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# **THE PRESIDENT'S REPORT**



**THESE VOLUMES ARE DEDICATED**  
**TO THE MEN AND WOMEN**  
**OF OUR TIME AND COUNTRY WHO BY WISE AND GENEROUS GIVING**  
**HAVE ENCOURAGED THE SEARCH AFTER TRUTH**  
**IN ALL DEPARTMENTS OF KNOWLEDGE**

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THE UNIVERSITY OF CHICAGO. *University*  
FOUNDED BY JOHN D. ROCKEFELLER

# THE PRESIDENT'S REPORT

ADMINISTRATION

THE DECENNIAL PUBLICATIONS  
FIRST SERIES VOLUME I

CHICAGO  
THE UNIVERSITY OF CHICAGO PRESS  
1903

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## THE PRESIDENT'S REPORT

*To the Board of Trustees of the University of Chicago:*

**GENTLEMEN:** In presenting herewith the first Decennial Report of the University, it is perhaps necessary to recall the various dates from which calculation has been made. The first gift for the University of Chicago was announced in Boston, May 30, 1889, and at that time a resolution was passed to undertake the establishment of a college in Chicago. The Board of Trustees was duly appointed in June, 1890, and held its first meeting for organization July 9, 1890. The first officers of instruction began work July 1, 1891. It was decided by the Trustees, in connection with the Quinquennial Celebration in 1896, to regard July 1, 1891, as the actual date of the beginning of the work of the University. The doors of the institution were opened for students October 1, 1892. The present Report covers the preliminary year 1891-92 and ten years of actual work closing July 1, 1902. It has been thought wise to regard the celebration of the Decennial of the University as covering the entire period of the year 1901-2. Exercises were held during the first week of July, and during the year the members of the various Departments, in celebration of the event, have contributed papers which are published in the volumes accompanying this Report.

In placing before you the Reports of the various Administrative Officers of the University (Vol. I), the Catalogue of books, articles, and reviews published during these years (Vol. II), the contributions of the various Departments of the University (Vols. III-X), together with the Second Series of more elaborate contributions (Vols. I-XVII), and the General Register of students and alumni, I desire to call attention to certain general matters which are not included in the special Reports, to make comment on these facts, and to formulate such suggestions as appear to be warranted by the experience of this first decade. In my comments and suggestions I have assumed the privilege of speaking frankly and plainly. It has seemed to me that a Report which was not thus candid and direct would not be worthy of the institution represented. For the comments and suggestions herewith presented no one is to be held responsible but myself.

I desire at this point to express the hope that a similar Report may be made by the officials of the University in connection with each decade of its progress. In these modern times ten years count for as much as one hundred years did formerly. It is worth the while of those engaged in any important undertaking, educational or otherwise, to sum up the results of the work accomplished in ten years, to consider the policies which have prevailed, and to decide whether, in view of all the facts, these policies have been correct and have secured the results desired. Moreover, it is to be remembered that many policies, at least those of minor importance, may wisely be

changed from time to time even under the same administration; for a policy which may have been the best for a certain period may not be the best for another period. It has been customary in educational administration to wait for the change of an administration before introducing or adopting new policies. This is a mistake. The institution is thus too frequently compelled to wait a longer period than is wise. It may, of course, be difficult for an administration to adapt itself from time to time to changes, but, however difficult this may be, it would seem to be upon the whole a wise policy.

#### I. THE BOARD OF TRUSTEES

The membership of the Board of Trustees has suffered material change during the ten years. Of the original twenty-one members, only eight are still identified with the work. During the period under review, three have been taken away by death, and ten have been compelled to withdraw because of outside work or for other reasons. The members of the Board have exhibited to a remarkable extent three important characteristics: faithfulness in service, unanimity in action, and generosity in giving. During the ten years there have been held more than two hundred and fifty meetings at which at least a quorum has been present, the average attendance being twelve or thirteen. This fact is significant when it is remembered that several members of the Board have been absent for long periods in Europe, and that four or five members have lived at a distance from Chicago, viz., at Detroit and New York city. To this large number of Board meetings must be added the still larger number of committee meetings (not less than a thousand) at which four or more members have always been present. It will not be forgotten that the membership of the Board is largely made up of men who are connected with large enterprises. This is illustrated by the fact that during the period of organizing the University five members of the Board were at the same time Directors of the World's Columbian Exposition.

On nearly every important question the action of the Trustees has been unanimous. I can recall only half a dozen matters, some of them of very minor importance, which have passed the Board with votes recorded in the negative. This seems an almost incredible statement when it is recalled that over ten thousand distinct recommendations, covering every imaginable subject both of an educational and business character, have been presented to the Board for its consideration. That this unanimity has not grown out of indifference is seen from the further fact that many matters have been debated through a period of one, two, or even three years before a conclusion has been reached.

No man can calculate the actual value of the time given the University by the Trustees in Board meetings, committee meetings, and conferences; but, in addition to all this, the Trustees have themselves contributed about \$1,000,000 to the University treasury, thus giving indubitable evidence of their personal interest in the great enterprise intrusted to their charge. In some instances these gifts have been made with considerable cost to the donor, but in every case with a splendid enthusiasm.

In the first years, and in connection with the financial panic of 1893, there were times of serious concern. It was not altogether certain that the new institution could meet the heavy demands made upon it in view of the generous scale on which it had been started. In these times of crisis the strength and courage of the Trustees individually and collectively appeared at its best. One may never forget some of these meetings in times when only the greatest skill and wisdom prevented disaster. But while some days, it is true, have been very dark, during most of the time the sky has been fairly bright; and today the Trustees may regard with some degree of satisfaction the outcome of these ten years of labor.

During the larger portion of this period the work of the Trustees has been placed in the hands of committees. The Committee on Instruction and Equipment has considered and made recommendations on all appointments, all matters of educational policy, all purchases of equipment and apparatus, including books and collections. The work of this committee has been exceedingly arduous. All nominations for positions on the staff have received careful study, and all questions of promotion and salary have here been taken up. During the period under review the committee has supervised the expenditure of about \$5,000,000. The Committee on Buildings and Grounds has had the most important and responsible task of determining the character of buildings, selecting architects, and passing final judgment on plans and specifications. The success or failure of this work will be determined by the estimate placed upon the results accomplished as they appear in the twenty-nine buildings, costing \$4,000,000, which now stand upon the University Quadrangles. The Finance Committee has been in special charge of the funds of the University, and has recommended all investments. The investments and reinvestments for the ten years have approximated the sum of \$15,000,000, at present distributed as follows: in real estate, \$3,443,138.35; in bonds, \$4,024,846.68; in stocks, \$310,427.09; in mortgages, \$896,550. The responsibility of this work has been very great, and the amount of time demanded for it almost incalculable. The committee has acted upon the principle that investments must be of the very highest character to secure recommendation. Other committees of the Board requiring a smaller amount of work have been: the Committee on Affiliated Work, including Morgan Park Academy, and the Committee on the University Extension and University Press Divisions.

It has been the custom of the Trustees from the beginning to take up for consideration in the month of October the Budget for the year beginning the following July. The Budget Committee, consisting of the chairmen of the various committees, together with the President of the Board of Trustees and the President of the University, has carefully gone over the estimated receipts and expenditures for the coming year. To this committee have been presented the requests of various Departments. After a full consideration of all such requests, the Trustees have regularly voted the Budget for the ensuing year in the last week in December. The invariable rule has been to approve no expenditures except those for which the money was actually provided. The

conservatism of the estimates thus made six months before the time set for the beginning of such expenditures may be gathered from the following table, which presents the estimated receipts and expenditures, together with the actual receipts and expenditures, for the five years beginning 1897:

Year	Estimate	Receipts	Expenditures
1897-1898 .....	\$703,213	\$708,973	\$878,400
1898-1899 .....	729,515	723,083	719,923
1899-1900 .....	749,107	744,955	747,186
1900-1901 .....	759,365	775,855	790,594
1901-1902 .....	893,025	977,828	944,348

An Expenditure Committee, consisting of the President of the University, the Secretary of the Board of Trustees and the Auditor, together with the President of the Board of Trustees — who, however, has been unable ordinarily to be present at the meetings of the committee — has supervised the expenditure of the various appropriations in accordance with general rules established by the Trustees. No officer of the University has been accorded the privilege of expending even the smallest sum of money unless that expenditure has beforehand been authorized under an appropriation made by the Trustees. The establishment of the Budget from year to year and the rigid adherence to its provisions have made it possible to reduce the work of the University to a thoroughly business basis, and it may fairly be claimed that the affairs of no business corporation are conducted more strictly on business lines than are those of the University. For the convenience of all members of the Board, and for the information of those who are unable to be present at particular meetings, the minutes of the Board from month to month are transmitted in copy to each member. This provision has made it possible for all of the members to keep themselves in touch with every detail of University work, in so far as that work is supervised by the Trustees.

The history of these years shows conclusively that the attitude of the Trustees toward the Faculties of the University has been broad and liberal. It is understood that all questions involving financial expenditure fall within the province of the Trustees and are to be considered by them; that all appointments to office in the University are made directly by the Trustees upon recommendation of the President; and that on questions of fundamental policy, involving the establishing of new Faculties and the change of statutes as established by the Trustees, final action is reserved for the Trustees themselves. But it is a firmly established policy of the Trustees that the responsibility for the settlement of educational questions rests with the Faculties, and although in some instances the request of a Faculty has not been granted for lack of the funds required, in no instance has the action of a Faculty on educational questions been disapproved. It is clearly recognized that the Trustees are responsible for the financial administration of the University, but that to the Faculties belongs in the fullest

extent the care of educational administration. During the years covered by this Report there has been no case of an appeal to the Trustees by a minority in any Faculty or governing Board against the action of a majority or against the action of the President.

The history of the growth of the University is in itself the best testimony of the largeness of view taken by the Board of Trustees. With a body of Trustees less intelligent or less able, such progress would have been impossible. It is fair to say that in the breadth of view which has characterized the work of the Trustees there is to be seen an expression of the spirit of the city of Chicago — a spirit to which the University is indebted for many of the important elements that have entered into its constitution. Justice compels me to refer particularly to the work of certain of the Trustees. To Mr. Martin A. Ryerson, the President of the Board during ten years of its history; to Mr. Andrew McLeish, the Vice-President, who has on several occasions in the absence of the President assumed his duties; to Mr. Charles L. Hutchinson, the Treasurer of the Board during the entire period; to Mr. Frederick A. Smith, the Chairman of the Committee on Instruction and Equipment; to Mr. George C. Walker, who has served on various regular and special committees; to Mr. Thomas W. Goodspeed, the Secretary of the Board of Trustees; and to Mr. Edward Goodman, the Treasurer of the Baptist Theological Union, the friends of education in Chicago and the Northwest are indebted for a service in each case without which the University could not have accomplished its work, and for a devotion which, I make bold to say, has not been surpassed in connection with any educational movement in American history.

Not least among the virtues of the Trustees has been the measure of sympathy and support which has uniformly been accorded by them to the President of the University. It may be said that such official support is to be expected on the part of Trustees, and that without it nothing can be effected. This is, of course, true; but I have in mind, in addition to this, the personal help which as individuals the Trustees have accorded me, and without which I could not possibly have endured the strain involved in the work of organization, or maintained the courage needed in the face of so many difficulties. There has been no moment in the ten years when I have not felt that each Trustee was a warm personal friend to whom I might go for that intangible help which a cold officialism does not furnish, but which exists only in connection with personal friendship.

I desire to present the following suggestions:

1. The University should procure the portraits of those who have served as Trustees during these first ten years. Whatever may hold true of future decades, it will always be recognized that special responsibilities rested upon the Trustees of the first decade. The name of each Trustee is so closely associated with the work in all its parts and as a whole as to justify the demand that his portrait should be one of the possessions of the University to be transmitted to later years.

2. Since the period of first organization has now passed, and the work of the Uni-

versity is better comprehended; and since also the details of the work are growing with great rapidity and will continue so to grow, it should be considered whether the present plan of organization in committees will prove in the future to be the most effective. This plan undoubtedly possesses many advantages, chief of which is the fact that the work and responsibility are thus divided, and the various members of the Board are enabled to become more thoroughly acquainted with certain divisions of the University than they could possibly become with all its divisions. But it is a question whether by this organization sufficient unity is secured; whether, as in the case of the ruling bodies of large cities, it would not be better to throw the responsibility of all the details upon a smaller number of men who might be able or willing to give a larger share of their time to the work; and whether, as in the case of business concerns, larger responsibility may not be placed upon the administrative officers. Such a smaller body would constitute an Executive Committee, to which might be given large powers in the intervals between Board meetings. It is perhaps true that in the case of no institution in the country are details presented to the Board of Trustees to such an extent as in the case of the University of Chicago. This policy has surely justified itself in the past, but with the growth of the University it may be doubted whether such men as are desired to serve as Trustees will have the time, aside from their other duties, to consider the work of the University in so great detail.

## II. THE UNIVERSITY STAFF OF INSTRUCTION

During the first year, 1892-93, the staff of the Faculty, including the teachers in the Morgan Park Academy, numbered 103. This included 34 instructors of the rank of Professor, 14 of the rank of Associate Professor, 22 of the rank of Assistant Professor, 13 of the rank of Instructor, 9 of the rank of Associate (then called Tutor), 11 of the rank of Assistants and Readers. The average salary per month was \$195. For the fifth year, 1896-97, the staff of the Faculty, including the Morgan Park Academy, numbered 170. This included 44 instructors of the rank of Professor, 26 of the rank of Associate Professor, 34 of the rank of Assistant Professor, 40 of the rank of Instructor, 10 of the rank of Associate, 16 of the rank of Assistants and Readers. The average salary per month was \$182. For the tenth year, 1901-2, the staff of the Faculty, including the Morgan Park Academy, numbered 280. This included 76 instructors of the rank of Professor, 34 of the rank of Associate Professor, 44 of the rank of Assistant Professor, 41 of the rank of Instructor, 40 of the rank of Associate, 45 of the rank of Assistants and Readers. The average salary per month was \$171. It will be seen that the total number has grown in ten years from 103 to 280, and that the average monthly salary has decreased in ten years from \$195 to \$171. The following table presents the various Departments in which these instructors have been distributed.

This distribution shows for the ten years that practically little attention has been given to work, on the one hand, in subjects connected with *Æsthetics*, and, on the other hand, in subjects connected with *Technology*. It appears that the strength of

the institution has been devoted, outside of the Divinity School, to the regular subjects in Arts, Literature, and Science. It may be claimed that in the distribution between the Humanities and Science the latter has been fairly dealt with. When account is

		Professors	Associate Professors	Assistant Professors	Instructors	Associates	Assistants			Professors	Associate Professors	Assistant Professors	Instructors	Associates	Assistants
Chemistry	1892-93	1	..	2	..	..	2	History	1892-93	2	1	1	..	..	..
	1896-97	1	..	3	1	..	2		1897-98	2	2	3	2	1	..
	1901-02	1	2	..	3	..	4		1902-03	4	3	1	2	..	1
Geology	1892-93	5	2	..	..	..	..	Archaeology	1897-98	1	..	..	..	..	..
	1896-97	6	1	..	..	..	1		1902-03	1	1	..	..	..	..
	1901-02	5	..	1	..	1	..		1892-93	1	1	3	..	..	..
Zoology	1892-93	1	..	1	3	..	..	Sociology	1897-98	2	3	2	..	..	..
	1897-98	1	..	3	..	1	..		1902-03	3	5	1	..	..	..
	1902-03	1	2	..	1	..	4		1892-93	..	1	..	..	..	..
Anatomy	1892-93	..	..	1	..	..	..	Comparative Religion	1897-98	..	1	..	..	..	..
	1897-98	..	..	1	1	..	..		1902-03	1	..	..	1	..	..
	1902-03	1	..	2	1	3	1		1892-93	2	3	..	1	..	..
Physiology	1892-93	..	..	2	..	..	..	Semitic Languages	1897-98	2	3	..	3	..	..
	1897-98	..	1	..	1	..	..		1902-03	5	1	2	1	1	..
	1902-03	1	..	2	1	1	4		1892-93	2	..	..	1	..	..
Neurology	1892-93	1	..	..	..	..	..	Biblical and Patristic Greek	1897-98	2	..	..	1	..	..
	1897-98	1	..	..	..	..	..		1902-03	2	..	1	1	..	..
	1902-03	1	..	..	..	..	3		1892-93	..	..	1	..	..	..
Paleontology	1897-98	..	1	..	..	..	..	Sanskrit	1897-98	..	1	..	..	..	1
	1902-03	1	..	..	..	..	..		1902-03	1	..	..	..	1	..
	1892-93	..	..	..	..	..	..		1892-93	1	1	2	..	..	1
Botany	1897-98	1	..	..	1	1	1	Greek	1897-98	2	2	..	1	..	..
	1902-03	2	..	1	2	1	2		1902-03	3	2	..	1	..	1
	1897-98	..	..	..	..	..	..		1892-93	2	1	..	..	..	..
Pathology	1902-03	1	1	..	1	2	1	Latin	1897-98	4	..	2	1	..	1
	1892-93	..	..	..	..	..	..		1902-03	4	1	1	1	1	1
	1897-98	..	..	..	..	..	..		1892-93	1	..	1	2	..	..
Public Speaking	1902-03	..	..	1	2	..	..	Romance	1897-98	..	..	2	3	1	..
	1897-98	..	1	1	..	1	1		1902-03	..	2	2	2	2	1
	1902-03	..	1	1	..	1	1		1892-93	..	..	1	2	..	..
Pedagogy	1897-98	1	1	..	..	..	..	Germanic	1897-98	..	1	2	1	..	..
	1892-93	1	1	..	..	..	..		1902-03	1	1	2	1	2	1
	1902-03	2	1	..	1	..	..		1892-93	2	1	4	1	..	..
Systematic History	1897-98	..	..	..	1	..	..	English Literature	1897-98	2	3	5	4	..	..
	1892-93	3	..	1	..	..	..		1902-03	3	2	5	1	4	..
	1897-98	..	..	..	1	..	..		1892-93	2	3	1	..	..	..
Danish-Norwegian Theol.Sem.	1902-03	1	..	1	1	..	..	Literature in English	1897-98	5	2	..	2	..	..
	1897-98	1	..	1	1	..	..		1902-03	1	..	..	..	1	..
	1892-93	..	1	1	..	..	..		1892-93	1	1	1	..	..	..
Philosophy	1897-98	1	1	2	..	1	1	Mathematics	1897-98	2	1	1	3	..	..
	1902-03	4	2	3	1	1	..		1902-03	2	1	3	1	1	..
	1897-98	2	1	..	1	..	..		1892-93	..	1	1	..	..	2
Political Economy	1892-92	2	1	..	1	..	..	Astronomy	1897-98	2	1	1	2	..	2
	1897-98	2	..	1	1	..	..		1902-03	4	..	1	3	..	3
	1902-03	1	..	4	1	..	..		1892-93	1	..	1	..	..	..
Political Science	1892-93	1	..	..	..	..	..	Physiology	1897-98	1	1	..	3	3	1
	1897-98	2	..	1	..	..	..		1902-03	2	..	2	3	..	1
	1902-03	2	..	..	..	1	..								

taken of the several laboratories erected, the considerable amount of equipment purchased, and the strong staff appointed in the various departments of Science, it will be recognized that a large share of the facilities of the University has been turned in



this direction. Criticism has been made more than once to the effect that it would have been better to have inaugurated work in the Technological Departments from the beginning—in other words, that the practical side deserved a larger consideration than it received. It is certainly true that the demand for the more practical departments of Engineering has been very great, and that if these departments had been organized at the beginning they would today be perhaps the strongest departments in the University. My answer to the suggestion, however, is twofold: First, it seemed upon the whole wise to devote the entire energy of the institution in scientific lines to departments of pure science, with the purpose of establishing these upon a strong foundation. This work being finished, there would be ample opportunity for the other work, and the other work would be all the stronger when it came, because of the earlier and more stable foundation of pure science. Second, it was also thought wise not to lay too much emphasis on the practical side of education at the outset. No one could fail to see that sooner or later in an environment like that of Chicago the practical side would be sufficiently cared for. The greater danger was that pure science might be left without provision. In any case, the plan adopted was the one which at the time seemed to be the correct one; and events, so far as I can interpret them, do not appear to have contradicted this opinion.

Some interest was excited in the first years of the organization of the University in view of the larger salaries paid to Heads of Departments. The position taken by the Trustees in this matter has never been challenged, nor does anyone today regret the action. In my opinion this action was one of utmost importance. I do not mean to suggest that men of prominence in the field of letters and science are mercenary, but this action was taken as an expression of the serious interest of the Trustees in the work which they had proposed for themselves. Two policies were open for the organization of the staff of instruction. The first, strongly urged by many educators, was that of selecting a few younger instructors and allowing the work to grow more gradually under the domination of a single spirit. The other policy, which was regarded as impracticable by many, was the one adopted, namely, to bring together the largest possible number of men who had already shown their strength in their several departments, each one of whom, representing a different training and a different set of ideas, would contribute much to the ultimate constitution of the University. Considerable risk attended the adoption of the second policy, for it was an open question whether with so large a number of eminent men, each maintaining his own ideas, there could be secured even in a long time that unity of spirit without which an institution could not prosper. During the first year there were times when to some it seemed doubtful if the experiment of bringing together so large a number of strong men would prove successful; but during the middle of the second year certain events occurred which led up to the birth, as it were, of the spirit of unity which had not been hoped for. The Saturday morning on which this new spirit first manifested itself in its fulness may well be regarded as the date of the spiritual birth

of the institution. From that time to the present there has never been the slightest question in the mind of any student of the situation that there existed a strong and powerful influence outside of any personal agency which made for unity of spirit. That this should have come so early in our history was the occasion at the same time of surprise and satisfaction.

The organization in Departments with recognized Heads was effected more rigidly than in any other institution. This organization secured to each Department a separateness and an independence which exhibited both advantages and disadvantages. It was advantageous in that it located responsibility, drew sharp lines, and made more evident points of strength and weakness. It was disadvantageous in that for a time it prevented a much-needed correlation of work between closely related Departments, and laid perhaps too great emphasis upon the difference in rank of officers. Both of these difficulties, however, soon took care of themselves. After a period of three or four years, the process of synthesizing began, and of their own accord Departments, without losing their independence, began to come together for conference on all questions of common interest. Out of this voluntary association there grew up at first Conferences, and very recently by legislative enactment the Group Faculties. I shall refer to these in another connection, and mention them here merely to show the evolution which gradually took place. The other difficulty was also largely removed. It soon became apparent that those Departments in which all the members of the staff came together in democratic fashion and worked out the plans of the Department were best organized for securing good results. Despotism on the part of a Head of Department was short-lived, and while some Heads of Departments reserved larger authority than others, the general relationship of the members of the staff in almost every Department was adjusted to the characteristics of those concerned. The organizing spirit in not a few Departments became that of some other officer than the Head, who perhaps gave himself more exclusively to the work of research instead of to that of administration. Upon the whole, therefore, the plan has probably developed as few difficulties as any other plan which might have been followed. It has the supreme advantage of being exceedingly flexible, and the administration of the different Departments is today almost as varied as the number of the different Departments. This is as it should be. The machinery is a secondary matter, and should be as far as possible that which the men most closely interested themselves prefer.

Only after the first year were the Departments of Botany and Physics organized. It is also to be noted that during the first years the Departments of the Germanic and Romance Languages were to some extent slighted, especially in the field of higher work. This discrimination, however, is a thing of the past, and these Departments are now fully organized. At the close of the second year the so-called Department of Biology was divided into five Departments, namely, Zoology, Botany, Anatomy, Physiology, and Neurology, and still later the Department of Paleontology was set apart. Here again the question may be raised as to the more minute division

of Departments. It is generally believed that the lines of departmental organization may not be strictly drawn. From a more scientific point of view, it is quite certain that the study of special problems will carry the student into two or more of the different Departments as they are now constituted. In general little difficulty has arisen from the divisions. There have been times when the line between Political Economy and the Social Science was not satisfactory; as also that between Geology and Zoology. The relationship of Paleontology on the one hand to the geological work, and on the other to that of Zoology, has been disputed, but the departmental organization as originally adopted, with the slight modifications which have been made, seems upon the whole the one best adapted to the interests of all concerned.

A spirit of co-operation has grown up which has shown itself in many ways, and from the more developed growth of which much good may be expected. The staff has been singularly free from cliques. A caucus is something practically unknown. Debate is always free and outspoken. The division of the Faculties varies with almost every question which comes forward. Men who oppose each other vigorously on one subject work together most harmoniously when another subject comes forward for consideration. At two or three times within the ten years there has been more or less excitement. This has demonstrated the sincerity of men in the expression of their convictions, and, as stated above, men who on one of these cases were vigorous opponents, on another clasped hands as allies. Upon the whole, it is perhaps strange that such periods when feeling has become, perhaps, too intense, have not been more frequent. In no community in the world has there been shown a greater readiness to permit the rule of the majority.

It seems evident that a closer bond of union will exist between the Professional Faculties and the staff of the Faculties of Arts, Literature, and Science than is ordinarily found in institutions of learning. No sharp line has yet been drawn between the members of the Professional Faculties and those of the other Faculties. It is my most earnest hope that the tendency which has already shown itself in this matter may continue, and that as other Professional Faculties shall be organized they shall not be isolated from the University at large or from any portion of it, but rather that they shall take their full share in the discussion and disposition of all questions which concern the University life and policy. The future of professional work in this country is largely dependent, in my opinion, upon the closeness of its relationship to the University.

Concerning the individual work of the members of the staff I cannot speak too strongly, but this work is represented in the large number of men and women who have received degrees from the University, and in the remarkable number and notable character of the publications which have been put forth by members of the staff. For a record of this splendid service I refer you to the special volume of this Report, entitled *Publications of Members of the University, 1892-1902*. The honors conferred on the various members of the staff by governments and by institutions of learning are more numerous than can here be recited.

The following persons on permanent appointment have been taken away by death during their service at the University: Ezekiel Gilman Robinson, Professor of Ethics and Apologetics; James Robinson Boise, Professor of New Testament Greek, Emeritus; George Washington Northrup, Professor of Systematic Theology; George Baur, Associate Professor of Comparative Osteology and Paleontology; Francis W. Parker, Director of the School of Education.

The following officers on permanent appointment have been called away from the University to occupy positions in connection with other institutions or in other fields: Professor Franklin P. Mall, to Johns Hopkins University; Professor Edmund Janes James, to the presidency of Northwestern University; Associate Professor George Emory Fellows, to the presidency of the University of Maine; Professor Adolph Caspar Miller, to the University of California.

There are two points in connection with the work of the members of the staff mention of which I cannot omit. The charge of sensationalism has been made by some unthinking persons against certain instructors in the University. This has had its origin in the misrepresentations of professorial utterances which have appeared in the public press, having come from the pens of irresponsible reporters. An effort has been made in most of these cases to discover the basis of the newspaper statements, and it has generally been found that a remark, entirely innocent, has been twisted either by the reporter or by the editor to subserve a humorous purpose. I take the liberty of repeating here a statement made at a recent Convocation:

"I am moved to make a statement of fact and opinion concerning two related subjects which quite recently have attracted some attention in the public mind. The first of these is the freedom of opinion enjoyed in these days by members of the University. The second is the use and abuse of this right by professors of the University Faculty. Concerning the first, I may be permitted to present a statement adopted unanimously by the members of the Congregation of the University on June 30, 1899:

*Resolved*, 1. That the principle of complete freedom of speech on all subjects has from the beginning been regarded as fundamental in the University of Chicago, as has been shown both by the attitude of the President and the Board of Trustees and by the actual practice of the President and the professors.

"2. That this principle can neither now nor at any future time be called in question.

"3. That it is desirable to have it clearly understood that the University, as such, does not appear as a disputant on either side upon any public question; and that the utterances which any professor may make in public are to be regarded as representing his opinions only.

"To this statement of the Congregation I wish to add, first, that whatever may or may not have happened in other universities, in the University of Chicago neither the Trustees, nor the President, nor anyone in official position has at any time called an instructor to account for any public utterances which he may have made. Still further, in no single case has a donor to the University called the attention of the Trustees

to the teaching of any officer of the University as being distasteful or objectionable. Still further, it is my opinion that no donor of money to a university, whether that donor be an individual or the state, has any right, before God or man, to interfere with the teaching of officers appointed to give instruction in a university. When for any reason, in a university on private foundation, or in a university supported by public money, the administration of the institution or the instruction in any of its departments is changed by an influence from without; when an effort is made to dislodge an officer or a professor because the political sentiment or the religious sentiment of the majority has undergone a change, at that moment the institution has ceased to be a university, and it cannot again take its place in the rank of universities so long as there continues to exist to any appreciable extent the factor of coercion. Neither an individual, nor the state, nor the church has the right to interfere with the search for truth, or with its promulgation when found. Individuals, or the state, or the church may found schools for propagating certain special kinds of instruction, but such schools are not universities, and may not be so denominated. A donor has the privilege of ceasing to make his gifts to an institution if, in his opinion, for any reason, the work of the institution is not satisfactory; but *as donor* he has no right to interfere with the administration or the instruction of the university. The trustees in an institution in which such interference has taken place may not maintain their self-respect and remain trustees. They owe it to themselves and to the cause of liberty of thought to resign their places rather than to yield a principle the significance of which rises above all else in comparison. In order to be specific, and in order not to be misunderstood, I wish to say again that no donor of funds to the University—and I include in the number of donors the founder of the University, Mr. Rockefeller—has ever by a single word or act indicated his dissatisfaction with the instruction given to students in the University, or with the public expression of opinion made by an officer of the University. I vouch for the truth of this statement, and I trust that it may have the largest possible publicity.

“Concerning the second subject, the use and abuse of the right of free expression by officers of the University staff: As I have said, an instructor in the University has an absolute right to express his opinion. If such an instructor is on an appointment for two or three or four years, and if during these years he exercises this right in such a way as to do himself and the institution serious injury, it is of course the privilege of the University to allow his appointment to lapse at the end of the term for which it was originally made. If an officer on permanent appointment abuses his privilege as a professor, the University must suffer and it is proper that it should suffer. This is only the direct and inevitable consequence of the lack of foresight and wisdom involved in the original appointment. The injury thus accruing to the University is, moreover, far less serious than would follow if, for an expression of opinion differing from that of the majority of the Faculty, or from that of the Board of Trustees, or from that of the President of the University, a permanent officer were asked to present his resign-

nation. The greatest single element necessary for the cultivation of the academic spirit is the feeling of security from interference. It is only those who have this feeling that are able to do work which in the highest sense will be beneficial to humanity. Freedom of expression must be given the members of a university faculty, even though it be abused; for, as has been said, the abuse of it is not so great an evil as the restriction of such liberty. But it may be asked: In what way may the professor abuse his privilege of freedom of expression? Or, to put the question more largely: In what way does a professor bring reproach and injury to himself and to his institution? I answer: A professor is guilty of an abuse of his privilege who promulgates as truth ideas or opinions which have not been tested scientifically by his colleagues in the same department of research or investigation. A professor has no right to proclaim to the public a truth discovered which is yet unsettled and uncertain. A professor abuses his privilege who takes advantage of a class-room exercise to propagate the partisan views of one or another of the political parties. The university is no place for partisanship. From the teacher's desk should emanate the discussion of principles, the judicial statement of arguments from various points of view, and not the one-sided representations of a partisan character. A professor abuses his privilege who in any way seeks to influence his pupils or the public by sensational methods. A professor abuses his privilege of expression of opinion when, although a student and perhaps an authority in one department or group of departments, he undertakes to speak authoritatively on subjects which have no relationship to the department in which he was appointed to give instruction. A professor abuses his privilege in many cases when, although shut off in large measure from the world, and engaged within a narrow field of investigation, he undertakes to instruct his colleagues or the public concerning matters in the world at large in connection with which he has had little or no experience. A professor abuses his privilege of freedom of expression when he fails to exercise that quality ordinarily called common sense, which, it must be confessed, in some cases the professor lacks. A professor ought not to make such an exhibition of his weakness, or to make an exhibition of his weakness so many times, that the attention of the public at large is called to the fact. In this respect he has no larger liberty than other men.

"But may a professor do all of these things and yet remain an officer in the University? Yes. The professor in most cases is only an ordinary man. Perfection is not to be expected of him. Like men in other professions, professors have their weaknesses. But will a professor under any circumstances be asked to withdraw from the University? Yes. His resignation will be demanded, and will be accepted, when, in the opinion of those in authority, he has been guilty of immorality, or when for any reason he has proved himself to be incompetent to perform the service called for. The public should be on its guard in two particulars: The utterance of a professor, however wise or foolish, is not the utterance of the University. No individual, no group of individuals, can speak for the University. A statement, by whomsoever made, is the statement of an individual.

"And further, in passing judgment, care should be taken that the facts are known. It is a habit of modern journalists, and especially of the average student reporter for the newspapers, so to supply facts, so to dress up the real facts, so to magnify and exaggerate, so to belittle and ridicule universities and university men, that serious injury is wrought, where perhaps no such injury was intended. It is the fashion to do this sort of thing, and it is done regardless of the consequences. Real regard for the interests of higher education would lead to the adoption of a different policy; but, as matters stand, the professor is often charged with acts and utterances implying an imbecility which is not characteristic of him, and to him there are frequently ascribed startling and revolutionary sentiments and statements of which he is wholly innocent. I may sum up the point in three sentences: (1) college and university professors do make mistakes, and sometimes serious ones; but (2) these are to be attributed to the professor and not to the university; and (3) in a large majority of instances the mistake, as published to the world, is misrepresented, exaggerated, or, at least, presented in such a form as to do the professor, the university, and the cause of truth itself, gross injustice."

I take the liberty of presenting the following suggestions:

1. Those who are Heads of Departments and clothed with the responsibility of such Headship should consider carefully what is involved in this responsibility, and the manner in which it affects the relations of the Head to the other members of Departments. The Head should be something more than a mere chairman of the Departmental Faculty. It is quite certain that the Head should not regard himself as the autocratic ruler of the Department. In some cases the Head has gone to one extreme, and the result has been lack of proper organization and effective service. In other cases the Head has gone to the other extreme, and the result has been friction and estrangement on the part of members of the Department. It is possible that in some Departments there are officers who because of natural temperament are better able to administer the affairs of the Department than the Head himself. It is not an altogether unfortunate thing that this fact should be recognized and the younger officer be given permission to do that work because he can do it with less effort. The distribution of the work of the Department is perhaps the most important single factor in its ultimate success, and this must in large measure rest with the Head after consultation with the other members. It seems inconceivable that a Head will ever allow himself to break the close personal relationship which ought to exist between himself and his colleagues. Yet this sometimes happens to the great detriment of the Department.

2. The University has been accustomed in the case of some Departments of Science to make provision for a Laboratory Assistant or Research Assistant whose services shall be at the disposal of the Head of the Department. The actual outcome of this plan is much greater than might at first be supposed. It really means that the Head, notwithstanding administrative duties, is thus enabled to carry on his research work, because to the Assistant he may assign work which under his supervision is as well performed by the

Assistant as by the Professor. I can easily see how the employment of such an Assistant upon a small salary would actually double the productive power of the Professor, while the training thus secured by the Assistant would be of more service than any course of study which could be prescribed. The question is therefore whether the time has not come for the appointment in every Department of such a Research Assistant, one who can be asked to collect material, arrange bibliography, and perform that ordinary service which requires so large an amount of time and which another may perform with as great satisfaction as the high-salaried officer.

3. It is probable that too large a portion of the time of instructors is given to the preparation of ordinary text-books. It cannot be argued, however, that the preparation of college text-books, as well as that of text-books for secondary schools, does not fall within the legitimate province of the university professor. It is not so much a question of the thing itself, but rather the proportion of time thus employed. It is important to recognize the fact that, while there is a demand for restatement of truth already secured, such demand should not lay too heavy a burden upon any one man or upon the men in any single institution.

4. There should be established Research Professorships, the occupants of which might lecture or not according to the best interests of the work in which they are engaged. This is practically the character of the Professorships in the Observatory. There should be chairs in other Departments, perhaps a chair in every Department, to which there might be made a permanent appointment, or which might be occupied for a longer or shorter period by the various members of the Department capable of doing research work.

5. Another step forward should be taken in the matter of salaries. The sum of \$3,000 is not a sufficient income for one who holds the full professorial rank. This salary should be at least \$4,000, while that of the Associate Professor should be made \$3,000. With the salaries thus arranged, the Assistant Professor receiving \$2,000, the Associate Professor receiving \$3,000, and the full Professor who is not a Head of a Department receiving \$4,000, the situation would be greatly improved. While it may not be said that there is too large a difference between the highest salaries and the lowest, it may be said truly that not enough men receive the higher salaries. The difficulty of carrying out such a policy with the continually diminishing rate of interest received on endowments is self-evident, but this means simply that a larger endowment is needed for the satisfactory support of the work undertaken.

