, Cornell, Yale, and Harvard.

Brown presents six courses of instruction, one literary and five others having to do with science and the arts. In all of these five courses for Bachelors of Science, Bachelors of Philosophy, civil engineers, mechanical engineers, and those looking toward architecture and the fine arts, drawing is required from one to four hours a week. What are the entrance examinations at Brown for these different courses? English, mathematics, French or German, Latin or Greek, and history. The same requirements practically for all courses, notwithstanding the fact that but one still remains literary, and that the five others are scientific and artistic.

At Cornell they have, in addition to the regular literary course, what are known as the Colleges of Architecture, of Civil Engineering, and Sibley College for mechanical engi-

neering. In architecture they require six hours a week in drawing during the first year, and six hours during the second year; ten hours a week in drawing during the third and ten hours a week during the fourth year. In Sibley College, and the college of civil engineering, drawing is required every year; and yet in the entrance requirements we find for subjects: English, geography, physiology and hygiene, American or English history, Greek or Roman history, mathematics, French or German.

At Yale is the Sheffield Scientific School, with eight different courses; in every course drawing is required, and yet in the entrance requirements they have: English, United States or English history, Latin, French, or German, mathematics or botany. Only one topic, botany, which has something to do with a scientific course.

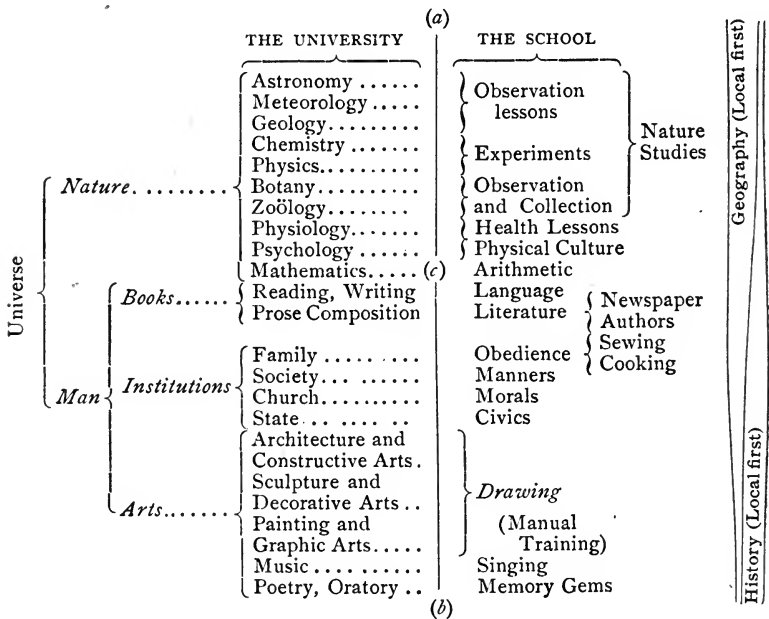
The Harvard Scientific School offers ten different courses for teachers. In every one of those courses, except botany and zoölogy, drawing is specified as a required study (and no professor of botany or zoölogy would say it would not be required in those courses. It is required there every year), and yet in the entrance examinations you have English, history of the United States or of England, history of Greece or Rome, mathematics, physical science, German or French.

I want to include with these the Institute of Technology, which does not pretend to have literary courses, but has thirteen courses of technical instruction. Drawing is common to them all, and yet the entrance requirements are: English, mathematics, history, French, and German.

There are only about forty high schools in this State that do even fair work in drawing. Do you now see why? Then, in the college, the pupils are handicapped because they have not the ability to draw. If there were requirements here at the colleges so that the pupils during the high-school course were required to have drawing, and that their skill in drawing might increase, the work in every department of these colleges would be better because of the pupils' power

and knowledge of the principles of truth and beauty. Agassiz says: "The pencil is one of the best of eyes." And Asa Gray: "Unless the pupil draws, he will not see." And Huxley: "I have no room in my classes for a student who cannot draw." When you think what drawing means as the language of the arts—how we find drawing of some sort as the first output of the brain, and then from the drawing the construction of the thing—how it enters into everything in all our daily life, it does seem strange that nothing of the sort is required by the colleges. It is, above all others, the language of the arts.

The good work of the lower schools might be continued in the high schools, and the work in the colleges be immensely improved.



The diagram will show the relations of the different subjects. We find that man has considered nature, and in the consideration of nature has developed certain departments. For instance, meteorology and astronomy, geology, chemistry and physics, botany, zoölogy, ending with mathe-

matics, which Dr. Harris says is matter in pure form. These lead out into such courses as mining and medicine, and all those which have to do with the sciences.

Man has embodied the results of his thinking in books—I want to use that term in the generic sense, to include the languages and literatures of all sorts. In addition to that, he has recorded the results of his thinking in the institutions, the family, society, the Church, the state, and hence we have courses in political economy, political science, etc. He has also recorded them in the arts. Those arts may be grouped under five heads. First of all, architecture, which includes all the constructive arts. Then sculpture, including all decorative arts, and the great art of painting, which includes all the graphic arts. The art of music and poetry, which they say is a lost art in these days; and also the art of oratory. That is complex, but that is the life that now is.

Let us see what we have in the elementary schools. First of all, observation lessons on the weather, on the heavenly bodies; experiments in chemistry, in physics; experiments and observations on geology, botany, and zoölogy; in short, what is known as nature-study lessons; so that this first group, the nature group, has now a very prominent place in our courses of study in the elementary schools. We have, of course, mathematics, the three Rs, and literature in the schools. We have in the schools good government; we have instruction required in manners; we have instruction in morals, which has to do with morality in the Church and state, and lessons in elementary civics, which tend to make intelligent citizens. The arts are represented in the schools through drawing, the language of them, and manual training, which has to do with certain of them. Then we have singing, and the pupils, through memory gems and other exercises, become acquainted with poetry and oratory.

Somebody may say: Where are history and geography in this? They are here, as two wedges. Geography has to do with the earth as the home of man; and history has to do with man trying to make a satisfactory home on the earth.

ab is the middle wall between the public school and what it teaches, and the university or college, and what it ought to teach—the larger, more abundant life. The entrance from one to the other is at *c*, with the mathematics and the three Rs, including the languages and literatures. Broad is the road to the public schools, and it is crowded; but strait is the gate and narrow is the way that leads to the larger life, and too few there be that find it. We may broaden it—take off a piece here and there, but I do not believe that will do it. If the university is what it ought to be, it should be four-square and complete, on the north three gates, and on the south three gates, and on the west three gates, and on the east three gates, so that the men all over this broad country who want to fight may go up every man straight before him, and enter in to possess the inheritance, from all these elementary studies, straight into the university through the gates of science, literature, and arts. I do not believe that we shall ever have the proper relation between the lower schools and the university until some such arrangement is brought about.

HENRY T. BAILEY

AGENT OF THE STATE BOARD OF EDUCATION,
BOSTON, MASS.

The discussion was continued by Professor Edwin H. Hall of Harvard University, who spoke as follows :

You should not infer from the scheme that I put before you what subjects are hereafter to be offered or accepted for admission to Harvard College. The table deals merely with things as they are. No doubt the college will add various subjects.

As to elementary physics. I should be a good deal chagrined at the criticisms offered, if I were not already very well aware of the imperfections of our present requirement, and if we were not already well on the road toward making serious changes in that requirement. The new requirement will give much larger liberty to the teacher, and will dwell much less upon the purely laboratory aspect of the work.

It will advise careful teaching, illustrated by qualitative work on the part of the teacher. But after making that explanation, I am afraid I cannot avoid altogether the objections which have been raised. One gentleman has objected to the examination as requiring the knowledge of specific pieces of apparatus. If we are to have an examination, we must have it with apparatus. Are these gentlemen ready to send their boys before us prepared to take *any* apparatus we may put before them? Our only reason for describing it is that they may know exactly what they are to be examined upon. We do not say that they must study with that apparatus and none other, but we cannot undertake to duplicate their apparatus. Twenty schools will have as many kinds of apparatus. We can only say what we will examine upon. They may use that or any other apparatus. The natural inference, I think, from what this gentleman has said, would be that we should accept the statement by the teacher as to whether the boys are prepared. Of course, the certificate system is often proposed, but I do not think we are ready for it yet. My experience with the notebooks would be decidedly against the advisability of that system.

One more criticism has been made. I think Mr. Sanford said that our experimental physics did not deal with any of the important principles or facts of the science. That statement simply leaves me wondering what *are* the most important principles and facts of the science.

Mr. J. A. Beatley of the English High School, Boston, spoke as follows :

I should like to correct the statement that, after a boy passes through an English high school, four years' language stands in front of him and prevents his entry into college. I speak only with reference to one high school, in which pupils receive a diploma at the end of the three-years' course. They are then able to go one year and take the requirements in column IV, and enter this university. After they have entered the university, they have acquitted themselves with credit, as President Eliot has said

in one of his reports. Formerly, the boys who graduated from our school had to receive their diplomas from the Latin school.

Mr. Sanford replied as follows :

I have in mind a high school where there are alternative courses, in some of which Latin is an elective. In my own school there are four courses, a Latin and Greek course, a Latin course with one or more modern languages, a technical course (no Latin allowed), and a general course in which there is a large range of electives. It is possible in two of those four courses for pupils to graduate and receive our diploma, and still be unprepared, according to present requirements, to enter college. I do not think that our arrangement is exceptional. I believe there are many schools which do not insist upon Latin. A graduate from such a school would have three or four years of Latin to make up, should he desire to enter college.

In reply to Mr. Moore, let me say I believe thoroughly in the enrichment of the elementary school curriculum. I protest against enrichment from above downward. In the kindergarten we have a nutritious course of study. The elements of natural science, literature, art, and manual training all appear. If they are continued without a break we shall have a rich and rare programme for the pupils of the intermediate and grammar grades. I protest against a kind of enrichment which thrusts down algebra and Latin, with the sole purpose of enabling us better to fit for college. If by a natural growth we better prepare for college, we all rejoice thereat.

In regard to the physics, I think I stated clearly, not that the attention of the pupil was withheld entirely from the important principles of the science, but that a course so distinctively quantitative would not of itself give a perspective view and comprehensive knowledge of that subject.

IV

SECONDARY SCHOOL AND COLLEGE

I want very much to have an opportunity of saying a few words about the meaning of Professor Hall's table. As he has stated, it relates solely to existing conditions of admission to Harvard College—not to those which we are projecting, and not to the best theoretical conditions. It has been spoken of as a palliative; and a palliative for the existing conditions of things it surely is, if it be nothing more; for it is a great improvement on the present mode of valuing subjects. A year ago, in this place, I spoke of the importance of determining the values attributed to subjects for admission to college by the time allotments given to the several subjects in the secondary schools. I suppose teachers observe that that is an enormous concession on the part of the colleges and universities to the secondary schools. I believe it is a just concession, and that it should have been made long ago. But just think what it means in the enlargement of the function of the secondary school and of its responsibilities. If the requirements are to be valued by the time allotments of secondary schools, how important it is that those allotments should be made wisely by you who are teaching there. You have the great responsibility of programme-making, which determines the valuation of subjects for admission to the higher institutions. That responsibility I proposed, a year ago, should be yours. Professor Hall has just applied that principle to a particular state of requirements, and he shows you the result—a great improvement on the existing methods of valuing subjects.

This improvement being admitted to be a palliative, let us next consider what additional changes are required in

order that the measure should be not only a palliative but a remedy, which is very much more important than a palliative. What is the amount of additional development that this subject requires, in order that we should arrive at a remedy for the gap between the secondary schools and the colleges? The only addition this scheme requires is that a very few more subjects be admitted to this list. What shall determine the number of these subjects? Simply, in my view, the established practice of good secondary schools as to the selection of the subjects which had better be taught there—a practice based on actual experience. There are not more than four or five subjects that can be added, on that principle. I submit that the next thing to be done is to add to this list of Professor Hall the few subjects which the experience of good secondary schools shows should be seriously taught in those schools for the good of their own pupils and with no ulterior views. Having examined many secondary-school programmes, I cannot find that any good schools teach, thoroughly, more than four or five additional subjects. Can anybody point out more than four or five additional subjects taught in good secondary schools with a thoroughness which would give them a deserved place on this list? I submit, therefore, that it is only a short distance to the remedy. I will add that the Harvard faculty is well advanced on the right path, and I hope will get to an issue within a few months.