6. Arrangements should be made to encourage a larger number of men to devote six months of the twelve to research and investigation, their lecture work and teaching being confined to the other six months. This plan has already been adopted in several individual cases. It is very desirable to place the advantages of this arrangement at the command of others. With the privilege thus secured of living a year abroad and a year at home, the highest results may be achieved.

7. The University should plan and execute at the earliest possible season a pension



system which should make ample provision for those who have been connected with the University for a definite period. Such a system goes far to make the calling of the professor an attractive one, and to relieve his mind from anxiety concerning his old age. The man who at twenty-five or twenty-seven takes up his work in the University on a salary of \$1,200 or \$1,500, whose expenses increase more rapidly in proportion than his income, with only a meager salary at the best before him, will be greatly helped by the knowledge that provision has been made for him in case of illness or old age. Such a system has already been introduced in one or more of our institutions in America, and no institution can be regarded as thoroughly established of which such a provision does not form a part.

8. There are certain obligations which members of the staff sometimes fail to observe. Among these may be mentioned:

a) Promptness at the beginning of the Quarter's work. It is a wrong to the institution and an injustice to the students for a Professor to fail to make his appearance at the first exercise for which he is announced in the University schedule.

b) The continuation of lectures and recitations to the end of the time for which he has been announced. It has sometimes seemed that the final date of an official term of residence was but slightly regarded by those who had some occasion to leave at an earlier period.

c) Access to instructors is a right which students may demand, and a reasonable amount of time should be set apart for such work. The office hour should be kept as regularly by a Professor as by a Dean.

9. That custom which seems to forbid one officer visiting the class-room of another, or to make such visits questionable, is an unfortunate one. Much good would follow from the intervisitation of classes by the different officers. The failure of instructors to observe the teaching of other instructors is at least in part responsible for the failure of many to make use in their work of the most common pedagogical principles. It is the purpose of the President to take occasion to visit the class-rooms of instructors as frequently as his other duties will permit. It is hoped that the other officers of the University may think it wise to adopt this custom.

### III. THE PUBLIC

The question next in importance to that of securing a spirit of unity in a Faculty made up of so many different elements was that of obtaining the good-will and support of the Chicago public. There was grave doubt whether the citizens of Chicago would rally to the support of an institution established so closely in connection with a single denomination and assisted so generously by one man. The history of other institutions organized wholly or in part along the same lines was not encouraging, and the very fact that Mr. Rockefeller was understood to be able to furnish all the money that might be needed was a source of difficulty; but the people of Chicago exhibited in this matter great breadth of mind and intelligence. Moved by the example of a few

men, known throughout the country for their large and generous consideration of important questions, the public at large soon came into friendly relationship with the University. This closer interest and sympathy was secured in part through the fact of the name, "The University of Chicago," and in part through Mr. Rockefeller's refusal to allow his name to be made a part of the main title of the University. It was really a source of considerable surprise that men of such character and in such numbers should within so short a time ally themselves in one way or another with the fortunes of the institution.

These three facts—namely, the sympathy of the public, the strength of the Faculty, and the character of the Trustees—furnish the basis for the progress thus far made.

From the beginning the University has adopted the policy of making its affairs known to the public. This has not been done with the desire to advertise itself. A charge to this effect has frequently been made by those who, for the time being, were perhaps disturbed by the rapidity of the University's growth. Our feeling has been that the institution is a public institution and that everything relating to its inside history, including its financial condition, should be made known. Its deficits have been published as well as its surpluses, and we attribute largely to this policy of public statement, not only the interest of the public, but the confidence which has been shown on so many occasions. It is generally understood that everything relating to the internal history will be made known within a proper time; in other words, the books of the University, both financial and educational, the minutes of its Faculties, and even the record-book of the President are open to all. *Nothing is concealed.* Even that which at the first sight would seem to be disadvantageous is made known. The amount and character of its investments are published annually. Perhaps no other institution has shown a greater readiness to allow its internal affairs to be known and criticised.

The financial support accorded has been something phenomenal. In the course of ten years the list of donors to the University includes more than three thousand names, besides that of Mr. Rockefeller. The gifts actually received, ranging from one dollar upward, have aggregated (up to June 30, 1902) \$17,417,275, and of this sum, \$5,978,371 has been given by friends of the University other than the founder. It is perhaps true that in the history of educational benevolence there is no parallel example. If account were taken of the wills which are known to have been made, this sum would be greatly increased. It is only fair to add that this interest has been largely a local one, inasmuch as the greater part of the \$5,978,371 has come from Chicago. The classes of society from which these contributions have been received are of every possible grade. It is also to be remembered that in the case of at least 90 per cent. of these gifts the initiative was taken by the donor himself.

In no way has the University received more loyal support than in the great multitude of young men and women who have been committed to its care. When we reflect that there still exists a strong tendency in Chicago and the West, especially on the part

of the alumni of eastern institutions, to send the children to the institution with which the parent was connected, and when we consider the great value of a period of residence entirely removed from the scenes of earlier life, we cannot be mistaken in interpreting the fact of the large number of students at work within the walls of the institution as an indication of interest and confidence on the part of the public. The moral support indicated in this and in so many ways has been a bulwark of strength in these early years—years necessarily full of difficulty and discouragement.

To the public press the University is more greatly indebted than it can adequately express; and while not infrequently statements have appeared which seemed to be injurious, it is certain that in no considerable number of cases have such representations been made for the purpose of injuring the institution. The opinion of the newspaper public as to what is helpful and what is interesting often differs from that of the party concerning whom the statement is made. On the whole, it may be said that a fairly satisfactory representation of the work of the University has been presented through the press. It is at all events true that the interest of the papers has been greater than we could have wished, and that, in part, because of this interest, the University is known throughout the world in a way in which it would not otherwise have been known. The press will bear testimony that the University has not sought this prominence; that indeed much has been done by the officers of the University to avoid it; and that more than once official steps have been taken to persuade the press that the University would be just as well satisfied with a more limited share of its attention. It seems necessary to make this statement, since many people honestly believe that the University from the beginning has had a Bureau of Publicity, and that this Bureau has been conducted at great expense for the purpose of advertising the institution. The University has occasionally accepted space in educational journals for the announcement of the opening and closing of its terms of work or for special announcements of special schools or divisions. It has also published similar announcements in the daily press of Chicago. But outside of these announcements its general policy has been not to expend money for advertising purposes except in the preparation of circulars of information which are sent out upon request.

The attitude of other institutions of learning has been very interesting. Institutions of secondary education have almost without exception sought the help of the University and expressed their appreciation of such help. The growth of the Conference of University Instructors and Teachers of Secondary Schools is an indication of the good relationship existing between the University and secondary schools. In another place (p. lxvi) I shall speak more definitely of the relationship by affiliation and co-operation. The colleges of the surrounding states at first regarded the establishment of the University as a source of menace to their interests. Some of them feared that their students would flock in a body to the city of Chicago and their halls be left entirely deserted; others were inclined to be hostile in their spirit. But as years passed it was recognized that the coming of the University had in no way

injured even a single institution of learning in the Mississippi valley; that while students entered the University from all sections of the country, there were still more students for the colleges than they had had before. It appeared that the establishment of the University of Chicago had deepened the interest in college education throughout the West, and that every college was to a greater or less extent the partaker of the advantages accruing from this deeper interest. It was at first thought impossible that the University could take an interest in other institutions, and that of necessity it must be hostile to the smaller colleges, but the utterances of University officers on this question, and the actual facts as they began to be known, proved the contrary. It was soon apparent: (a) that large assistance could be secured from the University in many ways; (b) that close proximity stimulated the work of the college and incited its students to continue in study after the college years had been finished; (c) that a broader spirit prevailed than in the former days, and that, in consequence of this, larger help was being secured for the maintenance of the college. It is now quite generally recognized that the University of Chicago sustains a relationship to these smaller colleges of the Mississippi valley which no other institution can sustain. The state university in each case is the distinct rival of the neighboring colleges because, not only in undergraduate work, but in the professional work, the standards of requirement are such as to make the state institution a competitor. If the standards of admission to the professional schools of the state universities were higher, the colleges would have the privilege of preparing men for this higher work; but since requirements of admission to these professional schools are in no case higher, and in many cases lower, than the requirements of admission to the Freshman class, the state university is in every department a rival of the college, while, on the other hand, the University of Chicago, requiring for admission to its professional schools at least three years of college work, sustains an entirely different relationship—one which encourages the doing of college work before entering upon professional work. This fact is coming to be more and more generally appreciated, and because of it the colleges are being drawn closer to the University.

During this first ten years of the University's history it is a striking fact that a large proportion of the colleges located in the South and West have sent from one-fourth to two-thirds of the members of their Faculties to be students in the University.

The universities east and west have at different times represented various attitudes. Among the eastern institutions there was at first indifference, followed by a certain degree of contemptuous interest, and this, in turn, as the plans of the University became more definitely understood, by an attitude of curiosity and surprise, which later developed into cordial interest and sympathy. Many remarks were made in public and in private about the institution, outlined on paper, the lack of culture in Chicago, and the need of centuries for the upbuilding of an institution of learning. In the West, on the other hand, there seems to have been a considerable degree of sympathy with the work of the University from the beginning. The state universities,

appreciative of the western spirit, recognizing the strength of the location in Chicago, and understanding the basis of development from their own experience, saw clearly that with sufficient resources an important work could be built up. They were of course suspicious as to the possibility of securing resources within a short time, but with the occasional transfer from the various institutions of strong members in their staff, there soon came to exist, not only an appreciation of the University's work, but a decided interest in its success. It was learned that the people of the states influenced by Chicago were ready to do larger things for the universities located in those states because of the larger things being done in Chicago. It was soon possible to secure the adjustment of larger salaries and the appropriation of larger funds for development, and while there has been occasional indication of a narrow and unpleasant spirit, in the great majority of cases the attitude has been one of larger view and of thorough cordiality. We have made earnest effort to maintain a proper relationship with sister institutions, and, so far as we are aware, nothing that could be called discourteous or illegitimate has been done to destroy such relationships. The general movement toward co-operation on the part of institutions of learning is one of the most marked tendencies of the last decade, and it is not claiming too much, perhaps, to suggest that our own University has performed its share of service in bringing about this better understanding.

It is generally understood that there exists upon the part of certain groups of teachers in the public schools a strong feeling of prejudice against the University. This feeling, so far as it exists, has grown out of a misunderstanding, and indeed a misrepresentation, of certain actions of the President of the University at the time when he was serving as a member of the Board of Education of the city of Chicago. When it was demonstrated that the educational funds of the city would not permit the continuance of salaries at the rate being paid, an effort was made, in which the President of the University joined, to adjust matters in such a way that the city should not be embarrassed and the Board of Education brought into reproach. Many of the teachers felt that this attitude of the President was due to his belief that the salaries paid were too large, and that teachers could be obtained for smaller salaries. His position was wholly misunderstood. On every legitimate occasion the President has advocated higher salaries in the public schools, as well as higher salaries in the colleges and universities, but he recognizes that salaries can be paid only when funds are provided, and that the amount of salaries must in every case be determined by the amount of funds available. Certain factors have entered into this feeling on the part of many teachers to which reference may not here be made. It is, however, believed that with a better understanding, and with the removal of certain misrepresentations, this feeling of hostility will pass away. It is certainly the desire of the University to be of direct service to all who are engaged in the work of teaching.

A great deal of satisfaction has been found in the fact that so many of the class of working-people have found it possible to send their sons and daughters to the Uni-

versity to secure an education. No accurate statement of numbers can be given, but it is quite certain that a large proportion of the students of the University coming from the city of Chicago belong to families ordinarily classified as those of the working-people. Nearly every nationality represented in the city is represented in the University. Not infrequently utterances have been made in the meetings of trades unions which have shown an utter lack of appreciation of the work being done by the University for the sons and daughters of the men gathered in those very unions. We understand that it is lack of acquaintance with the institution and its purposes that explains such utterances. In the near future a better conception will be entertained in these quarters. It is true that the sons and daughters of men of the working classes are unable to pay the fees prescribed by the University, but it is to be remembered that hundreds of students each year are assisted in the payment of their fees by scholarships and student service, and in many cases the Scholars appointed by the faculties of the high schools are young men and women of such parentage.

It is impossible in a Report of this character to pay proper tribute to the memory of those men and women who formed a part of the great public to which the University is indebted for help in establishing its work thus far done. The roll of our illustrious dead is not yet a long one, but it contains names closely associated with the early history of the University, and it is important to note that in many cases the help rendered was not material help. Here belong:

Justin A. Smith, D.D., editor of the *Standard*, who was the friend of higher education from his youth up, who labored earnestly for the establishment of the University, was the first Recording Secretary of the Board of Trustees, and to the end of his life remained a useful friend of the institution and a trusted adviser of its officers.

Silas B. Cobb, one of the very early settlers of Chicago, who took great satisfaction in providing the funds for the building of Cobb Lecture Hall.

Sidney A. Kent, one of the leading business men of the city, who not only built Kent Physical Laboratory, but made provision in his will for the permanent care of the building.

Mrs. Nancy S. Foster, who came to Chicago at an early day, and who first built the original Foster Hall, and afterward enlarged and completed it.

Mrs. Henrietta Snell, who built Snell Hall in memory of her husband.

Mrs. Caroline E. Haskell, who endowed the Haskell and Barrows Lectureships, built the Haskell Oriental Museum, and was unwearied in her efforts to aid the University.

I desire to make the following suggestions to the public:

1. The impression which seems to have gained ground that the University, in view of the large gifts which have been made to it, is not appreciative of smaller gifts, is an entirely erroneous one. There are many ways in which a small gift can be used to the best advantage; in illustration I mention the following:

- a) A gift of Twenty Dollars as a prize for marksmanship in the work of the Military Company.

b) Books, or money for the purchase of books, even in the smallest of sums.  
c) The provision of pictures and paintings for the decoration of the many buildings.  
d) The planting of a single tree.  
e) The sum of \$120 will pay the tuition of a poor student for one year.  
f) The sum of \$480 will carry him through his college course.  
g) The sum of \$3,000 will pay the tuition of one poor student as long as the University endures. There should be five hundred such endowed Scholarships in the Colleges of the University.

h) There should be two hundred and fifty endowed Fellowships in the Graduate Schools of the University. These endowments may be from \$8,000 upward.

2. The public has been led into error in so far as it has come to believe that the Faculty of the University contains men who say or do things for the sake of a sensational result. The men against whom this charge has been made deprecate most seriously the fact that the University and themselves should be thus maligned. As a matter of fact, to all who know those men it is apparent that they are removed the farthest possible from any such desire for notoriety. Unfortunate representations growing out of statements perfectly legitimate in themselves have made these men the targets of a merciless tendency to use for humorous purposes everything which can possibly be so used.

3. It is necessary to repeat a suggestion which has been made before, to the effect that the public should be careful not to treat the words of an individual professor as if they were the official utterance of the University. Each officer of the University is given the largest possible freedom. He is expected to follow out his individual bent. The University is of course responsible for giving him this opportunity, but it should not be held responsible for each and every word that is uttered by him. It is a mistake to charge reproach upon a University because of the utterance of a professor who holds opinions with which the person making the charge is not in sympathy. This is also true of the words of the President of the University, which should never be taken as an official statement of the University itself, unless he distinctly utters it as such and indicates the particular body, Trustees or Faculty, for which he speaks. All other utterances are of an individual and personal character, and he should be given permission, as is every other professor, to make utterances for himself.

4. The fundamental purpose of the press of a city is surely to assist that city in building up its institutions, and not to injure it by tearing down institutions recognized as bringing credit to the city. In the spirit of the times, the newspapers of Chicago have permitted themselves too frequently to print statements utterly devoid of foundation, and to make representations of a humorous character equally hurtful to the University. The press is cognizant of the fact that eastern papers and eastern institutions lose no opportunity to take up these statements and use them to the injury of the University and of the city of which the University forms a part, and distinct and permanent injury is the result of such treatment. Because the daily press has not

appreciated the nature and degree of the injury thus wrought, it has permitted itself to deal in this reprehensible way with institutions deserving only of assistance, and institutions which not only deserve but need such assistance. In other words, the press has with one hand greatly assisted the University and similar institutions, but with the other hand has torn down the very work it has sought to build up. This is not economical, nor is it on the whole a respectable treatment to accord an institution of the character of the University of Chicago. It is a degrading of the institution, and in such treatment the press degrades itself.

#### IV. THE STUDENTS

The number of students has risen gradually from year to year, beginning with 594 in the autumn of 1892, and closing with 2,431 in the autumn of 1901. The total number of matriculants has been 14,307.

The sources of this large student body have been exceedingly varied. Every state in the Union has made contributions, the ten states from which the largest number have come being Illinois, Indiana, Iowa, Ohio, Missouri, Wisconsin, New York, Michigan, Pennsylvania, and Kansas.

It has been a subject of general comment that the chief characteristics of the student body have been steadiness, sturdiness, strength, strong individuality, high ideals, and clear purpose. Members of the Faculties of eastern institutions have been struck with the individual strength and character of the student body. The student constituency does not perhaps equal in outward polish that of one of the larger institutions of the East, but in ability to organize work, in skill of adaptation of means to end, in determination of purpose to win, in readiness to make sacrifice for the sake of intellectual advancement, no body of students ever gathered together in this country, or in any other country, has shown itself superior to the student body of the University of Chicago. The student spirit is of course still in its infancy and has not yet worked out the best possible means of expression, but the changes that have come about in the last three years are clear evidence that the infancy just referred to is rapidly becoming a thing of the past, and that maturity of strength is being attained. The individual spirit has shown itself in so many ways that the history of individual enterprise is perhaps the most pathetic chapter in the history of the University. The strong development of the individual which has been encouraged by the institutions and regulations of the University has been gained at some cost to the spirit of the mass, but this individual spirit, which is characteristically the spirit of the university as distinguished from that of the college, has in proper ways subordinated itself to the more general spirit, and this without detriment to itself. The presence of so large a number of graduate students has influenced to an appreciable extent the general character of the undergraduate student body, and this has not in all cases resulted in disadvantage to the latter. Furthermore, the individual freedom of the graduate student has been shared by every undergraduate student, and while this has to some



extent prevented the massing of the students together for certain purposes, it has nevertheless proved to be a distinct source of advantage to the individual student.

Upon the whole, the relationship between student and professor has been a close one. It is ordinarily not expected that in an institution with city environment, and in an institution of so large a size, a great degree of intimacy is to be secured. Such intimacy is indeed frowned upon in certain of the larger institutions. It has been different with us. A large majority of the professors have cultivated close personal relationship with the members of their classes. Undoubtedly many an individual has passed out of the institution without entering into such intimacy even with a single officer, but this is not true of a large number, and when true is to be explained in most cases by the peculiar character of the student himself. In some cases officers of the University have held themselves aloof from students, but these cases also have been few, and in general as close a relationship exists in the University between student and officer as might be expected or as is really called for. The student who comes to the University after two years of residence in a college, the faculty of which numbers twelve or fifteen, should not complain if, after his first year in the University, he is not personally acquainted with more than thirty or forty of the three hundred instructors. His acquaintance is three times as extended as it was in the smaller college, although he does not yet know more than 10 per cent. of the officers of the University. The fact that he cannot become acquainted with a larger number means nothing, for he already knows a much larger number than he would have met in the smaller institution.

The number of cases requiring discipline has been surprisingly small, and the cases of the most serious character have occurred in the graduate schools rather than in the colleges. There has been the usual number of instances of cheating in theme work and in examinations. No student has been arrested by a police officer during the history of the University, and no student has been dismissed for drunkenness. Cases of immorality which have come to the notice of the authorities have been exceedingly few. In cases of discipline of the most serious character, the President, in consultation with the officers most nearly connected, has acted without bringing the matter to the attention of the Faculties. In ordinary cases the Faculty has taken action. But in nearly every case students have returned after the term of suspension and finished their course of study. Rules of conduct have been few, the general requirements being those ordinarily expected of men and women living in good society.

There probably has been a less satisfactory development of the literary spirit among the students than might have been expected. This has been due in part to the newness of the situation and to the lack of encouragement and stimulus in certain lines. Great emphasis has been placed on the scientific side of work, and perhaps there has been greater interest developed in the philology than in the literature of a given language. It is also true that in these years the æsthetic side of work has been

sadly ignored. A change has already been instituted, and in time the results should show themselves.

No larger interest in athletic matters has grown up than would naturally have been looked for. The refusal of the University to adopt the policy of other institutions in going out to search for athletes and to persuade them to enter the University by holding out inducements of many kinds is so thoroughly recognized that the athletic management has been severely criticised both by the students and the alumni for its lack of progressive enterprise in this respect; and yet in spite of this so-called failure to do the proper thing, a reasonable number of candidates for athletic honors have presented themselves, and the record of the institution for ten years may be called good. It is at all events singularly above reproach.

A very large number of the students support themselves wholly or in part by the aid of the Employment Bureau. Hundreds of students are enabled to secure work of one kind or another which contributes toward their expenses. This work is of various kinds, including: stenography and typewriting, clerical work, manual labor, dining-room service, bill collecting, canvassing, bookkeeping, lighting street lamps, distributing newspapers and circulars, folding Sunday papers in newspaper offices, domestic service, reading to aged people, serving as companions to children and youths, inspecting city gas lamps, acting as ticket clerks at suburban railway stations, or telephone switchboard operators, or stereopticon lantern operators, making lantern slides, reporting for newspapers, and clerking in stores. There have been more demands for young women to do housework than could be supplied. As a rule these places are not desirable. There have been also more openings for students to do canvassing work for book houses, and college novelty houses, than could be filled. The average student does not take kindly to this sort of work, although some men who are naturally adapted to the work secure good returns from it. Perhaps as many as three hundred students each year receive some help from this Bureau.

There was some question in the minds of the Trustees as to the merits of the so-called "Dormitory System" of college life. Effort was made on the part of certain educators at the time of the opening of the University to show that the dormitory life was a survival of the Middle Ages, and that it was something entirely injurious to the development of a proper manhood and womanhood. Our own experience has been exactly the opposite. With each recurring year the demand for residence on the grounds is greater, and the results of such residence are more clearly apparent. This is especially true in the case of women. The accommodations for men, however, have been so meager and unsatisfactory as to give small opportunity for judgment. The avidity with which the rooms in the new Hitchcock Hall have been taken, contrary to the expectations of many, shows conclusively that proper accommodations cannot be secured outside of the halls of the University, and even when it is possible to secure them, there is an attraction about life in a University building which is not found in isolation from the University grounds. The only exception to this is in the case of

the Fraternity Houses, which after all can hardly be called an exception, for they represent really only an intensification of the dormitory system.

One of the most pleasing things in the history of the student life has been the custom, now firmly established, for the retiring class to present to the University a memorial gift. These gifts have been accepted by the institution with great appreciation as indicative of the good spirit which has always existed between the institution and its students. The following is a list of the gifts thus far made: The Senior Bench, by the class of 1896; the President's chair, 1897; a stone drinking fountain, 1898; a pulpit, 1899; the planting of a tree upon the campus, 1900; the Douglas Tablet, 1901; and a stained-glass window for Mandel Hall, 1902.

I desire to make the following suggestions with reference to the student body now in residence and to those who are to come:

1. In view of the satisfactory work of the Student Councils, and in accordance with their development, larger and larger responsibility should be laid upon them. There seems to be no good reason why a considerable share of the government may not be placed with proper restrictions in their hands. This means a development of the plan of self-government. The more fully this plan can be worked out with common consent and satisfactory guarantees, the better for the life of the University both social and educational.

2. More halls for the residence of students should be built. Experience shows that up to a certain point such halls will be occupied as rapidly as they are provided. Nothing will contribute more largely to the development of the proper spirit and life than the provision of student houses on the quadrangles, or in close proximity.

3. Provision should also be made, in accordance with the recommendation of the Junior College Faculty, concerning those students whose homes are in the city and who do not desire a sleeping place at the University, for the erection of halls in which accommodation for groups of twenty-five or thirty should be arranged. These accommodations should include study-room, toilet-room, and lunch-room, and every undergraduate of the University should have his own place at the University.

4. Larger plans should be worked out for the management of the Employment Bureau. There is practically no limit to the amount of work which such a bureau can secure for those who need assistance. No fee is charged the students. The salaries of that office are a part of the University expense; but a larger corps of strong men should be employed to take charge of the work.

5. Additional scholarships should be established, and the present scholarships of the Junior and Senior Colleges extending for one year should be made two-year scholarships with proper limitations.

6. Something should be done to encourage a larger interest in literary work of a creative character. Whether this can best be done by prizes may be a question.

## V. THE ALUMNI

I desire to call attention to the publication in connection with the Decennial Series of the first general Register of the University. This Register, which appears as a separate volume, will contain lists of the Trustees of the University, the officers of instruction, the officers of administration, the Fellows of the University, the alumni of the University, and the honorary alumni of the University. It is a source of regret that a triennial catalogue could not have been published from the beginning. With this Decennial Register as a basis, the work should be revised and republished at least every five years. It remains to be seen how important this publication will prove to be. It has been interesting to note the readiness with which the alumni in the various sections of the country have come together for the organization of associations. Such associations have been established in Boston, New York, Indianapolis, Chicago, and Omaha. Nothing can be more advantageous to the general interests of the University than the association in this way of the alumni. The friends of the University have noted with much satisfaction the strong and enthusiastic support which has characterized the men and women on whom the degrees of the University have been conferred. In the earlier years of an institution it is hardly to be expected that this spirit will manifest itself in any striking manner. Only when an institution has lived thirty or fifty or one hundred years can the alumni constituency, under ordinary circumstances, become a strong factor, but in our case so long a time has not been required to witness the development of this spirit. The close touch in which a great majority of the alumni keep with the institution, the frequent visits made in connection with the Convocations and at other times, the definite suggestions which are constantly being received, and the not infrequent tangible expression in the form of gifts—all testify to the warmth and cordiality of the feeling cherished. A single exception has shown itself in the attitude of certain alumnae on questions recently discussed by the Faculty and Trustees. In this case the officers of the association refused to recognize the actual facts as presented to them officially, and saw fit to promulgate statements which were in a large measure misleading on account of their falsity.

A single example of the interest of the alumni may be cited, viz., the work which was done in assisting in the establishment of the *Daily Maroon*, a work greatly appreciated by all connected with the University.

The man who is only ten years or less out of college has not usually reached a place of prominence, and consequently we should not yet expect the alumni of the University to be occupying high positions. Indeed, the alumni of a new institution have many things with which to contend. It is natural that the alumni of universities established for many years will use their influence in every line of work to assist the younger alumni of their own institutions. It was difficult in the early days for the alumni of the University of Chicago to secure that recognition which they deserved, because the stronger influence of older institutions was, at least indirectly, being exerted against them; but in spite of the youth of the institution and of the diffi-

culties just stated, our graduates have already achieved the highest success in nearly every line of work.

Before the work of instruction had begun, the Trustees voted to re-enact the degrees of Bachelor of Arts and Divinity in the case of those graduates of the old University of Chicago and Morgan Park Theological Seminary who would come forward and receive the new degree at one of the Convocations. By this arrangement the University, before it had actually opened its doors, was in possession of a considerable body of alumni. The lines of distinction between the old and the new have been largely destroyed, and the spirit of co-operation prevails. A fuller reference to the subject of degrees will be made in another paragraph.

Through its Bureau of Recommendations the University is enabled to render valuable assistance to the alumni. The work of this Bureau, at first limited to making recommendations for teachers, has recently been extended, and now includes recommendations for any kind of work. The University desires through this Bureau to aid the alumni of the University, where aid is desired, in securing such positions as they may be able to fill most advantageously. A delicate responsibility is thus assumed, since not infrequently an alumnus is hardly satisfied with the statement that the University, from its knowledge of his work in college and his career after leaving college, is able to make. The Bureau of Recommendations must be absolutely sincere and honest in the statements which it shall make. The officers of the University evidently can have no motive in connection with this Bureau other than that of giving assistance.

To the alumni of no other institution of learning probably is there given so responsible a place in connection with the management of the affairs of the university as to the alumni of our own University. This is based upon the statute establishing and regulating the Congregation. Since this body includes in its constituency (a) every person who has received the Doctor's degree, (b) representatives of the Masters to the number of fifty, (c) representatives of the Bachelors of Arts, Literature, and Science to the number of one hundred, it is evident that it will ultimately be largely under the influence of the alumni, and since this body has been given the power to require a reconsideration of any action of a ruling body, its influence in the development of the policy of the University cannot be overestimated. It is customary to say to those receiving the higher degrees of the University that the acceptance of such degrees is not to be interpreted as an honorary dismissal from the institution, but rather as a final initiation into the University of which forever afterwards they are members. Not infrequently in the history of the Congregation men who were professors in other institutions of learning have sat in judgment upon the policy of the University of Chicago, being entitled to do this by virtue of the fact that they were Doctors of the University or representatives duly elected.

Much efficient work has been accomplished by the Secretary of the Alumni, who in connection with other work has administered the affairs of the association. The

time will soon come probably when the entire service of a strong man may profitably be occupied in the work of furthering the interests of the alumni, and through them of the institution.

I desire to present the following suggestions:

1. Copies of the *Annual Register* should be mailed to every alumnus of the University who indicates his desire to receive the same. Each alumnus, as a representative of the institution, should acquaint himself with the changes which are constantly being made in the internal work and organization of the University. These are formulated from time to time in the *Register*, and although the volume is an expensive one, it is not asking too much of the University to supply its members (every alumnus being a member) with a copy.

2. Steps should be taken to enlarge the Bureau of Recommendations. Here again the work has grown in an unprecedented manner. Much has been accomplished, but much more remains to be done. Only through adequate organization of the office can the many demands made upon it be satisfactorily met.

3. Whenever an opportunity presents itself for bringing together permanently eight or ten of the alumni, an association should be formed. Such an association will undoubtedly grow, and though at first small, a nucleus will be furnished around which will gather the new members of the University.

4. Regular provision should be made for the visitation of these associations by representatives of the Faculty. It is as necessary that the Faculty should keep in touch with the alumni as that the alumni should keep in touch with the University.

5. A large emphasis should be laid upon the fact that the alumni are members of the University, and that local separation should not interfere with the growth of close connection with the institution.

#### VI. THE FOUNDER

It is a delicate and somewhat difficult task to undertake to make a statement on the relations of the founder of the University to the institution, for much that I should like to say must of necessity be omitted. The story of the beginning of Mr. Rockefeller's interest in a college or university in Chicago is a long and intensely interesting one. The main features of it will probably not be made public until after the death of those who were the principal actors in it. His association with the Theological Seminary at Morgan Park was the occasion of his later interest in the larger work. His keen insight into the future led him to select Chicago as the center of the educational work which it was in his mind to foster. His study of the situation was one extending over several years, and only after he had given the subject a prolonged consideration was a decision finally reached. The fundamental principle in his policy from the beginning to the present has been to render assistance in such a way as that the responsibility for giving may not be taken from others. The wisdom of this policy has fully demonstrated itself. The fact that the list of donors contains

so large a number of names is in large measure due to the working out of this important policy. The method was one which has at times seemed severe, for Mr. Rockefeller has been very conscientious in carrying out his contracts, doing only what he has agreed to do, and compelling the other party to do his share according to the agreement. But the good results of the method are fully apparent, and the fact that the University has received in gifts \$17,000,000, and that this sum has come from over three thousand donors, is in itself sufficient evidence of Mr. Rockefeller's wisdom in this whole matter.

If any feature of his relationship has been more marked than another, it has been the steady perseverance with which he has pursued the purpose originally outlined. So far as I understand the case, he has not wavered. His attitude has always been that of intelligent interest. But this has never led him to interfere in any way with the educational details of the work. Much ado was made on a certain occasion with reference to the resignation of a professor, it being asserted that this resignation had come about through the influence of the University's patron. It was said at that time, and it may be repeated again, that the representations to that effect were absolutely false. Mr. Rockefeller was not even aware that such a professor was in the University until he saw in the newspapers an account of his resignation.

I cannot do better than reproduce here Mr. Rockefeller's brief address presented on the occasion of the Decennial celebration of the institution:

*Mr. President, Gentlemen of the Board of Trustees, Members of the Faculty, Students of the University of Chicago, Ladies and Gentlemen:*

It is a great pleasure for me to be present on this occasion. Five years have quickly passed since my last visit, and I see on every hand the great work which has been accomplished during that period—greater by far than our most sanguine expectations at that time.

The extent and magnitude of the work are not alone measured by what we see of new structures and additional lands, together with new books and apparatus, but also by the steady and remarkable growth in the influence which this University exerts. It has stood, and will stand, for the best and the highest; for the good of man and the glory of God.

\* \* \* \* \*

The University is to be congratulated on its Board of Trustees. It was no easy undertaking to secure such a Board, composed as it is of men occupying the most important positions in the business and professional world. This task, however, was rendered less difficult on account of the widespread confidence felt in our President. Much as we value the contributions of money which have been so generously furnished by the many friends of the University, we cannot overestimate the services of the Trustees, which have been given with unsurpassed ability, loyalty, and devotion. Indeed, I am certain that many gifts of money and property to the University of Chicago have been made because of the growing and well-merited confidence which the services of these Trustees have inspired in the public at large. In addition to these gifts, it is well known to you that large contributions have been made by individual members of this Board, and I understand there are still others in contemplation.

The statement has been made, on good authority, that the Faculty of the University of Chicago is not surpassed by that of any other university in our country. It has been chosen with the greatest care by those eminently qualified to make such choice. No pains or money

were spared in securing the very best professors and teachers, from every part of our own country and also from Europe. Certain it is that the high commendations with which they came to this University have been borne out in the work which they have since accomplished. They have proved themselves broad-minded and progressive men, and the large body of students from all parts of the country who have been in attendance at the University of Chicago is the best testimonial to their ability and efficiency. The confidence and esteem in which the Faculty is held are shared by the President, the Board of Trustees, and the community at large. Most friendly and cordial relations exist between the Faculty, the students, and all others sharing with the Faculty the responsibilities of the University administration, and at no time has there been so bright an outlook for the University as at present.

Students of the University of Chicago, what can I say to you that will enable you to make the best use of your opportunities? You look out upon the world with bright prospects, and from a standpoint far more advantageous than that of many who preceded you. Whatever your station may be hereafter, do not fail to turn gratefully to your families and friends who have stood by you in your time of struggle for an education. Many of them toiled incessantly through long, weary years, that you might be possessed of advantages which they were unable to secure for themselves. I entreat you not to forget them, and not to fail, as the years go by, frequently to express to them your gratitude and regard, and to return to them, in loving and helpful attentions, the proof of the sincerity of your unfailing appreciation. These expressions will give happiness to them, and the reflex influence of your words and acts of gratitude will bring blessing to you. We all rejoice in your hope of success. We trust that you will be so anchored in the possession of sterling qualities that you will turn to best account whatever life has in store for you. In the end the question will be, not whether you have achieved great distinction and made yourselves known to all the world, but whether you have fitted into the niches God has assigned you, and have done your work day by day in the best possible way. We shall continue in the future, as in the past, to need great men and women to fill the most important positions in the commercial and professional world, but we shall also need just as much the men and women who can and will fill the humblest positions uncomplainingly and acceptably. The vital thing is to find as soon as possible the place in life where you can best serve the world. Whatever position this is, it is the highest position in the sight of good men and in the economy of God. I tremble to think of the failures that may come to some of you who are possessed of the brightest intellects and capable of the greatest accomplishments. I shall expect to see many who are here present among the slow, methodical, plodding ones, who are not at all distinguished as you for brilliancy, go forward until at last they are found occupying positions of the greatest honor and responsibility. Some of the foes which threaten your success may not be apparent to you until it is too late. If you are to succeed in life, it will be because you master yourselves, and if you are to continue masters, and not slaves, you do not need that I should say to you here today that you must jealously guard the approach of any foe to your well-being. You will do well not to underestimate the strength of such a foe. How many a young man whom I knew in my school days went down because of his fondness for intoxicating drinks! No man has ever had occasion to regret that he was not addicted to the use of liquor. No woman has ever had occasion to regret that she was not instrumental in influencing young men to use intoxicants. So much has been said on the subject of success that I forbear making particular suggestions. The chances for success are better today than ever before. Success is attained by industry, perseverance, and pluck, coupled with any amount of hard work, and you need not expect to achieve it in any other way.

Citizens of Chicago, it affords me great pleasure to say to you that your kindly interest in, and generous support of, this University have been of the greatest encouragement to all those



interested in its welfare, and have also stimulated others to contribute to its advancement. It is possible for you to make this University an increasing power for good, not only for the city of Chicago, but for our entire country, and indeed the whole world.

The success of the University of Chicago is assured, and we are here today rejoicing in that success.

All praise to Chicago! Long may she live, to foster and develop this sturdy representative of her enterprise and public spirit!

On two occasions only has Mr. Rockefeller found it possible and convenient to visit us. The first was the celebration of the Quinquennial, and the second that of the Decennial. On both of these occasions his public addresses were so well conceived and so admirably expressed, and their adaptation to the situation so evident, that with one accord all who heard or read them were delighted. During both of these visits he has shown a keen appreciation of the kind and courteous expressions made to him by the friends and Trustees of the University. In no year of the University's history has he given more substantial evidence of his abiding love for the University and of his deep interest for its future than during the year closing June 30, 1902.

This statement would be incomplete without a full recognition of the part which has been played by the wife of the founder. From the first hour to the present her heart has been full of sympathy for the work, and on many occasions her words of encouragement have been a source of great service. It would indeed be difficult to determine whether the husband or the wife is the more strongly interested of the two.

It is an occasion for regret that arrangements for celebrating Founder's Day have never been satisfactorily completed. The Trustees at first designated Mr. Rockefeller's birthday, July 16. Afterward it was thought best to designate the day on which he first visited the University, July 1, 1896. Neither of these days seems to come at the right season of the year, and up to the present time a combination of Convocation Day and Founder's Day has been made. The relationship between the founder of the University and the Trustees has been at all times a most cordial one, and every step in the progress of the University has been one of common agreement.

I desire to present the following suggestions:

1. The Trustees should take steps in the immediate future to secure a bronze or marble bust of the founder of the University. The painting by Eastman Johnson is of course a most important treasure, but this is not sufficient, and we cannot be satisfied until there is placed in its proper position a more lasting representation of the founder.

2. The question of a permanent day to be set apart as Founder's Day, and to be celebrated as such every year, is one which should now receive careful consideration. In the earlier years it was thought best not to press this question for decision until a larger experience might be secured. The question of holidays and celebrations is one of great importance in the calendar of the University, and no permanent holidays in addition to those already established by law should be granted until this question has been settled.

3. It would seem to be proper and altogether appropriate that the University,

whenever assembled in Convocation, should send a communication to the founder. These meetings of the entire University are not complete without some recognition each time of the great and splendid service which has been done the cause of education in the Mississippi Valley by the foresight, courage, and magnanimity of this one man. A proper acknowledgment of this fact in such form as may be adopted from time to time is a tribute to which he is entitled.

4. An effort should be made by the Trustees to secure a visit from the founder each year of the remaining years of his life. Such a visit would always bring with it inspiration and increased zeal in the furtherance of the work, and such a visit, I am persuaded, would likewise prove to be a source of real satisfaction to the founder. An urgent appeal to him would perhaps secure his favorable consideration of this suggestion.

5. Provision should be made for acquainting the students of the University, not only with the relationship of Mr. Rockefeller to the University as founder, but also with the elements in his character which make him prominent among the men of modern times. Respect for his modest reserve would perhaps lead to the postponement of any direct action along the line of this suggestion for the present, but the matter is certainly deserving of consideration in the near future.

#### VII. ADMINISTRATIVE HISTORY

It was a memorable occasion on Saturday afternoon, October 1, 1892, when the Faculties of Arts, Literature, and Science held their first assembly. At this meeting the President reported that regulations covering the various lines of University administration had been adopted by the University Trustees, and it was expected that these regulations would be continued in force and the University be conducted in accordance with them until in any particular case a majority of the Faculty should agree upon a modification or substitute. The regulations which thus formed the basis of organization are contained in *Bulletins* Nos. 1, 2, 3, and 4. A comparison of the regulations of the University as now codified with the first regulations will indicate to what extent the original plans have been conserved. The first measure presented to the Faculties for their consideration related to the establishment of fraternities. The Minutes of the meeting show the following entry:

. . . . moved that under the restrictions named by the President, the Secret Societies be permitted in the University. On motion of Mr. Laughlin, this matter was committed to a committee for consideration. The President named on this committee Messrs. Judson, Hale, Small, Tufts, and Stagg.

It soon became apparent that the Faculty, numbering nearly one hundred members, was too large a body for the transaction of business relating to details. A proposition was made and adopted to organize boards of administration, one for the Junior Colleges, one for the Senior Colleges, and one for the Graduate Schools. Affairs were conducted through these Boards under the General Faculty until December

- 10, 1895. After a full discussion, the General Faculty recommended to the Trustees its division into three distinct Faculties, each corresponding to the Administrative Board which had hitherto existed. In the spring of 1902 the Senior College Faculty and the Graduate Faculty were combined into one, called the United Faculties, the supervision of the Senior College students being left to the administration of a Board which is virtually a standing committee of the United Faculties. At this time the Junior College was more distinctly separated than before from the other Faculties. A minority of the Faculties has urged the readoption of the policy of a General Faculty, to which all matters of legislation should be submitted, and in which should be included the work of the Junior Colleges as well as that of the Senior Colleges and the Graduate School. But, after a full discussion of the matter, a majority of the Congregation declared its opinion substantially in favor of the policy that had been in vogue. The policy is based upon the following principles:

1. The consideration of legislation and its application to the cases of individual students cannot economically be handled by a large body, the results being practically those of a mass meeting.

2. University legislation is largely an outgrowth of precedents established in consideration of individual cases, and this work in particular is impracticable in a body consisting of fifty or more officers.

3. While in a small institution each officer can easily keep in touch with all the departments of the institution's work, in a large institution specialization in the administration is as necessary as specialization in departmental work. Opportunity must be given men to find that particular phase of general university work which appeals to them most closely; and by the training which comes from experience these men as specialists are fitted to do particular kinds of work, while at the same time they are perhaps rendered unable to do other kinds of work.

4. Officers of instruction in a large institution must consent to limit their interests and sympathies to particular phases of the work, or they will not have the opportunity to perform properly the duties expected of them in connection with their departmental subjects.

5. To this end special Boards are created for the management of special lines of University work and life. For example: (a) the Libraries, Laboratories, and Museums; (b) the University Press; (c) the University Extension; (d) the Bureau of Recommendations; (e) Student Organizations, Publications, and Exhibitions; (f) Religious Work of the University; and so forth. Inasmuch as each of these lines of work affects alike the work of officers and students in all the divisions of the University, they cannot be properly relegated to any single Faculty, but should be conducted by Boards on which all Faculties are represented.

Some officers have felt that this policy deprived them of an opportunity of joining themselves more closely with the various fields of university work, but it seems clear that in a large institution, with so many departments and so varied interests, it would

be impossible for any single individual to keep in touch with all the departments in such a manner as to make his judgment concerning the work of a particular division of any value.

At the same time, it is recognized as a fundamental principle that every officer of the University should have an opportunity to make inquiry and to raise questions concerning the action of any Faculty or Board or ruling body in the institution. As affording such an opportunity, the University Congregation was established in the autumn of 1896. By the statute creating this body, (1) every officer of the rank of Instructor or above is constituted a member; (2) every action of every ruling body in the University must be submitted quarterly for the approval or disapproval of the Congregation; (3) if the Congregation votes its disapproval, the Faculty or the Board in which the action was originally taken is required to reconsider it within thirty days, and, if the action is again voted, to report the same with reasons therefor to the Congregation at its next meeting; (4) the privilege of raising new questions and establishing committees of investigation is granted; (5) the right to make suggestions in detail and to call for reports is granted. The Congregation thus affords a forum in which any officer may present his views upon any subject, for the consideration of the University at large, and in which the public opinion of the University at large is obtained concerning any matter, new or old, which may be presented. The history of the meetings of the Congregation thus far held shows four things:

1. Every subject of larger importance has sooner or later come before the Congregation, and thus every officer of the University has had the privilege of presenting his views on every subject connected with the development of the University.

2. The larger number of important subjects have received their fullest discussion in the Congregation, a discussion open to every member of the Congregation.

3. Whenever the Congregation has indicated clearly and definitely its opinion on an important question, the Faculty having to do with that question has accepted the opinion of the Congregation as authoritative.

4. The most important changes made in five years have in every case come as a result of the discussions in the Congregation.

In order to secure unity throughout the institution, on the one hand, of educational policy and, on the other, of administrative policy, the Senate, made up almost entirely of Heads of Departments, and the Council, made up of administrative officers, review each month the proceedings of Faculties and Boards, and have the right by statute to modify or veto such actions. This power is but rarely exercised, but the fact that these bodies have the power to modify the actions of other ruling bodies in itself secures the desired unity of legislation and administration. By this system, which when understood is devoid of all elements of complexity, there are gained four things: (a) the service of specialists in the various divisions of work; (b) independence of action by the various Faculties; (c) unity of policy through the Senate and Council; and (d) the influence of public opinion through the Congregation.

It is still a mooted question whether the President and the Deans in an institution of higher learning should at the same time be officers of instruction. It is urged, on the one side, that such a policy will result in overwork on the part of the officers or a neglect of one or the other of the duties assigned, namely, the administration, the work of teaching, or the work of investigation. It is maintained, on the other hand, that the administrative officer should have that sympathy with the student which ordinarily comes from contact with some students as pupils, and that sympathy with the staff of instructors which is impossible if the administrative officer himself is not an instructor. Our own experience has furnished strong testimony in favor of the policy of distributing the administrative work among a large number of men who in each case belong to the staff of instructors.

While occasionally there have been points of disagreement, and while sometimes this disagreement has reached a more or less serious stage, in no case has there been real rupture in any given Faculty or between any two Faculties or Boards. The spirit of accommodation has been marked, and it may well be questioned whether by any other system of administration results of the character actually produced could have been secured. Concerning the relationship of the President to the various Boards in the Faculty, a statement will be made in another paragraph.

I desire to make the following suggestions:

1. Those Deans who have the larger responsibilities—for example, the Dean of a Faculty as distinguished from a Dean in a Faculty—should be given greater freedom from teaching, and especially should this be done in cases in which there is clearly marked ability for investigation. If the Dean's work may be reckoned as half of the work of an instructor, and if each instructor not doing a Dean's work is expected to do investigation equal at all events to one-half the work of an instructor, the normal unit of a professor's work is three. Some men will give two parts to instruction and one part to investigation; others, two parts to administration and one part to investigation; still others would give one part to instruction, one part to administration, and one part to investigation.

2. Greater emphasis should be placed upon the independent authority of the several Boards and Faculties than has heretofore been done. The cases of modification or veto on the part of the Senate or Council are so few that each Board and Faculty may well consider itself authorized to proceed independently as if no such body as the Senate or Council existed.

3. Two meetings of the Congregation should be held each Quarter instead of one. Experience has shown that a single meeting is not sufficient for the transaction of all the matters to be brought before the Congregation. A meeting might perhaps be held at the close of the fourth or fifth week of the Quarter, and the regular procedure at this meeting might profitably be the review of the actions of ruling bodies during the preceding Quarter. This would leave opportunity for action by the bodies concerned to be taken between the first and second meetings of the Congregation in

the Quarter, and would relegate to the second meeting the reports from Faculties on special subjects referred to them, the reports of committees established, and the consideration of new questions.

4. The place of the Congregation Dinner should be more permanently fixed. This dinner has been changed from time to time, and for this reason has not become as permanent an institution as might be desired. It has, however, an important function to perform: (*a*) in bringing together the members of the Congregation, including representatives of the alumni as well as of the Faculties; (*b*) in affording members of the Congregation an opportunity to bring their friends into closer touch with the University; (*c*) in affording an opportunity for showing proper courtesy to the Convocation orator and special guests of the University; and (*d*) in giving the President an opportunity to speak confidentially to the members of the University on subjects of special importance and interest—an opportunity which is not otherwise afforded, unless the time of the regular meeting of the Congregation is taken.

5. It will be necessary within a short time to take up the consideration anew of the constitution of the Senate. This body, consisting originally of ten or twelve persons, now has a membership of thirty or more. The close and confidential assistance which the smaller body furnished the President cannot be rendered by the larger body. Is it probable that the Senate should ultimately become a representative body, its members to be selected by the Board of Trustees, or to be elected by the various Faculties?

6. In the recent reorganization of the United Faculties, certain group committees were established consisting of the officers of instruction belonging to closely related Departments. The chairman of each group, in accordance with the regulation, is to be elected by the members of the group. Experience has already shown that the chairman is not always selected with a view to his executive ability. It would seem necessary, therefore, that, as in an important eastern institution, the chairmen of these committees be appointed, like the Deans, by the Board of Trustees.

7. In the future differentiation of the work in each case the Dean of a Faculty should be that officer who is the chief administrative officer of the Faculty, and upon him should be placed the particular responsibility for the administration of its work. The Dean or Deans in such a Faculty should have for their function the more restricted work of dealing with students. The time has come, for example, when the Dean of the Junior Colleges and the Dean of the United Faculties should be relieved from the responsibility of dealing with particular students. The administrative work of the Faculties themselves in connection with the curricula and outside relationships is sufficient to engross their time.

8. The administrative work of the Faculties can never be properly handled until adequate quarters for such work have been provided. The use of rooms not constructed for the purpose, the distribution in several buildings of officers who should be closely associated in a single building, together with the lack of proper facilities for

committee work and even for the holding of Faculty meetings, all contribute to more or less unsatisfactory results in the work of administration. A central Administrative Building, constructed with special reference to the present organization, should be erected in the immediate future. With such a building, if properly arranged, the work would be handled with far greater efficiency and with marked economy.

#### VIII. BUILDINGS AND GROUNDS

The original plan of the grounds included three blocks running from Fifty-ninth street to Fifty-sixth street between Ellis avenue on the west and Greenwood avenue on the east. In arranging for the buildings on this piece of ground, it soon became apparent that the ground was ill adjusted for any scheme that would prove satisfactory. After a most earnest debate in the Board of Trustees, it was decided to purchase the block on Fifty-ninth street lying west of Lexington avenue and to exchange the block on Ellis avenue between Fifty-seventh and Fifty-sixth for the block on Lexington avenue between Fifty-eighth and Fifty-seventh. This gave a piece of ground eight hundred by twelve hundred feet. Plans were made for the erection of buildings on these grounds. At that time it was hardly expected that the University could extend its holdings. It became clear that space was needed for an athletic field, and after the block between Fifty-seventh and Fifty-sixth on Ellis avenue through the courtesy of Mr. Marshall Field had been occupied for several years at a nominal rental, Mr. Field and Mr. Rockefeller joined in presenting this block and the adjoining block on the east, thus enlarging the University holdings to six blocks or thirty-five acres. Two years later the growth of the institution seemed to be so great that in the near future additional land would be needed. With this in mind, the Business Manager was authorized to make additional purchases, and as a result the University is now in possession of all of the frontage on Fifty-ninth street between Cottage Grove avenue and Madison avenue. Certain portions of some of these blocks still remain unpurchased. Mention should be made of the generous gift of Mrs. Scammon of one-fourth of the block known as the Scammon Block between Kimbark avenue and Monroe avenue and Fifty-ninth and Fifty-eighth streets. The remainder of this block has been purchased. There are some who have visions of even more extended possessions in the matter of lands, but it is reasonable to suppose that for the present the University has moved in this direction as far as it is possible. It is understood that the two blocks next to Cottage Grove avenue are to be set aside for Technological work, the two east of these and west of the Divinity Halls for the Junior College for Men. The block west of the Scammon Block and a portion of the block on which the President's house stands will be used for buildings in connection with the Junior College for Women. In addition to this, the University has been given sixty-five acres of land on Lake Geneva with approximately six hundred feet of lake frontage. This gift was made by Mr. John Johnston, Jr. All of the property included in this statement is used for the purpose of the University campus.

The following are the buildings of the University, arranged in the order of erection, with the names of the donors, and the actual cost:

Building	Date Erected	Cost	Donor
Cobb Hall .....	1892	\$221,956.03	Silas B. Cobb
Graduate Hall	1892	172,805.72	John D. Rockefeller
Middle Divinity			
South Divinity			
Kent Chemical Laboratory .....	1893	202,270.19	Sidney A. Kent
Ryerson Physical Laboratory .....	1893	200,371.41	Martin A. Ryerson
Snell Hall .....	1893	53,586.41	Mrs. Henrietta Snell
Nancy Foster Hall .....	1893	62,968.88	Mrs. Nancy Foster
Beecher Hall .....	1893	62,126.06	Mrs. Jerome Beecher
Kelly Hall .....	1893	62,149.21	Mrs. Elizabeth Kelly
Walker Museum .....	1893	109,275.11	George C. Walker
Haskell Oriental Museum .....	1896	103,017.49	Mrs. Caroline E. Haskell
Hull Biological Laboratories .....	1897	325,000.00	Miss Helen Culver
Yerkes Observatory .....	1897	325,000.00	Charles T. Yerkes
Green Hall .....	1898	72,000.00	Mrs. Elizabeth Kelly
Foster Hall Addition .....	1900	20,466.04	Mrs. Nancy Foster
School of Education (temporary building) .....	1901	24,983.89	Several funds

BUILDINGS UNDER CONSTRUCTION AT THE CLOSE OF THE FIRST TEN YEARS

Building	Cost	Donor
Charles Hitchcock Hall .....	\$150,000.00	Mrs. Charles Hitchcock
Press Building .....	105,606.00	John D. Rockefeller
Power Plant .....	385,000.00	John D. Rockefeller
Frank Dickinson Bartlett Gymnasium .....	240,000.00	A. C. Bartlett and friends
School of Education .....	610,000.00	Mrs. Emmons Blaine and friends
Group of buildings on corner of Fifty-seventh street and Lexington avenue .....	500,000.00	C. L. Hutchinson, John J. Mitchell, Leon Mandel, the Reynolds estate, and friends

After long discussion in the Congregation, extending through more than two years, a Commission consisting of Trustees and Professors was appointed by the Board of Trustees to take up the question of locating buildings on the remaining space of the central quadrangles. The Report of this Commission is published in detail on pp. 266 ff. of this volume. The large amount of faithful and efficient service rendered by the Chairman of this Commission, Mr. Burton, deserves special acknowledgment. It is believed that the conclusions of the Commission will be substantially carried out, and already the plans for the Law Building have been prepared with reference to this project. The proposition of the Commission makes the Library the central feature of a group of seven buildings. On the east of the Library facing Fifty-ninth street will be located the building for the Historical Departments; north of it and a little to the west, the building of the Law School; and still farther north, a building for Philosophy and Psychology. Directly west of the Library will be located the building for the Modern Languages, north and east of which is the present Haskell Museum, and north



of this the building for the Divinity School. The location on the corner of Fifty-ninth street and Ellis avenue will be occupied by the building for the Classical Departments.

In the earlier days, when buildings were being erected on every side and tunnels for heat and light were being constructed, it did not seem worth while to take up the consideration of the treatment of the grounds, but more recently landscape gardeners have been employed to make a study of the situation, and the results of their work have been incorporated in plans, the execution of which will ultimately cost about one hundred thousand dollars for the four central blocks. The cost of putting a block of ground in proper shape is estimated at about twenty-five thousand dollars. On the basis of this calculation the Trustees have already inaugurated the plan of taking up a portion of the University grounds each year for complete and thorough treatment. The greatest expense is involved in preparing the soil in such a manner as that trees may attain their proper growth.

I desire to make the following suggestions:

1. Ground should be secured for the intercollegiate athletic games at a point not far distant from the University, but distinctly separated from the University buildings. The possession of such a field would (a) furnish an additional practice field, which is already needed and will be much more needed in future years; (b) relieve the libraries and class-rooms of the noise and distraction of the games, which has come to be something exceedingly serious; (c) secure better arrangement for the transportation of those attending the games. Nothing could be much worse than the present Marshall Field from this latter point of view.

2. The building for which there is the greatest need is the Library. On this point the entire membership of the University Faculties agrees. It is estimated that the building proposed, including the furnishings, will cost from three-quarters of a million to a million dollars. The greatest assistance that could be rendered the University would be the provision for such a building.

3. The plans for the Women's Quadrangle will soon be completed, and work should be begun at once upon the erection of the proposed buildings. These buildings will include the following: (a) a gymnasium for all the women of the University; (b) a café and club-house for women, corresponding to the café and club-house now being erected for men; (c) residence halls for women; (d) halls furnishing suites of rooms for non-residence Houses such as Spelman; (e) a building for class-rooms; (f) laboratories; (g) assembly-room and library.

4. At the same time work should begin upon the Men's Quadrangle to be located west of Ellis avenue on Fifty-ninth street. This Quadrangle will contain the following buildings: (a) a gymnasium for Junior College men; this will not be needed for some time; (b) a club-house for Junior College men; the erection of this also might be delayed for some time in view of the general club-house already provided; (c) residence Halls for men; (d) Halls for non-residence Houses such as Washington and Lincoln; (e) buildings for class-rooms and laboratories; (f) assembly-room and library.

5. Other buildings which are needed at once, and for which provision should be made, are the following: (a) the Classical Building, to be erected on the corner of Fifty-ninth street and Ellis avenue at a cost of \$150,000 to \$200,000; (b) the Modern Language Building, to be erected on Fifty-ninth street, directly west of the proposed Library, at a cost of \$250,000; (c) the building for the Historical Departments, to be erected directly east of the proposed Library Building, at a cost of \$250,000; (d) the building for Philosophy and Psychology, to be erected directly north of the Law School Building and west of Walker Museum, at a cost of \$150,000; (e) the building for the Divinity School, to be erected directly north of Haskell Oriental Museum, at a cost of \$200,000; (f) a building for the Departments of Geology, Geography, Mineralogy, Paleontology, and Anthropology, with provision for a large museum space, to be erected on Lexington avenue north of Beecher Hall and east of Walker Museum, at a cost of \$250,000; (g) a building for the Departments of Mathematics and Astronomy, to be erected south of Mandel Hall on Lexington avenue, at a cost of \$200,000; (h) the Administration Building referred to above, to be erected at the head of Fifty-eighth street on Lexington avenue, at a cost of \$200,000; (i) the University Chapel, to be used exclusively for the religious services of the University, and to be erected north of Cobb Lecture Hall on Ellis avenue, at a cost of \$500,000. The total cost of buildings necessary for the proper maintenance of the University's work in the Departments already established on the four main Quadrangles would therefore be from \$2,900,000 to \$3,200,000.

6. New buildings for the Medical work of the first two years are greatly needed. These, according to the present plans, are to be erected on Fifty-seventh street between Ellis and Lexington avenues, facing south. They will be in close relationship with the Biological Buildings on the other side of the street. Considering the large number of medical students and the crowded condition of the laboratories, this matter should receive immediate attention.

7. The staff of employees, whose work is connected with the care of buildings and grounds, now numbering 117, should be reorganized on lines of greater efficiency. A better distribution of work is possible. The service is at present exceedingly unsatisfactory. In all probability the sum of money set apart for this service has not been large enough.

8. The Trustees should enact that a specially designated uniform be worn by all members of the staff of employees engaged in connection with the buildings and grounds, including janitors. This uniform should be selected with special care, in view of the fact that many of the men are engaged in labor during a large portion of the time. With a better organization, as suggested above, supplemented by the uniforming of the staff of employees, the service will be greatly improved.

9. The University should undertake to provide more definitely and more reasonably for those of its employees who live on or near the grounds. Better accommodations should be arranged for sleeping-rooms, parlors, and for general means of self-improvement. It is hardly consistent to engage in Settlement Work in the Stock Yards dis-

trict and to ignore, at the same time, the opportunities and the necessities upon our own grounds.

#### IX. THE BUSINESS MANAGEMENT OF THE UNIVERSITY

The desire of the Trustees has been to conduct the affairs of the University in accordance with business methods of the strictest character; and no pains have been spared to organize the business side of the work in such a manner as to accomplish this end. No better illustration of the growth of the University could be cited than the history of the business management. During the first year the work was handled under the Buildings and Grounds Committee by the Secretary of the Board of Trustees with a single bookkeeper and a stenographer. When the work of the University began, a Registrar was appointed to collect fees and room rents, and to represent the University in financial dealings with the students. A Chief Accountant was soon needed, and around him was gathered a staff of bookkeepers. In the year 1894 the Trustees voted to establish the office of Comptroller, later changed to Business Manager, and Mr. Henry A. Rust was appointed to fill the position. In that year the buildings and grounds of the University were valued at \$1,781,252.98; the furniture, books, and equipment, at \$322,613.12; the investments of the University, at \$2,159,052.16; and the expenditures of the Budget were \$529,674.19. These sums had respectively become, in the year closing June 30, 1902: buildings and grounds, \$4,109,035.79; the furniture, books, and equipment, \$822,747.70; investments, \$8,674,962.12; expenditures of the Budget, \$944,348.26.

The staff of employees consisting of one stenographer and one bookkeeper has grown to a staff including a Business Manager, an Auditor, three assistant bookkeepers, seven clerks, two stenographers, in all fourteen, to whom is intrusted the management of the business part of the University's work. This does not include the clerks, stenographers, and assistants in the offices of the President, the Deans, and other educational administrators.

It has been a source of great satisfaction that in these first years, when the business of the University was being organized, the University could have so wise and strong and faithful an officer at the head of its finances as Mr. Rust has shown himself to be. In accepting this position Mr. Rust brought to it a large experience as an engineer in the erection of buildings, a refined and cultivated taste in everything that related to buildings and grounds, and a thorough and business-like appreciation of the financial side of the work. The University is to be congratulated upon its good fortune in having enjoyed the services of such a man for so long a time.<sup>1</sup>

From the following tables may be gathered certain interesting facts, viz.: (1) the growth of the assets of the University from year to year; (2) the distribution of these assets; (3) the percentage of income realized on invested funds; (4) the various sources of the University's income and the proportionate amount furnished by each.

<sup>1</sup>The resignation of Mr. Rust and the appointment of his successor, Mr. Wallace Heckman, do not fall within the period covered by this report.

June 30, 1894	- - - - -	\$ 4,272,147.06
" 1895	- - - - -	5,586,160.65
" 1896	- - - - -	7,732,626.06
" 1897	- - - - -	8,311,642.60
" 1898	- - - - -	8,937,759.41
" 1899	- - - - -	9,157,721.50
" 1900	- - - - -	9,880,777.52
" 1901	- - - - -	12,364,216.58
" 1902	- - - - -	15,128,375.95

The distribution of these assets on June 30, 1902, was as follows:

Investments	- - - - -	\$ 8,674,962.12
Buildings	- - - - -	2,812,032.60
Grounds	- - - - -	2,281,378.36
Books	- - - - -	314,949.78
Scientific equipment	- - - - -	440,993.48
Furniture	- - - - -	66,804.54
Material and supplies	- - - - -	36,569.28
Printing Office plant	- - - - -	10,521.77
Cash and current assets	- - - - -	490,164.02
<b>Total</b>	- - - - -	<b>\$15,128,375.95</b>

The per cent. of income realized on invested funds has been as follows:

Date	Rate per Cent.
June 30, 1895	- - - - - 5.30
" 1896	- - - - - 5.22
" 1897	- - - - - 5.20
" 1898	- - - - - 5.05
" 1899	- - - - - 5.03
" 1900	- - - - - 4.66
" 1901	- - - - - 4.44
" 1902	- - - - - 4.12

The various sources of the University's income and the proportionate amount furnished by each for the year 1901-2:

		Per Cent.
1. Invested funds	- - - - - \$258,187.42	26.4
2. Students	- - - - - 371,536.12	38.0
a) Tuition fees	- - - - - \$269,065.03	
b) Other fees	- - - - - 56,106.74	
c) Room rents	- - - - - 46,364.35	
3. John D. Rockefeller	- - - - - 310,644.00	31.9
a) Current expense	- - - - - 253,144.00	
b) Medical work	- - - - - 50,000.00	
c) History books	- - - - - 7,500.00	
4. Publications receipts	- - - - - 23,182.91	2.3
5. Theological Union	- - - - - 9,300.00	0.9
6. Donations, old subscriptions, and miscellaneous	- - - - - 4,977.88	0.5
<b>Total</b>	- - - - - <b>\$977,828.33</b>	<b>100.0</b>

The following statement, originally prepared for another publication, presents briefly the principles which have controlled the action of the Trustees in the management of the business of the University:

First: The business affairs of a great institution should be conducted, not for the sake of increasing the business, but in a manner wholly subservient to the best interests of the educational work which has been undertaken. To this end every dollar possible, consistent with good business prudence, will be expended for educational purposes, and every dollar possible will be saved from the expenditures involved in the administration of the business affairs. In other words, the successful business management is not in itself an end, but merely a means for providing facilities of an educational character.

Second: The business affairs of a large institution are of the nature of a public trust, and consequently differ essentially from the business affairs of a company or an individual. It follows that no risks of any kind may be incurred. Speculation with university funds is criminal. A transaction which would be perfectly proper for an individual, and from a business point of view satisfactory, may be utterly lacking in those characteristics which should secure its approval by the board of trustees of a university. It is probable that no business management in the world is more conservative than that of the large institutions of learning. It is also probable that in no other business concerns has the percentage of loss on investments or from dishonesty been so small.

Third: The trusteeship of a university, although involving the greatest possible responsibility and demanding work in large amount and of high character, must be a voluntary service. The president of the university should be the only salaried officer among the trustees; an exception will be made in the case of the treasurer, if he is at the same time business manager. It may not be claimed that such voluntary service is difficult to secure. The honor and satisfaction of connection with a work of such a character will be deemed sufficient reward by men of the highest ability.

Fourth: In the administration of the business affairs of an institution the principles of civil service must prevail. Favoritism of any kind, not to speak of nepotism, is insufferable. Those who are held responsible for certain divisions of the work must be given the privilege of making recommendations for the positions under their direction, subject to the approval of the higher authorities. Promotion from those already in the ranks is an essential element.

Fifth: Absolute economy must be exercised in every department of the institution. The officers charged with the responsibility of expending money should be held to strict account. It is undoubtedly true that many men, who are eminent in their respective departments for learning and for ability to give instruction, fail from the business point of view to conduct their own affairs or those of the institution, when intrusted to them, with proper care. Debt may be incurred only when satisfactory provision has been made in advance for its payment when due.

Sixth: Special consideration from the business point of view must be given to the problems connected with the expenses of student life. It is a mistake to encourage luxury, or even to make it possible. However wealthy a young man may be, he cannot spend a large sum of money annually and be a student. For the time being, at all events, he must limit his expenditures, and directly or indirectly the university must see that this is done. On the other hand, it is equally important that provision be made for the assistance of worthy students who find themselves unable to continue their work because of the lack of means. It is possible to make mistakes in assisting students who do not deserve assistance, and in rendering assistance in a manner which will injure the student even if he deserves help. To require that every student who receives help from the university shall make suitable return to the university in the form of service or of repayment of money is a practical business way of treating the whole matter. Help should be rendered only in return for work done or as a loan to be repaid. In the latter case there is no objection from the business point of view, if the loan is arranged on terms especially favorable to the student. Such a student cannot be expected in every case to furnish satisfactory security, but without such security money should not be loaned except to those whose character is personally known to the officers to be above reproach.

Seventh: The financial transactions of a large institution should be announced regularly to the public. The exact amount of expenditures in the various departments, even in detail, and the receipts from any and every source are facts which the public deserves to know; and knowledge of these facts will give to the university the confidence of the public. No single act can be performed by an institution that will accomplish greater good than the regular and systematic publication in official form of the receipts and expenditures of money.

Eighth: Contracts with members of the teaching staff are not treated like contracts with the officers of the university conducting the business side of the institution or like contracts made in ordinary business affairs. A large university is accustomed to accept the resignation of a professor or instructor whenever it may be proffered, whatever may have been the time for which the professor or instructor was appointed. Resignations are thus accepted in the case of men who have been appointed to do a certain service, and before even beginning to do that service desire to connect themselves with another institution. It is not considered out of place for one institution to make assiduous effort to draw away a member of the staff of another institution. The feeling prevails everywhere in the large universities that whatever is for the best interests of the individual will in the end prove to be for the best interests of education; and the university can in no case afford to deprive an individual officer of an opportunity to accept a position of greater possibility and influence. It is only in the smaller institutions of learning that this principle is not recognized.

Ninth: A university, although possessed of twenty millions of dollars, is, from a legal point of view, a charitable institution. Whatever may be its wealth or

influence, its affairs are managed as are those of great charitable institutions. It does not hesitate to accept from any and every source gifts, large and small, with which to prosecute its work for the public benefit. It declares no dividends, but it gives to the public through its students every dollar paid by the students, and with each such dollar three or five in addition.

In an institution of learning, those who are responsible for the business management of it have to do with many different kinds of work. Their task is not finished when the buildings and grounds of the university have been cared for and the invested funds have been looked after. Among the other kinds of business which must be handled are the following: the collection of fees of various kinds, of room rents, and of board bills; the payment of salaries and bills; the handling of students' deposits of money; the provision of work for needy students; the supervision of the University Press; the auditing of all accounts; the management of the University Commons, and the boarding arrangements in the women's dormitories.

I remember distinctly that within so short a time as twelve years ago in the administration of even a large university there was no such thing as stenographic service. The following list of stenographic appointments as it stands at this time throws some light on the development of this phase of the business management of a university: President's office, 2; Business Manager's office, 1; Secretary and Auditor's office, 1; Graduate Dean's office, 1; Senior Dean's office, 1; Divinity Dean's office, 1; Medical Dean's office, 1; Lecture-Study Department, 2; Correspondence-Study Department, 3; Recorder's office, 1; Board of Recommendation, 1; office of the Dean of Affiliations, 1; University College, 1; South Side Academy and Laboratory School, 1; School of Education, 2; Junior Dean's office, 1; Morgan Park Academy, 1; University Press and journals, 7; total, 28.

An important phase of the development of the business side of the University's work has been the establishment within the last two years of the office of Auditor. The By-Laws of the University establishing the duties of the Business Manager and the Auditor are as follows:

#### BUSINESS MANAGER

Subject to the control of the Committee on Finance and Investment, and such regulations as the Board may from time to time adopt, the Business Manager shall have the management of all property, whether real, personal, or mixed. He shall receive and promptly turn over to the Treasurer all moneys and securities; he shall sign and issue all checks upon funds of the University, but only in payment of vouchers previously certified by the Auditor; and he shall, also, take the initiative in seeking investments for the funds of the University, and promptly report thereon to the Committee on Finance and Investment.

No investment, purchase, or sale for the account of the endowment funds of the University nor any contract concerning the same shall be made by the Business Manager without the approval of the Committee on Finance and Investment.

The Business Manager shall superintend the recovery of litigated claims in favor of the University, and have charge of all legal proceedings.

In case of vacancy in the office of Business Manager, or his inability to act, his duties shall be performed by the chairman of the Committee on Finance and Investment.

#### AUDITOR

The Auditor shall exercise a general supervision over all accounts of officers of the University which may have to do with the receipts or disbursements of funds, and he shall require full and true records of all such receipts and disbursements to be kept, both in his own office and by the officers aforesaid, who shall keep their accounts in such manner and render to him such statements of account as he may direct. He shall keep full and appropriate books of account fully setting forth the financial condition and transactions of the University.

He shall supply such statements of account as may be from time to time required of him, or as may be needed to correctly show the financial condition of the University.

He shall examine all accounts, claims, and demands against the University, and no money shall be drawn from its Treasury unless the amount thereof be adjusted and settled by him and found to be within the appropriation for that general purpose. Accounts so found to be due shall be paid, upon vouchers certified by him, by warrant drawn by the Business Manager on the Treasurer, and countersigned by the Secretary, which vouchers shall state the particular fund or appropriation to which the account is chargeable and the person to whom payable. If he shall, upon the examination of any account, doubt its correctness, or find the appropriation insufficient, he shall submit the account to the Committee on Finance and Investment for its decision. No money shall be drawn from the Treasury except by warrants drawn as aforesaid.

The By-Law establishing the duties and powers of the Finance Committee is as follows:

The Committee on Finance and Investment shall, on the first day of July in each year, begin the examination and audit of the business accounts of the University for the previous fiscal year, and may employ for that purpose such persons or firms as it may select, and shall determine the amount of compensation to be paid for such service.

As soon as the above-mentioned annual audit shall furnish the necessary data therefor, the same committee shall conduct an examination of the securities and funds of the University as shown upon its books, and report thereon to the Board of Trustees not later than October 1.

Nothing here provided shall prevent the Finance and Investment Committee from making other examinations of the accounts, securities, and funds of the University at any other time it may determine.

The Committee on Finance and Investment shall have authority in the intervals between meetings of the Board of Trustees to change the form of the investments of the University or to make new investments in sums aggregating, but not exceeding, \$300,000, without the previous approval of the Board, but the said committee shall, at the next meeting of the Board, report in writing its action to the Board.