But now there fell from Mr. Sanborn one or two remarks that I dare say were accidental, or perhaps not thoroughly considered at the moment, but seemed to have a dangerous tendency. I agree absolutely with his proposition that nothing should be taught in secondary schools except what is put there in the sole interest of the secondary schools. That is a proposition which seems to me to be as plain as anything can be. It does not make the least difference in this respect whether it is an endowed preparatory school or a public school supported by taxes. Nothing should be taught there except what is the best possible thing for the

pupils in that school at the ages when they belong to the school, looking to nothing beyond. I should amplify this statement by saying that I personally believe that the course of study which is best for the fortunate children whose education is to be prolonged beyond the age of eighteen years of age, is also the best for those children whose education is, unfortunately, to stop at eighteen. I do not believe there is the least distinction between the best thing for one set of children, and the best thing for the other set. I believe the great sin in our public high schools is that they give an inferior course of instruction to those children whose education is to be the shortest. But, accepting the statement that there should be nothing taught in the secondary schools which is not placed there in their own interest, I must protest against the proposition that it is more important for the secondary school to connect itself with the elementary school than with the higher institutions. I believe that to be an absolutely fatal error, just exactly as I think it is a fatal error in the individual if he does not look up, and not down—if he does not seek his inspiration from above himself. Can any proposition be plainer than that in a school we must always look upward? Shall we not follow Emerson's advice and hitch our wagon to a star, and not to a bowlder by the roadside that has not moved for millions of years. Practically, what has been the source of improvements in education, here in the United States, for the last two generations? It is fifty years since Agassiz landed here. Where did laboratory teaching begin? Who brought into this country the method of studying zoölogy by observation and experiment? Louis Agassiz. Who did the same service for botany? Asa Gray, whose honorable name has been already mentioned here this morning. From what institutions have come the superior methods of teaching Latin and Greek within the last twenty-five years? Those languages have been taught in American secondary schools ever since the Boston Latin School and the Roxbury Latin School were founded in the seventeenth

century; but where did the improved methods come from? From the colleges, and the colleges only. Who started the method of reading at sight? Who produced books designed to encourage it? The classical department of Harvard College. Where are you who teach geometry, getting to-day the inspiration for the right mode of teaching it? Geometry is one of the oldest and most important subjects of human instruction; but who introduced that method of teaching geometry which requires something more than the committal to memory of a series of propositions—which demands that the pupil learn to originate or invent something himself? The mathematical and physical departments of Harvard University, taken together. Who have been most active, most energetic, most hopefully successful in developing the teaching of history in the United States? The college professors. Who have written the best books for teaching history? The college graduates. You cannot mention a subject of instruction in the secondary schools in which the inspiration to better teaching has not come out of the universities in this country and in Europe. I submit, then, that it is for us to hold firmly to the conviction that the way to improve the secondary schools of the United States is to cling closely to the colleges and universities, and to multiply the points of contact between schools and colleges. And I will add that the way to improve the elementary schools is to associate them closely with the secondary schools, and to correlate, at every point where it is possible to, the work of those two departments. By and by we shall find out that all these distinctions between grades in education are in the highest degree artificial; and that there should be but one aim, one method, and one system throughout the entire course of education.

CHARLES W. ELIOT

HARVARD UNIVERSITY,
CAMBRIDGE, MASS.

V

EDUCATIONAL CONDITIONS AND PROBLEMS

The three following papers contain the substance of the remarks of the speakers at the annual dinner of the Association :

Even at such short notice as this I should be a very ungrateful man if I could not say something in regard to the teachers of New England, for certainly, of all beneficial influences that came into my early life, one of the very best came from a New England teacher. I have been accustomed to say—indeed, on one occasion I published it—that the best instruction I ever received in any part of the world was from a New England schoolmaster; and that not only on the intellectual side, but on the moral side, and indeed, I might say, on the religious side, including the musical side. I am sorry to say, he was not a Harvard graduate, although he lived within a short distance of Harvard, and impressed his students always with a very great respect and even reverence for Harvard. It was Mr. Joseph A. Allen, living in Medfield. He came to central New York, and I remember made a very deep impression upon the youth of Syracuse. I do not mean a physical impression, for he claimed that he was averse to corporal punishment, although he had a way—he was very athletic—of taking hold of a student, which was equivalent to corporal punishment in a very strong sense. I need not say to an audience of this sort that I am duly impressed with the function—with the duty—with the ideal of the teacher. Indeed, I have been so much so that I risked my life upon it once. I have been a teacher myself. The happiest days I ever passed were as a teacher, and when my friend, Professor Adams of the University of Michigan, my successor in teachership, informed me that he had been called to two university presidencies in the West, I said to him: “ If any man calls you to another

college presidency, shoot him on the spot." And within a month I was obliged to tender him the position of President of Cornell University! As you see, I narrowly escaped with my life, and the cause of it was my admiration, my love for the profession. My friend at my left [President Eliot], who has distinguished himself above all others in the United States for his administrative work, I think will agree with me that happiness, at least, does not lie that way.¹

I have speculated somewhat upon politics in my day—have had a little to do with them sometimes, and I am profoundly of the impression—it is one of the things left in a somewhat skeptical age as a ripened conviction—that on the education in this republic is to depend its continuance. I have called the attention of other audiences to the fact, but I do not hesitate to add you to the number, that the republican form of government is by no means a new thing in this world. A number of great republics, officered by great men, have existed in the world. Their history has been very brilliant, and yet, of them all, only two remain—only two can be said to have lasted. Naturally, I do not count France, which exists simply because there is no head of any other party which is strong enough to marshal a party; therefore it remains a republic for the time being. I am speaking of Switzerland and the United States. Those two republics differ from all the others in only one particular. Other republics have been deeply religious. The republic at Florence was as deeply religious as any community that ever existed. They have had every virtue except an enlightened body of citizens. Switzerland and the United States have that. They stand some chance of continuance.

When I speak of education as a necessity for the republic, then I do not refer merely to those who teach in the public schools, teach men to be able to read their books and newspapers—that is a function which I respect—but I refer to the whole of education, from the bottom to the top, in all

¹ [President Eliot subsequently said that he did not agree with President White's view that happiness was not to be found in administration.—EDITOR.]

its phases, for, of necessity, you cannot have any part of it adequately developed, unless you have the whole of it. You cannot have blossom and fruitage, unless you have the sound trunk and the sound roots; and if you have the public-school roots of the system, and the intermediate schools and high schools as the trunk, and the university as bearing the bloom and fruit of the system, you can easily see that each is necessary to the other, and you cannot have one without having the other. That has always been my doctrine—all the parts are inseparable, and the pretty attempt now making in some of the Western States to pit one against the other is probably as futile as any of the worthless expedients that have appeared in the history of public instruction. Therefore, I must warmly congratulate you on your profession, and on your work in it. I know of none more worthy, none in which a man ought to be, and indeed, on the whole, most men are, more happy. I trust that you feel a due sense of the work you have in hand.

The school, the press, the pulpit, after all are, and will continue to be, the three great potent energies in the proper evolution of an American people fit for liberty and republican institutions. That you realize this to some extent I have no doubt. I doubt whether any of us realize it as we ought. I trust that, more and more, the time is coming when the simple, great principles of morality which lie at the bottom of all proper political development are to be taught in our schools of all grades, including colleges and universities, and when they will be brought to bear more and more in producing that environment which is the only thing, after all, on which we can rightly depend for a future proper development of our institutions and national life.

I have lately addressed audiences at two of our Western universities, at Minneapolis and at Madison, and I wish to bear to you from that quarter the happiest of tidings. It is magnificent. I came back with renewed hopes and courage and faith in the country. I had looked into the faces of audiences of students, magnificent audiences of students—

of pupils in the high schools—they make you speak at every turn-out there. I had even looked into the faces of the members of the legislature; and I must say—you think that is an extraordinary proof of courage—with renewed hopes for the country. At Minneapolis, without in the least expecting it, I was hurried into the speaker's chair and made to address the Legislature, and was replied to by Mr. Ignatius Donnelly. He insisted, in his speech in response to mine, that the dominating race of this country is now being produced upon the highlands of Minnesota. He remarked that in the olden time, the great brains, the great men of the continent, were produced in Virginia, of whom George Washington was one; but that the great brains of the present, the great men of the present and of the future, are produced, as he said with great emphasis, upon that high plateau of which Minneapolis forms the most important part. So I wish to warn you that you have competitors. I wish to warn you that you have men observing you and competing with you; that you are not to relax your efforts, if the supremacy of New England is to be maintained. Mr. Donnelly and the others are determined you shall not carry it off easily. He especially charged me to inform the East, when I returned, of these facts, as he called them, and I am now simply fulfilling his injunction. In a noble outburst, the peroration of his speech, he said: "I call on the gentleman, when he returns to the Eastern States, to tell these things to his fellow-citizens;" and now I have done it.

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I have been invited a great many times, I am happy to say, to speak in a manner for the ladies. I always enjoy doing it; and I remember that on one occasion, in New York, I was fortunate enough to do it so well that one of the genial morning papers—I dare say it may have been the

New York *Sun*—remarked that unquestionably, if I had been confronted during the speech by a casual mouse, I should have gathered my garments about me and jumped up on a chair. It is true, perhaps, to this extent, that I have more than once tackled that very question, which is generally the crowning appeal of the unrighteous on the whole subject of woman's position, and have expressed frankly my belief that if men wore skirts as long as women do, they too would unquestionably jump up on a chair.

In another respect, also, I feel that your summons to me is humane in its character. I know nothing that indicates a wider prevalence of the spirit of Christian forgiveness in a body of teachers than that they should be willing to receive and hear resignedly one who has spent a large part of his life on school committees and boards of education. That great American thinker, Mr. Emerson, in an address on New England reformers, in classifying the different elements of that body, said that there were some of them who devoted themselves exclusively to "the worrying of clergymen." I have belonged for many years to a class which has devoted itself largely to the worrying of teachers. In the early days of the republic I was put on the examining committee on mathematics in Harvard University, just after graduation, at the age of eighteen. There has been really scarcely a year in my life when I have not been on some board or some committee, or some inspecting body, the primary function of which was to render teachers uncomfortable. In that capacity I have asked many unoffending teachers many questions that I could not have answered myself, and have sometimes favored them with information which, I fear, they did not subsequently find confirmed by the text-books. I can only say this, in my own defense, that, from the beginning of my career in that respect, I have made it an absolute rule never, under any circumstances, to vote against raising the salary of any teacher. I have made that a rule, and have but once in my life, I think, varied from it.

All this, if it has done little good to the schools, has done at least this kind of good to me, that there is no class in the community who have, I feel, a profounder claim to our admiration, or at least to our sympathy, than the teachers of the community. I do not know any other class which is, on the whole, tested so severely. Mme. Roland says somewhere that it is one of the incidental objections to the married state that it is a union in which one person is expected to provide happiness for two. The teacher's position is incomparably worse, because, according to the ordinary standard of numbers, a teacher has to provide happiness and all manner of wisdom for forty. When we go into a school, we not only see the spectacle which Wordsworth found interesting in respect of cattle, of "forty feeding like one," but the whole forty are feeding on the teacher. That cruel motto which Horace Mann imported from Germany, "As is the teacher, so is the school," must have weighed with a tremendous sense of responsibility upon the whole teaching body since. And it is, if you look at it, a serious matter. When you compare the temper and conditions of school life with the natural temper and condition of the child, you find at once a discrepancy which the best teachers have as yet found it hard to reconcile. Here is this child, naturally bright, alert, active within his own range and on his own ground, his mind so quick and active that no person in this room could compare with him in the rapidity with which he would learn a new game—for instance, learn in half an hour just where to stand, where to go, who is "it," who isn't "it," what it is to be "it," what it is not to be "it." In a game of cards he will tax your brain to follow him. I look back at this moment at one of the very severest mental exercises of my life, that of attempting to learn the game of bezique from a little girl twelve years old. She left me in a state of mind when I could almost more easily have comprehended a university tabular view, or your programme of this morning. And yet, if I myself had been a teacher, and had that child in school, I might often have been compelled to admit

—perhaps even to charge upon the child as an offense—that she was dull, uninterested, slow. Why is it—is the perpetual question—that in dealing with these creatures who are made of such active life, we cannot keep the life in them while we are giving them human nature's daily food of instruction?

We know, and we cannot do. Our schools are not what we wish they were. A French dramatic critic, Sanson, listening to a certain play that a young aspirant was reading, went sound asleep early in the play. When the reading was over, he awoke, and informed the youth that it would never do. The youth said, with just indignation, "How do you know? You cannot even have formed an opinion; you were asleep." Said the critic: "Sleep is an opinion." The verdict upon the average school or upon the poorer class of schools—those which are not fortunate enough to have any of the teachers here at their head—is the reign of sleep within them. Professor Crosby of Amherst College, whom some of you may have been fortunate enough to study under, either as professor or normal-school teacher, was, I think, the wisest man I ever had to do with in regard to schools; I was with him on the schools of Newburyport. He had a favorite test he used to apply to see whether the children's minds actually exercised themselves or not. He would stand before the children, bland in appearance, but with a possibly formidable gleam through his gold spectacles. He would stand before them, and tell them that there was one question he wished very much that they should answer. All attention was fixed. He said: "Suppose any one of you were to go out of the front door of this schoolhouse, and walk five miles due north. Suppose he were then to turn round, and walk three miles due south; how far from the school would he then be?" He told me that he felt fortunate if he got hold of a school in which two boys or girls could answer that simple question. What was the defect? Not in anything they had learned; not in the text-books or methods of instruction; but that, somehow or other, the school was not

alive, or the child's mind was not alive. It could learn its lessons in a certain way. It could follow in a certain way the guidance given; but to take a wholly fresh thing, however simple, and deal with it—the child's mind could not do it.