I desire to make the following suggestions:

1. Steps should be taken at once to provide larger space for the accommodation of the business offices. It is entirely impossible for the work to be properly conducted within the quarters now allotted. In this connection I may mention again the desirability of a building which should provide at the same time for the administration of the educational and financial affairs of the University.

2. In view of the large amount of real estate now controlled by the University and the great number of tenants (in all over six hundred), it would seem to be a profit-



able arrangement for the University to establish and organize its own machinery for conducting a real-estate office. This can be handled directly by the University more efficiently and more economically than by distributing it to real-estate agents. It is important that this matter should be recognized and acted upon in the very near future.

3. No arrangement of any kind has been worked out by which the Faculties of the University may gain an acquaintance with the financial affairs in which of necessity they must be greatly interested. It is evident that the various appropriations assigned to Departments and individuals would be more satisfactorily expended if those who expend the money had a somewhat intimate knowledge of the sources of income and the difficulties which attend the securing of the amounts necessary for the efficient conduct of the institution. It would seem to be wise that at all events a meeting of the Congregation should be held each year at which the President and the financial officers should lay the financial affairs of the University in some detail before the members of the Congregation. Not only have the professors a right to know these details, but their sympathy with the work of the University as a whole would be secured by the possession of such knowledge.

4. It is important that whatever shall seem to be necessary for the proper conduct of the administration of the business part of the University should be provided. It will prove to be a mistake to limit unduly the Budget expenditures in this division of the work. With endowment funds of ten millions, and other assets amounting to eight millions or more; with buildings and grounds at the University valued at four millions, and other real estate valued at seven millions or more, it is incumbent upon the University to provide the strongest possible force for the proper conduct of this business.

#### X. THE UNIVERSITY PRESS

The first organization of the University Press was in the form of a stock company independent of the University, with which the University entered into a contract. The head of this company was Mr. D. C. Heath, of D. C. Heath & Co., Boston. It soon became apparent that the relationship was not sufficiently close, and although the management of the company was entirely satisfactory, and there had arisen no friction of any kind, all parties concerned were agreed that it would be best to transfer the rights of the company directly to the University. The interest and enthusiasm in those early days of Mr. Heath and Mr. R. R. Donnelley cannot be forgotten. After two years, the contract was mutually changed in July, 1894, and the property of the company was purchased by the University. The Press has been under the successive management of Mr. Charles Wells Chase, Mr. Hazlitt Alva Cuppy, Mr. Ned Arden Flood, and Mr. Newman Miller.

Owing to the lack of uniformity in the system of accounting it is impossible to give a report which will show the development from the beginning of the several departments of the Press independently. The only figures obtainable showing the

status of the various departments of the University Press are in connection with the inventories of stock and equipment taken each year. In the following tables the figures pertaining to the equipment of the manufacturing plant have been based upon a 10 per cent. reduction each year on account of the depreciation.

Date	Purchase and Retail Department (Stock)	Manufacturing Department (Plant and Stock)	Publication Department (Stock)
July 1, 1894	\$ 7,009.92	\$13,210.53	\$.....
" 1895	8,410.24	15,433.75	.....
" 1896	10,450.59	18,994.02	.....
" 1897	7,754.73	19,570.32	.....
" 1898	9,163.94	24,490.55	.....
" 1899	9,091.00	20,975.37	.....
" 1900	11,550.14	24,453.73	.....
" 1901	10,634.70	15,482.39	4,442.98
" 1902	14,505.95	20,029.90	11,578.35

The Press is conducted on the basis of a Constitution adopted by the Trustees, which classifies the work under the following departments: the Manufacturing Department, the Publication Department, and the Purchase and Retail Department.

The following departmental journals are published by the Press:

Journal	Departments Connected	Issues per Year	Average Pages per Year
The Biblical World .....	Biblical Faculties .....	12	985
The American Journal of Theology .....	Divinity School .....	4	900
The American Journal of Semitic Languages and Literatures .....	Semitic Languages .....	4	265
The School Review .....	School of Education .....	10	710
The Elementary School Teacher .....	School of Education .....	10	860
The American Journal of Sociology .....	Sociology and Anthropology .....	6	870
The Journal of Geology .....	Geology .....	8	820
The Botanical Gazette .....	Botany .....	12	930
The Journal of Political Economy .....	Political Economy .....	4	605
The Astrophysical Journal .....	Astronomy and Astrophysics .....	10	710
The Manual Training Magazine .....	Private owner .....	4	256

The following series of studies are published, numbers being issued from time to time:

1. "Studies in Classical Philology." Three complete volumes and one number of the fourth volume.
2. "Germanic Studies." Three numbers.
3. "English Studies." Five numbers.
4. "Economic Studies." Five numbers.
5. "Political Science Studies." Seven numbers.
6. "Bulletins of Anthropology." Four numbers.
7. "Divinity Studies." Two numbers.
8. "Historical and Linguistic Studies in Literature Related to the New Testament." Two numbers.

9. "Publications of the Yerkes Observatory." One volume.
10. "Contributions from Walker Museum." Three numbers.
11. "Contributions from the Hull Botanical Laboratory." Forty numbers.

The following statement shows the output of books and pamphlets by fiscal years:

1892-93	-	-	-	-	-	2
1893-94	-	-	-	-	-	3
1894-95	-	-	-	-	-	11
1895-96	-	-	-	-	-	8
1896-97	-	-	-	-	-	31
1897-98	-	-	-	-	-	27
1898-99	-	-	-	-	-	22
1899-00	-	-	-	-	-	28
1900-01	-	-	-	-	-	28
1901-02	-	-	-	-	-	40
Total	-	-	-	-	-	200

The following statement shows the output of books and pamphlets by Departments:

Department of Philosophy and Physiology	-	-	10
Department of Education	-	-	41
Departments of Theology and Religion	-	-	7
Department of Political Economy (complete)	-	-	31
Department of History	-	-	7
Department of Semitic Languages and Literatures	-	-	44
Departments of Science	-	-	58
Miscellaneous	-	-	2
Total	-	-	200

The most ambitious undertaking of the Press outside of the publication of the journals is the manufacture and publication of the two series of volumes celebrating the Decennial of the University.

The growing appreciation of the work of the Press on the part of the Trustees is shown in the fact that a new building for the use of the various departments of the Press has just been completed at a cost of \$110,000. This building is constructed on modern principles and furnishes a very satisfactory headquarters for the work of this very important division. While at present occupied in part by the Library and the Law School, in the very near future the entire building will be devoted to the work of the Press.

The mechanical equipment of the University Press at the close of the fiscal year ending June 30, 1902, was valued at \$10,521.77. This amount is represented by the equipment of the composing-room, with the exception of a job outfit including two small presses, paper cutter, type, etc. For the work which has been attempted the plant is thoroughly equipped.

In addition to this the plant includes a smaller dress of modern body type

amounting in the aggregate of the various sizes to about eight thousand pounds. In the job department are about two hundred fonts of sufficient size and variety to handle a large volume of work. There are also large fonts of Greek in five sizes, Hebrew in two, Nestorian Syriac, Arabic, and Ethiopic. With the addition to these special fonts of a most thorough equipment of mathematical, astronomical, and other signs and accents, the University Press has been able to produce work possible in very few printing houses.

The question has been raised whether the cost to the University of the printing of its journals and books was not greater by the present policy than if the work were done by contract. This question is a difficult one to answer conclusively without going into a very elaborate explanation, because it is a matter which is affected very largely by conditions. The question must be considered from a theoretical standpoint, practical comparison being impossible because prior to the present time the work has been divided, a part having been done on contract and a part at first hand. However, experience has demonstrated that, so far as concerns the work done by the Press, it has been put out at a less price than the same work would have cost on contract with an outside firm.

The question resolves itself into an inquiry as to whether it is possible for the University to operate the various departments of the University Press as economically as the same work could be administered by another party. Granting that it is possible to secure competent administrative ability, there is no reason why the conditions should be different in connection with the work done by the University Press from what they would be if it were executed by a private corporation. The item of labor is the same in all parts of the city. Printing stock has a marketable value which is easily ascertained, and with the volume of its business the University is able to secure as low prices as those granted to any publishing house. These and many other items of expense which might be mentioned are practically the same for all printers and publishers, and if the administrative ability of the affairs of the Press is competent, the business will show a profit. The principal saving, therefore, to the University lies in the amount of profit which would accrue to any commercial corporation engaging in the same class of work.

Aside from the saving of the regular commercial profit, there are many incidental advantages which result in an actual saving of money to the University in the operation of its own printing and publishing plant. It would be impossible without a great loss of time and money to carry on the volume of printing and publishing now conducted through the University Press if the manufacturing and publication activities were not closely associated with the local interests of the University itself. Under the present conditions, while a great saving of time is effected in the doing of all of the composition at first hand, an expense of about \$1,200 per year is incurred in the item of cartage, which would be saved if all of the work could be done at first hand. It is doubtful if such work as characterizes most of our journals and books could be

secured on contract with any such degree of accuracy or speed as that with which it is now accomplished. These results can be reached only by the employment of workmen trained to our particular class of work, in order that they may know in an emergency just what to do and when and how to do it. Only the editors of the journals and those in direct charge of the publication of the official documents of the University can appreciate the great convenience of having the work done on the ground at first hand.

It goes without saying that the money spent on much of the printing done by the University Press means a direct benefit to the University; and it would seem that the results of the expenditures must be measured very largely by the promptness and accuracy which accompany the issue of all printed matter. To those acquainted with the printing business the result of continuous requests for accommodations by a customer of a printing house is well known. An average printing firm cannot be induced to favor one customer as against others without using the situation as a basis for increased charges. The University has many times felt the result of situations of this kind without being in a position to remedy the difficulty. The possibility of doing all the work in its own plant would eliminate embarrassment of this sort.

The affairs of the Press have been conducted by a Board appointed by the Trustees from the different Faculties, nominated by the President, and in addition the Director of the Press and the editors of the journals. This Board conducts the work through four principal committees, namely: (1) Manufacturing Committee, (2) Publication Committee, (3) Purchase and Retail Committee, (4) Official Publications Committee. The Trustees in the regular Budget of the University make a special appropriation for each journal; also appropriations for particular books or studies.

I desire to make the following suggestions:

1. A better organization is needed for that portion of the work which includes the purchase of apparatus and equipment for the University. The connection between this work and that of the Press has not been as close as it should be. Of necessity each Laboratory must exert a large influence, not only on the character of material purchased, but also on the selection of the particular place of purchase. All of this work, however, should be conducted through a central agency, and this agency may more satisfactorily be connected with the University Press than operated as a separate division of the institution. This work requires a larger force of assistants, and deserves more careful and detailed consideration in the future than it has thus far received.

2. Provision should be made for keeping in New York city at least a small stock of the publications of the Press. Our publication list is from every point of view a most respectable one, and includes not a few books which have created for themselves quite a large demand. An arrangement can easily be made for the care of such a stock in connection with the University's office already established in New York city to handle the advertising of the Press.

3. One advertising representative cannot do the work both in the East and the West. It would be profitable to establish in Chicago, as well as in New York, an office

for securing advertising for the journals. To this office also might be committed the care of such announcements in the magazines and papers as the University desires to have made from time to time of its various Departments, as well as the advertising business of the Press itself.

4. It is important for the sake of the University as well as for the success of its publications that proper representation of the Press be secured in England and on the continent. Nothing that has been done thus far seems altogether satisfactory. One of two policies must be decided upon: either to concentrate the representation of the Press and select one representative for the work of all the Departments in London and another on the continent; or to place different books and journals with different dealers in England and on the continent. On the whole, the former policy seems preferable. An effort should be made to secure a proper arrangement within the near future.

5. It will be necessary within a year to give to the Press a larger proportion of the Press Building than it now occupies. If the Law School can be transferred to its new building October 1, 1903, the space now occupied by it can be satisfactorily used by the Press and a small portion of it perhaps given to the Library; but it is necessary, from the point of view of the Press, that the erection of the new Library Building be finished as early as possible. At the present rate of progress the Press will require within three years every foot of space afforded by the present building.

6. The members of the University at large should cultivate a closer sympathy with the work of the Press. As individuals and as a University they are to derive from it great benefit. The measure of this sympathy, however, may be determined by the degree of knowledge which is possessed by members of the University. It seems important, therefore, that regular reports should be made by the Director of the Press to the Congregation of the University, such reports to cover in general the work of the Quarter closing at the time of the meeting of the Congregation.

#### XI. UNIVERSITY EXTENSION

Even the briefest sketch of our ten years in University Extension is very interesting. Under the leadership of Mr. George Henderson for one year, Mr. Nathaniel Butler for three years, and Mr. Edmund J. James for six years, the work has made steady progress. Once or twice there has been a falling backward, but this was due to local reasons, and in every case the lost ground has been regained with large additions. Starting with three subdivisions outside of the Library work, namely, Lecture-Study, Class-Study, and Correspondence-Study work, it was thought best to allow the Class-Study work to develop into the University College, which has finished five years of most successful work, and since the first year has been treated as an organization independent of University Extension. The development of the Lecture-Study work is shown in Table A, p. 308.

The least successful part of the work has been the development of class work in

connection with the Lecture Studies. No such success has attended this part of the movement as is reported to be found in the English University Extension work. Among the more prominent lecturers of the ten years have been the following: Professors Moulton, Zueblin, Sparks, Willett, Starr, Troop, Butler, and Fellows. Among the special lecturers who have rendered good service are Henry W. Rolfe, Lorado Taft, John Graham Brooks, Jenkin Lloyd Jones, and W. M. R. French.

When it is recalled that in the ten years the amount of \$400,000 has been contributed in small sums of one, two, three, and five dollar fees for the support of a great intellectual movement, and that all of this money, with an additional \$100,000 furnished by the University, has been employed in placing before the various Centers men of international reputation in the various departments of study, the significance of the movement will come to be appreciated. The University Extension work has not been conducted as an advertising scheme, and yet it has without question brought many people, old and young, into contact with University thought and life who otherwise would not have known such contact. It is probably true that the work has been appreciated by college graduates more than by any other single class of people. They have found that in the midst of the activities of life something is needed as an incentive and help in stimulating their intellectual development.

The work of the Traveling Libraries (see Special Report, p. 232) has been most helpful. If a larger sum of money could have been secured for use in these Libraries, even greater good could have been accomplished.

The development of the Correspondence-Study work is shown in the following table:

STATISTICS SHOWING THE GROWTH OF THE CORRESPONDENCE-STUDY DEPARTMENT FROM OCTOBER 1, 1892 (DATE OF ORGANIZATION), TO JUNE 30, 1901

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Teachers giving instruction.....	23	33	41	44	59	66	73	80	89	92
Courses actually given.....	39	62	78	97	128	151	186	208	208	217
Different students enrolled.....	82	185	279	425	555	755	845	930	1,081	1,249
Total registration in all courses...	93	209	311	481	641	881	1,015	1,158	1,311	1,485

The steady advance of the Correspondence-Study work is noteworthy. Very frequently propositions have been made to popularize this work and greatly increase the number of students who have availed themselves of its service, but these propositions have been uniformly rejected. The work done by correspondence in connection with the University is as serious and as strong as any work attempted in the class-room. It is in large measure conducted by those who are at the same time doing the class-room work of the University. It is asserted by the instructors that in most cases twice as much actual work on the part of the student is called for. There is no other correspondence work being done which does not have for its primary object the making of money. Academic traditions have been respected, and the work may justly be said to have been conducted exclusively on an academic basis. In view of the great

amount of correspondence work offered in every section of the country, there has been some question in the minds of the University authorities as to whether reproach might not come on our own institution because so large an amount of the instruction elsewhere offered is valueless. On the other hand, we have to recall the fact that hundreds of institutions called universities are offering degrees for work of a decidedly inferior character, but this does not take away the responsibility of institutions attempting to give instruction of the highest order. The friends of the University may rest assured that the Correspondence work done under its auspices is at all times exactly on a par, so far as its character is concerned, with the work done in the lecture-rooms of the institution. It has been a source of satisfaction to note the change of attitude on the part of a large proportion of the Faculty during these last few years. At first the Faculty was rightly suspicious of the whole matter, but as the character of the work became better understood, and as one after another was persuaded to undertake courses for himself, acquaintance with the methods and results led to a change of opinion, and today it may be said that a thorough respect for it and an appreciation of its usefulness in connection with the residence instruction of the University are felt throughout the institution.

I desire to make the following suggestions:

1. If the Lecture-Study work is to hold its place in the future, a larger staff of lecturers must be employed. The present staff is not able under the highest pressure to meet the demands made in the various communities.

2. In order to maintain a staff of Extension men, a premium must be placed upon Extension work. This premium may take one of two forms: either (a) that of a larger salary than is paid the professor who does his work within the walls of the University, or (b) that of a shorter service for the same salary. Ordinarily the Extension professor should be allowed to finish his work in six months and be given a full six months' vacation for study and recuperation. In any case the hardship of traveling over long distances in the western territory must be compensated for in some way.

3. It is extremely desirable that the officers of the regular staff of the University should be detached from class-room work and placed in the Lecture-Study field now and then for a period of three months. The result of this will be twofold. Not only will there accrue a great advantage to the Extension work itself, but the University will be profited in having its lecturers come in contact with life and work outside the University walls.

4. The work of the Correspondence-Study Department will never be thoroughly established until a separate staff of officers shall have been created. It is too much to ask the regular officers of the University to increase their duties, even with extra pay, by conducting individual Correspondence work. Besides, this movement has now reached a point where it deserves the full and continuous consideration of men whose whole time shall be devoted to it. It is important that the Correspondence staff be organized at an early date.



5. Adequate quarters for the administration both of the Lecture-Study and the Correspondence-Study Departments must be provided. It will soon be impossible to conduct it in the present rooms. As at present maintained, there is great loss, not only of effort on the part of those engaged in the work, but of actual results because of the absence of proper facilities.

6. Up to the present time the cost of administering the Lecture-Study courses has averaged a sum of money equivalent to the income on \$150,000 or \$200,000, but inasmuch as it has been necessary to conduct lectures as far as possible on a business basis, much of the most important work has been omitted. With even a small endowment rich results could be secured. It is desirable that an endowment of at least \$500,000 should be provided for this Department. The income of \$1,000,000 could be expended most profitably.

7. Encouragement should be given to the establishment of Extension Colleges in the smaller cities having a population of 25,000 or upward. In these Extension Colleges would be centered the intellectual activity of the city. With a local committee under the direction and guidance of the University excellent results would be secured. The steps which have been taken in this direction in one or two cities should be encouraged in other cities of the West. The possibilities of this work are without limit.

#### XII. AFFILIATION AND CO-OPERATION

The report of the officer in charge of the Co-operating Schools and the Affiliations will be found to contain material of the most suggestive character. The word "affiliation" has been used in connection with colleges and academies under the control of non-state boards of trustees, while the word "co-operation" has been used in connection with high schools which were under state or municipal control. The word "affiliation," borrowed from English educational terminology, has not come to be popular. In the minds of many, the act of affiliating an institution is equivalent to absorbing the institution and taking away its independent existence. This conception of course is far wide of the truth. The fundamental principle underlying the plan and methods of affiliation has been to do nothing which would in any way interfere with or prevent the fullest exercise of independent action on the part of the institution affiliated. To this end the entire financial control has been left in the hands of the local Board. Only two privileges, as a matter of practice, have been exercised by the University in connection with the affiliated institutions, viz.: (1) that of reviewing the papers prepared by the instructors for the examination of the students; and (2) that of advising in the appointment of new instructors. The University has found itself in a position to be of real assistance in both of these particulars to the college instructors, and experience has shown the value of this aid.

The existence of the smaller colleges is not only a desirable thing; it is a necessity in the intellectual growth of the great sections of the country which make up the West, the Northwest, and the South, and the greatest calamity which could possibly

befall the cause of higher education in the United States would be the extinction, or even a considerable deterioration, of the small college. When the history of these colleges is considered, the work which they have done, the work which they alone can do in many sections, and the utter impracticability of supposing that all the students of any given state can be persuaded to go to one of two or three places in that state for a higher education, the necessity will be felt of stemming the tide which is setting in against the small college, and of doing something in a constructive way which will help the courageous souls who today are conducting these institutions, and give them a firmer basis upon which to work. This has been the thought underlying the policy of affiliation with colleges as it has thus far been developed in connection with the University of Chicago. Three things in addition are to be said:

1. The policy has been an experimental one, and has not gone far enough to demonstrate with perfect satisfaction the lines of operation which ultimately should be adopted. Enough, however, has been done to prove beyond question that something of the kind proposed is possible and most desirable.

2. No considerable effort has been made to increase the number of affiliated institutions, partly because the machinery for the conduct of the affiliated work has not been perfected, and partly because it was thought wise to move very slowly in a matter of so much consequence.

3. More opposition to the policy has arisen from the Faculties of the University and its students than from the colleges themselves and their students. The opposition in the University Faculties has arisen (a) in large measure from ignorance of the plans proposed and the results already achieved; (b) in some measure because of the additional labor required of the University officers in carrying out the plans; (c) in a considerable measure also because of a deeply rooted feeling that it is next to impossible to expect good work in a small institution, the fact being ignored that the instruction in the Freshman and Sophomore years in the better class of small colleges, at least in certain departments, is probably superior to that of the same years in the larger universities. The opposition on the part of the colleges and their constituencies grows out of (a) the fear of losing their independence, as suggested above; (b) the fact that affiliation is something new and its advantages are not yet understood; (c) the fear, in many cases, that the first step will be followed by a second which will consist in the removal of the last two years of the college course and the withdrawal of the privilege of conferring degrees.

There are certain difficulties with which the colleges must contend during the next few years. These are, to make the statement as brief as possible:

a) The growth and development of the high school, and the probability that this growth will not stop until two years of college work have been added to the present curriculum of the high school.

b) The rivalry of the state universities; for these institutions appeal to the same constituency, not only for their college students, but also for their professional students,

the latter being admitted on requirements no higher, but in many cases lower, than those required for entrance to the Freshman class. The state university is thus a distinct rival of every college within the state. Any success achieved by the small college must be won largely at the expense of the state university and *vice versa*. Because of its political power and financial strength, the state university will win the victory unless steps are taken by the small college to secure the needed strength and influence.

c) The lack of means; for with the growth of scientific work and with the modern methods of work in other departments, laboratories and libraries have become an essential factor, and these can be provided only at great cost.

d) The lack of public confidence, in that so many of the smaller colleges pretend to give a full college education, though the intelligent public is fully aware of the fact that it is impossible for the institutions in question to do this with the funds at their disposal.

e) A lack of confidence on the part of men of means, due to the bad financial management of these institutions. A score of well-known colleges could be named whose trustees have allowed endowment funds to be used for current expenses.

f) The tendency, everywhere manifest, for those having the necessary means to go to the larger institutions where greater numbers seem to give greater opportunity.

g) The proposition, in various forms, to reduce the college course from one of four years to one of three.

The problem of the smaller college is, therefore, a serious one. Although it has been pointed out clearly and definitely that it possesses many distinct advantages in comparison with the larger institution, public sentiment is, nevertheless, turning away from the smaller college. In solving this problem the small colleges may not turn to the state universities for help, because, as indicated above, these universities are in the truest sense their rivals.

The University of Chicago, it may be said without boasting, sustains a unique relation to the small colleges of the West, Northwest, and South. The constituency of its college work is understood to be the city of Chicago, and this city, with its two millions of inhabitants, ought to sustain three or four strong colleges. In other words, the University of Chicago has more college work to do in the future for the city of Chicago than it can probably succeed in doing, without attempting to enter the territory of its sister-colleges. While students actually come to the University from the surrounding states, and are always welcome, the University puts forth no distinct effort to secure such students, and therefore does not enter into rivalry with the colleges of those states. In the case of its professional schools, unlike those of the state universities, the University requires practically a college education before admission may be gained. In this particular it encourages the student to remain at college, while the state institution, in admitting students to the professional schools on the same basis as to the Freshman class of the Arts and Sciences, distinctly discourages students who

enter the various professions from taking a college course. Furthermore, the University is selfishly interested in building up the small colleges because, on the one hand, these colleges furnish students for the Graduate Schools of the University, aside from its professional schools, and, on the other, furnish Faculties in which those who have taken the degrees of the University may find employment. In each of these three particulars the University of Chicago stands alone in the West, Northwest, and South. The University has therefore every reason to encourage the strengthening of the college, and it is hoped that as a result of the policy of affiliation, with such modifications as experience will dictate, a plan may be found by which, with equal acceptability to the colleges and to the University, the service which the University can render the colleges may be formulated and the proper machinery provided for its execution.

The relationship of the University to its co-operating schools is one presenting many problems. It is manifestly desirable to maintain, by means of visitation, a close connection with these schools, and yet the necessary visitation makes upon the University and its officers demands which it is almost impossible to meet. The ordinary system of accrediting schools upon the visitation of a professor is not satisfactory. Our policy has been to require at least two visits, one from the regular inspector and another from a member of the officers' staff. Our plan of co-operation includes also the principle of dealing with the individual teachers of a school rather than with the school as a whole through its principal. The teachers thought worthy of the honor are theoretically treated as University Deputy Examiners, and the examinations which they offer from time to time are accepted in lieu of examinations furnished by the University itself. This system has not worked out so satisfactorily as might have been desired. The whole question of entrance from the high school into the college is one which has attracted much attention throughout the country, and it is possible that the problem may be solved by the proposals which are being suggested through the North Central Association of Colleges and Secondary Schools. It is to be noted that the co-operating list of the University includes a large proportion of the best high schools of the West and South.

In connection with the work of affiliation and co-operation there have been held annually, and sometimes semi-annually, Conferences with Superintendents, Principals, and High-School Teachers. Each Conference seems to have been more successful than its predecessor. The attendance upon these Conferences has grown to be very large, the regular membership in the last one being at least five hundred. At this Conference, held November 7 and 8, 1902, a resolution was adopted establishing a commission of twenty-one members, organized in three committees of seven each, for the comparative study of the curricula of the Elementary School, the Secondary School, and the Junior College.

In connection with these Conferences there has been held an annual Declamation Contest to which high schools and academies throughout the West have sent repre-

sentatives. The winner is awarded a scholarship for a year in the University. The interest manifested in connection with these contests has been noteworthy.

While, then, the policy of affiliation and the plans of co-operation are as yet in a stage of development, it is unquestionable that an important development has already taken place, and that the results of past experience furnish the basis for important modifications, some of which are suggested below:

1. The scholarships at the present time distributed among the co-operating high schools which entitle the holder to free tuition in the University for one year should be increased in their amount to cover the tuition fees for two years instead of one.

2. In addition to the annual Declamation Contest for which a scholarship is offered as a prize, scholarships to be awarded on the basis of competitive examinations should be established—one in Latin, one in English, one in Mathematics, one in French, one in German, one in Physics, one in Chemistry, and one in History; these scholarships to provide the tuition fee of the student for two years in the University. The examinations might be conducted either at the University or in the schools upon papers prepared by the Departments of the University.

3. In view of the distinct feeling in western high schools and academies on the part of teachers and students against examinations, and in view of the great educational value of examinations when properly conducted, strenuous effort should be made to encourage taking of examinations by students on frequent occasions, those encouragements to be in the form of prizes, as in the case of the scholarships suggested above, or in the form of money prizes, the spirit of interscholastic rivalry being taken advantage of in so far as it may seem to be legitimate.

4. The whole subject of the official relationship of the University to the high schools should be taken up for special consideration with a view to devising methods by which the relationship may be made closer and the results of the closer relationship become more apparent.

5. The principle of appointing teachers as Deputy Examiners should be still further developed, and to this end special honor should be bestowed upon those who do this work, and special privileges granted them.

6. A Conference between the University and the colleges of the West and South should be instituted similar to that already established between the University and the high schools and academies, and in this Conference the problems of the college in its relationship to the university should be discussed from the point of view of both college and university.

7. Steps should be taken to organize a local corporation under the auspices of the University, but legally independent of it, which shall be controlled by a board of trustees made up of men of national reputation, the purpose of this corporation being as follows: (a) to receive and invest money, the income of which shall be used for the maintenance of college work, in colleges to be specified by the donor, or chosen by the trustees of the corporation so organized; (b) to investigate the financial affairs of

colleges whose trustees may indicate their desire for such investigation and to conduct the financial affairs of the colleges when invited so to do, with a view to providing a proper financial management; (c) to study the general management of colleges, to suggest practical economies on the educational side as well as on the financial, and to secure such advantages, financial and otherwise, as would come from the close association of several institutions under the general conduct of one corporation.

### XIII. THE DIVINITY SCHOOL

The relationship of the Divinity School to the University is a somewhat anomalous one. With a separate Charter and a distinct Board of Trustees, the School has none the less been an organic part of the University. The change of location from Morgan Park, where the work had been conducted for many years, to the city, and from its separate location to close contact with the University, was nothing less than a revolution. The results of this change of location and character have been significant. The School has taken on a larger breadth of view and a much larger constituency. The attendance during the last five years at Morgan Park averaged annually 156; the attendance during the last five years of its connection with the University has averaged, on the basis of three Quarters to the year, 254. This growth is quite remarkable in view of the history of other Theological Seminaries during this period, for during the same five years in eleven representative Theological Seminaries there has been a decrease from an average attendance of 128 to an average of 111. The growth in the staff of instructors has been from 16 in 1892 to 22 in 1902. During this period two Professors have passed away: first, in 1896, Professor Simpson, a man of strong intellect and striking character; and in December, 1901, the Nestor of theologians in the West, Professor George W. Northrup, by whom the Seminary was practically created, and to whom the University is indebted for much that was helpful in connection with its early history.

Several important steps have characterized the progress of the work. Among these have been the following:

1. The establishing of a tuition fee—the usual fee prescribed in the other Departments of the University, \$120 a year. This step has contributed largely to the position of respect and eminence enjoyed by the Divinity School in relation to the other divisions of the work—a position in striking contrast with that of the Divinity School in many other institutions. The University has established a large number of scholarships, but these scholarships are assigned only to those who have shown themselves possessed of real ability, and in many cases the Divinity student prefers to pay his fee even when a scholarship might be obtained. Only two institutions, it is believed, have taken this step, which marks a distinct advance in the history of theological education.

2. The Divinity School has entered into a close relationship with the college work, and has permitted the undergraduate students who are candidates for the

Bachelor's degree to select two-thirds of the work of the last year from the Divinity curriculum. This privilege has not always been taken advantage of, but has in many cases shown itself to be legitimate and proper. More recently the privilege has been extended to cover the work of an entire year.

3. The study of Hebrew was made optional July 1, 1899; and it would appear from the statistics that, while 100 per cent. of the regular students took Hebrew before this arrangement was announced, since that time only 27 per cent. of those who entered without Hebrew have taken up the study. However, there has been no diminution in the number of candidates for higher degrees in the Department of Semitics, since only a very small proportion of the students under the former system ever studied to any appreciable extent beyond the small amount of work actually required for the degree of D.B. The experiment has not been conducted a sufficient length of time to enable us to determine whether it will prove permanently successful. In any case, those who have selected the subject have done so from choice, and the results accomplished by them have been more satisfactory.

4. In each Department a series of three Outline or Survey courses has been provided which aims to give the student a general appreciation of the entire field covered by the Department. These courses are prescribed. With the general view thus obtained, the student is in a better position to select those Departments to which he will devote his larger attention in the later years of the course; and further, with these prescribed courses as a basis, the student is given large liberty to elect one or more Departments in which he may specialize. Here again it may be said that sufficient time has not elapsed to enable a correct opinion to be formed as to the actual results obtained. Is it possible that the preliminary survey of the field may satisfy the student, and lead him to think that he has actually done sufficient work? While there may be disadvantages in the plan, there are evident advantages, and a considerable degree of enthusiasm has thus far characterized the work of these particular courses.

5. The work of the Summer Quarter has taken on something of a special character. Many pastors and theological students from other institutions have taken advantage of the presence of the distinguished teachers of various denominations and countries who lecture during this Quarter. The following is a list of some of the many who have served as regular instructors on the staff: Professor Charles Rufus Brown, of Newton Theological Institution, Newton Centre, Mass.; the late Professor Alexander Balmain Bruce, of the Free Church College, Glasgow; Professor Sylvester Burnham, of Colgate University, Hamilton, N. Y.; Rev. W. H. P. Faunce, now President of Brown University; Professor Caspar René Gregory, of the University of Leipzig; Professor Arthur C. McGiffert, of Union Theological Seminary, New York; Professor Rush Rhees, of Newton Theological Institute (now President of the University of Rochester); Professor J. S. Riggs, of Auburn Theological Seminary; Professor George Adam Smith, of the Free Church College, Glasgow.

6. Plans have been perfected by which students who so desire may count as a part

of their curriculum practical work carried on under the guidance of a pastor in one of the city churches. Substantial benefit has been gained by this arrangement, and many students have availed themselves of this opportunity.

7. While the work of the Divinity School has been arranged for those who are graduates of a college, occasional exceptions have been made in the case of mature students; but in general these exceptions have been restricted to the Summer Quarter and to special classes organized for the instruction of such students. It is the result of our experience that the man who has not had the advantage of college education and the man who has shared that advantage may not work together, under ordinary circumstances, with profit to either class.

8. An interesting development of the work has been the establishment of the so-called Divinity Houses. The first of these Houses was established in accordance with the following action of the Board of the Theological Union, which was approved by the Board of Trustees of the University:

MEMORANDUM OF AGREEMENT BETWEEN THE DISCIPLES' DIVINITY HOUSE OF THE UNIVERSITY OF CHICAGO AND THE UNIVERSITY OF CHICAGO, BOTH CORPORATIONS ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF ILLINOIS

*First:* The Disciples' Divinity House of the University of Chicago hereby agrees to build one or more halls at some point in proximity to the grounds of the University of Chicago, to be called by name or names hereafter to be agreed upon by the parties to this contract, it being understood that the hall or halls shall be used as a home for students of the Christian denomination attending the University of Chicago; it being further understood that the grounds and halls shall be the sole and exclusive property of said Disciples' Divinity House of the University of Chicago.

*Second:* The University of Chicago hereby agrees to furnish to the students of said House all the privileges of the University on the same terms as to the students living in the houses of the University itself; it being further understood that students pursuing courses of theological studies shall be admitted in accordance with the regulations governing the Divinity School, and that said students, after having completed the courses of study laid down by the University, shall receive the proper recognition of such work in the form of appropriate degrees.

*Third:* It is mutually agreed that the Disciples' Divinity House of the University of Chicago shall have the privilege of nominating one or more instructors or officers, who shall be given general charge of their said hall or halls, and of students residing therein; provided said instructors or officers shall be elected by the Board of Trustees of the University of Chicago; it being understood:

1. That the officers of the House shall be recognized as members of the University of Chicago; shall be invited to confer with the Divinity Faculty of the University on questions which relate exclusively to the interests of the House or its members, and upon such questions only; and that the House shall be represented in the University Council by its principal officer, who shall be called Dean.

2. That the officers of the House shall give instruction in connection with the department or departments of the University designated at the time of their election, which instruction shall be accepted of students in lieu of other similar instruction offered by the University in accordance with the regulations of the Divinity School.



3. That the support and maintenance of such officers and instructors shall be provided by the Disciples' Divinity House of the University of Chicago; it being understood that the University of Chicago shall have no financial responsibility in connection with said House, its officers, or teachers.

*In witness whereof* said *Disciples' Divinity House of the University of Chicago* and *The University of Chicago* have respectively caused these Presents to be signed by their duly authorized officers, and their corporate seals to be affixed hereto at Chicago this 18th day of October, A. D. 1894.

DISCIPLES' DIVINITY HOUSE OF THE UNIVERSITY OF CHICAGO.

Signed by F. M. KIRKHAM, *President of its Board of Trustees.*

Signed by N. S. HAYNES, *Secretary.*

THE UNIVERSITY OF CHICAGO.

Signed by MARTIN A. RYERSON, *President of its Board of Trustees.*

Attested by T. W. GOODSPEED, *Secretary.*

The Cumberland Presbyterian House has been organized upon the same basis.

The execution of this plan has shown that it is capable of a still fuller development. The actual facts are contained in the Reports of the Deans. Upon the whole it may be said that no Department of the University has exhibited larger growth or a better character of growth than has characterized the Divinity School.

While the relationship between the two Boards of Trustees has been all that could be desired, and in no single case has any friction existed as the result of disagreement, the experience of these years seems to show that the present arrangement cannot be permanent either for the best interests of the Theological Union or for those of the University. The difficulties of the situation may be summed up as follows:

1. Unless the present policy is considerably modified, the Theological Union, it is maintained, will lose the advantage of its charter dating from the year 1856, a Charter securing special privileges, which probably ought not to be permitted to lapse.

2. The interest of the University is distinctly in a School of Theology which shall partake exclusively of a scientific character, while it is also within the scope of the University to develop a School of Theology which shall emphasize the practical side of this work. It is a question whether both of these things can be accomplished in the same school.

3. The subject of theology in its broadest scope, and viewed from the scientific point of view, is one which may not be limited by the influence of a single denomination, nor indeed by any group of denominations. Such work should indeed be established and may be independent of denominational influence.

4. In like manner the staff of a School of Divinity controlled by university ideals should not be restricted to teachers selected from a single denomination or from any group of denominations. There should be opportunity to obtain the strongest man, whatever might be his denominational connection.

These are some of the difficulties which confront us, and for which a solution should be found. The place of the theological work as a great division of the

University is thoroughly established. The only question is under what auspices, with what ideals, and in what associations this work shall be conducted.

I desire to make the following suggestions:

1. A special investigation should be instituted which shall have for its purpose the consideration of two questions: (a) the advisability of continuing the policy of making the study of the Hebrew language optional for those who take the highest degree in Divinity; and (b) the advantages and disadvantages which are associated with the present plan of the so-called Preliminary or Survey courses.

2. In spite of the failure up to this time to solve the question of providing theological education for students of a mature age who have not had the advantages of a college course, the subject should be given further study; and the question may well be considered whether there is not a place for the College of Divinity side by side with the School of Divinity, the former leading to the degree of Bachelor of Divinity and including a curriculum of four years based upon the high schools, the latter restricting its work to college graduates. There is evidently no call for a curriculum based upon a training inferior to that of the high schools.

3. Inasmuch as certain universities, including our own, have given the degree of Bachelor of Laws an inferior place, restricting it to students who have had no considerable portion of the college training, and have established for the regular degree in Law, to be conferred upon those who have taken a college course, the degree of J.D. (Doctor of Law), the Divinity School should take up the question whether the corresponding degree of Doctor of Theology is not the proper one to be conferred upon those who have finished its work.

4. While theoretically the curriculum of the Divinity School has recognized the Social Settlement and the advantage of training gained in the Settlement, the work thus far done in this direction has been small. It would seem to be opportune at this time to devise means by which the real benefit of such work shall be placed at the command of the students.

5. It is generally acknowledged that the arrangements for such instruction in Public Speaking and in Music as would be most helpful to students in Divinity have not yet been formulated. This formulation is worthy of immediate consideration.

6. The line between scientific Divinity, if such a phrase may be used, and practical Divinity must be more sharply drawn, and such reorganization of the work should be brought about as will adapt it more closely to the needs of different classes of students.

7. A rearrangement of the work in the Departments of Homiletics, Practical Theology, and Sociology, as presented to the Divinity students, seems necessary. This rearrangement, under what might be called the Department of Practical Theology, is, however, something quite different from the proposition to draw a line between scientific and practical Divinity. In this case reference is made to the Department concerned; in the other, to the methods of work in all the Departments of the Divinity school.

8. Serious consideration should be undertaken of the problems underlying the

present relationship of the Theological Seminary to the University, with a view to determining whether (a) it would be wise to revoke by common consent the present contract existing between the University and the Theological Seminary, provided that such a financial adjustment can be made as will permit the establishment upon a practical basis of an independent Theological Seminary under the Baptist Theological Union; (b) whether in this case it would be wise for the University to establish a separate Divinity School, non-denominational, co-ordinate with the other Graduate Schools of the University, and under the direction of the Board of Trustees, or perhaps to limit its theological work to those chairs already provided for in the Faculty of Arts, Literature, and Science; (c) whether it would be wise for the University to encourage other Theological Schools of different denominations to locate their buildings near the University and become federated with the Divinity School of the University on terms which may be satisfactory to all parties, it being understood that the proposed affiliated Seminaries shall be legally independent, that their buildings and grounds shall be their own property, and that their relationship to the University shall be an educational arrangement of such character as to benefit the students and teachers of such schools as well as the University. It is clearly appreciated that the questions here raised are fundamental; but in view of the trend of the times, the great economies which could be secured, the larger independence attained by the Seminary of the Theological Union, the great mutual benefit to other theological institutions and to the University accruing from the location of the former in proximity to the latter, it is believed that they deserve full and immediate consideration. This consideration is recommended, although it is very far from clear that, under all the circumstances, any change whatever should be made in existing contracts.

#### XIV. THE MEDICAL SCHOOL

It has been only during the last year of the first decade that medical work as such has been conducted in the University. Before the opening of the University a proposition was received to enter into affiliation with Rush Medical College. It did not seem wise at that time to accept this proposition. It was repeated in one form and another until in December, 1897, it was accepted in the following action of the Trustees:

The following report was received from the Committee on Academy and Affiliations:

"The Committee also made a report recommending that a petition of the Rush Medical College for affiliation be granted on certain conditions. After full consideration, the recommendation was approved and the conditions named were adopted in the following form:

"1. The Board of Trustees of Rush Medical College shall be reorganized in such manner as that it shall consist of men who are satisfactory to the Board of Trustees of the University, are interested in education and have no pecuniary interest in the earnings of the school.

"2. The Board of Trustees as thus reorganized shall pledge itself to increase the preliminary requirements for entrance to the Rush Medical College in accordance with the action already taken by its Trustees, so that in 1902 the requirements for admission shall include the Freshman and Sophomore years of college work.

"3. That affiliation shall take effect June 1, 1898, provided the debts of Rush Medical College shall have been paid by that time. In case it shall appear on June 1, 1898, that the College needs more time for the payment of its debts, the Trustees of the University of Chicago will entertain a request to extend the time for a period not to exceed eighteen months, but in no event shall affiliation be entered into until said debts shall have been paid."

In April, 1901, the work of the first two years of the course in Rush Medical College was transferred to the University and made an organic part of the University work, in accordance with the following action on the part of the Trustees of the University:

The Committee on Instruction and Equipment submitted the following recommendation, viz.:

"That the University consent to the request of the Board of Trustees of Rush Medical College, to receive the present Freshman class of Rush Medical College and the Freshmen classes entering July 1, 1901, and thereafter, as students of the University; it being understood that, in accordance with the laws of the state, they shall remain enrolled as students of Rush Medical College also, the fees of the students to be paid to the University; but that this action is made dependent upon the securing by the University of the sum of fifty thousand dollars (\$50,000) with which to provide for initial expenses necessarily connected with such work."

Drs. Billings and Ingals made very full statements relating to the question. After very full consideration by the Trustees, it was voted that the following proviso should be added to the recommendation of the Committee, viz.: "it being understood that the work assumed by the University can be conducted without increasing the deficit already provided for in the budget for the coming year." With this addition, the recommendation of the Committee was adopted by a unanimous vote.

In April, 1902, the following proposition was received by the Trustees of the University:

The Trustees of Rush Medical College believe that the high purposes for which the College was founded, and which it has attempted to carry out for more than sixty years, will be best served by its organic union with the University of Chicago. To the end that this may be accomplished, we hereby submit, for your consideration, the following proposition:

1. If it can be legally done, and upon compliance with the other conditions hereinafter to be mentioned, the Trustees of the Rush Medical College will, on or before January 1, 1903, transfer to the University of Chicago all its property—real, personal, and mixed—and its goodwill, which includes the privileges of the Central Free Dispensary and the Presbyterian Hospital, thus affording privileges indispensable to a medical college, which would cost a large amount to obtain. . . . There shall, also, be transferred all the appliances and equipment in said buildings, or on said premises, or elsewhere, which belong to the College.

2. The Rush Medical College, with the consent of the Presbyterian Hospital, will transfer the contract now existing between the Rush Medical College Trustees and the Presbyterian Hospital.

3. So far as it can legally be done, the Rush Medical College Trustees will provide that any endowment, hereafter received by it, or in its name, shall belong to the University of Chicago.

4. The Trustees and Faculty of the Rush Medical College, with such assistance as may be obtained from its friends, will endeavor to secure for the purposes hereof the sum of \$1,000,000, to be used for medical buildings, equipment, and instruction, at the discretion of the Trustees of the University of Chicago. In consideration of the foregoing, the University of Chicago is to agree that, upon compliance with these conditions, and the raising of the \$1,000,000

referred to above, it will thereupon assume and thereafter continue to conduct the work of Rush Medical College.

The plan for the future development of Medicine, as suggested by the Trustees of Rush Medical College in connection with the proposition just recited, is as follows:

1. In addition to the present Departments of Anatomy, Physiology, Pathology, and Physical Chemistry, which shall also be part of the Ogden School of Science, three clinical Departments shall be created in the University of Chicago, all constituting the Faculty of Medicine.

2. The work of these clinical Departments (Medicine, Surgery, and Obstetrics) shall be conducted for (1) undergraduates, and (2) for research work.

For undergraduates: (a) during the third year of the medical course at the University, as soon as satisfactory arrangements can be made; (b) during the fourth year at Rush Medical College, at the University, and elsewhere, if thought wise, as may be arranged.

For research work: (a) at the University; (b) at Rush Medical College, and elsewhere, as may be arranged.

3. The work of each of these Departments shall be under a Dean, who shall correlate the work of the Departments in the several places.

4. All instructors in all Departments shall be members of the Faculty of the Rush Medical College of the University of Chicago. All instructors in the fundamental branches of Anatomy, Physiology, Pathology, Physical Chemistry, etc., shall be members of the same Faculty as those of the Clinical Departments (Medicine, Surgery, and Obstetrics); and they shall, also, be members of the Faculty of the Ogden School of Science.

The real basis for the development of medical work in the University was furnished in the gift by Miss Helen Culver of one million dollars for the endowment of the Biological Departments, and in the use of a part of this gift in the erection of the Laboratories of Botany, Anatomy, Physiology, and Zoology. These buildings are at present crowded to their fullest capacity, and in the near future additional space will be required.

The property of Rush Medical College includes the following:

Real estate and buildings (three buildings)	\$290,000.00
Furniture and fixtures	15,000.00
Equipment and apparatus	25,000.00
Library	16,000.00
John Philips's Endowment for Central Free Dispensary	7,743.81
Freer Prize Endowment	8,200.00
Nicholas Senn Fellowship Fund	15,000.00
<b>Total</b>	<b>\$371,943.81</b>

In addition to the partial equipment of the Departments already provided for in connection with the biological work, the sum of \$50,000 was contributed by a friend of the University for the purchase of additional equipment and apparatus. Quite recently the sum of \$20,000 has been presented for the purchase of additional books in the Departments concerned in Medicine. The Rush Medical Library now contains 14,000 volumes. In the Departmental Libraries immediately connected with the work of Medicine in the University there are 9,368 volumes, making a total of 23,368 volumes in the medical work under the charge of the University.

The students of Rush Medical College have always been known for the high grade of work performed and for their excellent character. As a result of the advancement in the requirements for admission, the grade of students is still higher.

I desire to make the following suggestions :

1. In spite of the difficulties connected with the proposition, it is on the whole best to locate the new buildings for the first two years of medical work at the University on Fifty-seventh street directly opposite the Hull Biological Court.

2. At the earliest possible date provision should be made for giving the men of the first two years some instruction in connection with clinical material.

3. The order of procedure in the development of the medical work should be as follows :

a) On the South Side at the University: (1) The erection of new buildings for Anatomy and Pharmacology, as suggested above. (2) The establishment of a chair of Medicine in connection with the work at the University, and the appointment of its Head in order that ample time may be given for the preparation of plans both of buildings and work in general. (3) The provision of a temporary Dispensary with a few beds, in which certain forms of disease may be studied. This should be located within a quarter of a mile or less of the present University buildings. (4) The provision at the earliest possible date of permanent hospitals for Medicine, Surgery, and Obstetrics, and the organization of the Departments to take charge of these hospitals and give the necessary instruction. (5) The provision, as early as possible, of hospitals for children's diseases and contagious diseases. The sum needed for the erection of the buildings and the endowment of the work in each of these five hospitals will be at least \$1,000,000.

b) On the West Side in connection with Rush Medical College: (1) The raising of the proposed sum of \$1,000,000. (2) The completion of the group of buildings of which the Senn Memorial Building forms the first part. This will cost about \$350,000. (3) The organization on the proper basis of a School of Dentistry which shall be in close association with the School of Medicine, with the requirements for admission much higher than those ordinarily demanded in schools of dentistry. (4) The organization of a Nurses' Training School which shall be entirely under the control of the Medical Department of the University. (5) A revision of the agreement now existing between the Rush Medical College and the Presbyterian Hospital, in accordance with which the present arrangements shall be re-enacted by the Trustees of the Hospital with such changes as may be agreed upon, in favor of the University of Chicago. (6) The readjustment of the arrangement existing between Rush Medical College and the Central Free Dispensary.

c) The reorganization of the various Departments under Deans in accordance with the plan outlined above, and the further development of the clinical work on the North Side.

4. Since the degree of M.D. is used to designate graduation from many institu-

tions which make but slight requirements for admission, and since this degree is required by law in the various states, it would seem proper to grant to the graduates of the Medical School who have already taken their Bachelor's degree, and are therefore Graduate students, the degree of Doctor of Science contemporaneous with that of M.D. This would correspond with the degree of J.D. (Doctor of Law) for the graduate of the Law School, and Th.D. (Doctor of Theology) for the graduate of the Divinity School.

#### XV. THE LAW SCHOOL

While the organization of the School of Law had been contemplated for many years, and a large part of the preparation for the same made, it was not until the closing year of the first ten that the actual steps were taken for its establishment. The order of these steps was as follows :

1. The preparation of a schedule of organization by a Committee of the Senate, consisting of Messrs. Judson, Small, and Laughlin, acting with the President.

2. The adoption of the recommendations contained in this Memorial by the Committee of the Trustees, and the addition of supplementary conditions by the Board. The final form of this action was as follows :

*January 21, 1902.*

The President reported from the Committee on Instruction and Equipment the following recommendation, which, after full consideration and discussion, was approved and adopted :

"1. WHEREAS, It is important to proceed to the organization of those departments of the University not yet established ;

"2. WHEREAS, It seems desirable at present to offer especially those departments of work which appeal to men ;

"3. WHEREAS, The demand for instruction in Law grows every day more pressing ;

"4. WHEREAS, The University is today actually giving the instruction called for in the first year of a School of Law ;

"5. WHEREAS, (1) The instruction called for in the remaining two years, (2) the cost of administration, (3) the cost of advertising, &c., can be provided for a sum not to exceed \$18,000 a year, and this expense would probably be met by the tuition fees of the students registering for the work ;

"6. WHEREAS, Temporary quarters for the School may be arranged in the building now occupied by the School of Education ;

"7. WHEREAS, There would still remain the necessity for providing a library, estimated to cost \$50,000 ;

*"It is voted :*

"1. That Mr. Rockefeller be requested to consider the advisability of giving to the University the sum of \$50,000 for the purchase of a law library ; and, if he shall consent,

"2. The President be authorized to proceed to organize the University School of Law, to be open for instruction October 1, 1902, with the understanding—

"a) That the total expense of the School (not including the cost of the library) for the first year shall not exceed \$18,000, and for the second year \$22,000—a sum estimated to correspond to the receipts from tuition fees and matriculations.

"b) That the School be arranged to include :

"(1) A preparatory year equivalent to the third college year ; and

"(2) A three-years' course of study, to which no one shall be admitted who is not a graduate of an approved college or who has not completed three years of study in such a college.

"c) That the students of the preparatory year and those of the first year of the Law work who do not have a Bachelor's degree be reckoned, for administrative and financial purposes, students of the School of Law.

"d) That the general items of the budget of expenditures be as follows :

Administrative salaries - - - - -	\$ 1,000
Administrative expenses - - - - -	800
General expenses - - - - -	500
Instruction - - - - -	14,000
Books and librarian - - - - -	800
Heat and light - - - - -	800
	\$17,900"

3. The gift by Mr. Rockefeller of \$50,000 for the purchase of books.

4. The consent of the Harvard Corporation to grant Professor Beale leave of absence for two years to act as Dean of the new Law School during its period of organization.

5. The securing of a gift for the Law School Building.

6. The selection of the Faculty and adoption of regulations.

All of these steps had been practically completed at the close of the first ten years of University work, and so belong to the first period of its history.

Three important points were adopted as fundamental in the policy of the School:

1. That it should be located at the University, and thus constitute a part of the University environment and form an organic part of the University, making contribution to the University life and at the same time imbibing the spirit and purpose of that life.

2. That it should be essentially a Graduate School, its regular students being required to have the Bachelor's degree, or at least three years of work in an approved college.

3. That, while the methods of each instructor should be left to be determined by himself, the system which should serve as a basis of the work should be the so-called "Case System."

On the first and second points there was entire unanimity on the part of the Committee of the Senate and the Trustees. On the third point the feeling was not so unanimous. This question, however, seemed to receive a practical settlement in the choice of instructors finally agreed upon.

The task of selecting the books for the library was intrusted to Professors Beale and Mack, and the result of their work has shown itself to be thoroughly satisfactory. The library, as thus far organized, contains over 20,000 volumes, and includes the reports of all the courts of the United States, and of the several states and territories, of England, Scotland, Ireland, Canada, Australia, and India; the statutes now in force in these jurisdictions; a large number of session laws, many of them rare and



valuable; an adequate collection of treatises, trials, and legal periodicals; and the necessary books of reference. A large collection of civil-law treatises and of the reports of the European states is to be procured at once.

Much consideration has been given to the question of degrees. At first provision was made only for the degree of J.D. (Juris Doctor) which is intended for those who have already received the Bachelor's degree. This step was taken after consultation with the other graduate law schools of the country, Harvard and Columbia. Later it was decided to bestow the degree of Bachelor of Laws on special students who are qualified to enter the Junior Colleges, provided they maintain a high standing.

Special mention should be made of the courtesy of the Harvard Corporation in permitting Professor Beale to accept the temporary appointment of Dean, referred to above. This action indicated a broad spirit and an appreciation of the closer relationships which are coming to exist between higher institutions of learning. The University of Chicago acknowledges most cordially its obligation to Harvard for this unprecedented favor.

The building intended for the Law School has been planned with great care. Pains have been taken in the provision, not only for the things needed, but also for the things desired. It will be of stone, in the English Gothic style, which has been consecrated to English law by the use, for legal purposes, of Westminster Hall and the Inns of Court. The basement will contain smoking- and conversation-rooms, toilet-rooms and lockers. On the first floor will be two large lecture-rooms, capable of seating about 175 men each, and a number of smaller lecture-rooms, class-rooms, offices, etc. On a mezzanine floor above will be the stack-room of the library, 9 feet high, occupying this entire floor of the building; here will be the work tables and studies of the professors, the librarian's room and other rooms for the administration of the library, and stack-room for at least 100,000 law books. Above this will be the reading-room, a great hall 160 feet long and 50 feet wide, with timbered roof and clerestory windows, equaling in dignity and beauty the great English academic halls. The impressive dignity and the historic associations of the architecture of this great hall will of themselves be of much educational value. The reading-room will furnish wall space for about 25,000 volumes. On the same floor will be the Dean's office. The building will be thoroughly ventilated, and all parts of it, except the smaller lecture-rooms, will be lighted by windows on both sides. The building will be in the main Quadrangle of the University, and will be connected by covered passages with the general library of the University and with the building of the Historical Departments, when the latter buildings are erected.

By the action of the Board of Trustees, a pre-legal year has been established for students who are preparing to enter the Law School. The work of this year consists of Political Economy, Constitutional History, Political Science, Commerce, and Logic.

I desire to make the following suggestions:

1. There should be established, as early as practicable, a Journal for the Law School, to be edited by its professors. This Journal might be, if thought best, the continuation of a Journal already established, which could be secured on satisfactory terms, or a new Journal with a constituency to be obtained. The advantage of controlling such a Journal is apparent and needs no argument.

2. Provision should be made for instruction in subjects of Law for which students from other divisions of the University might register. Such courses should be arranged for, even if they should prove to be courses outside of those ordinarily offered in the Law-School curriculum. There should be particularly included courses which would prove of advantage to students of the College of Commerce and Administration.

3. It is desirable that the Law School should conform to the general policy of the University and offer courses in the Summer Quarter. These courses should be so arranged that students who desire to begin the work of the Law School may make the Summer Quarter their first Quarter. Instruction should also be provided for those who desire to take the second and third years of the law course as well as those who desire to undertake special work in connection with the law of modern commercial life. In other words, opportunity should be provided for work on the part of (a) those who wish to complete their course in a shorter time than the three calendar years ordinarily required; (b) students of other institutions who wish to do special work in particular subjects; (c) graduates of schools of law already engaged in practice who desire to make special investigations in particular lines; and (d) teachers of law in other law schools who wish to undertake advanced work with professors of law of international reputation.

4. Care must be taken that the Law School shall not be regarded as an institution which has a merely nominal connection with the University. Effort should be made to keep it in the closest touch with the other divisions of the University, and to this end in matters of legislation there should not be departure from the usages of the University already established, except in those cases where the circumstances make clear demand.

#### XVI. THE SCHOOL OF EDUCATION

The institution established under the name of The Chicago Institute by Mrs. Emmons Blaine, and originally located on the North Side, after one year of work in that location was transferred to the University and reorganized as an organic part of the University.

Within a few months, Colonel Francis W. Parker, the Director of the School, was taken away. This serious loss rendered necessary certain changes in the staff of the Faculty. Upon the election to the Directorship of Mr. John Dewey, the Department of Education in the University was joined to the School of Education, and the larger plans contemplated in the original contract, by which secondary work as well as elementary work should form a part of the scheme of work, were completed. At an

important meeting held in May, 1902, the Faculties of the School of Education, the Department of Education, the South Side Academy, the Chicago Manual Training School, and the Laboratory School were organized as a single Faculty, thus bringing about the union of these various interests and their organization into one administrative body. At this meeting committees were appointed on the curriculum of the various sections of the work and upon the consideration of questions relating to buildings and grounds. With this action the second year of the history of the School was closed.

The difficulties encountered by the School, of which the greatest was the loss of the Director, Colonel Parker, have included also the following:

1. The embarrassment of doing two years' work at the University in a provisional building which does not furnish adequate facilities.

2. The fact that the buildings planned are to cost more than the sums originally appropriated. This excess of cost is due in part to the adoption of Bedford stone as the material for the buildings, and in part also to the fact that they are to be made strictly fireproof. The opinion prevailed that both of these steps were not only desirable, but necessary.

3. The fact that so large a portion of the original endowment, viz., \$425,000, consists of the unproductive piece of real estate lying between North Clark street on the west and North Park avenue on the east, Webster avenue on the south and Belden avenue on the north, purchased for the site of the School as originally proposed. Inasmuch as this investment produces no income, but, on the other hand, is a source of expense on account of taxes, it becomes necessary, in accordance with the provision made in the original contract, to use a portion of the principal of the endowment for a period of six years. The maximum which may thus be employed is \$25,000 a year.

4. The adjustments which are required by the University environment, involving, on the one hand, great economy and advantage, but, on the other, careful arrangement of curriculum and a new distribution of work among the members of the Faculty.

5. Adjustments growing out of the fact that the work as originally proposed has limited itself, perhaps too rigidly, to the ground covered ordinarily in the normal school, leaving out of view necessarily the larger and higher work which under the new circumstances seems to be demanded.

6. The existence of the Laboratory School (formerly the Elementary School), which for seven years has been conducted as a Laboratory of the Department of Education in the University. This School, with its separate Faculty and pupils, has had for its aim the working out of certain important educational theories. The question of adjusting the relationship of this School to the Elementary School of the School of Education involves several points for serious consideration, among which may be named:

a) Is it necessary henceforth to conduct two independent schools?

b) Even if such a policy is desirable, how can both be properly conducted with the money at the disposal of the University?

c) In case both schools are maintained separately, what shall be the distinction between the two, and to what extent may there be co-operation in the matter of teachers?

d) Can both schools, if maintained separately, occupy a single building, or must there be a separate building for the Laboratory School in addition to those already erected for the School of Education?

7. The adjustments involved in placing the Chicago Manual Training School with its distinctive features in connection with the South Side Academy.

8. The relationship to be sustained between the instruction in the various Departments in these schools and the corresponding Departments of the Junior Colleges.

These and other problems still await solution. The Departments concerned are engaged in their earnest consideration.

The journal formerly entitled the *Course of Study*, and connected with the Chicago Institute, has been continued under the name of the *Elementary School Teacher*. This journal is published by the School of Education under the Managing Editorship of Professor Ella F. Young. It is intended to serve, not merely as an organ of the School of Education, but as a medium for the discussion of all questions relating to the field of elementary education.

The possibilities of the School of Education are very great, although considerable disappointment has been felt thus far in the small number of professional students registered. It is believed that the failure thus far is due to causes beyond the control of those who have been connected with the School. It is confidently felt that, with the establishment of the School in its permanent quarters in the new buildings, with the larger scope which the combination of various interests will invite, and with the closer correlation of all the factors in the situation, the number now enrolled, viz., one hundred, will be doubled, or even quadrupled, within the near future. It is estimated that the buildings now in process of erection, including those which are to follow within a short time, will be capable of accommodating five hundred professional students, five hundred secondary pupils, and three hundred elementary pupils. The library and the various departments are thought to be more strongly equipped in books and apparatus than those of any other school of a similar character in the West or Northwest.

The following is a brief description of the building now being erected: It is situated on Scammon court, between Kimbark and Monroe avenues, and faces the Midway Plaisance. The building will be of stone, with tile roof to correspond with the other buildings of the University, although the actual details of the style are somewhat different. It will have a frontage of 350 feet, and a depth, through its two wings, of 162 feet. It will be four stories high, but passenger and freight elevators will give easy access to the upper floors. An attractive feature of the plan is the large

open court, the quadrangle, which is now accepted as the best arrangement for a university building. The court will offer great possibilities for landscape effects, and in the final plan will be symmetrical and surrounded with buildings. The wings on the east and west sides are low, to insure a circulation of air in the court, and also to take advantage of the prevailing western winds in summer. To increase the effect of the whole, and to insure a certain privacy, the building is set upon a terrace.

The west half of the building will be assigned mainly to the professional department, and the first two floors in the east wing to the Elementary School.

In detail the disposition of the rooms is as follows: The part of the basement used for rooms is taken up with the geographical laboratory, and the casting-room and the furnace-room used in connection with clay-modeling. On the first floor are the assembly hall, physics laboratory, rooms for astronomy and mathematics, the offices of the Director and the Dean, and four full-sized grade-rooms and eight half-sized grade-rooms to be used as group-rooms. On the second floor are the rooms for oral reading, geography, geology, history, and library. In the east wing there are four full- and four half-sized group-rooms and a play-room for the kindergarten. On the third floor there are rooms for chemistry and biology, a lecture hall, museum, four general class-rooms, two for psychology, two for domestic science and sanitation. On the fourth floor there are rooms for music, photography, manual training, art, a Faculty room for lunch and kitchen, clay-modeling, textiles, and dyeing.

It will be seen that the general arrangement is such as to insure plenty of light for each of the rooms and for all of the corridors. From this fact it is believed that the building will lend itself easily to the decorative effects which can be planned with a view to an appropriate treatment of the building as a whole. The corridors will be lined with brick of a soft gray color, and the floor will be of cement, in a shade of red harmonizing with the walls. The finish overhead will be in rough plaster, to add life to the color effects. The interior woodwork will be of dark-stained birch. Birch has been selected rather than oak or other woods of a more porous nature, because of the ease with which it may be kept clean. With the exception of the kiln-room and the casting-room, there are no work-rooms in the basement. The building will be equipped with a complete interior telephone system. The heating and ventilation will be of the Plenum system, the same as in our public schools, except that the amount of air furnished each person per hour will be greater, and the velocity of the air entering the room not so great. In addition, the laboratories are equipped with an exhaust system.

I desire to make the following suggestions:

1. The connection between the School of Education and the various Departments of the University, while already close, should be made still closer. The higher the grade of the teacher, the more important becomes the factor of actual knowledge as compared with method; in other words, if it shall prove to be the policy of the School to prepare the higher grade of teachers as well as principals and superintendents, the

University must make a larger and larger contribution as compared with that of the School itself. This can come about only if the curriculum of the school allows the fullest possible opportunity for the student to do work in the University.

2. It is probable that, after all, the laboratory method will prove to be the better method for training teachers as well as for working out anew the solution of educational problems. If this is true, it will not be necessary, as has heretofore been supposed, to multiply indefinitely the number of pupils for the purpose of affording an opportunity to train the teachers, nor will it be necessary to place the pupils unre-servedly in the hands of amateur teachers.

3. If the suggestion just made proves to be correct, it will be possible with the growth of the professional school to reduce the number of pupils in both the elementary and secondary divisions in order to make room for professional students.

4. It is apparent that in the suggestion just made lies the possible solution of the combination of the two elementary schools now in existence. It seems wise, upon the whole, to make some adjustment of the curriculum and requirements for admission in order to accommodate the large number of teachers desiring to be present during the Summer Quarter, and it is probable that nothing would be lost by modifying in this way the general regulations of the School.

5. Consideration should be given to the question whether it is not possible to arrange a system of co-operation between normal schools of the various states and the School of Education similar to that which exists between the high schools and the Colleges of the University, or between the various Colleges and the Graduate School of the University.

6. It is also to be considered whether a large factor in the future work of the School of Education shall not be the training of specialists in the various departments of educational work, rather than furnishing the usual courses of study covered in the ordinary normal school.

XVII. THE UNIVERSITY COLLEGE

In 1898 Mrs. Emmons Blaine, after a study of certain facts presented to her, kindly consented to contribute \$5,000 a year for five years toward the establishment of courses of study for teachers and others at some down-town place more accessible to the public than on the Quadrangles of the University, these courses to be offered in afternoons and evenings and on Saturdays. An annual gift of \$1,200 was subse-

Quarter	1882				1883				1884				1885				1886				1887				1888			
	Autumn	Winter	Spring	Totals	Autumn	Winter	Spring	Totals	Autumn	Winter	Spring	Totals	Autumn	Winter	Spring	Totals	Autumn	Winter	Spring	Totals	Autumn	Winter	Spring	Totals	Autumn	Winter	Spring	Totals
No. of classes..	4	7	..	11	1	15	13	29	39	24	21	84	51	32	23	111	87	65	34	186	89	58	11	156	36	23	8	67
Enrolment ....	50	79	..	129	15	109	68	192	495	198	273	961	625	323	195	1143	1011	592	268	1871	1007	504	58	1567	36	23	8	67
Av. No. in class	13	11	..	..	5	7	5	..	12	8	12	..	12	8	8	..	11	9	7	..	11	8	5	..	36	23	8	67
No. instructors	4	7	..	7	1	13	10	13	28	19	13	28	24	20	15	35	36	28	18	39	36	23	8	36	36	23	8	67

quently added to the original gift. The work was established under the title "The College for Teachers," and there was joined with it the class work of the University Extension Division. The history of the class work for the preceding six years is summarized in the accompanying table.

Under the management of the Director of the University Extension, Mr. James, courses were offered in the Studebaker building, Michigan avenue and Van Buren street, beginning October, 1898. The enrolment of students for the four successive years was as follows:

1898-1899	-	-	-	-	305
1899-1900	-	-	-	-	287
1900-1901	-	-	-	-	234
1901-1902	-	-	-	-	515

In addition to these regularly matriculated students, during the last two years, after the dropping of the Class-Study Division, a certain number of students has been cared for by the University College in classes away from the College rooms. Very many of these are matriculated students of the University, but many are not. They should, however, be taken into consideration, in the figures of the University College, because many of them are doing the same kind of work as is done at the University College, and they are constantly being drawn into the University College classes proper. The figures for the two years are as follows:

1900-1901	-	-	-	-	108
1901-1902	-	-	-	-	135

At the end of the second year of the work, the name was changed to "The University College," because the name formerly used was understood to indicate that the work proposed limited itself to the training of teachers. The fees collected during the first four years were as follows:

	1898-1899	1899-1900	1900-1901	1901-1902
Tuition and laboratory fees.....	\$5,978.65	\$5,149.26	\$8,427.15	\$9,924.57
Rent.....	.....	.....	.....	727.50
Matriculation.....	1,125.00	580.00	1,125.00	995.00
Totals.....	\$7,103.65	\$5,729.26	\$9,552.15	\$11,647.07

An attempt was made to adjust the courses to the demands being made from time to time, and the result was, taking the fourth year as a typical year, that courses were organized in the various Departments as follows: Philosophy, 5; Education, 3; Political Economy, 2; History, 5; Greek, 2; Latin, 5; Romance, 4; German, 4; English, 7; Mathematics, 2; Physics, 1; Chemistry, 1; Geology, 1; Zoölogy, 3; Botany, 2; Public Speaking, 3; Library Science, 1. At the end of the fourth year it was apparent that a splendid body of students was being helped in this way who could receive help in no other form. Many of these students had classified themselves according to the regulations of the University and were studying for a degree. Already many by

means of the opportunity thus afforded have been enabled to receive the Bachelor's degree. At least four hundred students are actively engaged in the prosecution of the full college course with a view to the degree. Only a small percentage of the colleges of the United States have an enrolment of as many students.

The fact confronts the Trustees that at the end of the fifth year, 1903, the term will expire for which the gift was made. There seems to be no question that in no part of the University has a gift of money been used to accomplish so much as in this particular case.

I desire to make the following suggestions:

1. The work of the University College should be continued. It would be wholly inconsistent to give up this work and at the same time continue other work which the University is doing in which the returns are not so great. If, by the expenditure of six or seven thousand dollars, four or five hundred students can be assisted in carrying on their studies for a college degree, the work done as indicated is the most economical of any higher educational work in the country.

2. It is important that more suitable quarters be obtained than those the College has occupied during the five years of its history. These rooms are not as accessible to students from the West and North Sides as is desired. The fact that so large a part of the Studebaker building is occupied by teachers of music occasions constant noise, which proves to be a source of annoyance to those engaged in the usual recitation-room work of the College.

3. There is room for a much larger development than has yet been secured. The provision which has recently been made by the Board of Education for promotion and increased salaries on the basis of examinations passed will prove a great incentive, and whatever other sources of help may be offered to teachers of Chicago by the Board of Education or by other institutions independent of the Board of Education, it is apparent that there is no agency to which the teachers may come with so much profit as to the University College, partly because the work done in the University College will count for a University degree as well as for the examination looking toward promotion and increased salary. The small fee charged will not deter many from entering the classes.

#### XVIII. THE COLLEGE OF COMMERCE AND ADMINISTRATION

The records show that the University Senate took up the consideration of the establishment of the College of Commerce and Administration in 1894. This date preceded that at which any other college or university in this country had given the matter consideration. The most important part of the discussion in the Senate turned on the question: "Shall the proposed work in Commerce and Administration be organized as a professional school or as one of the undergraduate Colleges of the University?" The decision of the Senate was in favor of the second proposition. Notwithstanding the early date at which the movement was started, the development of the work as distinguished from that of other undergraduate work has been slow.



This has been due to the purpose of the University—the desire of the authorities being not to lay too great emphasis upon work of this character, in contrast with the longer-established college work, in the early years of the history of the University. One of the important events in the history of the movement was the presentation of papers on the subject before the Thirteenth Conference of Secondary Schools of the University held November 10 and 11, 1899. At this Conference admirable contributions, one from the point of view of the academician and one from the point of view of the business man, were presented by Professor A. C. Miller, now of the University of California, and Mr. A. C. Bartlett, of Hibbard, Spencer, Bartlett & Co. In the spring of 1901, after full discussion, it was thought that the time had arrived to place the work in charge of a separate Faculty and under the direction of a separate Dean. At the same time the curriculum of study was reorganized, and new courses were added. Certain fields, however, still remain untouched, *e. g.*, Insurance, Accounting.

It may be acknowledged that other institutions, starting at a later date, have proceeded more rapidly and have already succeeded in presenting a larger variety of courses.

The work of the College has been greatly advanced by the services of eminent men in various departments of commerce who have kindly consented to visit the University and lecture upon the subjects in which they were specially interested.

I desire to make the following suggestions:

1. It is evident that the work of the College must be largely increased, and to this end new instructors must be appointed and new courses of instruction offered. A plan for gradual development should be worked out in accordance with which one or two new instructors should be added to the force each year until the entire ground is covered. Provision has been made for such an increase during the present year.

2. Important combinations are possible between the College of Commerce and Administration, on the one hand, and the Law School and the proposed Technological School, on the other. Such combinations, however, can be worked out only by the united effort of all concerned. Special committees should be established for this purpose.

3. In view of the trend of affairs, provision of a substantial character should be made for men who desire to enter the consular and diplomatic service of the country, and the students who are specially interested in these lines should be brought into actual touch with the problems of such service.