We all recognize what he implied in that question and criticism. From the point of the school inspector in my days of darkness, before I had sowed my wild oats, I used to say to myself: After all, the teachers should have something to do with it. There must be some fault somewhere, to be overcome somehow, in the teacher. There is the child, with all its natural powers. The child cannot be made over; you must take the child as it comes. Is there nothing in the teacher which is responsible for this defect, and no method that can cure it? Then I sometimes replied to myself what one of the ablest "schoolmen," as they say nowadays, whom I ever encountered, Mr. Admiral P. Stone, formerly school superintendent in Springfield—what he said once when I was with him on the board of education. He expressed the opinion, which I do not think any other member of the board would have dared to express, that about two-thirds of the methods employed in our schools tend toward the deadening of the child's mind, instead of waking it up. Then I think of what my friend, Mrs. Palmer, told me once, in that admirable story which has been told so often that I do not doubt Mr. Chauncey Depew is telling it somewhere at this moment, about the child who told his mother in a moment of confidence that the thing which really troubled him was those dreadful questions: "If John has two red apples, and Charles has two red apples, how many apples have they both got?" "Well," she said to him, "you know perfectly well two and two make four." "Oh, yes!" he said, "of course I know perfectly well that two and two make four, but it's the process that wears me out!"

Can we not at least avoid the additional deadening which the "process" gives? I remember how, in the schools, even in normal schools—for I have had the handling of two or

three normal schools in different States, and very poor handling it was—I remember how in normal schools I have seen a class of pupils taught how to teach other smaller pupils; and they were taught how to take, for instance, a stuffed bird up, and hold it before the class, and make believe that they were children, even smaller than they were, and that they knew even less than they did. This would be the process: “Children, what is that?” “That is an animal.” One child says rashly, “It’s a bird.” “No, it isn’t a bird yet; you mustn’t say it’s a bird!” They analyze and establish the fact that it is a bird, until one rash boy puts in his oar, and says, boldly and unflinchingly, “It’s a bobolink.” “No, no, John, it isn’t a bobolink yet; you mustn’t say it’s a bobolink.”

I am glad I was building better than I knew. These things bring it home to us that, after all, even the teacher may have something to do with it. I recall what I once heard from a clergyman who was present at a discussion of clergymen about various profound problems. One problem was what they were to do about it when parishioners would go to sleep during the sermon, especially in summer and in an agricultural region. Mr. Beecher was finally called upon for his opinion. He said: “All I can say about it, brethren, is that in Plymouth Church we find a very successful method. The sexton has orders, if anybody is seen asleep in the church, to go right up into the pulpit and wake the minister.” Is it not possible that it may be so with the teacher?

And if you ask me how the teacher is to be waked up, or wake himself up, I can only say that, with all my experience, I have but imperfectly discovered how to keep myself awake, and I can still less do it for others. One thing alone I would suggest, and that is a thing within the reach of all—that just so far as the teacher becomes himself a learner, and keeps himself perpetually in the attitude of learning, just so far he is near the pupil, and can see through the pupils’ eyes, and the pupils through his eyes. As is the teacher, so is the school, is a motto well reversed, if we can only say, As is the

school, so is the teacher. That is, if the teacher can share that youthfulness of mind, that freshness of spirit, which is the only thing in which his pupils surpass him.

I remember, in regard to the gentleman who last addressed you this morning [President Eliot] as I saw him with pleasure coming in like a Prince Rupert of debate, as he always does, and being received with cheers by you, some of whom, perhaps, criticised him two years ago when he started the same ideas—I always feel that I have the key to his nature, in a manner, and perhaps to his success, in recalling what I heard him say once at a dinner of librarians in Memorial Hall, that he thought it might be due to his early chemical studies, but there was always to his mind a fascination in the word “experiment.” That is the key to his success. Now, the utmost that I could ask for this body of teachers would be that by that same cultivation within themselves of what they are seeking to cultivate in their children, they should meet the children on common ground, and no longer do as Charles Lamb says the teacher is apt to do, “talk down to his little people.”

Perhaps it is because I am coming so near to what Leigh Hunt calls a man’s anecdotage, that all which belongs to childhood is fascinating to me; and I would therefore plead for their point of view, as well as for yours; that we all, as far as can be done, may be children together.

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We have here a gathering of highly educated, practical, hard-working teachers, whose minds are especially turned at this moment and to-day to the great problems of education, and we feel for the moment as though the world were to-day full of teachers’ associations—as though everybody in the profession had exactly the same hopes and interests and aims. But when we look over the country, the future of American education is, after all, not too hopeful. How hard it is to carry through and main-

tain and enlarge reforms which are already begun, as in cities like Cambridge! What danger there is of failure in a great city like New York, where a popular movement for reform is still not beyond the point where it may be arrested and perhaps turned backward! And then consider the more lamentable condition of great cities like Philadelphia and Boston, which do not realize that they need reform.

Looking over the whole field, we feel that there is some ground for anxiety, and yet, perhaps, for hopeful anxiety. Just as in military affairs there is an offensive-defensive and a defensive-offensive, so there is a pessimistic optimism which is sure that things in general must come out well, through an overruling Providence, though everything in particular go wrong; and there is also an optimistic pessimism which takes account of the unceasing difficulties in the way of the improvement of mankind, and in particular of the reform of American education, but still recognizes the steady advance. As one looks out over the whole field of education, one is tempted to say, as Franklin said at the end of the Constitutional Convention: "I have often and often, in the vicissitudes of my hopes and fears, looked at that sun behind the President without being able to tell whether it was rising or setting." But our sun is a rising sun, and the members of this Association have risen early to meet it.

What reasons have we for thinking that, in spite of the slow progress of reform, in spite of the setbacks to reforms apparently accomplished, on the whole education in the United States is advancing; and that fifty years hence it will be as far in advance of present achievements as to-day is in improvement over fifty years ago? We may hope something from the realizing of our own defects. When, in 1830, the Duke of Wellington, as Prime Minister, was challenged by the borough reformers, he replied, "that if, at the present moment, he had imposed upon him the duty of forming a legislature, he did not mean to assert that he could form such a legislature as they possessed now, for the nature of man was not capable of reaching such excellence at once, but his

great endeavor would be to form some description of legislature which would produce the same results." So, often, the readjustment of education seems to go back to the same point—there is a new system, but it produces the same results as before. But, just as the people in the slums are on the highway to improvement when they realize that they are no longer comfortable, and that they ought to be in better condition, so we may hope something for educational reform of the country because so much has been done to make people discontented. This unrestful movement, which at first was called an attack upon the public-school system, is very recent; we can trace back but five or six years the beginning of a determined effort to discover whether there was a difficulty in American schools, and where it was, and how to obviate it.

When attention had been directed to the defects of the schools another encouraging process followed—patient and serious investigation. The first necessity was to know the actual condition of the schools, and more has been done in the last five years than in thirty years before, in the way of actually bringing before the minds of the people the status of American schools, the relation of scholars to teachers, the methods employed, and the system of school administration. These investigations have also included inquiries into the fundamentals of education. Child-study, of which we hear so much, and which, of course, may be abused, does mean that those who teach are undertaking to find out what they teach; and if the most elaborate study of the child will not enable a poor teacher to teach better, it will at least confirm a good teacher that she is teaching well.

This is an "I want to know" period. Already two great investigations of the National Educational Association have culminated in the Reports of the Committee of Ten and of the Committee of Fifteen, and we may hope soon for a report from the Committee on Rural Schools, and also from the Committee on Admission to Colleges. These investi-

gations furnish the teachers and the public throughout the country with the ammunition that is necessary to batter down the walls which seem to shut in and surround and defend the poor systems of the present day.

Not least of the results of a new interest felt by teachers in their own profession has been the improvement and increase of educational associations. Not only has the great National Educational Association taken on a new aspect of vigor and efficiency throughout the country, but local bodies are multiplying, which include educational workers from different fields and of different interests and subjects. To the flourishing New England Association of Colleges and Preparatory Schools, and its sister, the Middle States Association, is now added a similar society in the Northwest; and there will doubtless follow another for the South, and still another for the far West. This means that in each of these five sections problems are being taken up with special reference to the local conditions of those sections.

Of these problems none is more important than the relations of the schools and colleges. Up to the present time these two systems of education have had to each other something very like the relation between the earth and the moon: the two bodies revolve around each other, depend on each other, control each other; but do not tend to move nearer to each other. The effect of the educational reforms of the present day has been to bring the colleges and schools into knowledge of each other's needs; even so serious a joint concern as mutual discussion about entrance requirements is a new thing. How long is it since the colleges troubled themselves about the opinions of the schools on such matters; or the school boards so much as knew the purposes of the colleges?

Another evidence of the improvement of education is in the better training of teachers. It is not very long ago that application was made to an officer of this university, to recommend for a college in the West a Presbyterian professor of geology: there was to be a distinct understanding

that, if any student asked the Presbyterian professor how old the world was, the inquirer was to be referred to the president of the institution. Thirty years ago the method of filling college positions was to select promising members of the graduating class, and to set them at work as tutors of any subject, or even as full professors. To-day hardly a college in the country, even the smaller and poorer ones in the most distant West and South, when an appointment is to be made, fails to require of a candidate that he should have had a graduate course, foreign or American, and that he should actually know something in particular about the subject which he undertakes to teach. There are evidences of a similar improvement in the new demand for special preparation of teachers in the normal schools; for it is notorious that for many years after the normal schools were founded, the teachers—though men of education—were not chosen because of special qualifications for their particular chairs. The opportunities for the training of teachers of primary and secondary schools also are much increased. At the University of Pennsylvania, at Yale, at Harvard, at Teachers College in New York, and at the University of Chicago are offered special courses for teachers in service. These advantages are this year accepted by 282 teachers registered as students at the University of Pennsylvania; by about 120 at Yale, and a large number at Harvard. That means that the universities have at last recognized the duty and opportunity of making their facilities count for something for the teachers about them.

There has been another very great improvement in the materials with which the schools work; the school buildings improve, apparatus and school furniture improve, the tools are better. Think what a difference there is between Pinneo's *Analytic grammar* and the ordinary, modern text-book in English composition! Think of the old days of singing geographies, and compare the results with those of the best modern geographies well taught. Think of the improvement of text-books in mathematics and in science.

Any school committee, which so desires, has now the opportunity of finding good text-books in every subject. In the field with which I am most familiar, American history, there were, twenty years ago, almost no school text-books which were anything more than an account of Indian wars. An old lady relates that in her day American history consisted in learning the names and places of the battles of the Revolution, with the names of the commanders, the number of troops on each side, and which army was victorious: when she could not remember who won she always gave the palm to the British, because they had the most men and usually won. A more patriotic friend of hers, in case of any doubt, always said that the Americans won, because they had the righteous cause. Now the most eminent scholars in American history do not think it beneath them to write text-books which have in them something more than the battles of the Revolution.

Furthermore, when we consider the condition of American schools, they are, on the whole, better than they seem to be. Mr. Bryce, in his *American commonwealth*, notices one institution after another which is so defective that it ought not to work well; but somehow, as he points out, it does work well. So of the American schools—they have many defects; they can be greatly improved, but they stand well among the nations. Three years ago I took occasion to visit the schools of Montpellier, in France. The city is very like Cambridge in its conditions—a thriving and intelligent university town with an excellent system of public schools. I followed through one school of each grade for boys, and another series for girls, from the kindergarten up to what corresponds rightly to our manual-training school here—a sort of inferior high school. Comparing those schools with the schools of Cambridge, I was convinced that the Cambridge plant is better. Of course, we see none of those buildings of beautifully cut stone which they admire in France; but our schools are better lighted, ventilated, heated, and drained, and are far more suitable for the chil-

dren. I was satisfied further that the quality of the teachers in Cambridge was far above the quality there, even although every French teacher had gone through a careful course of elaborate normal-school training. The intellectual quality of our children seemed decidedly higher. When I observed the real impression which the teachers in Montpellier make upon their pupils, I was proud of our Cambridge teachers; for the result of ten years' schooling in Cambridge, as compared with the same period in Montpellier, seemed to me more likely to advance a child. The Swiss schools also seemed to me no better than the American schools. The net result was that I came home with a feeling stronger than ever before of the real efficiency of the American public schools.

Nevertheless our schools are, on the average, far below what we have a right to demand; it is not the scholars, nor the teachers, nor the school boards who need improvement. If the teachers could make the schools what they themselves desire, there would not be the necessity for so much discussion about educational reform. What we need is a reform in the public opinion of the average American. Common schools is a splendid term; "common" is a splendid word. But there is such a thing as commonplace, and, in general, what we need in our schools on the part of parents and the community is a higher average standard as to what they have a right to expect of the schools, teachers, and governing boards. Such a state of things as has long existed in New York city would be impossible if the average man understood what may be done with schools properly carried on. You all know the story of Anderson's heaven. When he arrived at the gate he was invited by St. Peter to select his own heaven and to lay out his eternal life to suit himself. Said he, "I will have every day roast goose with apple sauce, and every evening the daily paper." So St. Peter left him to enjoy his heaven, promising to come back in a thousand years. For a year Anderson was thoroughly contented with his roast goose and daily paper. Then it began

to get monotonous—the roast goose lost its flavor, and the evening paper contained no news. At the end of the second year Anderson became restless and began to range about his heaven till he discovered an attic. At the end of the third year he discovered a light in a knothole in the wall of his attic, and by standing on tip-toe he was just able to apply his eye to the opening, and there, for the first time, he looked over into the real heaven. Nine hundred and ninety-seven years afterward, when St. Peter came back, Anderson had never moved, but was still on tip-toe with his eye to the knothole, looking into the real heaven. If the American public could only for one moment realize the possibilities of such schools, they would insist on having them for their children.

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VI

EDUCATION IN THE GREATER NEW YORK CHARTER

The Greater New York Charter is contained in a volume of 796 pages, of which 54 pages are devoted to education.

The school administration is dual—consisting of a board of education with nineteen members, “ which shall have the management and control of the public schools and the public-school system of the city, subject only to the general statutes of the State relating to public schools and public-school instruction ”—and to the provisions of the Act. In addition there are four local school boards, termed borough school boards, having jurisdiction over matters within the limits of their respective localities as prescribed and defined by the provisions of the Act.

The first notable variation from existing methods of school administration in the Greater New York Charter is the division of the city into boroughs. These are: (1) Manhattan and the Bronx, including that part of the present city of New York lying below the Harlem River, and that part of the present city of New York above the Harlem River; (2) Brooklyn, including the present city of Brooklyn; (3) Richmond, including Staten Island; and (4) Queens, including as much of the county of Queens as is included in the Greater New York. Each of these boroughs is to have a school board and a board of superintendents (elected by the borough school board), and is to control its own schools, subject to certain restrictions. At first thought this is a decided weakness, but when we take into consideration the problem that confronted the Charter Commission it seems a happy solution. Each of these boroughs has a distinctive character.

Each has been conducting its schools upon a plan and by methods which, whatever may be their respective merits, have a local standing and flavor. Each borough, therefore, has a problem which its own board of education and its own board of superintendents attempt to solve. It will be readily seen that this plan forces a fluidity throughout the entire Greater New York and prevents the crystallization which would inevitably result in so large a city from the administration of a central board only.

The members of these borough boards are appointed by the Mayor of the Greater New York. This insures a certain amount of homogeneity in the operations of these borough boards. Were they elected by the people in these boroughs, the tendency would be to set up little independent principalities within the larger body, which tendency has been the bane of existing systems, with the exception that the principality was much smaller and therefore more dangerous, as it was composed of a single school organization. The borough school board elects its president, clerks, and such other officers as may be necessary; has in its charge, for safe keeping, the school buildings and school property of the borough; selects sites for school buildings; elects a superintendent and associate superintendents; appoints principals and teachers and fixes their salaries; regulates the transfers of principals and teachers. It has no power over the construction of school buildings; it has no power to represent its borough before the Board of Estimate and Apportionment or before the Municipal Assembly, on any matter of appropriations. It has no power to purchase supplies needed by the borough; it has no power over the certification of teachers; it has no power over the apportionment of the general school fund; it has no power over the special school fund.

To harmonize and to make cohesive the work of administration in the city, a board of education is provided consisting of representatives from each borough school board. Each borough school board is represented in the Board of

Education by its chairman, making four, and in addition there are elected from their own membership fifteen other delegates (ten from Manhattan and Bronx, five from Brooklyn), making a total of nineteen members. This Board of Education has all financial responsibility: the asking of appropriations, the building of school houses, the purchasing of supplies, the licensing of teachers on recommendation of the City Superintendent and in accordance with the terms of the Charter. The different school funds are placed in charge of the Board of Education. Thus the borough school boards deal largely with questions of detail in the administration of affairs in their respective boroughs, which, if thrown into the Board of Education, would render the work of administration extremely arduous; while the Board of Education deals with general matters, and has control over the borough school boards to such an extent as to prevent the growth of well-known abuses. The central Board of Education elects a City Superintendent, who shall have charge of the schools of the entire city under certain restrictions. The professional or pedagogical administration of the schools in each borough is placed in the hands of the borough superintendent and his associates, who constitute what is termed the borough board of superintendents. They have power to establish rules for the promotion, graduation and transfer of pupils; have power to transfer teachers from one school to another, subject to the by-laws of the borough board; have power to recommend all text-books, apparatus, and other supplies that may be needed, subject to approval by the borough board; have power to issue syllabuses in the various branches of study. It will be seen that the practical management of the schools, from the teachers' standpoint, is in the hands of the borough superintendents and their associates.

The character of this organization, with its division of powers and responsibilities, marks a distinct advance upon any other scheme that has been put into operation in the United States. It is greatly superior to

the Cleveland or so-called Federal plan because it escapes the dangers of a possible incompetent, corrupt, or political Director. It places authoritatively in the hands of the superintendents questions of detail relative to the management of schools, which, in the best managed schools, have always, by the implied consent of the Board of Education in those cities, been placed in the hands of the Superintendent. It reserves to the Board of Education control of all financial matters and locates responsibility for the expenditure of the vast sums of money which the people give to the schools. It places the school buildings in charge of a superintendent, who must be an architect of experience and standing, elected by the Board of Education. This superintendent nominates janitors from a properly "certified list of duly qualified persons"; he must approve all plans for new school buildings and for additions to school buildings, etc., etc., etc.

The Board of Education has power to apportion the general school fund among the different boroughs. "The quota for each borough is one hundred dollars for every qualified teacher who shall have actually taught in the schools of the borough for a term of thirty-two weeks of five days each. After apportionment shall have been so made, the remainder of the general fund shall be apportioned among the boroughs in proportion to the aggregate number of days of attendance of the pupils, resident therein, between the ages of five and eighteen years." This has a local significance and is intended to be an improvement upon the present method of apportionment in the territory covered by the Greater New York. An interesting matter connected with this apportionment is the power that is specially conferred upon the Board of Education to direct the comptroller to withhold from any borough school board any part of the moneys apportioned to the latter upon the basis of the number of teachers employed in any school under its charge, "when the City Superintendent shall report to the Board of Education that the provisions of the State school laws or of this

chapter, or the by-laws of the Board of Education in any way relating to such school or to its teachers are not being complied with." This is a tremendous weapon in the hands of the Board of Education.

The new Charter is an immense advance over existing conditions:

(1) It segregates all questions relative to the work of managing the schools, so far as the initiative is concerned—the appointment and removal of teachers, the course of study, and the tools with which the teachers work—into purely professional hands. With one exception—that of Cleveland—I believe that this is the first instance where such powers have been formerly conferred by statute or charter upon the Superintendent. It should not be forgotten, however, that for many years these powers have been held, with the implied sanction of school boards, by the superintendents of Washington (D. C.), Chicago, St. Louis, Kansas City, Denver, Omaha, Peoria, St. Joseph (Mo.), Springfield (Mass.), Brookline, Newton (Mass.), and many other cities. But such a formal departure in the charter for the Greater New York will have the effect to confirm these implied powers where they are exercised, and to point the way toward a desired segregation elsewhere. It is a gain and not a loss that these powers are to be exercised subject to the by-laws of the school board. It is infinitely better that these responsibilities should be divided and limited. Only the initiative responsibility should be in professional hands, while the school board, as a sort of jury, should act upon this initiative either favorably or unfavorably. Like the United States Senate, though they may refuse to confirm, they cannot themselves originate any nomination.

(2) It eliminates a vast amount of patronage by providing a definite plan by which teachers, principals, janitors, truant or attendance officers are to be selected. Proper safeguards are provided to prevent this patronage from becoming a perquisite of the superintendents and officers of the school board.

(3) It establishes a broad and rational plan for the licensing of teachers, and places this power wisely in the hands of a different body from that which nominates or that which appoints the teachers.

(4) It prescribes the minimum qualification that shall be possessed by the City Superintendent, borough superintendents, associate superintendents, supervisors of music, drawing, kindergarten, etc. It is impossible to overestimate the advantages of this prescription, though the section has been so broadly drawn as not to damage the interests of the city by its limitations.

(5) It secures for the individual boroughs which form the amalgamated city, local school government of a class which will enable the schools to make the transition without loss and with a distinct gain to themselves. It preserves the salaries of teachers and principals at a reasonable figure in a borough where the living expenses are abnormally high, and prevents an unnecessarily heavy burden from being placed upon the taxpayers by an equalizing of salaries in boroughs where living expenses are normal.

(6) It abolishes the vicious trustee, or subcommittee, government. That Brooklyn is permitted to retain it in a modified form is a loss to Brooklyn, but it will furnish a gigantic object lesson which cannot fail to be of great value. That there are wise and good and helpful boards of trustees and local committees is a truism. That the system itself is an incubus to the schools is evident to any candid observer. The system does not exist west of the Alleghanies. In its various forms, as existing in Pittsburg, Philadelphia, Boston, and other New England cities, it is a dead weight which prevents the energies of the community from being profitably expended and directed.

(7) It gives scope for individual excellence by formally giving permission to borough boards to regulate and fix salaries of members of the teaching staff "by merit, by the grade of class taught, by the length of service, or by the experience in teaching of the incumbent in charge or by such

a combination of these considerations as the school board may deem proper." "Said salaries need not be uniform throughout all the several boroughs nor in any two of them, nor throughout any one borough."

(8) The principal is given a seat, a voice, and a vote in the board of borough superintendents when matters relative to said principal's school are being considered by said board. This is a particularly wise provision, which should find its way into the charter of other cities of the first class.

(9) It places the financial responsibility in the hands of the Board of Education, and secures for the least favored borough the same high class of school buildings, supplies, furniture, and appurtenances that are enjoyed by the richest and most influential borough.

(10) It assures the domination of the Board of Education to the boroughs of Manhattan and the Bronx (the present city of New York), and thereby provides that, for a considerable space of time, sufficient to get the new creation under weigh, the carrying out of the provisions of the charter shall be in the hands of its friends.

(11) While the charter does not provide for a sufficient number of associate superintendents to perform properly the work devolving upon them, it is provided that the Board of education shall have power "to modify the basis of the number of teachers upon which the borough boards may appoint associate superintendents," which will permit such additions to the number of associate superintendents in any borough as experience may find necessary.

(12) The special teachers and supervisors are assigned to their duties by the borough superintendent, and assume their proper relation as assistants in a special department. It is further wisely provided that the special teachers in special branches "shall be responsible to the principal of each school for the performance of their duties therein."

(13) The Board of Education and each borough school board may sit as a trial court in an investigation of charges relative to the misconduct of any employee, administer oaths,

compel the attendance of witnesses—their judgment “shall be final, except as to matters in relation to which, under the general school laws of the State, an appeal may be taken to the State Superintendent of Public Instruction.”

(14) The promotion of members of the teaching staff must be upon the nomination of the board of borough superintendents made to the borough school board.

(15) Full power is given the borough school board to establish kindergartens, manual training, trade schools, high schools, evening schools, teachers, training schools; they may also maintain free lectures for working men and working women.

(16) On the business side, the Board of Education, by placing in the hands of a superintendent of supplies, a superintendent of buildings, and a superintendent of schools, the manifold details arising in these departments, escapes the worry, irritation, and annoyance which a discussion over such trivial matters always brings to the members of the board. As a result, the members of the Board of Education will have ample time to discuss great questions of school policy, and lend valuable aid to the solution of many vexed questions relative to the schools.

(17) The chapter upon the licensing of teachers is a valuable contribution to school administration. It defines the minimum qualifications which the four members shall possess, who, with the City Superintendent, constitute the Board of Examiners, in such a way as to secure competency on the part of the board for its delicate task. This is all the more necessary, as “no borough superintendent, associate superintendent, principal, or teacher in the city of New York shall be allowed to serve on the Board of Examiners.” “The borough school board shall have power to fix the standard of qualification as a necessary requirement for the service of all principals and teachers in the high schools and schools of the borough, which requirement may be higher, but not lower, than the minimum qualifications established by the Board of Education.”

It makes it possible for teachers of the highest class and the best qualifications, outside the city, to seek a position in the Greater New York without undergoing the humiliation of a formal examination. "Graduates of colleges and universities recognized by the Regents of the University of the State of New York, who have pursued for not less than one year pedagogical courses therein; graduates of schools and colleges for the training of teachers, approved by the State Superintendent of Public Instruction; and teachers holding a State certificate issued by the State Superintendent of Public Instruction since the year 1875, or holding a college graduate's certificate issued by the same authority, *may* be exempted, in whole or in part, from such examinations at the discretion of the City Superintendent." Such a clause, with limitations suitable to the environment, should find a place in the charter or by-laws of every city board of education. Such a clause would go far toward strengthening many teaching staffs, which now, by reason of Chinese prescriptions, in the form of examinations at inopportune times, and various other devices, are being steadily weakened by the necessity of relying upon local talent to fill every vacancy.

The greatest weakness of the Charter is in the composition of the central Board of Education; it will always reflect the ideas of the borough boards, when it ought to be so organized that its influence would permeate down through the borough boards.

The City Superintendent, under this Charter, has no power over the boards of borough superintendents, except to call them together—no opportunity to impress his ideas upon the schools. He may visit the schools (there will be upward of eight thousand teachers in the Greater New York), "but he shall have no right of interference with the actual conduct of any school in the city of New York."

It is difficult to see why "any borough superintendent or any associate superintendent may be removed for cause at any time by a three-fourths vote of all the members appointed to the school board by which he was appointed," unless the

clause quoted indicates a compromise between the friends and enemies of some fortunate or unfortunate individual now in office. The salaries of teachers and members of the teaching staff, including the superintendents in each borough board, should be fixed by the Board of Education. The power to suspend a teacher by the principal in any school should be exercised only by permission of the borough superintendent. The power to establish separate schools for colored children, where there is such small need for such a policy as in the Greater New York, should not have been conferred.