4. Attention should be paid to the fact that the constituency of the College of Commerce and Administration under ordinary circumstances may be expected to be one which has not hitherto been provided for in the College. A small number of those who would have chosen one of the other Colleges will in preference select this College, but the greater number of students in this College will be men and women who have entered college primarily because of the possibility of doing the work thus offered.

5. The work of the College of Commerce and Administration must remain inade-

quate so long as it is without a well-equipped commercial museum. The leading commercial colleges of Europe have long recognized that such provision is as essential to their work as is a laboratory for chemistry or a workshop for engineering. In this respect the University of Chicago is far behind, and even the materials which have been contributed to the University must, because of lack of space in its buildings, remain stored away and altogether inaccessible. A commercial museum designed for educational purposes should contain primarily a collection of the raw and partly manufactured materials of Commerce. These should be arranged so that the student could study carefully the products and resources of any one country, and so that he could also make a comparative study of all the varieties of any given product coming from different parts of the world. In addition to this, there should be exhibits showing the processes of manufacture in the leading industries, and illustrating the industrial progress of various lands. Supplementary to the materials exhibited, there should be collections of photographs, maps, and charts, so that the museum would serve as a laboratory to students of Commerce.

6. Special arrangements should be made for training students to speak the principal modern languages, French, German, and Spanish, and to this end Houses should be established in which only a given language is employed by the servants as well as by the students.

7. It is important also that provision should be made for training students to speak some of the more important living oriental languages.

8. Chairs should be established for the teaching of the Russian and Chinese languages, literatures, history, and institutions. No more important field lies open before the college student than work in these great empires.

#### XIX. THE SENIOR COLLEGE OF ARTS, LITERATURE, AND SCIENCE

The origin of the present Board of the Senior College of Arts, Literature, and Science is described in the statement on "Administrative History," p. xliii. The work under the charge of this Board was originally a part of the work of the General Faculty, later the work of a special Board of that Faculty, still later the work of a special Faculty, and at present the work of a Board which serves as a standing committee, on the one hand, of the Faculty of Arts, Literature, and Science, and, on the other, of all of the Faculties including in their enrolment students of the rank of Senior College students. The terms "Upper" and "Lower" were at first used, but after two years these were changed to Senior and Junior College. The Senior College work at present includes eight possible groups, viz.: Arts, Literature, Science, Law, Medicine, Commerce and Administration, Divinity, and Technology. All but the last of these have been organized. The membership of the Board is constituted as follows:

1. The President and the Recorder.
2. The Deans concerned with Senior College students.
3. Two representatives each of the following groups of departments: (a) Ancient

Languages and Literatures; (b) Modern Languages and Literatures; (c) Philosophy and the Social Sciences; (d) Mathematics and Inorganic Sciences; (e) The Organic Sciences; (f) Each professional or technical Faculty having students who are candidates for the Bachelor's degree; namely, the Divinity, the Medical, the Faculty of Commerce and Administration, the Faculty of the Law School.

The reports show that the number of students classified as members of the Senior Colleges actually in attendance at any one time has varied from 31 in the Spring Quarter, 1893, to 326 in the Spring Quarter, 1902; and that the various Bachelor's degrees have been conferred in any given year on from 15 to 286 candidates, the latter number being reached in the year closing June 30, 1902.

A large minority of the Faculties of Arts, Literature, and Science would probably favor the policy of granting one Bachelor's degree rather than, as at present, three, but a majority has always been in favor of the policy outlined at the beginning; and if the suggestions made elsewhere in this Report should be adopted, the degree of B.D. as well as that of LL.B., and perhaps others, will be given to represent in general the same time-requirement as is now represented by the other Bachelor degrees.

Much difference of opinion has existed as to the advisability of conferring the Bachelor's degree on graduates of affiliated colleges after three months' residence. It is evident that this practice seems at first sight to discriminate in favor of those who do not come to our own institution, but considerations may be presented which largely relieve the difficulties in the case.

A remarkable fact is shown by the Dean's Report in reference to the number of students entering the University of Chicago from other colleges (see pp. 66-8). Probably in no other university does the principle of migration in undergraduate work play so prominent a part.

More or less doubt has existed as to the advisability of continuing the plan of Division Lectures. Upon the whole, it is probable that the plan, or some improvement of it, will remain a permanent institution of the undergraduate work. The same statement may be made concerning the weekly Chapel Assembly.

The requirement that students who have not taken courses in Psychology and Ethics shall be expected to take one Major each in the Senior College work is one which has approved itself by experience. These courses really are Junior College courses, and the student who enters the Senior College without having taken them is treated as conditioned in them.

The flexibility of our system is seen in the fact that a student may reduce the time of his work, if he so desires, in either one of three ways:

1. By selecting, as his Senior College subjects, courses in the Professional School—a step which shortens by so much the time required in the Professional School.
2. By continuing in residence during the whole or part of the Summer Quarter.
3. By securing permission to take a fourth subject in addition to the regular three.

In this way the University regulations adjust themselves to the needs and to the desires of different individuals, but in no case is there a lowering of the standard.

I desire to make the following suggestions:

1. A larger number of scholarships should be established, and incentive should be given students in the smaller colleges to finish their work in the University by the provision of such scholarships.

2. Scholarships awarded to students who have done their work in the Junior Colleges should cover the entire period of the Senior College, namely, two years, instead of one.

3. Effort should be made to classify in the undergraduate colleges a larger number of those who come to us as Graduate students, because, (a) as a matter of fact, the work of many of these students is such as in the University of Chicago is regarded as undergraduate work, and (b) the student thus secures the Bachelor's degree of an institution which will be everywhere recognized as valuable.

4. Every effort should be put forth to treat alike students of the Senior College rank, in whatever group or college they may be registered. In other words, the same requirements should be made of Medical students, Law students, and Divinity students who have the rank of Senior College students as are made of Arts, Literature, and Science students.

5. Provision should be made by which a student doing work of high character might be excused from a certain number of Majors, the number of Majors being apportioned to the degree of ability shown in the work already done.

6. The plan already adopted in the Junior Colleges of naming members of the Faculty who will consent to serve as advisors of students should be adopted in the Senior Colleges, and should be urgently recommended from time to time to the student body.

7. There should always be kept in mind the desirability of preserving a unity of feeling among the Senior College students, and every opportunity should be taken to emphasize this unity as over against the great diversity of Departments and groups represented.

8. The present policy of granting the Bachelor's degree to the graduates of affiliated colleges after three months' residence in the University should be modified to include a provision that the students intending to take such a degree shall (a) matriculate at the University at least six months before they enter the University for the residence of three months, and at the time of matriculation present a full description of all college work which they have done up to this time; (b) register at the University simultaneously with the registration at the college for the courses of instruction offered during these two Quarters; and (c) present through the proper executive officer of their college all examination papers which they have prepared and all special papers which they have written during these Quarters, for the inspection of the Departments concerned.

## XX. THE JUNIOR COLLEGES

The work of the Freshman and Sophomore classes has from the beginning been sharply distinguished from that of the so-called Junior and Senior classes. This distinction was first made by the use of the terms "Upper" and "Lower," which in April, 1896, were changed to "Junior" and "Senior." The growth of the work of the Junior Colleges may be shown in two or three ways, for example:

1. The following table shows the growth in attendance in the Junior Colleges:

1893-94	-	-	-	274	1898-99	-	-	-	545
1894-95	-	-	-	366	1899-00	-	-	-	636
1895-96	-	-	-	427	1900-01	-	-	-	733
1896-97	-	-	-	438	1901-02	-	-	-	772
1897-98	-	-	-	442					

2. The number of students completing the work of the Junior Colleges during the successive years has been as follows:

	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Summer .....	..	20	30	40	53	48	62	96	79
Autumn .....	9	6	9	9	16	11	9	20	10
Winter .....	2	18	51	37	45	29	26	47	36
Spring .....	6	15	26	42	37	39	41	28	39
Total.....	17	59	116	128	151	127	138	181	164

Some interesting material may be found in the Reports of the Deans (pp. 105 f.) on the number of students who have gone up from the Junior College to the Senior College.

The following statement made in the President's Annual Report for 1898-99 will perhaps best present the thought underlying this distinct division between the Junior and Senior Colleges. This statement also furnishes the considerations offered for the establishment of the so-called title or degree termed, for lack of a better word, "University Associate":

Upon the recommendation of the Faculty of the Junior Colleges and of the Senate, and upon the approval of the University Congregation, the Trustees have voted to confer the title or degree of Associate upon those students who finish the work of the Junior Colleges. The action in the Faculty of the Junior Colleges and in the Senate was practically unanimous—the action in the Board of Trustees was entirely unanimous.

From the point of view of the student, the following considerations have had influence in determining this action: (1) The fact, very generally recognized, that no important step is taken at the end of the preparatory course. The work of the Freshman and Sophomore years in most colleges differs little in content and in method from that of the last year of the academy or high school—except that it is somewhat more advanced; but, on the other hand, (2) at the end of the Sophomore year a most important change occurs according to the organization of the larger number of institutions—for it is at this point that the student is given larger liberty of choice, and at the same time higher methods of instruction are employed. For the last two years of college work the university spirit and the university method prevail. A new era in the

work of the student has begun. (3) It is evident that many students continue work in the Junior and Senior years of college life whose best interests would be served by withdrawal from college. Many continue to the end, not from choice, but rather from compulsion, because of the disgrace which may attend an unfinished course. If it were regarded as respectable to stop at the close of the Sophomore year, many would avail themselves of the opportunity. (4) Many students who might be courageous enough to undertake a two-years' college course are not able, for the lack of funds or for other reasons, to see their way clear to enter upon a four years' course. Many, still further, feel that if a professional course is to be taken, there is not time for a four years' college course. It is for this reason that, in part, our professional schools are made up so largely of non-college students. If a student who had in view ultimately the medical, or legal, or pedagogical profession could make provision to finish a course of study at the end of two years, he would be much more likely to undertake such a course than the longer four years' course. (5) On the other hand, many students who are thus led to take the two-years' course would be induced at the end of that time to continue to the end of the fourth year, and in this way many students of the very highest character, at all events, would be enabled to take the entire college course by whom, under the present arrangements, such a course would be regarded as impracticable.

From the point of view of the University, the following points have been considered: (1) Many academies are able to do, at least in part, the work of the Freshman and Sophomore years. The high schools in some states are ready to do such work, and in at least one state the university of the state recognizes the work of the Freshman year when performed in approved high schools. (2) It cannot be denied that, until young men or young women have shown some maturity of character, it is wise that they should not be sent very far away from home. If, now, the academies and high schools could so perfect their work that Freshman and Sophomore courses might be offered, many young people would be enabled to pursue their education to at least this higher point. (3) A large number of so-called colleges, which have not sufficient endowment to enable them properly to do the work of the Junior and Senior years, should limit their work to that of the Freshman and Sophomore years. In many cases the officers of these colleges recognize most keenly that they are not doing justice to the students in the higher classes. In reality they are defrauding the students who pay their fees in lower classes in order to obtain a meager sum of money with which to provide an entirely inadequate course of instruction for the higher class of men. These institutions in many cases would be disposed to limit their work to the lower field, if it were made possible for them to do so. They find it necessary, however, to give a degree. If they could follow the example of a large institution and give an appropriate recognition of the work of the lower years, they would be ready to adopt such an arrangement. (4) It is a general law of educational work that in seeking a college, students rarely go farther away from home than a hundred miles. Ninety per cent. of all the students in American colleges will be found in colleges which are within a hundred miles of home. If a fair proportion of these institutions were to limit themselves to the work of the Freshman and Sophomore years, at the end of this time the students who had finished this work and desired to continue would be compelled to go away from home to some distant institution, perhaps a large university, where library and laboratory facilities might be found which would make possible the doing of good work. If, on the one hand, the academies and high schools were elevated, and if, on the other hand, the scope of work done by many colleges were limited, and as a result institutions developed which would do that work thoroughly, there would come to be a recognized distinction between college and university which does not now exist.

In order, therefore, to encourage a movement in the direction thus mentioned, the proposed degree has been established. It is believed that the results will be fivefold: (1) Many students

will find it convenient to give up college work at the end of the Sophomore year; (2) many students who would not otherwise do so, will undertake at least two years of college work; (3) the professional schools will be able to raise their standards for admission, and in any case many who desire a professional education will take the first two years of college work; (4) many academies and high schools will be encouraged to develop higher work; (5) many colleges which have not the means to do the work of the Junior and Senior years will be satisfied under this arrangement to do the lower work.

The work of the College has passed through three stages in its method of administration. During the first year the work was conducted by a Board under the General Faculty, and while this Board was really a committee, it had very largely the power of a Faculty. Upon the division of the General Faculty, a special Faculty was established for the management of this College, which was made up of all instructors offering courses intended primarily for Junior College students. In the spring of 1902 a definite effort was made to bring the Junior College work under the immediate supervision of the General Faculty, and thus to take away its independence. The arguments for this position, although strongly presented, did not prevail, and the policy already in vogue was strengthened. After nearly ten years of trial the plan of a separate and distinct Faculty, with independent powers, received the approval of the majority of the Congregation. Certain changes were suggested in the constitution of the Committees whereby the various groups of Departments should have proper representation. On the basis of an action of the Congregation taken January 31, 1902, additional steps were taken in April for the better distribution of the work of the Faculty and for the assignment of larger responsibility.

In November, 1901, the Advisor System was adopted, with the understanding, however, that it should be entirely voluntary on the part of the students. The members of the Faculty came forward quite unanimously and heartily to offer their services to the students who might desire the same. Up to the present time, however, the results of the plan have not been encouraging.

A serious question has confronted the University, and especially the Faculty of the Junior Colleges, in connection with the growing scarcity of lecture-room and laboratory space in the buildings thus far erected. It has come to be quite clear that it will require the entire space of the central quadrangles to make provision for the Senior College and Graduate work of the various Departments. The Science laboratories, although very large, are already practically full. Two or three possibilities seem to present themselves: (1) either that of enlarging the present buildings, without reference to the architectural effect; or (2) that of removing certain Departments to adjoining quadrangles; or (3) that of separating a certain portion of the work of all Departments furnishing elementary courses and assigning this work a place on the outside quadrangles. The third plan commended itself to the largest number. It was, indeed, unanimously adopted as the opinion of the Junior College Faculty. It was, therefore, decided by the Trustees, upon the recommendation of a special Commission to arrange for Junior College work outside of the central quadrangles.

It was in connection with this question that there was discussed also the question of providing separate instruction for the sexes, concerning which a statement is presented below.

It seems to be the unanimous desire of the Junior College Faculty to lay an emphasis upon the House system even greater than that which it has thus far been given. It is proposed, moreover, to require every member of the Junior Colleges to be a member of some House. Provision will be made for all the Houses that may be required. These Houses will fall into two classes, those intended for residence, and those planned only for the use of students whose homes are in the neighborhood. Provision will be made in the latter case for clubs of thirty or forty students, which will include a study-room, a parlor, and a dining-room, together with a toilet-room and a cloak-room. It has been calculated that such provision can be made for two or three dollars a Quarter. In this way every student will have a home on the University grounds. The suggestion has also been made, and considered with some degree of favor, that in the non-resident Houses luncheon shall be served in the University every day and the expense made a regular part of the Quarter's bills.

In connection with the Junior College work it seems best to place on record the following statement on the subject of providing separate instruction for the sexes in the Junior College subjects. The large space given to this subject is perhaps justified in view of the interest which has been aroused by the discussion of the question:

#### I. THE PROPOSITION BRIEFLY STATED

The proposition briefly stated is as follows: To make provision in the development of Junior College work as far as possible for separate instruction for men and women, upon the basis of extending equal privileges to both sexes. The above wording, with the exception of the last clause, is the form of the statement upon which action was taken by the Junior College Faculty and the form which was approved by the University Senate. The last clause, viz., "upon the basis of extending equal privileges to both sexes," has always been assumed as a part of the proposition, for it would evidently be undesirable to give to either one of the sexes larger or higher privileges than to the other.

#### II. WHAT THE PROPOSITION DOES NOT INVOLVE

1. It does not mean that one policy is contemplated for women and another for men. In the general discussion much has been said of the so-called "segregation of women." As a matter of fact, all Junior College students will go from the central quadrangles; not women only. Nothing has been proposed concerning women that does not apply to men.

2. It does not mean that those who advocate the proposition desire to see the policy extended to any work outside of Junior College work. It is, of course, true that some have favored the proposition who would have voted for its adoption on a larger scale. Three important points are to be recognized in opposition to extending



the policy beyond Junior College work: (a) the fact that women are being admitted in all leading institutions to the privileges of graduate and higher college work; (b) the fact that in Rush Medical College, which is practically a part of the University of Chicago, the classes of instruction have been opened to women, this action having been taken within eighteen months; and (c) the fact that it would be impossible, for financial reasons, to duplicate most of the courses of instruction in the Senior College and Graduate Schools, although such a possibility might exist in the case of professional work. Those who disapprove the movement, whether because it involves partial separation, or because it does not involve total separation of men and women students, should accept the statement of the advocates of the movement that it is not intended to extend the separation to other classes than those which are announced as Junior College courses (required and elective).

3. It does not involve the organization of separate sections unless circumstances seem to furnish sufficient warrant therefor. There are circumstances under which instruction even in a Junior College subject would best be conducted as at present; for example, an elective Junior College course offered once a year and taken by twenty-five or thirty students will continue as before to be offered to men and women. Nor will such provision be made in cases where the use of extra equipment is too costly.

4. The proposition does not contemplate the organization of instruction for women after the fashion of the so-called annex. In such institutions much of the instruction is given by professors who have already performed a full professor's service and for a proportionately smaller compensation do the work with women as an extra.

5. The plan does not involve two separate Faculties, or special rules and regulations for women as distinct from men. The work as heretofore will be under one Faculty at the head of which will be a single administrative officer, with assistant Deans. The chief administrative officer of the Junior Colleges will be responsible for the work with women as well as for that with men. Rules and regulations for both men and women will be made by the same Faculty.

6. The proposition does not mean that the women of the Junior Colleges will be taught by instructors who are, for the most part or exclusively, women.

7. The plan does not involve any separation socially in public exercises other than that which at present exists. The policy of a separate Chapel service for women and for men has more than justified itself, but public lectures, except perhaps Division lectures, when given in the University, will be open alike to men and women.

8. The plan does not mean the establishment of artificial barriers to prevent men and women from any proper and desirable intercourse for which college life affords opportunity. At the same time it will not compel association. To a much greater degree than is now the case this association will be a matter of choice rather than necessity.

9. The proposition does not involve any reflection upon the students who have lived in the University during the first ten years of its history, nor upon the plan of coeducation as adopted in other institutions.

10. The plan does not require the separation of the younger women from the older in residence halls. This in time may prove to be a policy deserving of consideration, but it is not in any way involved in the proposition under discussion.

11. The plan does not involve the transfer of the present women's halls to men, although a quadrangle for women may be built. The present women's halls will always be needed and used by women who do not wish, for one reason or another, to identify themselves with the life in the Women's Quadrangle.

12. The plan does not carry with it deprivation, so far as either men or women are concerned, of any educational privilege now enjoyed, unless co-instruction be *eo ipso* so regarded.

13. The proposition does not involve any radical or revolutionary action. The change will be so gradual that it will hardly be noticed, and when the proposition shall have come into full execution the difference between it and the plan hitherto followed will be much less striking than some have supposed.

### III. WHAT THE PROPOSITION DOES INVOLVE

1. It proposes an arrangement by which the courses of instruction in the Junior Colleges (elective or required) now given in several sections shall be offered, some exclusively for men and others exclusively for women.

2. It proposes an arrangement by which courses now repeated in successive Quarters may be restricted during one Quarter to women and during another Quarter to men.

3. It proposes a continuation of the separation which has already taken place in Chapel Assembly, with possibly an extension of it to the Division lectures.

4. It permits co-instruction in those courses offered to Junior College students for which the registration is not sufficiently large to warrant division on an economical basis; for example, for the present, one-third of all the courses offered to Junior College students, roughly speaking, will be offered to men, one-third to women, and one-third will be open to both men and women.

5. It is probable that, as the number of students increases, the number of courses retained as co-instructional on grounds of economy will be diminished.

6. The plan makes necessary the provision of separate class-rooms and laboratories, just as now separate accommodations are arranged for work in physical culture.

7. The plan implies that officers of instruction who teach the Junior College courses shall divide their time with approximate equality between men and women.

8. The plan involves an acceptance of this policy as a factor in the organization of the work in every department, and in the selection of instructors for the special work of the Junior Colleges.

9. The proposition guarantees the freedom of women in the University to enjoy all the privileges of the University and to take up residence in the proposed Women's Quadrangle or in the present Women's Halls at their pleasure.

10. The plan provides for the more thorough development of the House system, not only in the interest of those who live in University Halls, but also for those who prefer to live at home or with friends outside of the University Quadrangles; it being understood that for the latter there shall be provided study-rooms and luncheon-rooms in accordance with the policy already recommended by the Junior College Faculty.

#### IV. THE PROPOSITION CONSIDERED HISTORICALLY

1. The question of separate instruction for men and women first presented itself in the conference of gentlemen called together in March, 1889, by Mr. Fred. T. Gates, who was at that time secretary of the American Baptist Education Society. The members of this conference could not agree upon the proposition that the institution should be coeducational. . After a full debate (see below) the following statement was agreed upon, viz: "That the privileges of the institution be extended to persons of both sexes on equal terms."

2. This phraseology was used as the basis for the subscriptions secured for the foundation of the College in Chicago, and, when the first million dollars was secured, the committee appointed to draw the charter directed that it should be drawn upon the basis of certain propositions, among which number this was included. (See below.)

3. The subject was raised in the Annual Report of the President for 1899, which included the following statement:

"It may be worth while to note that the life of men and women at the University has been the most natural possible, and no special difficulties of administration have arisen from the fact that the two sexes were working together in the class-room and associating with each other in the social life of the University. It is quite certain, however, that the scope of instruction has not been made sufficiently broad to satisfy the demands arising from the presence of women in the University. It is manifestly unfair to compel a young woman to give up music, for example, in order that she may receive a college degree. It would also seem to be eminently fitting that opportunity should be given for work in the history of art and in drawing. Such courses would be taken not only by women but by men, and the scope of the college curricula must be regarded as very narrow until the time shall come when a student may offer work in music and art for the Bachelor's degree. Nor should I think it wise to restrict courses offered in music merely to the science of music. With certain prerequisites provided for, the art, as well as the science, of music should be accepted. I beg to submit the following questions for consideration: (1) Whether, when the number of students has grown larger and the same subject is offered at the same time in two or three sections, it would not be wise to offer one section to which men only will be admitted, another to which women only may be admitted, and a third to which both men and women may be admitted? (2) Whether in all prizes offered there should not be an equal number for men and for women? (3) Whether in the morning assem-

blies of the students at chapel and for general lectures provision should not be made during at least a portion of the year by which women should meet together at one time and the men at another."

4. At the twenty-first meeting of the University Congregation, held July 3, 1900, the following was among the topics recommended for discussion :

*Resolved*, That better educational results would be secured in the University by teaching the sexes in separate classes.

At a meeting of the Executive Committee of the Congregation, held March 20, 1901, the question was recommended for discussion by the Congregation in the following form :

That better educational results would be secured in the Junior Colleges by teaching persons of the two sexes in separate classes.

The recommendation of the Executive Committee, that the question for consideration by the Congregation at its next meeting be chosen from a list of two questions, of which the above was one, was presented to the Congregation at its meeting, March 20, 1901, and it was voted that the question of separate classes be referred to the University Council for consideration and report to the Congregation. The Council, however, did not take up the discussion of the question.

5. In the months of January to September, 1901, the subject was discussed with several members of the Board of Trustees, including the President of the Board. With his approval, the architects of the University were asked to submit rough sketches of a Women's Quadrangle which should furnish the facilities desired in connection with the execution of the proposed plan. These sketches were received and considered during the same months by members of the Faculty and others.

6. At a meeting of the University Senate held October 12, 1901, the question was presented, and the following minute appears in the records of the Senate:

"The special business of the meeting was the following motion, made at the regular monthly meeting of October 5, the vote upon which was postponed for one week at the request of four Senators: 'It was moved that after the Chapel exercises announced for Monday, the division of the Junior Colleges for the Chapel Assembly be for the present made alphabetically pending further discussion.'

"A statement was made by the President regarding the proposed Women's Quadrangle for the Junior Colleges, in explanation of the request for the postponement of the vote, as having a bearing upon the question under discussion."

At this meeting the discussion of the subject was opened. It was continued in subsequent meetings of the Senate on November 2, November 16, December 14, January 4, 1902; and at a meeting held February 1, 1902, the vote of the Senate, given in writing, was announced to be, ayes 13, nays 8, upon the following question:

"Will the Senate advise the Trustees of the University to accept a gift of a million or a million and a half of dollars, to be used in erecting, on a separate block of land, dormitories, gymnasium, club-house, assembly hall, recitation halls, and laboratories,

to be used exclusively for women, and, as concerns recitation halls and laboratories, by women in the Junior Colleges?"

It was not appreciated as fully then as later that the discussion of an important educational question in connection with the discussion of the acceptance of a gift was unwise. The question, however, was put in this form hypothetically in order to secure an expression of opinion on the part of the Senate.

7. At a meeting of the Board of Trustees, held January, 28, 1902, the following preamble and resolutions were considered:

"(1) WHEREAS, The increasing numbers of students in the first two years of college work renders necessary some larger and more systematic provision than has yet been planned.

"(2) WHEREAS, The courses offered in the first years must in any case be duplicated and repeated in proportion to the number of students, reckoning thirty or forty in each class.

"(3) WHEREAS, There would be great advantage in allowing men and women the opportunity of selecting courses limited to men, or to women, or open to both sexes.

"(4) WHEREAS, There is need of better opportunity both for men and women in the earlier years to cultivate the life peculiar to each.

"(5) WHEREAS, There is needed also better opportunity for men and women to cultivate the feeling of corporate consciousness.

"(6) WHEREAS, Provision must immediately be made for a woman's gymnasium, a woman's club-house, and a woman's café.

"(7) WHEREAS, With better facilities for women's life the numbers would be greatly increased.

*"It is recommended:*

"(1) To set apart the so-called Sheldon block of land for the erection of a Women's Quadrangle.

"(2) To set apart the block of land on the Plaisance, west of Ellis avenue, for the erection of a Men's Quadrangle.

"(3) To arrange the buildings of the Women's Quadrangle to include—

"(a) Dormitory accommodation for 700 to 800 women.

"(b) A gymnasium for 1,500 women.

"(c) A club-house and café for 1,500 women.

"(d) An assembly hall and library for 1,200 to 1,500 persons.

"(e) Recitation halls and laboratories for the subjects ordinarily taught in the Freshman and Sophomore years.

"(4) To organize the work of Junior College women as a separate division of the Junior Colleges, in which the various officers of instruction shall teach according to their assignment, with the understanding that—

"(a) Junior College courses offered in the Women's Quadrangle shall be open only to women.

"(b) Other Junior College courses offered in the University shall be open only to men, unless otherwise specified.

"(c) Junior College women shall be permitted to take higher courses with men according to desire and preparation.

"(5) To authorize the President to proceed immediately to the preparation of plans and the securing of money for the execution of this policy."

On February 18, 1902, the Committee on Instruction and Equipment took up the consideration of the plan, and voted unanimously to present the same, with its approval, to the Board of Trustees.

8. At a meeting of the Trustees, held on the same day, the preamble and recommendations (see above) presented by the Committee on Instruction and Equipment were taken up for consideration, and after full discussion were unanimously adopted.

9. In an official conference between the President and certain Trustees of the University held in March, it was agreed that a mistake had been made in coupling the question of a gift with a question of so much educational importance, inasmuch as it was feared that some might actually believe that the University had permitted the decision of an educational question to be influenced by the probability of a gift for that purpose which might not be secured for another purpose. At this conference, therefore, it was decided that the matter should be reopened for full and complete consideration on the part of those voting bodies in the University whose function it was to consider such a question, and that in this further discussion effort should be made to separate the question under consideration from any associated question of a financial character. It was agreed that the question of providing separate instruction for men and women in the Junior Colleges should be taken up as a subject involving the further development of the Junior College work, and a question therefore which should be decided wholly upon its merits. It was agreed, further, that in all probability the money needed for the development of Junior College work could be secured, whatever policy of development might finally be decided upon by the Faculties concerned and the Trustees.

10. In the meanwhile, at a meeting of the Junior College Faculty held April 20, 1901, a committee of five, consisting of Messrs. Edward Capps, J. W. Thompson, H. E. Slaughter, and Miss Talbot, with Mr. George E. Vincent as chairman, was appointed to consider the advisability of providing separate sections for men and women. This committee took the subject under consideration, and on April 12, 1902, presented a report to the Junior College Faculty declaring that the instruction of the sexes in separate classes was perfectly feasible from an administrative point of view. The bearings of the question were then discussed, and the Faculty was asked to take up the consideration of the question as one involving very largely the policy which should control the future development of the institution. The subject was referred for study and report to the Committee on Curriculum, consisting of Mr. George E. Vincent,

chairman, Miss Talbot, Mr. Owen, Mr. Neff, Mr. Mann, Mr. A. W. Moore, Mr. Young, Mr. Barnes, Mr. Alexander Smith, and Mr. Hatfield. This committee held several meetings during the months of April and May. At a meeting of the Faculty held May 17, 1902, it presented unanimous recommendations on the following items:

“(1) That new buildings be erected for the use of the Junior Colleges.

“(2) That the work of the Junior Colleges be separated from that of the Senior Colleges and Graduate Schools.

“(3) That a residence Quadrangle for women be established east of the central grounds, and one for men to the west.

“(4) That both residence Quadrangles be subdivided into Houses, each with its own commons and a resident Head.

“(5) That Houses or clubs with common luncheons be provided for students who live outside the University.

“(6) That smaller units for recitation halls be provided rather than one large building.”

These recommendations were unanimously adopted by the Faculty at a meeting May 31, 1902. At this meeting a majority of the committee presented the following recommendation:

“The committee recommends that in the development of Junior College instruction provision be made as far as possible for separate sections for men and women.”

The minority presented the following recommendation:

“That the system of co-instruction be continued as heretofore.”

The discussion of the question was postponed to another meeting to be held especially for the purpose. At this meeting, held June 14, 1902, the entire time was occupied in the discussion of the subject, and the Faculty voted (ayes, 17; nays, 11) in favor of the recommendation of the majority.

In view of the disapproval of this action by the Congregation at a meeting held June 16, 1902, the Faculty of the Junior Colleges, in accordance with the statutes, at a meeting held June 23, reconsidered its action of June 14. After a discussion occupying the entire time of the meeting, the Faculty voted again (ayes, 25; nays, 17) in favor of the action which had been disapproved by the Congregation.

11. The University Senate took up the subject a second time in view of the action of the Junior College Faculty. Before the final action of the Faculty on the proposition for separate instruction was taken, the Senate had referred to a committee for its consideration the preceding actions of the Junior College Faculty on propositions 1 to 6 concerning buildings, house system, etc. (see above). At a meeting of the Senate held June 16 it was voted to lay a pending motion to approve the action of the Junior College Faculty on the table until the next meeting of the Senate. At another meeting of the Senate, held June 25, after the final action of the Junior College Faculty was taken, it was decided to take the vote of the Senate individually, and to accord to each Senator the privilege of expressing his opinions in connection with his vote in writing,

this vote to be filed on or before July 25. The vote showed (ayes, 18; nays, 12) that the Senate approved the action of the Junior College Faculty.

12. At a meeting of the Congregation held June 16 the action of the Junior College Faculty taken June 14 was considered and disapproved by a vote of 24 to 7. The Congregation, however, at a meeting held August 28, at which the report of the vote of the Junior College Faculty re-enacting its former action was presented, adopted the action of the Junior College Faculty as an expression of its opinion by a vote of 41 to 23.

13. The subject was again taken up by the Trustees of the University upon the presentation of the action of the Junior College Faculty and the Senate. The action of February 18 was reconsidered. A full discussion followed the presentation of these actions. At this meeting, held July 29, the President placed before the Trustees a memorial addressed "To President W. R. Harper and the Board of Trustees of the University of Chicago," and signed by certain officers of instruction of the rank of Associate and above in the University, numbering in all fifty-eight. This memorial, after reciting certain reasons therefor, requested that the proposition for providing separate instruction for men and women in the Junior Colleges be submitted "to at least one year's further deliberation by the various divisions of the Faculty." This memorial was discussed in detail and at length by the Trustees. After a session covering several hours the matter was postponed for still further consideration. At a meeting held August 19, in view of certain considerations which were presented by the President, it was decided again to postpone the vote of approval or disapproval of the action of the Junior College Faculty and the Senate. At a meeting of the Trustees held October 22, the matter was taken up once more, and, on the motion to approve and adopt as the action of the Board the recommendation of the Junior College Faculty and the Senate, the Trustees voted as follows: ayes, 13; nays, 3; absent and not voting, 5, of whom it was understood that four would have voted aye and one probably nay.

This historical statement, which might easily be largely extended, will indicate that the subject involved in this proposition is not a new one. It was taken up in connection with the first conference held to consider the constitution of the University; it was fully considered in connection with the securing of the charter of the University; it has been discussed at great length by the various bodies immediately concerned; it has twice come before the Congregation, of which every officer of the University of the rank of Instructor and above is a member; it has been considered by the Trustees during the past twelve months as much as all other questions combined which have been presented during the same period.

#### V. THE PLAN CONSIDERED ADMINISTRATIVELY

1. On any reasonable calculation it seems certain that the number of undergraduate students, and especially of Junior College students, coming to the University in the next ten years will be largely increased. This increase has been from 10 to 15 per



cent. every year for five years. With larger numbers the difficulties of administration are greatly increased.

2. The policy will not be adopted of putting 200 or 500 or 700 students in a single section. It is universally agreed that the present policy of placing about thirty students in a section is the correct one. The problem is, therefore, one of proper distribution.

3. A body of 1,500 or 2,000 students (and this number in the Junior Colleges may be expected within ten years) cannot easily use one set of class-rooms and administrative offices. The inevitable result is congestion. When men and women are thus promiscuously thrown together, this question is much more serious than when it is a matter of men only or of women only. In any case this congestion will be greatly minimized by adopting at once the plan of two headquarters, one for men and one for women.

4. It may easily be shown that the cost of such a plan increases only according to the number of students, and the additional fees of students organized in sections of thirty are even more than sufficient to cover the expenses.

5. The number of administrative officers will also be increased according to the number of students, with a Dean in charge of the entire Junior College work. There should also be a Dean of Women in the Junior Colleges and a Dean of Men. These latter Deans would have special charge of the students. The first Dean would be in charge of the Faculty and of the work as a whole.

6. Instructors will be distributed according to the demands of the situation to sections open only to women or to sections open only to men. It is not to be expected that a particular instructor will limit his work to one class of students or to the other, or that women instructors will teach more largely the sections open only to women, or men the sections open only to men. Just as the question of vacations and the adjustment of the work in relation to the vacation of each instructor has been easily arranged from time to time without difficulty, so the assignment of instructors will involve no difficulties of a serious character. It may be expected that appointments to positions in the Junior Colleges will be made with especial reference to the fitness of the instructor to teach both men and women.

7. The rules and regulations of the Junior College Faculty will apply with equal force to men and women. With one Faculty in charge of the entire work, with one set of rules, and with these administered under the supervision of a single Dean, no difficulties need arise from the employment of different rules or the interpretation of the same rule in different ways.

8. For the present, at least, one-third of the work of the average student in the Junior Colleges will be done in the classes made up of men and women, and at the close of the Junior College work students in entering the higher work of the Senior Colleges or professional schools will do their work in classes open to men and women.

9. Students who have finished the work of the Junior Colleges will continue

residence in the Junior College Quadrangles for men or women according to their pleasure.

10. The House system will continue to be the basis of organized social life, and no change in this respect is to be expected.

11. The separation of younger from older women or of younger from older men will be entirely voluntary.

12. The plan proposed brings the Women's Quadrangle on one side and the Men's Quadrangle on the other in such close propinquity to the central Quadrangle as to permit the students to come from the outer Quadrangle to the central Quadrangle in the period of seven minutes allowed between class exercises.

#### VI. THE PROPOSITION CONSIDERED ARCHITECTURALLY

1. It is clear that —

(a) Any policy of development adopted should and would control the architectural arrangement in connection with new buildings.

(b) Any decision reached concerning the location of buildings and their architectural arrangements must largely influence the policy of development.

2. Should a new group of buildings be established for the men and women together, it would unquestionably relieve the present congestion in Cobb Hall, but in a short time the same conditions would recur. It is, therefore, necessary at the present time to decide upon a plan which will allow indefinite expansion without the recurrence of the present disagreeable conditions.