The City Superintendent in Greater New York cannot be expected to exercise many of the functions which are within the province of the superintendent in smaller cities. His position is analogous to that of the United States Commissioner of Education. The influence of the office will be great or small according to the caliber of the man who is first selected to fill the position. If he has a grasp over the conditions involved in the problem of education in our cities, and education in its complex theoretical relations, and does not allow himself to be lost in a maze of detail, his power for good and his influence upon the schools will be great. A second-rate man would speedily degenerate into a first-class clerk. The problem of supervision in the Greater New York, with its traditions, its vested educational rights, its peculiar environment, its educational customs and privileges, cannot be solved by any existing systems or methods. Until now, it has hardly been possible to state the terms of the problem with sufficient clearness to attempt to formulate them in terms of an equation.

The new charter makes it possible to begin work upon this solution; by its terms every teacher and principal now in the schools has protection and consideration. It may be reasonably expected that every member of the teaching force will ultimately lend his efforts to assist in the solution which means so much to him and to the schools.

To interpret properly the charter for the Greater New York, it should be studied from different standpoints—the

standpoint of existing charters in the subdivisions constituting the new city, the standpoint of the needs of the schools, the evils to be remedied; the standpoint of the reformer, who desires the charter to represent a high type of solution of the vexed problems which encompass the whole question of bettering the schools; and, finally, it should be observed from the standpoint of compromise—*i. e.*, what real advance could be made by a commission representing conflicting views, imperfectly acquainted with the terms of the problem, to a certain extent pioneers in the work, and confronted continually with the fact that their work had finally to go before the people or their representatives in the Legislature. Any rational reform must (1) segregate, at least so far as initiative is concerned, the purely professional side of the schools—the shaping of the course of study, the assignment and transfer of teachers, the promotion, graduation, and transfer of pupils into professional hands; (2) so arrange the business administration that the members of the Board of Education may attend to these details without devoting an undue amount of time to the public service; (3) establish a freedom among teachers and principals, within certain broad limits, which freedom is necessary to prevent a blind following of the dictum of the school officer in charge. Each valid scheme of reform should develop in a line with the spirit and environment of the community. A plan might be admirable for a comparatively new community, which had no traditions and no vested educational rights, which would not do at all in New York, Philadelphia, or Boston.

Every reform movement must run the gantlet of criticism, and be tempered and ameliorated by the spirit of compromise. A glance backward after the lapse of years will not infrequently carry with it the conviction that the reform, as affected by compromise, was distinctly bettered by that compromise. Reformers are not always content to have the essential elements of their reform accepted by the people; they often grieve that comparatively unimportant non-essential elements are rejected. Perhaps they could not be re-

formers in action if they always clearly distinguished between essentials and non-essentials.

At a very early stage in the movement for reform which has culminated in this charter an insane delusion seized hold of many teachers and principals. They saw, or professed to see, in this movement a scheme to drive them out of the schools to make places for the friends of those who were championing these reforms. Living in an atmosphere which had been redolent of the odors of the vicious patronage system, it is not surprising that rumors of the intention to make wholesale removals should spread and become epidemic. Then, again, change in existing conditions did not hold out any hope to the great mass of the teachers. The wildest rumors were current among them. It grew to be believed that every teacher and principal was to be re-examined as a test of her fitness and worthiness to continue in the schools. It grew to be believed that wholesale transfers of teachers from the schools in which they had long been factors were to be made. Good men and wise men believed that it was better to bear the ills they had than to tempt fortune by change. Then, again, New York, the most cosmopolitan of cities, is in many respects the most provincial. Why should New Yorkers go outside their city to investigate what is done in other localities in any department? Is not New York the center toward which the best, ablest, and most highly developed men in every department of life's work inevitably gravitate? Does not New York have the best of everything? Then, again, the unwise and extreme utterances of some of the friends of reform, relative to the caliber and quality of the teachers and the character of the work done in the schools of New York and Brooklyn in no wise tended to allay this irritation. It would be an unexampled condition of affairs if there were not a great many incompetent teachers in the teaching corps of New York and Brooklyn. Not many years ago the city superintendent of Philadelphia stated, at a meeting of school superintendents held in that city, that there were upward of seven hundred incompetent

teachers in the schools of that city, out of a total of about twenty-eight hundred teachers. Intelligent observers of school systems over the country believe that the same statement could be relatively applied to the schools of any other city in the United States. Indeed a similar statement might be applied to the members of the legal profession in any city, or the members of the medical profession, or the employees of any great mercantile or industrial corporation. I once asked the superintendent of a city whose schools are famous for their excellent work, and where favorable conditions have existed for a long series of years, the question: "If you were to leave this city, and go to a city of similar size, and have full power to select your teachers, how many teachers of your present corps of 320 would you take with you?" He reflected for a moment, and said: "I would not want to be forced to take more than 120 of them." The lesson of this is that about 33 1-3 per cent. of the teachers in the most favored school systems are excellent teachers; from 30 to 50 per cent. are average and good teachers, and the remainder are below the average in everything that goes to make up the ability to do the right kind of work in school. The ability, character, and honesty of the principals in New York and Brooklyn will at least bear favorable comparison with the principals in Boston, Chicago, St. Louis, San Francisco, Cincinnati, Cleveland, Detroit, and other cities. There are just as good schools in the territory of the Greater New York as can be found in other cities. There are just as poor schools. The teaching force compares favorably with that of other large cities. The pressure and conditions under which teachers and principals have worked in the territory of the Greater New York have been such as to require greater skill, tact, persistence, and energy to produce good schools, than were required elsewhere to bring about similar good results.

But under the old conditions a very good school was largely the result of fortuitous circumstances; the able, conscientious principal stood alone in his efforts to better his

school. He could not materially strengthen his corps of teachers, on account of the vicious trustee system; he could not get any help from the superintendents, because there were too few of them to have any knowledge of the conditions in any individual school; and had they been numerous enough, they had no power to bring about the necessary changes. Under the new charter it will be possible to strengthen the teaching force in any individual school to such an extent as to bring up the weaker schools to a much higher level.

In any organization certain elementary prescriptions are necessary that we may keep in a definite plane of effort. But within this organization and its prescriptions there is really a greater freedom for the individual than there would be outside this organization—*i. e.*, where there is an imperfect organization or no organization.

Viewing questions from different standpoints, there is always more or less antagonism between principals and the superintendent; this feeling exists in Boston, St. Louis, Chicago, Cincinnati, for instance, to just as great an extent as it does in Brooklyn and New York. It is as absolutely necessary for this antagonism to exist in a school system to produce the best results as it is for friction to exist in order that we may move a railway train. But the friction may be so great that it will stop the train. To a foreigner, the complex relations existing between our general government, State government, county, and municipal governments are difficult to understand. He cannot see how it is possible to escape continual and dangerous collisions. But to us the adjustment and operation are perfectly simple.

Just so with the relations between superintendents, principals, and teachers. Far from desiring to weaken and destroy the power and responsibility of the principal, the wise superintendent seeks continually how he may increase that power. So the wise principal seeks to strengthen the hands of his teachers, that they may lean on themselves and leave him free for other duties. The end of all supervision is to

bring about such a condition among the supervised that they will not need supervision, will be self-supervised, self-determined. The legitimate and local end of discipline in a school is such wise restraint as will lead inevitably to wise self-restraint.

Under this charter for the Greater New York, both principals and teachers have much more freedom and power than under the old conditions. For every restriction imposed, other restrictions have been removed. It is susceptible of demonstration that, so far as selecting their own teachers, for instance, is concerned, the principals in Cleveland and St. Louis, and Chicago and Kansas City, have even more freedom than they do in Brooklyn at present. In the cities mentioned the principal confers with the superintendent, in Brooklyn with the local committee of the board.

Under the new charter the principal will confer with the superintendent who has charge of his division, or with the board of borough superintendents. The same parallel may be drawn in other directions. Nevertheless, it is not at all strange that many principals could not make up their minds beforehand that the net changes would be an improvement upon the existing order. Their doubts and misgivings were no greater than that of the opponents of the adoption of the Federal Constitution one hundred years ago. I believe that an impartial, dispassionate judgment from the opponents of many charter provisions, during the process of their construction, will cordially commend the completed charter long before it goes into effect.

To the short-sighted, enthusiastic reformer in other parts of the country, who has expected the charter commission to blaze the way for general reform in the organization of school governing boards, the charter is a disappointment. Few cities in America have in their midst the conditions typified in the Greater New York, which conditions led to the creation of the borough boards and the central Board of Education. Chicago, with its distinctive West Side, South Side,

North Side, and outlying territory, is a good field for such an organization. Boston, with its aggregated additions—East Boston, South Boston, Charlestown, Roxbury, Dorchester, Brighton—might profitably consider such a plan. In most other cities the borough board of education would be a step backward. To the reformer in New York and the annexed territory, who has had a clear vision of the needs, and a rational plan by which these ends could be secured, the new charter has much in it to commend, and any careful student of accomplished reforms will be thankful that so much real progress has been made, and that the way is clear for added meritorious features, when the need of these added features is apprehended.

The nondescript, inefficient organization of the Brooklyn borough cannot long exist alongside of the better and more efficient organization in the other boroughs. Conditions in Brooklyn, over which neither the friends nor the framers of the charter had any control, profoundly influenced the apparently factious opposition which succeeded ultimately in depriving that borough, temporarily at least, of the benefits which should have come to it. Fortunately, the way is clear for the change when conditions are more favorable.

To anyone conversant with the different schemes which have come to the surface in sections of the territory of the Greater New York, having for their object the aggrandizement of some individual or set of individuals, it may be readily understood why certain aggressive spirits in the schools have resolutely opposed any and all changes whose ends and aims were not apparent. The prevalence of this feeling greatly added to the labors and difficulties and responsibilities of the framers of the charter. The dignity and power of the principal and teacher have been greatly and wisely increased by the provisions of the new charter. They have been freed from burdens which, though they may have pressed down upon them unequally, were nevertheless a great hindrance to successful and rational effort. And when the charter formally passes through its legislative stages,

EDUCATIONAL STATISTICS OF THE TERRITORY TO

	NEW YORK.	BROOKLYN.
Population.....	1,960,000	995,277
School population. 1895, 5-21 years.....	540,000	260,000
1896, 5-18 ".....	Say 490,000	Say 230,000
Enrollment in public schools (including corporate).....	287,332	148,327
Average daily attendance.....	192,858	103,858
No. of teachers, including principals.....	5,118	2,708
Total number of schools.....	329	114
Total number of school buildings.....	160	111 owned, 5 rented, 116
Value of school buildings and sites.....	\$20,166,890 00	cost \$9,573,772 00
Average expenditure for pupil, year 1895....	\$23 11	\$23 02
Total expenditure for all purposes, 1895....	\$6,112,227 71	\$3,485,608 19
Amount paid for new buildings, sites, furnishing, and repairs in past year.....	\$1,074,412 74	\$788,314 82
Amount of State School tax paid by City, County, or Town.....	\$1,857,373 25	\$493,683 98
Amount received from State School funds.....	\$693,771 62	\$421,998 15
Amount raised for School purposes by local taxation.....	\$5,092,495 14	\$2,553,094 81
Total receipts from all sources.....	\$6,989,356 12	\$3,609,518 93
No. of school districts.....	35 inspection dist's.	1
Total amount of teachers' salaries.....	\$3,573,865 10	\$2,154,655 77
Total amount of janitors' salaries.....	\$181,014 12	\$107,256 45
Total amount of superintendents' and clerical officers' salaries.....	\$59,292 71	\$52,350 00
No. of Grammar Schools.....	49 Boys, 49 Girls, 23 mixed, 121	35
No. of Primary Schools and Departments..	132	including interme- diate, 56
No. of Corporate Schools receiving public moneys.....	44	11
No. of Evening Schools.....	31	3 evenings per week for nine weeks, 12
No. of High Schools.....	4 Evening High Schools	3
No. of Normal or Teachers' Colleges.....	1 with 1,921 pupils	1 with 145 pupils
No. of Public Kindergartens.....	17	3
No. of Pupils in Grammar grades.....	84,111	36,386
No. of Pupils in Primary grades.....	142,600	including interme- diate, 78,792
No. of Pupils in Evening Schools.....	32,895	7,223
No. of Pupils in High Schools.....	0	2,998
No. of Pupils in Corporate Schools receiving public money.....	28,028	4,625
No. of Superintendents and Ass't Sup'ts...	16	3
No. of Principals not teaching.....	273	including Heads of Departments, 229
No. of Male teachers, including Principals.	749	142
No. of Female teachers, including Principals.....	4,475	2,629
No. of Teachers in Grammar grades.....	1,996	904
No. of Teachers in Primary grades.....	2,187	1,476
No. of Teachers in Evening Schools.....	498	192
No. of Teachers in High Schools.....	103 in Evening H. Schools 0	99
No. of Teachers in Corporate Schools (above).....	395	79
No. of Teachers of special subjects.....	129	40
No. of Ungraded except by State.....	0	13

The College of the City of New York has 1,314 students, and the Nautical School has 72. The town of Hempstead receives \$12,000 per annum from the "Stewart Fund." It is tracts which are cut by the Greater New York line have school bonds outstanding.

BE EMBRACED IN GREATER NEW YORK.—1895-96.

LONG ISLAND CITY.	RICHMOND COUNTY.	NEW-TOWN.	FLUSHING.	JAMAICA.	PORTION OF HEMPSTEAD.	GREATER NEW YORK.
35,745	53,452	19,776	20,816	17,654	SAY 10,000	3,112,719
12,500	15,094	6,752	7,307	6,807	3,372	851,832
11,300	12,975	8,161	5,874	5,786	2,751	766,847
8,119	9,923	5,592	3,284	4,587	1,900	469,064
5,615	6,000	3,615	2,317	2,814	1,148	318,225
155	169	85	68	89	36	8,428
14	29	17	14	39	19	575
{ 9 owned 5 rented, }	29	17	10	20	10	376
14						
\$649,500 00	\$519,900 00	\$171,995 00	\$169,600 00	\$242,714 00	\$128,260 00	\$31,622,631 00
\$17 05	\$15 63	\$14 59	\$18 75	\$17 27	....	....
\$150,443 72	\$353,452 00	\$105,860 24	\$60,800 10	\$237,980 97	\$46,582 44	\$10,552,955 37
\$31,326 93	\$166,695 24	\$38,673 65	\$8,692 54	\$148,839 85	\$13,510 90	\$2,270,466 75
\$20,146 47	\$25,072 90	\$7,793 97	\$8,395 16	\$11,709 52	SAY \$4,000 00	\$2,428,176 25
\$21,250 43	\$23,122 90	\$10,751 05	\$10,820 23	\$12,638 89	\$4,589 75	\$1,198,943 02
\$112,000 00	\$144,767 56	\$73,475 37	\$42,448 34	\$88,939 25	\$25,336 61	\$8,132,557 08
\$133,250 00	\$392,700 02	\$131,149 55	\$72,633 82	\$320,277 31	\$50,360 98	\$11,699,246 73
5	29	14	8	11	7	....
\$86,504 10	\$117,561 79	\$46,652 41	\$36,954 37	\$49,761 41	\$20,544 75	\$6,086,499 70
\$11,900 66	....	....	....	....	....	....
\$3,915 00	{ \$1,600 00 o except Comm'r }	\$700 00	\$3,500 00	\$3,400 00	0	....
6	....	....	....	12	5	....
13	....	....	....	23	10	....
0	0	0	0	0	0	....
0	0	0	0	0	0	....
1	3	0	1	4	3	....
0	0	0	0	r State	0	....
0	1	2	1	1	1	....
1,511	....	....	....	....	....	....
5,941	....	....	....	....	....	....
0	0	0	0	0	0	....
177	0	0	....	....	....	....
0	0	0	0	0	0	....
1	1	0	2	2	0	25
8	0	0	0	0	0	510
7	31	10	7	2	6	954
148	138	75	61	87	30	7,643
45	Grades Mixed	....	....	....	....	....
97	" "	....	....	....	....	....
0	0	0	0	0	0	....
6	....	0	5	7	4	....
0	0	0	0	0	0	....
0	2	0	3	4	0	....
0	10	17	10	....	....	....

students. divided twice a year, on the same basis as the State funds, under special acts. Several of the dis-

and becomes a law, we shall see the era of mutual recrimination give way to an era of good feeling.

The framers of the charter are to be congratulated upon the evenness and balance of their work. They have never lost sight of the fact that the management of the schools should be left in the hands of the people, through their representatives. While power has been conferred upon the employees of the board, it has properly been, in the main, the power to initiate and not to accomplish. This is the method of the business world—the board of directors in a corporation elect a president or general manager, to whom the power to operate the various branches covered by the business is delegated. The owners of a property never allow *carte blanche* to their officers without courting disaster. It is better for the manager of such properties, and better for the owners, that there should be a distinct separation of their duties and a definite responsibility.

The framers of the charter have retained the good features of the old organization, and have constantly had in their minds these two principles: (1) that of definitely fixing responsibility; (2) that of steadily lessening the friction which would otherwise be a clog to a proper development of the full power of the organization. They have rewarded no friends, punished no enemies; their work will be an incentive to the friends of constructive reform and a source of pride to all factions in the Greater New York.

FRANK A. FITZPATRICK

BOSTON, MASS.

VII

REVIEWS

The school of Plato—By F. W. BUSSELL, Fellow and Tutor of Brasenose College, Oxford. New York: The Macmillan Company, 1896. 346 p. \$2.75.

Philosophy, like all the sciences, as well as economic industries, suffers all the evil and enjoys all the good that comes from a division of labor. Once she was the queen of the sciences, says Lotze in a fine passage; and this position gave her as commanding an interest as she had influence, and her duty was to expound all the general principles of religion, art, literature, and politics, as well as the foundations of knowledge. But the enlargement of scientific territory and the division of labor have changed all this. Philosophy has become a technical science, limited almost wholly to theories of knowledge and metaphysics, and enlivened occasionally by remarkable illustrations from psychology. In most of the treatises upon it, we should discover few traces of that insight into its intimate relation to religion and politics which was its original reason for existence. Plato reads very differently from Kant. Plato is the delight of all readers in all ranks of thought, while Kant, in spite of his great work in philosophic fields, comes near inviting the judgment that Milton had to repel when he said that "philosophy is not harsh and crabbed as dull fools suppose." But the present writer has done something to restore a forgotten interest in the subject. He has put life in the dullest metaphysical problems. What he shows is the closest connection of conception and interest between the obscure problems of Greek philosophy and the religious and political life of the time. It is not often that the student has impressed upon him the intimate relation between Eleatic or Platonic metaphysics and the struggles in Greek moral and political life, or between the atomism of Democritus and modern individualism, as reflected in religion and politics, as well as in eco-

nomics. But Mr. Bussell succeeds in doing this, and in a way that makes us think that he has discovered a lost art.

The title is rather misleading. It would imply a treatise upon Plato and his philosophic school. But the work is far from this, except in so far as that philosopher furnishes the key to Greek thought. It is in reality a book on every phase of ancient philosophy and its relation to the general tendencies of modern times, and the title is only the appropriation of a brilliant name to give the general setting of the author's problem and sympathies. The great value of the book lies just in this free and liberal way of treating the subject, and the comprehensive simplicity of the problems here discussed. Philosophy once more has a general interest, and shows, in the author's treatment, how profoundly common life and thought are influenced by conceptions which seem very technical to the student, but, when metamorphosed into the real problems of the age, show the immortal questions of morality and politics in their unfading colors, and with their permanent importance.

Mr. Bussell's assertion is that the history of philosophy gets its whole meaning from the inherent tendency of all development to sustain and increase the importance of the individual. He shows how Eleatic monism and Stoic pantheism could not suppress the idea, and that Greek life, though constantly associated with strong government, could never overcome this tendency, and was, in fact, a struggle to attain the position where the individual counted for everything. In stating his position, Mr. Bussell uses an expression which will frighten this altruistic age. He says: "The ultimate motive is, of course (I need not waste words over a fictitious altruism!), a selfish one; and the impulse to speculate is either curiosity or the satisfaction of a moral need." The bold confession of "selfishness" as the basic principle of human progress, after all that Mr. Spencer has shown regarding the value and growth of altruistic sentiments, seems paradoxical, not to say shocking. But it is less harmful than it seems. The author does not mean it in its most objectionable sense, as is distinctly indicated by his relation to Christianity, which he regards as giving the key,

to the meaning of the whole intellectual and moral movement of the race. This point of view, however, is not obtruded upon the reader. In fact, the author's sympathy with Christianity does not indicate where he stands theologically, and so little does he seem to be determined by dogmatic considerations in these sympathies, that they have usually to be read between the lines. The "selfishness" which he boldly places at the basis of evolution is not the ordinary form of it, but is nothing more nor less than Green's self-realization, and Kant's personal worth, or man as an end in himself. But, barring his incautious language, there is such a clear and vigorous statement of the general tendency of history that one wonders, comparing the usual run of books, whether he is reading philosophy at all. To me it is as interesting as Pater's *Plato and Platonism* and Bryce's *Holy Roman Empire*. For those who wish to get the practical meaning of philosophy the book is very instructive and inspiring. Yet one cannot suppose that he knows all about philosophy after reading the book. He will look at the subject superficially if he does. He may acquire a real interest in it and a desire to know more about it, but he will have to master the very works whose style and method are here eschewed. This is not to say that Mr. Bussell's book is superficial, but only that it does not gratify the desire of the technical and scientific student. It is simply a work to awaken great and comprehensive thoughts, which may leaven life with aspirations while it lays bare the unconscious tendencies of the past.

JAMES H. HYSLOP

COLUMBIA UNIVERSITY

The intellectual and moral development of the child. Part I. Containing the chapters on perception, emotion, memory, imagination, and consciousness—By GABRIEL COMPAYRÉ, recteur of the Academy of Poitiers. Translated by MARY E. WILSON, member of Graduate Seminary in Child-study, University of California. New York: D. Appleton & Co., 1896. International Education Series. 298 p. \$1.50.

Probably no other French writer on education is so well known in this country as Gabriel Compayré, recently appointed to the rectorship of the University of Lyons.

In 1893 he published his *L'évolution intellectuelle et morale de l'enfant*, the first half of which has just appeared in an English translation. The reputation of the author, the timeliness of the subject, and the popularity of the series in which his work has appeared, will give the book a wide circulation, whatever its intrinsic merits, and these are by no means slight. M. Compayré is himself a student of history and of educational philosophy and theory, rather than a scientific student of childhood. This fact is reflected in the work. His book is a compilation, covering the general fields of movement, special senses, emotions, memory, imagination, consciousness, imitation, reason, language, the sense of right, and so forth. The authorities cited are standard writers of the period before 1885. The writer draws largely on Perez, Preyer, Egger, with frequent references to Locke and the older educational theorists. Mr. Compayré says, in a note on p. 2, that the body of the work was arranged sixteen years ago, in 1880, but that he has profited by much that has appeared between that date and 1893. As one goes through the book, however, he is impressed with the fact that very few of the experimental and quantitative studies of the last ten years are noted in its pages. This is the great defect of the book. Its virtue is that it gives relation and proportion to the scattered and disconnected fragments of work in child-study carried out all over the country. One who consults it for suggestions, however, or for directions as to methods of study, or for the results of the investigations of the last ten years, will come away disappointed.

The translation has been very faithfully done, and in a careful comparison of several chapters with the original I have found nothing in it to criticise. Even the notes have been translated with perfect fidelity, but the reader of to-day would be grateful for some additions to their number. For instance, to the note on p. 19, which gives the principal works on child-study, but shows no title later than 1880, the translator might well have added some of the leading contributions of the last sixteen years.

EARL BARNES

FOREIGN EDUCATIONAL PERIODICALS

Revue Internationale de l'Enseignement, February 15, 1897

L'Enseignement de la chimie medicale en Allemagne et en France, by L. Hugounenq.—In Germany chemistry is the only one of the sciences auxiliary to medicine represented by a chair in the medical faculty. There medical chemistry is narrowly defined, and means the study of the chemical modifications produced in the human body by medicines and poisons. Many students do not get a sufficient knowledge of physiological chemistry, for, in most institutions, the instruction is incomplete and the equipment inadequate. In France the situation is quite different. The instruction in this subject is well organized and is insisted upon. The article contains many interesting and useful points of detail.

Les Étudiants Américains en France, by Raphael Georges-Levy.—This important article is discussed editorially in this issue of the REVIEW.

L'Œuvre scolaire de la jeune Hongroie, 1868--96, by J. Kont.—In this second and concluding paper the writer traces the recent progress of elementary education in Hungary.

Revue Internationale de l'Enseignement, March 15, 1897

Un Réformateur de l'Enseignement, by G. Monod.—A sketch of Emile Frédéric Rieder, born in Alsace in 1828.

Les observations d'un pédagogue allemand sur nos écoles, by Louis Weil.—Professor Hartmann of Leipzig was commissioned by the Saxon minister of public instruction to study the schools of Switzerland and of France, especially the teaching of modern languages, and the present article is a review of the book that contains the results of Hartmann's observations.

La Réforme du baccalauréat classique.—This is a report presented to the Society for Higher Education, by M. Picavet, dealing with the details of the examination for this degree.

EXTRACTS FROM EDUCATIONAL REPORTS

President J. G. Schurman, Cornell University, . . . Report for 1895-96

The method of admitting students on approved credentials is the rule at Cornell University. As against 5 per cent.

of new students entering the University by means of examinations, 52 per cent. are admitted on school certificates and New York Regents' diplomas and 21 per cent. on college certificates, while of the remainder 15 per cent. consists of law students, for whose method of entrance statistics are not available, and 7 per cent. of special students who are admitted, without examination, on the recommendation of heads of departments. The method of admission on approved credentials is a great convenience to students; and it must be remembered that the students of Cornell University come from practically every State and Territory in the Union, and that even in the 57 per cent. whose residence is in New York State, every county of the State is represented. There are two other considerable advantages of the system. In the first place, it insures equitable and considerate treatment for every matriculant individually—his scholastic record being furnished by the person who knows him best, his teacher. And, secondly, by this recognition of the work of the high schools and academies, the University is brought into close, intelligent, and mutually beneficial intercourse with them. Everything that makes for freer and more cordial relations between the secondary and the higher institutions of learning should be sedulously cultivated. At Cornell University, especially, which has no private academies in affiliation with it, but draws four-fifths of all its students from the public schools, which are the people's schools, this object is of unusual significance, and fortunately it is also congenial to the spirit and traditions of the University.

A slight modification of the system, for the meantime at least, has been found necessary. English has been withdrawn from the list of subjects in which students are admitted by certificate from schools; and it seems not unlikely that Regents' diplomas will, in the near future, be accepted with the same reservation. Whether the system needs further restriction is a question that must constantly be kept in view.