3. The proposition involves the setting apart of a block of land on the east for the women and one or two blocks of land on the west for the men. It will be remembered that the blocks on the west are smaller than the blocks on the east. It is important perhaps to make provision even at this early time for the erection of buildings needed for music, the fine arts, the industrial arts, and public speaking. An appropriate place for such buildings is the block between Lexington and Woodlawn avenues.

4. The controlling aim in constructing the Women's Quadrangle should be to secure privacy and convenience in the matter of going from halls to class-rooms. The controlling aim in constructing the Men's Quadrangle should be to provide for intermingling and close association.

5. The first buildings to be erected in the Women's Quadrangle should be: a certain number of halls for residence, the gymnasium, a club-house for women, one hall for non-residence Houses such as Spelman, and one building which could be used for class-rooms and laboratories.

The first buildings to be erected in the Men's Quadrangle should be: a building to be used for class-rooms and laboratories; a hall for non-residence Houses such as Washington and Lincoln; halls for residence.

With these facilities provided for within two years, the proposed plan could be thoroughly tested.

6. With very serious disadvantages the proposition can be carried into practical execution at once with the present facilities. Some relief will be secured when the historical Departments are moved to the new Law Building. It is possible that a portion of this building could be used for women's classes until the erection of a classroom building in the Women's Quadrangle. Meanwhile Cobb Lecture Hall would have to be used in spite of the fact that it is ill-adapted to the purpose.<sup>2</sup>

7. The plan involves the ultimate reservation of all the buildings in the central Quadrangle for the Senior College and advanced work.

8. The plan involves the erection of a Technological School on the two blocks west of the Junior Quadrangle; inasmuch as the work in technology will be largely for men, this propinquity will be fitting.

9. The plan recognizes the nearness of the location of the School of Education to the Women's Quadrangle, and, in view of the inevitably large proportion of women in the School of Education, this seems also appropriate.

#### VII. THE PLAN CONSIDERED SOCIALLY AND PEDAGOGICALLY

1. The conditions with which the University of Chicago has to deal in furnishing equal opportunities to men and women differ from those under which coeducation has thus far been tested. Little attention has been given to this fact. Three factors in particular are not found in precisely the same combination elsewhere:

(a) *Urban location.* No coeducational institution which is likely to have an equal number of Junior College students in the near future is in a large city.

(b) *Number of students.* Coeducation has been in operation, as a rule, with smaller bodies of students than we must provide for, and the numerical ratio of men to women has differed from that which is certain to prevail in the future.

(c) *Youth of students.* Until very recently, the young women who went to college, and especially those who went to coeducational colleges, have represented a higher average of maturity and fixity of character than is to be expected when it becomes as much the rule in families above a certain level of competence for the daughters to go to college as for the sons, or even more so. Our Junior College students are sure to average younger than those of institutions to which a great city population is not immediately tributary.

Unless we are prepared to maintain that the coeducational method generally followed in other western universities for a generation—itsself an altogether modern innovation, be it noted—represents the perfect ideal beyond which there can be no progress, and of which there can be no modification in adaptation to changed conditions, we must recognize that these new elements of our situation compel us to consider whether they do not call for modification or improvement of the coeducational plan. The University of Chicago is irrevocably committed to the policy of providing educational opportunities open to men and women on equal terms, and in both cases the

<sup>2</sup>The work of Junior women has been temporarily provided for by the erection of Lexington Hall, January-February, 1903.

best possible; but this fact, so far from compelling it to rest content with the plan of coeducation as hitherto and elsewhere followed, compels it to consider whether that plan cannot be modified so as to give both men and women larger and better opportunities.

2. The advantages offered by a great city, while incomparable when properly used in connection with University work, may prove to immature students merely distractions. The mental repose and attention to intellectual interests necessary to gain the best that the University and the city together can give, are not insured by mere enrolment in the University. Safeguards of proper interests in due proportions have to be provided for students while they are learning to maintain them for themselves.

3. The association of a large number of young men and women is another factor which, advantageous in some respects, may become a distraction and disadvantage. It is by no means certain that membership in a large undifferentiated mass of men and women students furnishes the most favorable environment for the student, or the conditions for the best exercise of the necessary oversight of the student by the officers of the University.

4. When to these considerations there is added the fact of the youth of the Junior College student, referred to above, it is, in the judgment of those most responsible for the plan recently adopted, evident that the conditions which already exist in the University of Chicago and which are certain in the near future to exist in greater intensity, call for the breaking up of the total student community into smaller units to the end that each distinct class of students may receive that kind and degree of oversight and guidance, and that type of social and physical environment which is most conducive to the highest education of the individual. That in the creation of these smaller communities within the general University community the lines of cleavage should be partly those that divide younger from older students, partly those that separate men from women, is certainly natural, and, subject to the condition that men and women shall have equal opportunities, and that the separation shall not be carried to an unhealthy extreme, can hardly fail to be advantageous. That the separation should pertain not only to residence buildings but in part also to instruction is the judgment of the majority in the several governing bodies of the University having responsibility in the matter. That on this point there should be difference of opinion is natural; but the plan advocated by the majority is entitled to respect as the deliberate opinion of thoughtful men and to honest trial as a sincere attempt to give to both men and women the best possible educational opportunities.

5. The chief reasons urged for association of men and women in college classes are (a) that it softens the manners of the men, (b) that it gives zest to the work of the women, and (c) that it tends to make both the men and the women saner in their attitude toward each other. There can be no question that there is truth in each of these claims. The mistake of those who rely upon them is, however, (a) in attributing to

the single cause much that is due in large part to other influences, and (b) in assuming that these salutary tendencies under all circumstances predominate over all the other tendencies involved.

(a) The improvement in the moral tone of colleges during the past generation is often ascribed solely to the presence of women in the colleges. It is forgotten that the same improvement is evident in colleges for men only, and that several distinct factors have obviously co-operated to produce the change. The caste spirit, claiming license for the gown not allowed to the town, has in a notable degree disappeared. The curriculum has become less perfunctory, and college life has consequently become more genuine. Athletics have not only afforded wholesome amusement, but they have developed higher standards of honor. More than this, the ideas of men in general society have changed considerably in the last half-century, and college manners have changed accordingly.

(b) The intellectual stimulation which the women have received is not wholly of a salutary sort.

(c) It is also a question whether the saner attitude is not a gain which is offset by too many cases of young women who have lost some of the fine attractiveness which somewhat closer reserve would have attained. Thoughtful men and women are not unanimous that the type of comradeship which coeducation has promoted between men and women is altogether an improvement.

6. There are reasons for inquiry whether it is not a pedagogical and social mistake to assume that men and women should be trained to be just as nearly alike as possible. Is there not something as extreme in the policy of trying to conform the college life of men and women to a common standard as there would be in trying to train their voices to a common pitch? Is there not a serious loss to both men and women if the University places too much emphasis upon what they have in common, and gives too little weight to the fact that in many respects these essential common interests may be best promoted separately?

7. Girls from sixteen to twenty years of age are socially more advanced than boys of the same age. This arises from the fact that they are in some respects more mature. They are apt to have social interests to which boys of the same age have not attained. Owing to this fact, boys and girls are not at this period altogether the best associates for each other in common pursuits. The girls are apt to be patronizing toward the boys, and the latter are self-conscious and embarrassed when thrown into company with the girls. This situation is acute when a large number of matriculants from many secondary schools is assembled in one body. They may have come from coeducational schools, but in such cases the same boys and girls have associated with each other so long that they are but vaguely conscious that they have been gradually becoming socially unlike. In the presence of a great number of strangers, however, this unlikeness becomes conscious. It does not affect boys and girls uniformly in the same way, but because of it mixed classes are really ungraded to an extent which

is not the case when this factor is less prominent. For this reason it is not as practicable in mixed as in separate classes to adapt to specific needs the most salutary kinds and degrees of stimulus and restraint.

8. The general ideal or standard of university work is injuriously affected by mixed classes and common community life in the university at this period. When young men and women are together under the circumstances just indicated, the terms and tone of association are necessarily fixed too little by the essential character of the thing to be done, and too much by the fact that both men and women are doing it. In other words, the tendency is to admit too much of the personal element into interests which should be cultivated for their own sake. The spirit of university work should be very different from that which belongs in the society of men and women when sociability itself is the chief purpose.

9. It has been urged that such considerations as these are arguments against coeducation in general; that they apply to secondary schools and to the Senior Colleges and Graduate Schools just as much as to the Junior Colleges. Taken absolutely, this is true. But the same thing may be said of the considerations for and against every good thing that we know. If we should consider exclusively the merits, we should bar every detection of faults and prevent every effort for improvement. If we considered exclusively the demerits, the inference would be that the institution in question should be abolished altogether. We are not shut up to the alternatives of indiscriminate approval or disapproval of coeducation. We recognize both its merits and its defects, and our problem is to secure the maximum of the former and the minimum of the latter. The University has not adopted the present plan with the idea that it is a complete and final solution of the problem, but with the belief that in our situation it is a partial solution. It is believed that in our circumstances the balance against the unmodified coeducational policy is greatest during the Junior College period. It is believed that the more definite discovery of scientific or professional interests, and the increased age of students in the Senior Colleges and later, are factors which tend to nullify the less desirable tendencies of association between men and women in the Junior Colleges and help to secure increasing ratios of the advantages.

VIII. THE PROPOSITION CONSIDERED IN ITS RELATION TO THE CHARTER OF THE  
UNIVERSITY

The following letter from Mr. F. T. Gates explains itself:

OCTOBER 16, 1902.

*Dr. William R. Harper, University of Chicago, Chicago, Ill.*

DEAR DR. HARPER:

Replying to your esteemed favor of October 13: From May, 1888, to May, 1893, I was the corresponding secretary and executive officer of the American Baptist Education Society. I first met Mr. John D. Rockefeller in the winter of 1889. He had already been favorably considering for some time with you the question of the establishment of an institution of learning in Chicago. From my conversations with him, I gathered that the sentiment in favor of such an

institution throughout the Baptist denomination had not yet taken such definite shape, as to character, scope, and initial expenditure, as to justify present action on his part. I then suggested to him that the American Baptist Education Society invite a conference of a few representative Baptists in New York, and ask this conference to define the character and scope of an institution of learning in Chicago which would meet, in their opinion, the approval and active co-operation of the Baptists of the whole country. Mr. Rockefeller approved the suggestion. The Executive Committee of the American Baptist Education Society immediately adopted the suggestion, and instructed me to invite the following gentlemen to the proposed conference: President Andrews, then of Brown University; President Hovey, then of Newton Theological Seminary; President Weston, of Crozer Theological Seminary; Rev. Dr. Elder, then of Albany, N. Y.; President Taylor, of Vassar College; Rev. Henry L. Morehouse, of New York; Dr. W. R. Harper, then of Yale University; Dr. Samuel Duncan, then of Haverhill, Mass.; and Hon. Charles L. Colby, of New York.

At the same time the Executive Committee instructed me to send to each of the gentlemen named a series of printed questions to serve as a guide to the deliberations of the conference on the character and scope of the proposed institution.

The gentlemen invited duly met in the rooms of the American Baptist Home Mission Society in New York, and considered the questions submitted to them in their order. On most of the questions there was substantially unanimity of opinion; on the twelfth question there was some diversity of opinion. This question was as follows: "Should such an institution be coeducative?" referring to the institution which it was proposed to found at Chicago. This question admitted of a categorical answer, yes or no. The answer actually given was as follows: "The privileges of the institution should be extended to both sexes on equal terms." The committee avoided a categorical answer. In the discussion of this question it was conceded by all that an institution of learning located in the West, where coeducation was almost universal, should freely open its doors to women. It was pointed out, however, that certain subjects in the curriculum could better be studied by men and women apart; that the institution was likely to grow and expand in every direction, and in the course of its history would doubtless teach many subjects not equally adapted for men and women; and that it would be unwise so to phrase the reply to this question as would seem to commit the institution of necessity, at all times and under all circumstances, to common classes for the sexes. It was thought that the demand for the education of women would be sufficiently met if the institution admitted both sexes on equal terms, without requiring the institution to give instruction to both sexes in the same class-room. On this, all varieties of opinion in the committee finally united.

The findings of the committee were submitted to Mr. Rockefeller. He held them for a considerable time under advisement. Early in May, 1889, I met him by appointment in New York. It was just previous to the meeting of the American Baptist Education Society about to be held in Boston. The findings of the committee were written out under his own eye in the form of a series of resolutions to be submitted to the body. At the same time Mr. Rockefeller gave me his pledge for \$600,000 toward the first million, with the verbal instructions to hold his pledge in escrow, and not to communicate its contents until the Executive Board of the Society, independently of the pledge, and without knowledge of the pledge, should adopt the resolutions. If the resolutions were adopted without change, then the pledge was to be submitted to the Board; if the resolutions were not adopted, the pledge was to be returned to him. The third resolution was as follows:

*"Resolved, That the privileges of the institution be extended to persons of both sexes on equal terms."*

The resolutions were all unanimously adopted, including the one recited above. This, then, fixed the character of the institution.

The Society immediately appealed to the public for the remaining \$400,000 to complete the million dollars, which had been fixed by the conference in New York as the smallest sum on which the institution could probably begin. The resolutions defining the character, location, and scope of the institution, including the third resolution, were published and made the basis of the appeal for funds; they formed, in fact, an implied contract with every contributor. A year later, namely, in the spring of 1890, the necessary funds having been raised, the duty of drawing the charter was intrusted to Judge J. M. Bailey, then Chief Justice of the Supreme Court of the State of Illinois. Judge Bailey was instructed to draw the charter in such a way as to preserve all the permanent features of the resolutions, so as to carry out the implied contract with all the donors. Resolution third Judge Bailey adopted with as slight change as possible. The following is the language of the charter:

"The particular objects for which said corporation is formed are to provide, impart, and furnish opportunities for all departments of higher education to persons of both sexes on equal terms."

Thus was actually carried out the purpose of the conference, which was to require the institution to open its doors to men and women on equal terms, but to leave the institution *free* to impart instruction to both sexes in the same class-rooms, or apart, as circumstances might require.

\* \* \* \* \*

Yours very truly,  
(Signed) F. T. GATES.

Other questions might be taken up for consideration, *e. g.*, the financial side, the relation to other institutions and the general public, but it has been thought sufficient, for the present, to limit the statement to the points considered above.

#### SUGGESTIONS REGARDING THE JUNIOR COLLEGES

I desire to make the following suggestions:

1. The Adviser System has not yet been given a satisfactory trial. Too great emphasis has been laid upon the voluntary side of the matter. The Faculty has been somewhat slow to force the service of its individual members upon the students. If necessary, the Trustees should take action upon this matter, and thus make it certain that those who are to be students in the first year of college work shall have a more careful supervision than is now received. It is almost pitiable to note the indifference and ignorance of many students in reference to all questions relating to the essential factors in a college life. It is not supposed that a fuller introduction of the Adviser System will remove all this indifference and ignorance, but the more rigorous introduction of the system would contribute much in this direction.

2. While good results have been secured through the Division Lecture plan, these results have not been so marked as could have been desired. An important advantage was secured when arrangements were made by which men accustomed to do public lecturing, for example in connection with Extension Lecture Work, were assigned to this task. As experience has shown, many good instructors fail entirely in an effort to profit or interest students in a subject for which credit is not given or an examination demanded. The original thought of securing a substantial correlation of subjects



in the mind of the student has been largely lost sight of in the actual execution of the plan. There is opportunity in this matter for an important contribution to the subject of college training. Something outside of the regular class-room work and the religious gathering is needed to secure a unity of spirit and a unity of thought in the student body, to furnish a common element which shall be of service to all.

3. The number of Chapel Assemblies in the Junior College should be increased. At least two meetings should be held each week. Without question, better results are gained by holding separate sessions for men and women. Here again experience shows that the voluntary element is not a very important consideration. Not only in this respect, but in others, it may be questioned whether a larger compulsory element should not be introduced into the work of the early college years.

4. Within two or three years a growth of interest has been noticed in the graduating exercises of the Junior College. This should be encouraged. Every effort of the student body to make public expression of its corporate existence should be strongly cultivated. There is little danger that there will be found too great an exhibition of true sentiment.

5. The number of scholarships open to Junior College students should be increased, but a matter of still greater importance is the extension of the time during which scholarships assigned may be enjoyed. At present no scholarship continues longer than one year. Every Junior scholarship should be assigned for two years, with, of course, provision for a modification in case the work of the student does not seem satisfactory.

6. It will soon be necessary for the Dean of the Junior Colleges to devote his attention exclusively to questions which arise in connection with instruction and the staff of officers, together with those questions of a general character which relate to the student body as a whole. The Deans in the College, who are essentially Assistant Deans, should be sufficient in number to take the supervision of the work of individual students. In general, there should be a Dean for every one hundred students, and perhaps, by the plan just suggested, as many as one hundred and fifty students could be profitably handled by a single Dean. This would certainly be true if the Adviser System were properly introduced.

7. Since the scope of the work of the Junior College will continue to broaden, and since technological students and others are soon to be admitted, care should be taken to hold in one great body all the students of the Junior College grade. A single set of traditions should prevail. No line should be drawn between the classical students, on the one hand, and the scientific or technological students on the other. All should work under the same general regulations, and effort should be made to draw together these various groups and to hold them in close connection. The work of the Junior Colleges will be successful in proportion as it is a work characterized by unity of purpose and unity of spirit both on the part of instructors and students.

## XXI. FELLOWSHIPS, SCHOLARSHIPS, AND STUDENT SERVICE

The following statement, greatly condensed from the official circular on Fellowships and Scholarships, presents the essential facts relating to assistance rendered students by the University:

The University appropriates annually the amount of twenty thousand dollars (\$20,000) for Fellowships in the Graduate Schools. These Fellowships are awarded by the Trustees, upon the recommendation of the President and the nomination of a particular Department, to graduate students who desire to specialize. Each year about seventy Fellowships are assigned, ranging in individual value from \$120, or the tuition fees of the student for three Quarters, to \$520.

In addition to the regular University Fellowships mentioned above, there are special Fellowships offered by individuals. These vary somewhat in number and amount from year to year.

On the nomination of the principal or dean of each of the preparatory schools which are affiliated or co-operating with the University of Chicago, a Scholarship is assigned to that member of the graduating class who has attained the highest rank in the work of the school, provided he passes with credit the requirements for admission to the University, and actually enters the University without conditions on or before the first day of October next following the completion of his preparatory course. Should the pupil standing highest in the class not claim the Scholarship by the first of October, it may be assigned, upon the nomination of the principal or the dean of the school, when approved by the President of the University, to the pupil having the next highest rank, if he has entered the University. Each Scholarship yields a sum equal to the University tuition fees for three Quarters (\$120), and must be used during the University year (July-June) immediately following the completion of preparatory work.

Four Scholarships, each yielding the amount of the University tuition fees for one Quarter, are awarded each Quarter, except during the summer, to the winners of the Junior College preliminary contests in declamation. In case a winner in a preliminary contest has previously secured a Scholarship in this way, the award is made to the second in rank.

The University offers twelve Scholarships for excellence in the work of the Junior Colleges. These Scholarships are awarded annually in the Spring Quarter, on the nomination of the Faculty of the Junior Colleges, to those students who have completed the work of a Junior College and have stood highest in the various departments of the Junior Colleges. A Scholarship is assigned, for example, to the student who has done the best work in Latin; another to the one who has done the best work in Mathematics; and so forth. These Scholarships yield, in each case, a sum equal to the University fees for three Quarters (\$120), but in no case extend beyond July next following.

Three Scholarships for excellence in public speaking are awarded in the Winter Quarter of each year to the winners in the Annual Oratorical Contest in the Senior Colleges. The first-prize Scholarship yields a sum equal to the University tuition fees for three Quarters (\$120) and \$50 cash. The second-prize Scholarship yields a sum equal to the University tuition fees for two Quarters (\$80) and \$25 cash. The third-prize Scholarship yields a sum equal to the University tuition fees for one Quarter (\$40). The winner of the first prize may not again compete in the Annual Oratorical Contest.

The University offers twenty Scholarships for excellence in the work of the Senior Colleges. These Scholarships are assigned annually, in the Spring Quarter, on the nomination of the Faculty of the Senior Colleges. Each Department of the University, with the approval of the Committee on Scholarships, has the privilege of naming a student who is for that year the honor student of the Senior Colleges in that Department, and to this student there is given a

Graduate Scholarship yielding in each case a sum equal to the University tuition fees for three Quarters (\$120), provided the student continues his studies in the Graduate Schools.

Five Scholarships, each yielding the tuition fees for three Quarters (\$150) are assigned annually to students of the Law School, on the nomination of the Dean of the Law School, with the approval of the President.

In addition to the Scholarships named above, several special Scholarships are available for students in the Junior and Senior Colleges and the Graduate Schools, a partial list of which follows:

The Selz Scholarship.

The Zuinglius Grover Memorial Scholarship.

The Elbert H. Shirk Scholarship.

The Henry C. Lytton Scholarship.

The Enos M. Barton Scholarship.

The Catherine M. White Scholarships.

The Chicago Scholarship.

The Colonial Dames Scholarship in American History.

The William A. and Fannie C. Talcott Fellowships or Scholarships.

The Scholarships for Excellence in Debate.

In addition to the help thus offered, four other plans have been in vogue:

a) That of student-service, in accordance with which about 175 students each Quarter are given work in connection with the University sufficient in amount to cover two-thirds of the University fees. The service rendered by the students in this way may be classified as follows: (1) members of the band; (2) members of the choir; (3) pianists; (4) teachers and assistants in secondary schools; (5) laboratory assistants; (6) library attendants; (7) clerks and stenographers in the various offices of administration; (8) attendants in the Faculty Exchange; (9) telephone attendants; (10) messengers; (11) bulletin writers; (12) blackboard cleaners; (13) watchmen; (14) janitors.

b) The Employment Bureau which has been organized by the University to provide outside employment for students. The records of the students registered are examined, and only those capable of giving good service are recommended to positions. The scope of the Bureau is not limited to any particular kind of work, but embraces any honorable employment, *e. g.*, tutoring, clerical work, typewriting and stenography, bookkeeping, collecting accounts, lighting street lamps, carrying newspapers, waiting on table, clerking on Saturdays. The services of the Bureau are entirely gratuitous both to the employer and the employed.

c) The Students' Fund Society—an Association made up of men and women of Chicago—which makes loans upon the joint recommendation of its own committee and a committee of the Faculty. Students are eligible for such loans only after they have been members of the University one Quarter, and have shown marked success in scholarship.

d) The President's Fund, which is a small sum of money placed in the President's hands by different persons, to be loaned to students in small sums. This fund includes the Gerhardt and Hannah Foreman Fund of two thousand dollars, presented by the

children of Gerhardt and Hannah Foreman, and certain other small funds placed in the President's hands for the same purpose, the total amounting to less than four thousand dollars.

The problems connected with the distribution of Fellowships and Scholarships are:

a) The question as to the amount of the stipend. Considerable difference of opinion has existed among the members of the Faculty on this matter. Some favor reducing the amount and thus enabling the University to help a greater number of students; others favor an increase of the amount, the thought being that this would give greater dignity to the office of Fellow and secure a stronger incumbent. Two important reports upon this and other subjects relating to Fellowships have been presented to the Faculty within the last five years, the first by a committee of which Mr. George H. Mead was chairman, and the second by a committee of which Mr. Starr W. Cutting was the chairman. These reports are here included:

REPORT OF THE COMMITTEE ON FELLOWSHIPS TO THE GRADUATE FACULTY, MARCH 19,  
1898. MR. MEAD, CHAIRMAN

At the opening of the University in the year 1892-93 the proportion of the whole sum expended for Fellowships that went into the \$520 class was 55 per cent.; in 1893-94 it sank to 48 per cent., counting in a \$620 Fellowship given in that year; in 1894-95, to 44 per cent.; in 1895-96, to 28 per cent.; in 1896-97, to 20 per cent.; while in 1897-98 it has remained practically the same, being 22 per cent. The actual number of the Fellowships of the \$520 class that were given was, in 1892-93, 19; in 1893-94, the same number, with a large amount of money expended on Fellowships; in 1894-95, 17; in 1895-96, 12; in 1896-97, 8; and in 1897-98, 9.

In Harvard more than double the percentage spent on our highest Fellowships is devoted to those yielding from \$500 upward; that is, 48 per cent.; in Clark, 46 per cent.; in Johns Hopkins, 72 per cent.; in Columbia, 75 per cent. The actual amount expended here is \$23,360, including the special sums which different Departments and the Graduate School have secured; in Harvard the amount is almost identical, \$23,500; in Columbia, \$22,500; in Cornell, \$16,300; in Johns Hopkins, \$14,500; in Clark, \$1,300.

Standing, therefore, at the head of all the institutions of the country in the amount we devote to Fellowships, we have taken a most exceptional position as to its distribution. The great bulk of the money is given in the form of the \$320 Fellowships, which net to the student but \$200 for his use outside of fees. There were 18 of these in 1892-93; 21 in 1893-94; 23 in 1894-95; 34 in 1895-96; 41 in 1896-97; and 46 in 1897-98. The percentage of the whole amount has passed from 32 in 1892-93 to 70 in 1897-98.

As is seen by the gradual change from the opening of the University on, this distribution does not seem to represent a consciously adopted policy. Indeed, at first we expended a somewhat larger percentage of the whole sum upon the highest Fellowships than Harvard does today. In the first place, the amounts of the Fellowships have not been fixed, as they have in some other institutions, by separate endowments; and, in the second place, their first distribution among the Departments had to be broken in upon to do justice to new and growing ones that were not adequately recognized. These conditions seemed to have introduced a competition, both within the Departments among those applying for Fellowships, and between the Departments themselves, that has expressed itself in the change which has placed us in our present position. It was found in the majority of cases that, if a \$520 Fellowship was split in

two, two men of equal ability could be obtained instead of one. There seemed to be no justification in expending twice the amount if the man could be retained for half the sum. But five instances have been given of men who were lost to the University through the smallness of the Fellowships, while an equal number have been instanced of those who have preferred to remain, when they could have secured larger Fellowships elsewhere. As a result we have had nearly 30 per cent. more Fellows during the same period of time than Harvard has appointed, with practically the same amount of money. Furthermore, when this policy of dividing the larger Fellowships had once been entered upon, the natural competition between the Departments themselves seems to have accelerated the movement from the higher to the lower Fellowships. The recognition of the claims of new and growing Departments, and the effort to maintain a position once gained, have both tended in this direction. If this statement, which has arisen not only from the study of the statistics, but also from conference with different members of the Faculty, be in any degree correct, it is evident that we have drifted into this present distribution of the Fellowship fund through internal causes, and it is of importance that we consider what the result will be in our competition with other institutions.

The experience of the University seems to have shown that actual acquaintance with the instructors on the ground and the opportunity of working with particular men are of more importance than larger Fellowships elsewhere. But this applies only to those with whom we come into immediate contact—students coming to us from institutions in some degree tributary to us or because of other more or less exceptional causes. Graduate students in America are not attracted in any such degree by the instructors as in Germany. The institution, with its traditions and environment, plays a very large part. If, then, we wish to draw here exceptionally strong students by our Fellowships, the disappearance of the \$520 Fellowship will seriously hamper us. If we are willing to confine ourselves to those who fall naturally within our immediate field of influence, our past experience may indicate that we accomplish more with the \$320 Fellowship than with the \$520 one. It is the opinion of the Committee, however, that this would be an unfortunate result. It does not seem desirable that the University should shut itself out from the largest field and confine itself to its more immediate surroundings. If the present movement continue, it will not be long before the \$520 Fellowship will have practically disappeared. At a recent meeting of the Graduate Clubs in Chicago the amount of the Fellowships came up for discussion, and the unusual smallness of our Fellowships called out a great deal of surprise from representatives of other institutions. These impressions will be widely spread, and soon we shall have the reputation of having only \$320 Fellowships, whatever the statement may be in the University announcement.

There is another feature of the situation that seems to shed further light upon it. During the period of the University's existence it has conferred the degree of Ph.D. upon 56 of her Fellows—that is, upon 25 per cent.—while Harvard, *e. g.*, confers the degree upon 36 per cent. of her Fellows. While Harvard has had 30 per cent. fewer Fellows, they have come up much more uniformly for the Doctorate than here. The indication seems to be that, among our larger number of Fellows, we have proportionally a smaller number worthy of the Doctorate. If this is the case, a concentration upon a smaller number might be desirable, for we assume that opinion is unanimous that the Fellowships should normally lead toward the degree of Ph.D., and should not be conferred except where there is good reason to assume that this goal will be eventually reached.

It is the opinion of the Committee that some means should be adopted to increase the number of the \$520 Fellowships, with the necessary result of diminishing the number of Fellows in proportion. Three possible ways of accomplishing this have presented themselves to us:

The amount of the Fellowships could be definitely fixed, so that it would no longer be possible to split up a \$520 Fellowship into two \$320 ones. This is, however, open to the grave objection that we should then frequently be compelled to expend larger sums where they would not be necessary, and thus perhaps lose two good men to keep one with a larger stipend. As long as we are not bound by the form of the Fellowship fund it seems a misfortune to lose the advantages of freedom.

Or, the amount might be fixed which each Department may use. The advantage of this is that it would go to the root of the matter and remove the competition between Departments which seems to have been largely responsible for the reduction of the amount of the Fellowships. The Department would have no fear that it would be losing prestige in making a smaller number of recommendations, and would be encouraged to wait, if necessary, till stronger men made application.

Finally, the Faculty could recommend both to the Departments and the President and Trustees that in their selections and appointments the number of \$520 Fellowships be increased as rapidly as seemed desirable and maintained at a position enabling us to compete with the other universities of the land.

The Committee recognizes that the second plan involves a return to a system already abandoned, presumably for good and sufficient reasons, but suggests that it might be possible to make a distribution more satisfactory now than formerly, and also that such a distribution might be periodically renewed. If desired, the statistics of the average amounts the Departments have had during the life of the University can be given and the comparison between these and the amounts expended at Harvard for the same Departments.

We recommend one of the two latter plans.

Finally, we recommend that everything below \$320 within the gift of the University be termed Scholarships; that, where in the judgment of the President and Trustees assistance is to be given to worthy students apart from their claims to Fellowships leading up to a Doctorate, it be confined to these Scholarships; and that the Faculty petition the Trustees to vote ten further Scholarships of the \$120 class.

REPORT OF COMMITTEE ON FELLOWSHIPS TO THE GRADUATE FACULTY, APRIL 27, 1901.

MR. CUTTING, CHAIRMAN

I. A glance at the Fellowship statistics of Harvard for the year 1899 shows a total distribution of \$21,850 among eighteen Departments, indicated in percentages by the following figures:

Philosophy . . . . .	10%	Romance Languages . . . . .	3%
Pedagogy . . . . .	..	Germanic Languages . . . . .	5
Political Economy } . . . . .	8	English . . . . .	5
Political Science } . . . . .		Mathematics . . . . .	9
Social Science } . . . . .	8	Physics . . . . .	6
History . . . . .		Chemistry . . . . .	8
Semitics . . . . .	3	Geology . . . . .	3
Sanskrit } . . . . .	2	Zoology . . . . .	6
Comparative Philology } . . . . .		Botany . . . . .	5
Classical Philology . . . . .	16	Jurisprudence . . . . .	3

The entire amount assigned by the University of Chicago, April, 1900, in the shape of Fellowships was \$24,860 — just \$3,010 more than that appropriated by Harvard for the previous year. The percentages of the whole amount in each case, received by corresponding Departments at the two institutions, are as follows:

	Harvard	Chicago
Philosophy . . . . .	10%	4%
Pedagogy . . . . .	..	3
Political Economy } Political Science } Jurisprudence } (30 at Harvard)	11	17
Social Science . . . . .	..	..
History . . . . .	8	6
Semitics . . . . .	3	5
Sanskrit and Comparative Philology . . . . .	2	2
Classical Philology . . . . .	..	..
Latin and Greek . . . . .	16	11
Romance Languages . . . . .	3	No award
Germanic Languages . . . . .	5	4
English . . . . .	5	5
Mathematics . . . . .	9	5
Physics . . . . .	6	6
Chemistry . . . . .	8	5
Geology . . . . .	3	5
Zoology . . . . .	6	9
Botany . . . . .	5	6
Archæology . . . . .	..	2
Astronomy . . . . .	..	2
Physiology . . . . .	..	2
Neurology . . . . .	..	1

II. Harvard appropriated \$10,250, or nearly 50 per cent. of the total, in Fellowships yielding from \$450 to \$750 apiece; Chicago assigned \$7,700, or 33 per cent. of the total, in Fellowships of \$520 each (including one for \$420). Harvard's appropriation of \$6,000, or nearly 27 per cent. of the total, in \$300 Fellowships corresponds to Chicago's \$15,040, or 60 per cent. of the total, in \$320 Fellowships. Harvard gave \$5,000, or 23 per cent. of the total, in sums of less than \$300 each; Chicago gave but \$2,120, or 9 per cent. of the total, in such sums. Seven Fellowships, each yielding \$750, were assigned by Harvard to the Departments of History, Semitics, Classical Philology, Germanic Languages, Chemistry, Geology, and Jurisprudence; Chicago assigned no Fellowships for a sum greater than \$520. The conspicuous points of difference in these proportions are:

1. Of Harvard's total, 50 per cent. is applied to Fellowships yielding each \$450 and upward, as against 31 per cent. of Chicago's total similarly applied.
2. Of Harvard's total, 23 per cent. covers Fellowships yielding less than \$300 each, as against 9 per cent. of Chicago's total thus used.
3. Harvard gave but 27 per cent. of her total in sums of \$300, whereas Chicago assigned 60 per cent. of her total to \$320 Fellowships.

Harvard's largest and smallest individual assignments are thus each about twice as numerous as are those of Chicago, while the medium-sized Fellowship (Harvard, \$300, Chicago, \$320) was granted by Chicago more than twice as often as by Harvard.

III. At the opening of the University in the year 1892-93, the percentage of the whole sum expended for Fellowships that was applied for the \$520 class was 55 per cent. In 1893-94 it dropped to 48 per cent., including a \$620 Fellowship given that year; in 1894-95 to 44 per cent.; in 1895-96, to 28 per cent.; in 1896-97, to 20 per cent. In 1897-98 it rose again slightly to 22 per cent., against 31 per cent. for the current year.

The actual number of first-class Fellowships granted in 1892-93 was 19; in 1893-94, the same number, with a larger financial total; in 1894-95, 17; in 1895-96, 12; in 1896-97, 8; in 1897-98, 9; against 13 for the current year.

The approximate proportions of the first-class Fellowships in other institutions to the total applied by these institutions to Fellowships is expressed by the following percentages: In Clark University, 46 per cent.; in Cornell, 69 per cent.; in Johns Hopkins, 72 per cent.; in Columbia, 75 per cent.

A previous committee, appointed by this body to consider the general subject of Fellowships, has called attention to the fact that graduate students in America are not attracted in any such degree by instructors as in Germany. The institution, its traditions, and environment are among the controlling factors of the student's choice. Hence the inference that the disappearance of the \$520 Fellowships will seriously hamper our efforts to draw here exceptionally strong students from the larger fields outside the sphere of our immediate influence seems natural, and it is verified by the loss of several worthy appointees to institutions offering a higher financial inducement. Most of our colleagues agree that we should pursue a policy favorable to securing our share of such students from the country at large, and this, too, in a way adapted to the greatest possible freedom of action on the part of individual departments.

The Committee recommends, therefore, in the light of the facts, and of the views of those members of the Faculty whom we have been able to consult:

1. That the Fellowship fund be left, as heretofore, for annual readjustment by the President and Trustees, upon the recommendation of the different Departments.

2. That this Faculty recommend both to Departments and to the President and Trustees that in their selections and appointments the number of Fellowships with a high stipend be increased, as rapidly as may seem desirable, and maintained at a rate enabling us to compete in this matter with other universities of the land.

3. "That it is the sense of this Faculty that no departmental Faculty should recommend as a candidate for a Fellowship one who at the same time might not be available as a candidate for the Doctor's degree." (Reaffirmation of the action of the Graduate Faculty on March 19, 1896.)

4. That the Trustees be requested to establish, in addition to the Fellowship funds already appropriated, five doctorate Fellowships of \$750 each, to be assigned only to those who have taken the Doctor's degree with distinction, and who give promise of exceptional ability for investigative work.

b) The time of duration of the Scholarship. This was referred to above.

c) The kind and amount of service expected from the Scholar. The difficulty here lies in the fact that the service must be of a kind to benefit the student. This excludes everything of a menial character. The line is not always sharply drawn between the student service and the service suitable to the higher character of scholarship. The latter has usually included library work of a more flexible kind.