Superintendent Clarence F. Carroll, Worcester, Mass. . . . Report for 1896

No one acquainted with the work of the kindergarten can doubt that the training here received by both the rich and

the poor has an economic and moral value affecting the city not less directly than that given in the high school. The cost of the pure kindergartens for the last year was \$4159.42. The cost per pupil in the pure kindergartens was \$33.11, which is \$5.23 more than the cost per pupil in the other schools. To find the net cost of pure kindergartens, a considerable deduction should be made from the figure above (\$4159.42), because many children remain in the pure kindergarten after they are five years old, at which time they become of regular school age.

Within the last ten years, physiology, nature-study, gymnastics, and manual training have been added to the curriculum. In consequence of these additions, and of the more careful training needed by teachers, it has become the fashion to say that the course of study is overcrowded. If this is true, this committee has a plain duty, that is to relieve the curriculum of some of the subjects which it now includes. Before going further it should be added that no subject has been added to our curriculum during the last five years, and that all the subjects prescribed in our present course of study are required by law, except nature-study and gymnastics. This point is often overlooked by some who believe that teachers and children are required to do more than we can reasonably ask them to attempt.

One other well-known fact should be taken into account in considering this question. In cities and towns west of New York, what is known as our ninth grade is practically unheard of. In other words, children fit for the high school in eight years, while we take nine to accomplish the same thing. The Report of the Committee of Fifteen recognizes but eight grades, and Dr. Harris, who wrote this Report, is recognized as being, at least, safely conservative.

From this it would appear that our ninth grade is either an expensive luxury or else that we are wasting time. You ask if we could abolish our ninth grade and send pupils from the eighth grade directly to the high school. I should reply that this would be entirely practicable at the end of a few years. Such a step would undoubtedly be an advantage to those

who are going to college. On the other hand, the common schools are the colleges of the great mass of children who cannot even enter the high school. On their account we should be very cautious in taking such a step. Moreover it would be possible so to enrich the ninth curriculum as to make it one of the grandest years in the history of every child.

There are several radical evils in our civilization that seriously affect the success of the individual pupil. These same evils will soon seriously affect the standard of our citizenship. I need scarcely enumerate these vices, but the pupils in many schoolrooms in our cities are withered and blighted under our very eyes, and no voice is raised in warning. It is not a question of sentiment so much as a question of citizenship. It is a business proposition, that we should consider seriously, whether we should passively allow the life of half the boys of our public schools to be sapped, and drugged into stupidity by bad habits. We yearly graduate a crop of young criminals to the reform school and the truant school. We do well to acquaint pupils even to a limited extent with their own bodies, but our present teaching in physiology is but a poor apology and has received but the feeblest moral support from the community.

VIII

EDITORIAL

One of the most promising of the advances made in New York by the reform Board of Education is the provision for public high schools. It has long been a disgrace to the metropolis that none but the children of those families who could afford to pay heavy tuition fees to private institutions were able to secure a good secondary education. The two so-called colleges maintained at public expense, the City College for boys and the Normal College for girls, are part high school and part college; but, because of the very meager, but long drawn out, elementary school course upon which they have rested, it has been impossible for them, even with the best intentions, to do for New York what that great city most needs.

The new school law expressly provides for the establishment of high schools, and the Board of Education has gone about the work with intelligence and vigor. Commissioner Taft, chairman of the committee on high schools, has himself been a high-school teacher, and he fully recognizes the essential part that secondary education plays in a well-organized school system. Dr. Marble, the chairman of the committee of the Board of Superintendents on the same subject, is, of course, a powerful and effective ally in such a movement.

It has been determined to establish three high schools in the autumn, using temporarily buildings that are now under the control of the Board of Education, in order not to postpone the opening of these schools a day longer than is necessary. Of course, all high schools should be for boys and girls alike, but it is understood that the plan in contemplation provides one boys' high school, one girls' high school, and one mixed high school. The legislature has passed a bill that will, if approved by the Governor, put \$2,500,000 at the disposal of the Board of Education for the erection of four buildings

planned especially with reference to high-school work. If it falls to the lot of the present committee on buildings to oversee the plans and the erection of these structures, it is quite safe to predict that they will be among the best in the country.

For appointment to positions in these schools applications have poured in by the hundred. The majority of the applicants are unworthy of serious consideration, but among the number are some of the strongest and best secondary-school teachers in the country. Others who are not willing to apply for appointment, but who very properly prefer to stand on their record and reputation, have been urged for appointment by their friends; and a number of such men and women will unquestionably be considered before the appointments are made. Too much care cannot be exercised in selecting principals for these schools. Scholarship, tact, and constructive ability are needed, and they are needed badly. New York has no high-school experience to fall back upon, and its high-school problems are involved and difficult. The authorities would make no mistake whatever if they should lay down, informally at least, two rules for their guidance in making selections for principals and teachers in these schools. No one should be considered who is not (1) a graduate of a college in good standing, and who is not (2) now successfully engaged in secondary-school work. New York State requires that elementary-school teachers in its cities shall all have a high-school education, and New York city should apply the same principle, and insist that its high-school teachers shall have had a college training. Otherwise the schools will lack scholarship from the start. The second condition is no less important. It shuts out at once itinerant educational adventurers in search of a job, ambitious superintendents who want an increased salary, and elementary-school principals, who urge as a qualification for undertaking this new and delicate task the somewhat equivocal claim that they "understand the New York boy."

In these high schools it is proposed to maintain from the beginning classical, scientific, modern language, and commer-

cial courses of study. A mechanic-arts course will be instituted as soon as a proper building can be provided; though Principal Larkins and his staff have lately demonstrated, just across the river in Brooklyn, how a successful manual-training school can be organized and built up in an old and unsuitable building. The secondary-school courses that New York most needs are the scientific, the commercial, and the mechanic arts. The technical and commercial education of France and Germany must be imitated, and if possible improved upon, in the manufacturing and commercial metropolis of the United States. And by commercial education is not meant mere business arithmetic, stenography, and book-keeping; but that adequate study of commercial geography, economic history, and trade conditions that is needed to make young men and women thoroughly useful in the conduct of a modern business, large or small. Great Britain has recently been frightened, particularly by German competition, into studying the problem of technical and commercial education, and the great city of New York cannot follow its example too quickly. This is one of the reasons why it would be suicidal to put a mere pedant or a narrow-minded pedagogue in charge of any of these high schools. They are big with promise for the future civilization of New York, if wisely developed and efficiently conducted.

Another important innovation, that makes for civilization and for decency, has been made in New York by the joint action of the Board of Health and the reform Board of Education. This is the systematic medical inspection of public-school children by a corps of 150 physicians, appointed for the purpose. The first examination was made on March 29, and the reports of the inspectors showed at once that the school children have not only been shamefully neglected, but have also been allowed to spread contagious diseases to an alarming extent. Certainly many principals and teachers must have been either densely ignorant or extremely negligent to permit such a condition of affairs as was found to exist. As a result of the first day's inspection, no fewer than

140 children had to be excluded from the schools. There were found 14 cases of diphtheria, 3 of measles, 1 of scarlet fever, 35 of contagious eye diseases, 3 of mumps, 1 of croup, 8 of chicken pox, 8 of skin diseases, and 67 cases of parasitic diseases. The children with measles and scarlet fever were "peeling," and of course most liable to spread the contagion. One teacher appealed to the examining physician to send her entire class home, so filthy were they.

It is this sort of barbarous neglect that has been permitted to go on for years in New York without any movement for its abolition by the old régime. A new and intelligent administration construes its duty and responsibility differently, and hereafter not only will the great city's death rate be decreased, but the school children will be taught something of personal cleanliness and of care for the health of others that will do them more good than all the studies of the curriculum taken together.

President Gilman, who was president of the Baltimore School Commission—just ousted by the courts, unfortunately—has recently expressed, in a published letter, his views on the subject of city school administration. They are clear and accurate, and wholly in accord with the best modern thought. Mr. Gilman seems a little timid, unduly so, about enforcing his views, for they are sound not only for one community, but for all urban populations that wish to see their schools carried forward steadily, without political influence or personal "pulls."

The Legislature of North Carolina not only withstood the demands of the barbarians who wanted to cripple the higher educational institutions of the State, so that the sectarian colleges might be the gainers, but it increased the regular appropriation to the University twenty-five per cent., and that to the State Normal and Industrial School at Greensboro fifty per cent. This is wise and prudent legislation, and should be but the first step in an educational advance all along the line, both in North Carolina and in the South generally.

It is doubtless true that not more than a score of American teachers are regular readers of *Cosmopolis*, the monthly review published by Unwin of London, that divides its space almost equally between articles written in English, in French, and in German. Now that that review has demonstrated its ability to exist and to maintain high standards, it may be confidently recommended to those teachers who feel that they can afford but a single point of periodical contact with the contemporary culture of Europe. *Cosmopolis* is well edited and well printed. The articles in French and German enable American readers to keep up easily their reading knowledge of those languages, and the contributors are of the best. If we may refer to a single issue of *Cosmopolis*—that for March, 1897—it will be found to contain an unusually large number of articles that cultivated Americans should be glad to read. For example, there are papers on John Stuart Mill, by Sir Charles W. Dilke; on Current German Literature, by John G. Robertson; on L'Amérique Universitaire, by Baron de Coubertin; and on Türkische Reformen seit vierzig Jahren, by H. Vambery. In addition there are contributions of a more strictly literary character by Max Müller, Paul Heyse, I. Zangwill, and others.

The article by Baron de Coubertin on L'Amérique Universitaire is worthy of more extended mention, as it is a sympathetic and helpful discussion of some phases of our higher education. Our university life, the country over, is described as manifesting an absolute moral uniformity under the greatest possible material diversity. The universities are constitutional monarchies, so great is both the moral and the actual authority of the university president. The basis of the moral uniformity referred to is thought, by Baron de Coubertin, also to explain the readiness and ease with which foreign immigrants become Americans. It lies in the tacit acceptance, by Americans, of one view of life and one formula of action, which is this: Work is the universal law; putting forth of effort is the highest happiness; success is not an end in itself, but merely a means of attempting still higher; the individual has no value apart from his relations to the race; his own conscience is his only guide and his final judge;

he toils with tremendous zeal and dies with resignation. To turn this formula into a body of doctrine, and to apply it, is the task that the American university has set before itself.

The universities are increasingly popular. Through the devotion of large bodies of deeply attached alumni, they are building up a respect for tradition and a spirit of fraternity, two sentiments that must carry far-reaching consequences in their train. The universities are also a powerful disciplinary force in America. The American people understand obedience and practice it to a wonderful degree. No other people have shown themselves so capable of self-discipline. The universities contribute powerfully to this condition. The American universities are not likely to influence France directly, in the near future, but they are now influencing it indirectly because of the part they play in shaping the life of a great nation that has intimate relations with Europe.

A recent article on some relations between French and American universities is that by the well-known publicist, M. Raphael Georges-Levy, published in the *Revue Internationale de l'Enseignement* for February 15 last. The attention of French university administrators has been directed for some time past to the fact, so strongly emphasized by Professor Wenley of Ann Arbor in his article contributed to the March issue of this REVIEW, that Americans, as a rule, go abroad to study in Germany, rather than in France, Scotland, or England. A strong movement has been set on foot in Paris, under the best auspices, to attract American students to the French universities, and M. Georges-Levy discusses the matter, in the article named, with clearness and force. His article contains a translation of a letter written to him by an American professor, making some practical suggestions for co-operation between the universities of France and those of America. More will be heard of this movement, it is quite certain, in the near future.

The Conference on College Entrance Requirements in History, which reported to the New England Association of Colleges and Preparatory Schools October 11, 1895, and

whose report, after slight amendment, was adopted, re-assembled on March 17, 1897, to examine certain plans of a similar kind which had appeared since their report. After deliberation it unanimously passed the following votes:

Voted, That this Conference after careful comparison of the proposals of the New York Conference on requirements for entrance examinations in history, with the report made by this Conference to the New England Association of Colleges and Preparatory Schools and amended by that Association, sees no essential differences between the two reports, and cordially approves the scheme proposed by the New York Conference.

Voted, That this Conference urges upon the Colleges the desirability of conforming their requirements to the New York report as soon as possible, they having been already accepted by Cornell University, by the University of Pennsylvania, by Tufts College, and by Harvard University provisionally.

Voted, That an examination of the requirements which the Harvard Faculty provisionally adopted January 20, 1897, shows that it adheres in all essential respects to the New York report, the changes being chiefly in phraseology and details.

This Conference consisted of the following persons: Professor Katharine Coman of Wellesley, Miss Anna Boynton Thompson of Thayer Academy, Professor Albert Bushnell Hart of Harvard, Professor Edwin A. Start of Tufts, and Principal Ray Greene Huling of Cambridge as chairman.

The second annual meeting of the North Central Association of Colleges and Secondary Schools developed one innovation that is most commendable and that should be imitated. Where discussion was to be had, the topic was stated in the form of a parliamentary resolution, and at the conclusion of the debate the question was put. In the hands of a competent chairman this device might become a most effective influence in improving the character of many educational meetings.

The Chicago *Times-Herald* is responsible for the following story of a Kansas school district:

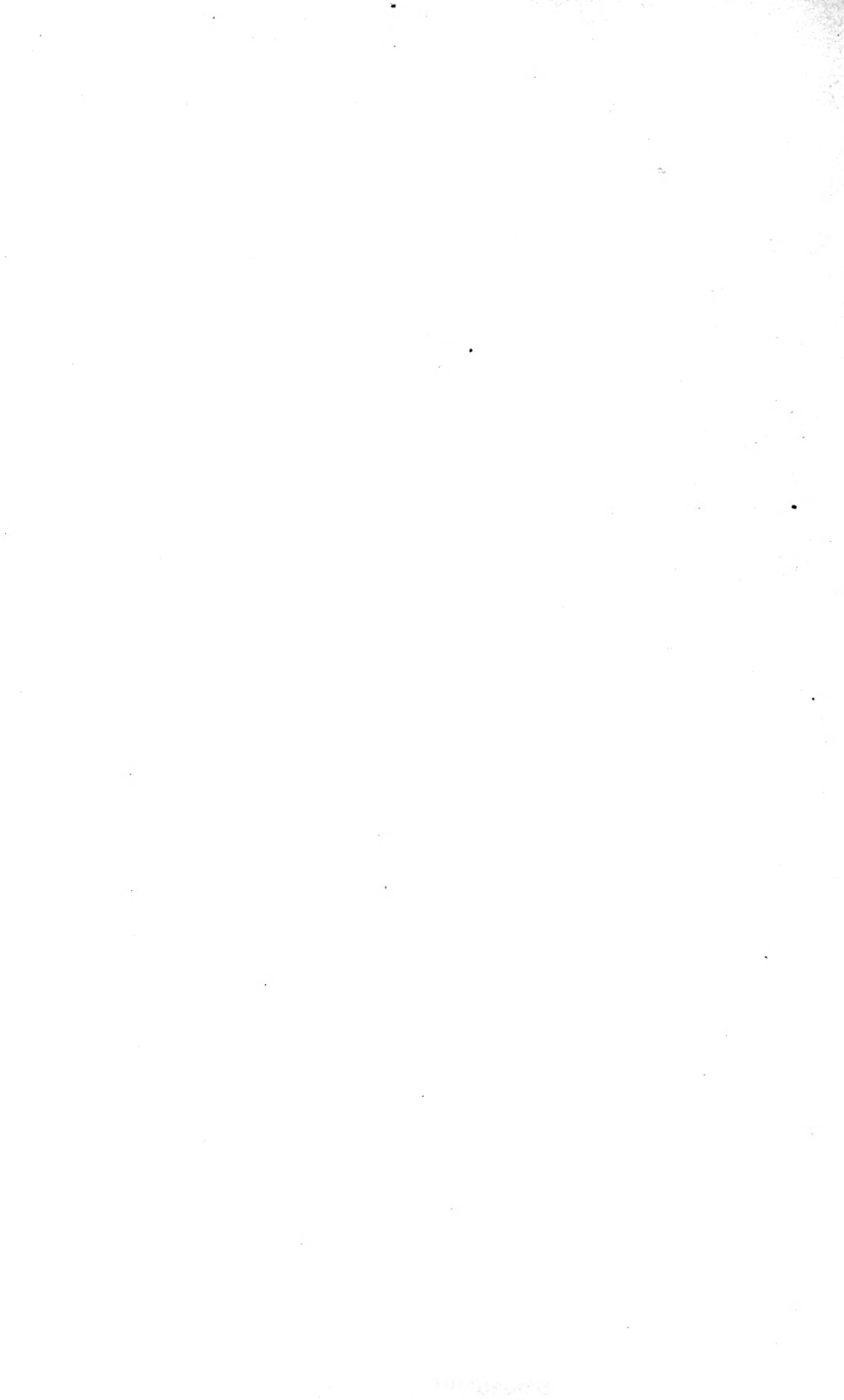
"I know of one school district in which the land is mainly owned by non-residents and where the actual voting population has been reduced to one family—a man, his wife, and two grown sons. These four voters levy the school tax and elect a school board, consisting of the father, mother, and one grown son. This board employs the other grown son as teacher at fifty dollars a month, and the only scholar is the small boy of the family. The popular sentiment for free education is strong in that district."

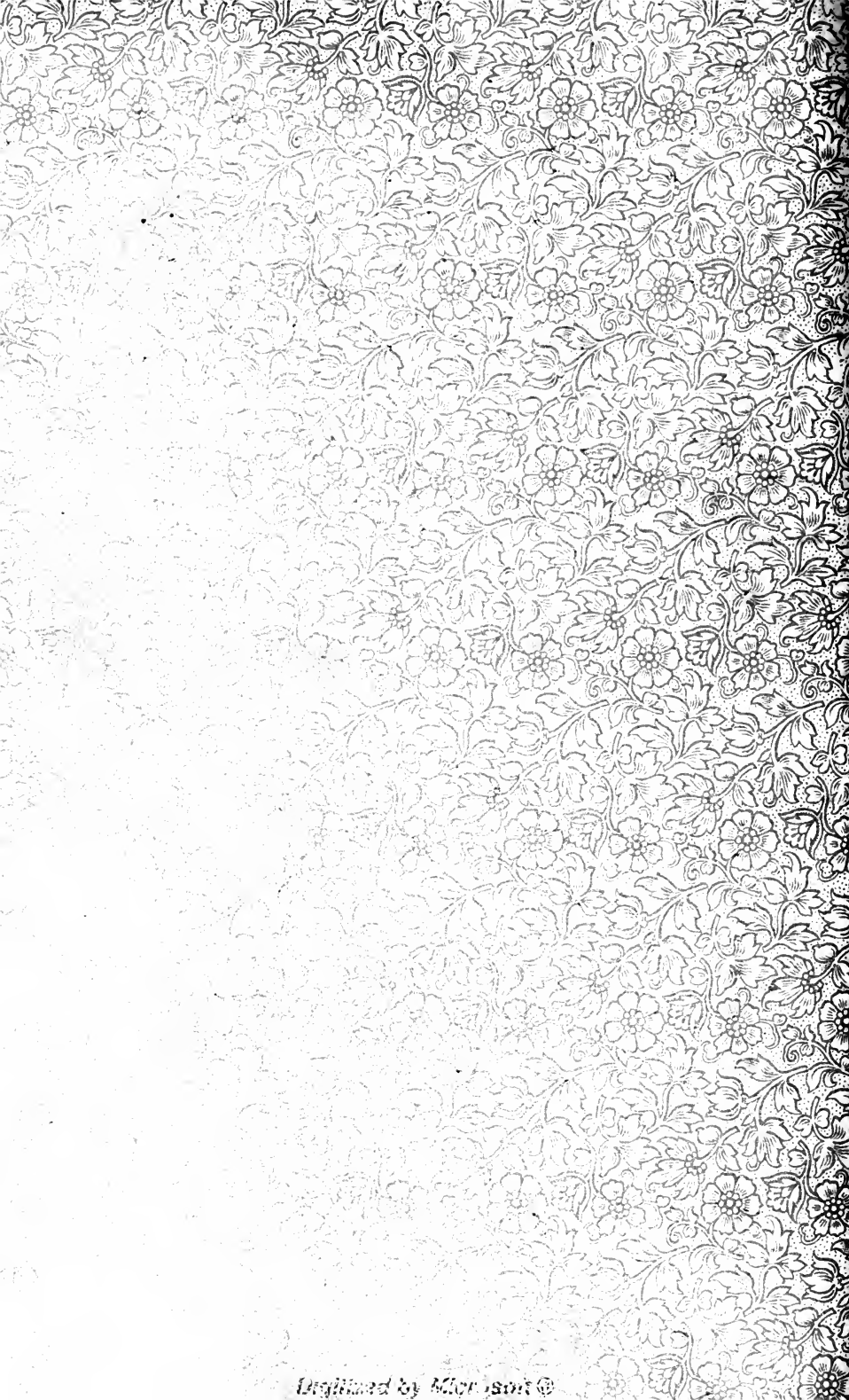
The New York legislature of 1897 consisted of 50 senators and 150 assemblymen. On one issue, in which the whole educational force of the State was on one side and only the Government and the Government's son on the other, education commanded 7 votes in the Senate (Messrs. Brackett, Brush, Chahoon, Pavey, Stewart, White, and Wray) and 7 in the Assembly (Messrs. Hobbie, Laimbeer, Mathewson, Sanger, J. J. Sullivan, T. P. Sullivan, and Sweet): politics got all the rest. The issue in question was the revolutionary and unnecessary bill to incorporate the New York Law School, with full power to confer degrees, as described in this REVIEW for April. Governor Black signed this bill on April 19, and the Government and the Government's son have thus had the pleasure of using their short-lived power to undermine the educational system of the State of New York. The State has now an opportunity to enjoy what one Senator who voted for the bill said it ought to have; namely, "at least one 'soft snap' law school."

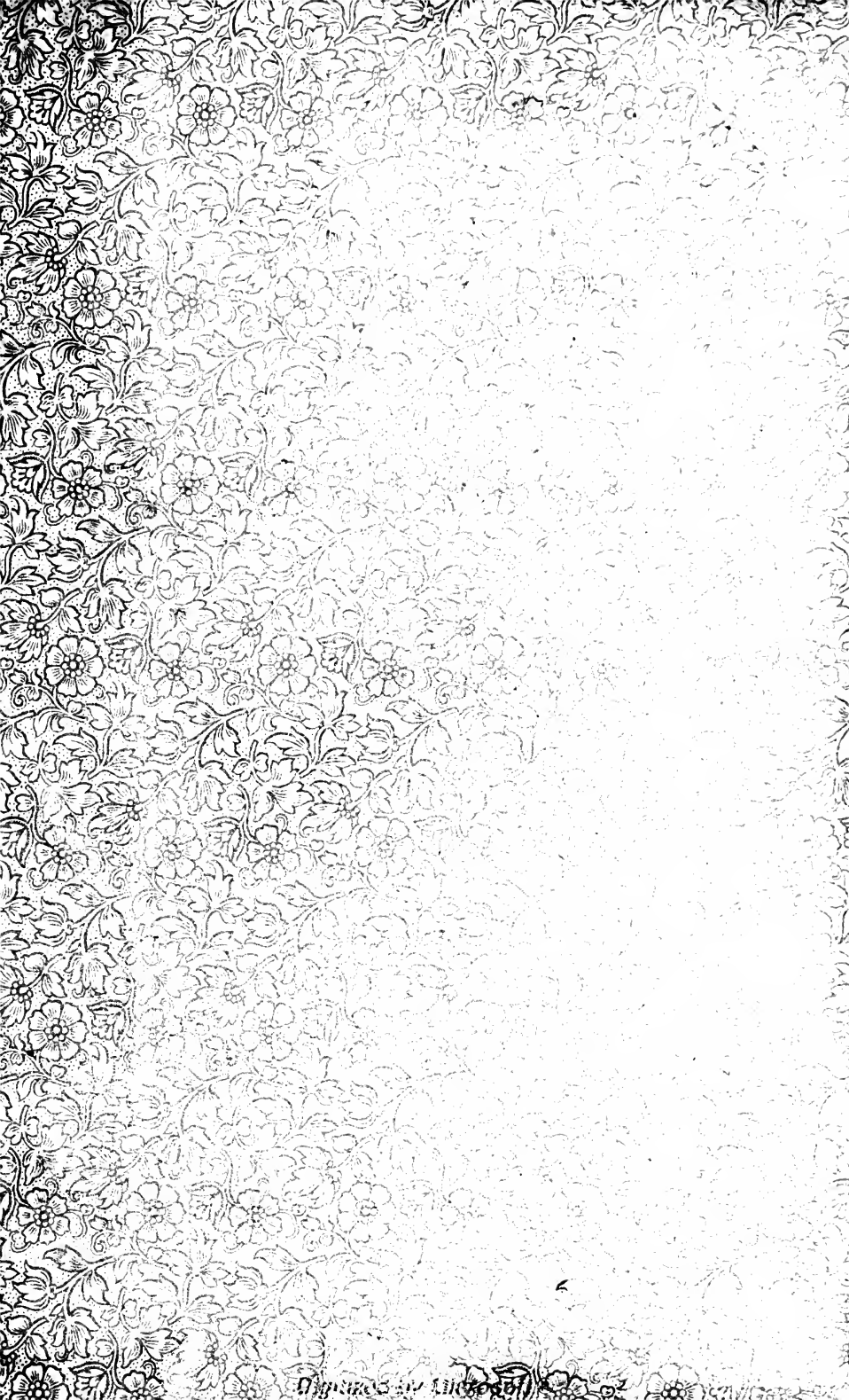
The newspapers report the summary removal, for political reasons only, of President George T. Fairchild of the Kansas State Agricultural College, together with fourteen of his colleagues. If this charge should prove to be true it would be a blot on the good name of Kansas that will not soon be removed. A far higher type of civilization is shown in Pennsylvania, a State in which party feeling runs very high, where Governor Hastings has reappointed State Superintendent Schaeffer for another term of four years. The American people have got to teach the spoils-hunting politicians some pretty severe lessons before the divorce between education and politics will be complete.

The School Committee of Holyoke, Mass., has passed the following rule, which is worthy of widespread imitation:

The superintendent shall be the head of the schools, and, as such, shall have a voice in the councils of the board and of the various committees. He shall nominate his assistants and the teachers, make all assignments and transfers of teachers, and have entire charge of the classification, examination, and promotion of pupils.







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