Some question has been raised by members of the Faculty as to the wisdom of requiring service of any kind from Fellows. There are certainly important considerations to be urged on both sides of this question. On the whole, it has seemed best to require that some service be rendered by every student receiving a stipend from the University. It is probable that sufficient care has not been taken to secure uniformity on the part of the various Departments.

Until May, 1902, the work connected with the selection of Fellows was performed



in large measure through the President's office, in connection with the various Departments interested. Upon the recommendation of the President, this work has been placed in the hands of a Committee of which, at the earnest request of the Faculty, the President remains Chairman.

It is of interest to note that 133 members of the present Faculty have at one time or another been Fellows of the University, and that of the 496 persons appointed to Fellowships, 197 have received the Doctor's degree. In a few cases students on Fellowships have received permission to do their work abroad, but this permission has been limited to those cases in which a member of the Department was himself abroad, and the student accorded the privilege was thus in close connection with the University. Good use could have been made many times of traveling Fellowships yielding a stipend. It was found best, after a short experiment, to give up the distinction between Junior and Senior Fellowships, and also to give up the separate title of Honorary Fellow.

I desire to make the following suggestions :

1. The stipend of the Fellows should be increased, that of \$320 to \$420 and that of \$520 to \$620. If necessary, the number of Fellowships should be diminished in order that this modification should be secured. It is proper to suggest, however, that no better appropriation of funds could be made than to increase the sum of \$20,000 now given to Fellowships to \$25,000 or \$30,000.

2. A more systematic and regular Fellowship service should be organized. The proper executive officer should give close attention to the particular kind of work being performed by the Fellows, and in no case should the voucher of a Fellow be audited unless it is found that his work in amount and character is in accordance with the spirit of the University Statute.

3. The University Fellow should have a larger recognition in connection with University functions. The Fellow is strictly an officer. His responsibilities are not as great as those of the ordinary Instructor, but they should be made greater than they have been.

4. The duration of the undergraduate Scholarship should be extended from one year to two years. It is unfair to the student, as well as to the college concerned, to make the period a shorter one.

5. There should be a closer supervision of the work of the Scholars, and the rule should be rigidly carried out which would prevent a student from holding a Scholarship unless his work is of a satisfactory character.

6. Effort should be made in every possible way to increase the fund for special Scholarships. One of the greatest needs of the University is endowment funds for the establishment of Scholarships. A graduate Scholarship should be established for each of forty or fifty colleges to be selected from the West and Northwest. This would correspond to the Scholarships established in the Colleges for the various high schools.

7. The task of supervising the work of Scholars and Fellows and dealing with

these special classes has grown to be so great that there should be appointed a Dean of Fellows and Scholars, whose entire work as Dean should be devoted to this particular service.

8. Regular official meetings of the body of Fellows should be held. These meetings should be held with the same regularity as Faculty meetings, and should be presided over by the President or a Dean. In these meetings questions relating to the administration of colleges and universities should be discussed. While such meetings would serve in part a social purpose, their larger function should be one of an official character.

XXII. LIBRARIES, LABORATORIES, AND MUSEUMS

The nucleus of the University collection was the library of the Theological Union transferred from Morgan Park in connection with the removal of the Theological Seminary to the city. This collection—one of the best of its kind—together with a small number of books remaining over from the old University of Chicago, formed the beginning of the work. The preparations made during the early years were hardly adequate for the high class of work which the University undertook to provide. It was found necessary, therefore, in the middle of the second year to make provision for a special gift of \$50,000. With this sum, a respectable beginning was secured. The total appropriation for books during the first ten years has been as follows:

To June 30, 1894	- - - - -	\$171,046.62
1894-95	- - - - -	14,950.60
1895-96	- - - - -	22,865.99
1896-97	- - - - -	17,112.04
1897-98	- - - - -	11,771.63
1898-99	- - - - -	13,553.76
1899-00	- - - - -	11,394.59
1900-01	- - - - -	26,915.00
1901-02	- - - - -	25,339.55
Total	- - - - -	<u>\$314,949.78</u>

Special appropriations have from time to time been secured for special objects. Many books have come into the Library through the University Journals and a large number by gift. The number of volumes in the possession of the University on July 1, 1902, was 354,592.

The Library staff has always been inadequate for the large amount of work required. It is probably true that the work has been accomplished on about one-half of what actually ought to have been spent. In other words, the number of attendants should have been much larger, and the salaries paid considerably in advance of those actually paid. The total number of persons employed on the staff for the ten years has been as follows:

1892-93	- - - - - 7	1897-98	- - - - - 13
1893-94	- - - - - 5	1898-99	- - - - - 15
1894-95	- - - - - 8	1899-00	- - - - - 15
1895-96	- - - - - 13	1900-01	- - - - - 16
1896-97	- - - - - 13	1901-02	- - - - - 19

The average salary paid for the year 1901-2 was \$880.77.

The following table shows the total sum paid for the administration of the Library:

1894-95	-	-	-	\$10,146.18	1898-99	-	-	-	\$17,181.68
1895-96	-	-	-	15,067.90	1899-00	-	-	-	17,108.76
1896-97	-	-	-	16,949.13	1900-01	-	-	-	17,358.71
1897-98	-	-	-	17,702.92	1901-02	-	-	-	20,784.84

The most marked feature of library administration has been the large emphasis placed upon the Departmental system. Without question this policy is attended with some disadvantages, but upon the whole it may be said that it secures advantages which more than outweigh the disadvantages. In any case, it is the only system which could be adopted by an institution which did not possess a central Library Building. The Report of the Chairman of the Library Commission (pp. 266 ff.) presents the history of a most interesting discussion which has continued through four or five years. The attitudes of the various Departments towards the departmental system has been marked by a wide difference of opinion, but all differences seem to have practically disappeared, and the almost unanimous adoption of the Report of the Commission has settled the discussion. Great credit is due the Chairman of the Commission, Mr. Ernest D. Burton, for the patience and skill with which, as Chairman of various Committees, he has conducted the work through these several years. A most important point was established in the future development of the University when the Report of this Commission was adopted by the Board of Trustees. Work has already been undertaken in preparation of plans for the permanent Library Building, and it is the desire of the Trustees that no pains be spared to make these plans as perfect as possible.

Associate Librarian Dixon, in connection with the work as Librarian, has conducted certain classes of instruction in the training of librarians. No effort has been made to establish a Library School, and yet to some extent the results of the work of such a school have been accomplished. A feeling has existed in some quarters that this work has not been of a sufficiently thorough character to warrant its continuance in connection with the University of Chicago. In order that this question may be settled without prejudice on either side, a Commission has been appointed which will in due time report upon the advisability of continuing the work.

Several of us will remember that in the early days of the history of the institution, when planning for buildings, reference was made more than once to the necessity for erecting a Science Hall. The conception entertained by some of a single building which should provide for the work of the Scientific Departments has grown to one of eight buildings costing in all \$1,161,816, with at least four additional buildings required to meet the demands. It has been suggested that too large a proportion of the money at the University's command has been devoted to Pure Science, as compared with that given to the Humanities and with that given to Applied Science. Concern-

ing the first question, a statement has already been made (p. xviii). It is certainly true that the University has succeeded in providing homes for the Departments of Science more quickly and more easily than in providing homes for the various Departments of the Humanities. In explanation of this it may be said: (1) It seems easier in these days to find here and there a man interested in a particular Department of Science and willing to erect a laboratory than to find one interested in one of the Departments of the Humanities. (2) Not even the university world has yet come to appreciate the fact that the Departments of the Humanities stand just as strongly in need of laboratories as do the Scientific Departments. (3) When provision for these Departments was once made in Cobb Hall it was thought that perhaps they might be accommodated in this fashion quite comfortably, and the effort for special buildings was turned in the direction of the Scientific Departments. The equipment of these laboratories has steadily increased, until it is perhaps reasonably satisfactory.

That the erection of these laboratories has been justified can surely be seen from the record (see Vol. II) of articles and books published by the members of the University from these laboratories. Justification is also found in the fact that, large as these laboratories are, today they are practically full. The crowded condition of some of them is almost unendurable. It is proposed to secure relief for some of the laboratories by the erection of special laboratories for elementary work in the various subjects.

The progress made thus far in establishing Museums has not been very considerable. With the exception of the Oriental Museum, which is fairly well developed in the Archæology of Egypt, and the various paleontological collections which have come to the University, little has been accomplished. Steps have been taken to organize (1) a Historical Museum, for which already a large amount of material has been gathered, only to be stored away until space can be found for installing it; (2) a Botanical Museum, in connection with which there has been spent up to the present time \$7,000; (3) a Zoölogical Museum, which has but just begun its work. A few things have been gathered for a Commercial Museum.

The whole policy of the museum work requires to be definitely considered and decided. It is, of course, impossible for the University to endeavor to establish a museum for the education of the public. It is justified only in developing that kind of a museum which may be used advantageously in the work of instruction. The propinquity of the Field Columbian Museum is a source of great advantage, and there seems to be no good reason why in the future provision should not be made for a closer relationship than any which has hitherto existed between the Field Columbian Museum and the University. Such a relationship would be of advantage to both institutions.

I desire to make the following suggestions:

1. The plans for the new Library to be located on Fifty-ninth street in the main quadrangles should be completed at the earliest possible moment, and every effort should be made to secure the erection of this building within the next two or three years. No need of the University is greater today than that of the central Library.

The Library is, or should be, the very heart of the institution. It will be impossible for the University to continue its growth in any proper form if it shall be longer deprived of this essential factor in the institutional life.

2. The time has come when the attention of the Trustees should be given to the reorganization and higher development of the Library staff. We may possibly be excused for the indifference thus far shown to this important division of the University's work, but from this time forward there can be no possible reason for lack of interest. The interest of every Department is concerned, and now that the various Departments have been placed upon a proper footing, their highest interest demands the erection and further organization of the central Library.

3. Large sums of money are needed for the purchase of books for the various Departments. The sum of \$250,000 could be used to most excellent advantage at once, and a permanent endowment of \$500,000, or even \$1,000,000, is needed, the income to be used in the purchase of books from year to year. It will be seen from the figures given above that the University is even now spending an aggregate of about \$30,000 a year for books and periodicals.

4. Some arrangement should be made by which, even before the erection of the main building, better distribution of books between the various Libraries may be secured. Some system of transmission may perhaps be found which will not prove to be too expensive. Investigation should be made at once in reference to the basis of this.

5. Whatever may be found to be true of the library instruction now being given, it seems quite certain that no better opportunity exists for the establishment of a School of Library Science than that which is connected with the library work of the University of Chicago. A good analogy is perhaps to be found in the Training Schools for Nurses associated with medical schools and hospitals. The University itself will be a great gainer by making use of the service of students in training for library work, and such training is more real and vital when actually connected with a large library.

6. The following Laboratories need to be added to the number already erected: (a) a Laboratory for the Geological and Geographical Departments, to be located north of Beecher Hall and east of Walker Museum, and to be connected with Walker Museum by a bridgeway; (b) a Laboratory for Physical Chemistry, to be erected on Ellis avenue directly west of Kent Chemical Laboratory; (c) Laboratories for the Departments of Anatomy and Pharmacology, to be erected on Fifty-seventh street between Ellis avenue and Lexington avenue; and (d) a Hygienic Laboratory, to be erected on the corner of Ellis avenue and Fifty-seventh street.

7. The Museum erected by Mr. George C. Walker should be henceforth used strictly for the purpose proposed in its establishment, namely, for a museum. By the kindness of Mr. Walker, the University has been able to use a large part of the space of the Museum for class-room and laboratory work, but the time has come when this work should be transferred to some other building and the entire space of the Walker Building dedicated to its original purpose. It is true that today the policy with

reference to the development of museums is different from that which seemed to be approved in the first days of the University. At that time it was thought possible to bring together the material of all Departments, and to have what would be called a General Museum. Today it is apparent that each group of Departments desires to establish a museum and to have it located in the closest possible relationship to the lecture work of these Departments. In other words, the Departmental Museum seems to commend itself, after the fashion of the Departmental Library. But, even from this point of view, it is possible to make use of the Walker Museum for several groups of closely related subjects. This matter should receive the immediate consideration of the Trustees.

8. The museum is as essential an element in educational work as is the library. It is these two factors which have revolutionized educational methods in the last quarter of a century, and yet it is these same two factors in the University equipment which are least fully developed. Our Faculties are strongly manned; the buildings are large and beautiful and numerous; the libraries are only half way developed; the museums have hardly begun. It is in respect to the libraries and museums that the greatest effort should be made in these coming years.

#### XXIII. THE MORGAN PARK ACADEMY

The Academy at Morgan Park occupies the buildings and grounds formerly belonging to the Theological Seminary. Mr. Rockefeller's second gift to the University consisted of one million dollars, and was made with the provision that the Baptist Union Theological Seminary of Chicago "become an organic part of the said University; and also that the transfer of said Seminary to the grounds of the University shall be made within two years from this date; and also that a thoroughly equipped Academy shall be established in the buildings hitherto occupied by the said Seminary, on or before October 1, 1892."

The Academy was intended to serve a threefold purpose, viz.: (1) as an institution which under the control of the University should prepare students to enter the University; (2) as an institution in which experiment might be made in the problems connected with the field of secondary education; (3) to give to the work of secondary education a higher place and a closer relationship to college education. It was, moreover, the opinion of some that no sharp line could be drawn between the work of the Freshman and Sophomore years of college and those of the preparatory years. It was believed that these six years constituted a unit, and it has been the purpose of the University sooner or later to establish the work of the Freshman and Sophomore years at Morgan Park. In the constituency of the University there are many parents who do not wish to give their sons that freedom which must be given them if they attend the Junior Colleges of the University in the city. For some young men such liberty is distinctly injurious. It is the desire of the University to provide its facilities under different circumstances and for persons of different temperaments and desires.

The institution was at first coeducational. Many problems presented themselves in the particular situation of the Academy which, after a fair effort, seemed to be insoluble. With some hesitation, and after long deliberation, the Trustees decided to limit the attendance at the Academy to boys. All who are connected with the Academy officially now realize that the change has demonstrated itself to be a wise one.

The possibilities of the Academy are very many. It may fairly be said that at no point in a central or western state are greater advantages offered to a boy who desires to prepare himself thoroughly for college. The character of the work which has been done in college by the graduates of the Academy is sufficient evidence of the thoroughness of the instruction given.

I desire to make the following suggestions:

1. Inasmuch as the work of the so-called eighth grade in public schools and private schools is for the most part a waste of time and effort, and since boys should be started in their secondary work at an earlier age than at present, provision should be made for the care and supervision of boys of a younger class than those who now attend the Academy. One or two houses should be organized, with Masters, in which boys of ten to twelve years of age could be properly cared for.

2. There should be a greater difference in the treatment of the older and younger boys than now prevails. A carefully graded system should be adopted, and the young man should be given larger freedom, partly in accordance with his apparent ability to make good use of such freedom, and partly also on the basis of his increasing age.

3. On the whole, a much stricter discipline should be maintained in the case of the younger boys than at present prevails. This greater strictness should include closer supervision of conduct, dress, and hours of recreation.

4. A closer connection between the work of the Academy and that of the University should be maintained. This connection should be brought about by more frequent visits on the part of the University officers to the Academy for such service as might profitably be rendered, as well as by the employment of the Academy officers to do University work when it is so desired. The graduates of the Academy who are at the University should cultivate a bond of unity and be kept in close touch with the students of the Academy.

5. In the work of instruction the greatest weakness of the Academy lies on the side of its Science work. A greater stress has been placed upon the work of the Humanities. Additional instructors in Science should be appointed in order that the work may be more definitely distributed.

6. As early as possible the work of the Freshman and Sophomore years should be added to that which is now being done. There are many students who might be assigned by the University to do work at Morgan Park rather than on the University grounds. The establishment of this higher work should carry with it a large freedom of interchange between the work of the two localities.

## XXIV. THE STUDENT SOCIAL LIFE

It is commonly understood that in an urban University there exists a great lack of the elements which constitute the basis of social life, and indeed the presence of many elements which are distinctly harmful to such life. Among these latter may be cited, for example, the fact that very many of the students live on the University grounds during only a small period of the day, and also the fact that these same students who live at home are compelled to maintain the social life which is connected with the home. About 40 per cent. of the students have their homes in Chicago; another 40 per cent. live in rooms which are in more or less close proximity to the University grounds; the remaining 20 per cent. reside in the Halls of the University. It is on this account that the so-called "college spirit" is so slow of development in a large community as compared with its growth in a small community. In the history of our own institution, the development of the social life has been somewhat remarkable, in view of all the circumstances.

In my opinion, the arrangement by which all University exercises are suspended for thirty minutes between 10 and 10:30 A. M. or 10:30 and 11 A. M. has contributed very largely to this development of social life. This interval has furnished opportunity for the commingling of students, the holding of meetings in which a portion or the entire body of students was interested, and the coming together on stated occasions in Chapel Assembly. I think that no more important institution exists in connection with the University life than this morning interval. If this respite in the middle of the day were lost by the transfer of the Chapel Assembly to the first half-hour in the morning, a serious injury would be inflicted upon the social life of the institution.

The relation between individual members of the Faculty and their respective students has been conspicuously close. In no other institution of this size, I am persuaded, has the intimacy between instructor and student been more zealously cultivated. On the other hand, the interest of the members of the Faculty in amusements and recreations controlled by the students has not been as clearly manifested. There seems to have existed a strong disposition to leave the students to themselves in their various plans for social improvement, the Faculties restricting their energies largely to their own membership. To put the matter in another form, there has been a lack of co-operation between the Faculties as such and the student social interest, while at the same time many individual members of the Faculty have taken large part in connection with these interests. The separation referred to has been due in part to the large numbers which make up the Faculties, it being inevitable that the first movement in a social way shall be within the circles of the Faculties themselves; in part also to the fact that in these first years the members of the Faculties were strangers to each other, and their social interest has been entirely occupied in forming friendships in the new environment. On the other hand, indications of an increasing co-operation between the Faculties and the students have shown themselves, as, for example, in the readiness to unite in the celebration of Washington's birthday.



The distinguishing factor in the social life of the University has been the so-called "House System." This system was established during the first year of the University's history, and its purpose was to provide social units so constituted as to give freedom for individual development. The history of the House System is admirably presented in the report of the Director of Houses, Mr. Thompson (pp. 387-95). The theory of the system may be summed up in the statement that the University is one family, socially considered, of which the President is the head; that groups of six or more students living together constitute official Houses, for which the President appoints a Head, who is responsible to him. Such groups of students are for the most part self-governing, each group selecting an Executive Committee and some member of the University Faculty as Councilor. The rules of each are thus what the House itself adopts after approval by the University Council. As shown by the report, three classes of Houses have thus far been organized. The first class includes the groups of students occupying University Houses on the Quadrangles. These groups comprise from forty to seventy students each. The second class includes groups occupying Fraternity Houses. The third class includes students having a parlor or sitting-room on the University grounds, made up, however, of students whose homes are in the city. The plan has had a varying success. The life in some Houses has been almost ideal; in others, exceedingly unsatisfactory. On the whole, the scheme has been successful, and the later stages of its development have exhibited many encouraging features. The proposed enlargement of the plan by the unanimous vote of the Junior College Faculty to include all Junior College students is perhaps the strongest evidence of its practical success. Other facts pointing in the same direction are to be found in the recent successful organization of Hitchcock House and the reorganization of Snell House under the auspices of the Young Men's Christian Association.

After the first two or three years, suggestions were made for a Club House for men. This at first seemed something entirely impracticable, but the force of the suggestion grew in intensity until it was the unanimous feeling of the Faculties and Trustees that such a building should be erected. Plans for it were provided, and upon the recommendation of the Committee having in charge the designation of the use for which the funds coming from the Reynolds estate might be employed, Reynolds Hall has been erected. It is confidently believed that the erection of this Hall at the end of the first decade will mark a new era in the social life of the men of the University.

Within the last year, through the efforts of the Dean of Women, Miss Talbot, and others associated with her, the Women's Union has been established. This includes from three hundred to four hundred women, and has already become a center of social life in the institution. The Women's Union has occupied temporarily the Disciples' Church on the corner of Fifty-seventh street and Lexington avenue, and, even with the inadequate facilities thus presented, the work accomplished has been noteworthy.

One of the most practical, as well as difficult, problems of University life is

involved in what may be called the food question, and it is inseparably connected, not only with the intellectual life, but also with the social life of the institution. In the Women's Houses the University has been able to provide a Commons which includes four dining-rooms and makes provision for about two hundred students. During the last year of the first decade a small café for men was established at the corner of Fifty-seventh street and Ellis avenue as an experiment. Only breakfast and luncheon are served. The results have been more than satisfactory. In the new Commons, which will be finished within a few months, facilities will be provided for furnishing table board to five hundred men and café accommodations to three hundred in addition. This will probably meet the demand of the immediate future, so far as men are concerned, but it leaves the women who are not in University Houses still unprovided for.

Very fortunately there have been few cases of serious illness in the ranks of the student body during these early years. Provision for the care of women has been made on the top floor of Green Hall, and for the care of men on the top floor of Hitchcock Hall. In each case four to six persons may be taken care of at the same time. As a matter of fact, no practical use has been made of these quarters up to this time. In cases of serious illness a student has been removed to a hospital. There have been several cases of contagious or infectious disease, but these cases have been handled each time with great care by the University physician, Dr. C. P. Small, and in no instance have bad results followed. We must say, however, that the University has made no proper provision for sickness. No plan has been worked out by which students shall be cared for, and it remains to organize this important service.

It is generally conceded that the Student Councils have contributed very largely to the *esprit de corps* of the student body. These Councils were intended to serve in each case as an Executive Committee, and thus to represent the students. It has been our custom to present all matters of importance which concern the student body to the Councils for their consideration, and to receive from them recommendations embodying the desires and opinions of the student body. The records show that in nearly every case the recommendations of the Councils have been of such a character as to warrant their acceptance and approval by the University ruling bodies. The growth of these Councils in influence has been steady, and already they have come to occupy a high place in the esteem of the students. Membership is regarded as an honor, and in almost every case those elected to membership have shown faithfulness in the discharge of their duties. The possibilities of the Councils are without limit; each year will add to the dignity and effectiveness of the service.

The history of the Fraternity System in the University is one of more than usual interest. Much anxiety existed in the minds of a majority of the members of the Faculty lest the introduction of Fraternities might bring disturbance of many kinds. The facts show that their presence in the University has been a source of great advantage rather than of disadvantage. In almost every case the Fraternities have

contributed each its share, not only to the social life of the institution, but to its general welfare. Some criticism has been presented against the policy of the University in reference to Sororities, the organization of which up to the present time has been prohibited by the University. This is not the place in which to present the considerations which explain this attitude on the part of the University. It is, perhaps, sufficient to say that the opinion is still a strong one that the social life of the University has developed more satisfactorily than would have been the case if Sororities had been introduced.

The amateur organizations of the University, of Music, Dramatics, etc., have naturally labored under the great disadvantage of being brought into comparison directly and constantly with the professional representatives in these various lines. When members of the University have the privilege of attending the concerts of the Chicago Orchestra at a trifling cost, and when the best plays presented to the American public can be heard almost every night in the year, there is little to encourage the development of the amateur spirit. But in spite of proximity to these exhibitions of the highest art, the local amateur interest has been cultivated with real enthusiasm. The Musical Clubs and the Dramatic Clubs have achieved a large success.

The general administration of the student social life has been placed under the Board of Student Organizations. The membership of this Board has suffered only slight change during the years of its organization, and has been exceedingly faithful in attendance upon its several duties.

I desire to make the following suggestions:

1. Immediate steps should be taken to erect a building which shall be carefully planned to make provision for groups of students whose residence at the University is limited to the day period. This building should accommodate eight such groups of thirty or forty each. For each group provision should be made for a sitting-room or parlor, a dining-room, toilet and cloak-room; perhaps also a small library should be included. Every facility should be furnished which would contribute to the social and intellectual life of such a group of students. The income from such a building will be as large as that from a building used as a dormitory, without imposing any considerable expense upon the students. University life includes as one of its largest factors the living together and the eating together in groups properly organized.

2. It will be necessary within a comparatively short time to provide a separate Club House for Junior College men, Reynolds Hall being restricted for the use of Senior College, Graduate, and Professional students. Such a Junior College Club House should be one of the buildings in the Junior College Quadrangle, and should make provision for those activities and interests of special service to younger men.

3. There should be erected also a Club House for women in connection with the Women's Gymnasium. This should be a Club House for all the women of the University, and should include arrangements of a character to meet the many demands of the social life of the women students.

4. A building should be erected in connection with the Club House for women which should serve as a café to meet the needs of those women who live outside the University buildings, but desire to take their meals at the University. The number of such women will increase every year, and the responsibility for making this provision is pressing.

5. A student Hospital independent of the other buildings of the University should be erected, and a plan should be worked out in accordance with which any student of the University when ill might have the right to occupy a room in this Hospital. Just what should be the characteristic features of such a plan may not at first be clear, but it should at all events include provision for making known to the students the fact that such a Hospital when erected is open to them upon reasonable terms. No one can measure the great danger which exists that through some imprudence an epidemic shall be found to exist before the necessary precautions for its prevention can be carried into effect.

6. Since the organization of the Undergraduate Councils, there have been added to the University the School of Education, the School of Medicine, and the School of Law. These schools are partly of a graduate character and partly also of an undergraduate character. In so far as they are either graduate or undergraduate, they to some extent duplicate the ground already covered by the other Councils. The time has therefore come for the reorganization of the student Councils on a plan which shall be more consistent with the present constitution of the student body.

7. Such reorganization should, moreover, contemplate the possibility of the securing of a larger unity in the work of the various Councils, and it may well be questioned whether there should not be one Council rather than several, this one Council being made up of distinct special Councils representing the various divisions of students.

8. The question should also be considered whether larger powers may not be granted the Councils than have heretofore been officially sanctioned. The effectiveness of the work of the Councils will probably be in proportion to the degree of responsibility with which they are charged.

9. The half-hour of interval between the first two exercises of the morning and the remaining two is insufficient for many of the important purposes which the use of this interval has been found to serve. Much would be gained by increasing this interval to forty-five minutes. This could be arranged by having the morning exercises begin at 8:15 instead of 8:30.

10. Even closer supervision of the social meetings of the various bodies of the University should be instituted than has yet been tried. Without such supervision on the part of a skilful and tactful officer, great injury may be expected to accrue in the case of many individuals and likewise in the case of the University at large. The regulation already established, in accordance with which the ordinary social meetings of students shall be limited to certain evenings, and in those evenings to certain hours, should be strictly enforced.

11. Since some confusion has arisen because the affairs of the Board of Student Organizations have been administered by several Deans in their several different positions, and since such difficulties are unavoidable under the circumstances, it is important to consider whether it would not be well to commit to one Dean, perhaps the Dean of Women, the administration of the actions of the Board of Student Organizations.

#### XXV. THE RELIGIOUS WORK AND LIFE

The position of the University of Chicago religiously has been definitely and professedly Christian. Any other attitude would have been false to the auspices under which the institution was established, and particularly to the hopes and desires of its founder. It is not forgotten that in the earliest days, when there was great question whether the first four hundred thousand dollars could be secured, the Jews of Chicago came forward, and by their splendid gift made the effort successful. A representative of the Jews has been on the Board of Trustees, several Jews are members of Faculties, large numbers of Jews have been matriculated as students; but in the large and true sense of the word "Christian" the University has maintained urgently and strongly its professed position as Christian. The various Faculties have contained members of almost every communion, and many who were not members of any church. The question of the religious faith of an officer has not been raised by the Trustees in connection with the appointment of any officer of the University. No one, so far as I am aware, has ever taken the trouble to make a calculation of the representation of the various denominations either in the Faculty or among the students. As the country of which we are citizens is a Christian country, so the University of Chicago is a Christian institution. The drawing of a narrower line than this would be fatal to the growth of the University. Here lies the distinction between a college and a university. The one may be controlled by the ecclesiastical or political spirit; the other may not be.

To the Chaplain of the University, Mr. Henderson, who has served in this capacity from the first day, all the members of the University feel a sense of deep obligation. It rarely happens that one man can so impress himself upon a great community as Mr. Henderson has done. His strong personal character, his broad and liberal spirit, and the tact with which he has performed his duties have at the same time gained for him the respect of every member of the University and brought him into close touch with a very large proportion of the membership.

It was very fortunate that in the beginning success attended the effort to organize the religious work of the University upon a broad basis. The Christian Union was so constituted that it should include all religious effort put forth by any particular group of persons. Opportunity was thus afforded, on the one hand, for the work of the Young Men's Christian Association as well as that of the Young Women's Christian Association, and, on the other, for such philanthropic effort as was included in the University Settlement work. There was at first some disappointment that the narrower

conception did not prevail in this organization, but today all persons agree that a more satisfactory arrangement perhaps could not have been instituted. The work of the Social Settlement has been genuinely successful. Its success, however, has found its expression not so much in the results accomplished at the Settlement as in the splendid influence which this work has exerted on the membership of the University. The life of the professional student has a tendency to become distinctly selfish. This tendency has been overcome, at least to some extent, through the vigorous effort put forth by the members of the Faculty, including the members of the Women's League, to cultivate in this manner the altruistic spirit. The Reports published in this volume present clear evidence of the high character of the work undertaken.

During the first years a religious service was conducted every Sunday in the evening. This was after a while changed to the afternoon, and for several years the Sunday Vesper Service occupied a large place in the religious work of the institution. It soon became evident, however, that a service was needed which would develop more definitely the spirit of worship, and after full consideration arrangements were made for introducing a regular Sunday morning service at which preachers officially appointed by the University should conduct the services and preach. A single year's experience has convinced all concerned of its value. It has been found that the most eminent preachers of the country are willing to visit the University and to give its members their service. The best results cannot, of course, be secured with the present lack of a proper place in which to hold the services, and this same difficulty presents itself in connection with all the other religious work of the institution. No one of the religious organizations has a place which can be called even respectable. Until such facilities are provided as are absolutely needed, the work will be seriously handicapped.

The daily Chapel Assembly—Monday for the Junior College students, Tuesday for the Senior College students, Thursday for the Graduate students, and Friday for the Divinity students—has contributed something toward the higher life of the University. At these meetings the greatest preachers of the country have addressed the students, and their words have been gratefully received. It is probably true that the religious life is as strongly marked in the University of Chicago as in any other institution similarly situated. It is an interesting fact that, so far as is known, no student has ever been arrested by a policeman for disorder or drunkenness. The moral life of the student body seems to be of the highest character.

I desire to make the following suggestions:

1. While the new Assembly Hall, erected by the kindness of Mr. Leon Mandel, will be used for the religious exercises as well as for other general exercises of the University, and will contribute greatly to the increased value of all such exercises, it remains true that the University should have upon its grounds a structure which should be used only for ecclesiastical and the highest academical functions. This building should be the most beautiful ecclesiastical structure in the Mississippi valley, and should cost not less than five hundred thousand dollars. In connection with it pro-

vision should be made for the headquarters of the various religious organizations, and no pains or money should be spared to make it the most magnificent building on the University grounds.

2. Some plan should be devised for bringing into closer relationship the various members of the Christian Union. It would hardly be thought best, under all the circumstances, to organize a church; but an organization as much like that of a church as possible should be effected, and all possible means should be employed to develop the community spirit in connection with its organization. It would seem probable that no more unifying factor could be suggested, and in a community like that of an urban University the greatest possible stress should be placed upon factors which produce the spirit of unity.

3. Although the work of the Settlement has been thoroughly successful, its influence has reached a small number proportionately of the University community, and it may be asked whether something may not be done which would bring a much larger proportion of the students and members of the Faculty into personal touch with this work.

4. No satisfactory arrangements have yet been provided for the residence of the University Preacher or for his office. Both of these matters demand immediate consideration. A large part of the effectiveness of the work is destroyed because of the lack of the proper facilities for doing it.

#### XXVI. THE MORE IMPORTANT EXPERIMENTS

It may be said that at least ten important experiments have been instituted in connection with the work of the University. Some of these may no longer be called experiments, inasmuch as the experimental stage has confessedly been passed. In other cases the time has not arrived at which the experiment may be called closed. Among the problems the solution of which has thus been attempted I may mention the following:

1. The establishment of work in the Summer Quarter as an organic part of the University year, in distinction from the Summer School work as it had formerly been conducted. The success of this plan is attested, not only by the large number of students in attendance—the largest, in fact, of any Quarter in the year—but also by the character of the students, a body made up of earnest men and women from every state in the Union. The growth of the Summer Quarter will be seen from the following list, which presents the attendance of the successive summers:

Date	Men	Women	Total
1894 . . . . .	397	200	597
1895 . . . . .	638	295	931
1896 . . . . .	698	350	1,048
1897 . . . . .	795	478	1,273
1898 . . . . .	853	581	1,434
1899 . . . . .	949	687	1,636
1900 . . . . .	1,008	668	1,674
1901 . . . . .	1,113	1,262	2,375

2. The continuous session of the University, including the Summer Quarter just mentioned—an arrangement by which the buildings and grounds, the libraries and equipment, of the institution are used throughout the entire year, in contrast with the prevailing custom of permitting the entire plant to lie idle during one-fourth or one-third of the time.

3. The distribution of service on the part of members of the Faculty throughout the entire year—a plan which requires that about 25 per cent. of the officers of instruction shall be absent at any given time, and also makes it possible for the officer (a) to take his vacation at such season of the year as may be most satisfactory; or (b) to allow his vacation to accumulate until he shall be able to secure the privilege of spending six or nine months in a foreign land; or (c) to devote, if he so desires, only six months to instruction and to give the remaining six months to investigation—all of this flexibility being gained without extra cost of money or time. This arrangement, looked at from the student's point of view, permits students of all grades to enter the University four times a year instead of once, the adjustment of courses to this end having been found entirely feasible.

4. The graduating of students at four seasons of the year—that is, at the close of each of the four Quarters—a policy which is strictly in accord with the individualism of modern education, and serves to protect the student against many of the arbitrary arrangements ordinarily prescribed.

5. Specialization in administration, this being gained by distributing the work of various divisions of the University to special Boards and Faculties, and placing the responsibility of such service almost exclusively upon the Board or Faculty concerned. This might be put into another form: the abolition of the so-called General Faculty to which everything ordinarily must be submitted.

6. The policy of affiliating colleges and academies in accordance with a plan which makes the University responsible from an educational point of view, while it leaves the entire financial responsibility upon the local Board.

7. The plan of co-operating with high schools, emphasis being placed upon the individualism of the teacher, and the teachers recognized as University Deputy Examiners.

8. The separation of the work of the Freshman and Sophomore classes, called the Junior Colleges, from the higher work, and its assignment to an independent Faculty.

9. The House System described above, in accordance with which groups of students practically become self-governing under the general supervision of a Head appointed by the President.

10. The plan of providing separate instruction for men and women in the Freshman and Sophomore classes, while allowing them to work together in the upper classes (see pp. xcvi ff.).

If the question were to be asked what two elements constitute the largest factors in controlling the organization and spirit of the institution, the answer might be made:



- (1) the principle of individualism, from the point of view both of student and instructor, which has been all-powerful in effecting the details of organization; and
- (2) the principle of flexibility, which is, after all, perhaps only a corollary of the first-named principle of individualism, to which everything has been made subservient.

#### XXVII. CELEBRATIONS

During the ten years the University has had two notable celebrations, one marking the completion of five years of life, the other of ten. The most important feature of each occasion was the presence of the founder of the University, who was received with great enthusiasm by Trustees, Faculties, and students.

The Quinquennial Celebration took place during the first five days of July, 1896, and was attended by the formal dedication of the Haskell Oriental Museum and the laying of the corner-stones of the four Hull Biological Laboratories. In connection with the former there was held a series of interesting conferences and a unique reproduction of the synagogue service in the time of Christ by twenty men in oriental costume using the Hebrew language and old Hebrew chants. In connection with the latter there was an address by Professor George Lincoln Goodale, M.D., LL.D., of Harvard University, and briefer addresses by the Professors at the head of the particular Departments interested. The main features of the program were as follows:

On Wednesday, July 1, the exercises included the presentation of the synagogue service of the times of Christ, and the Fifteenth University Convocation. This was held in a large tent in the center of the Quadrangles. After a prayer by Rev. William H. P. Faunce, there were brief addresses by Andrew McLeish, Vice-President of the Board of Trustees; George W. Northrup, representing the Divinity Faculty; Harry Pratt Judson, representing the Faculties of Arts, Literature and Science; and Henry Love Clarke, representing the students of the University. To these greetings Mr. Rockefeller responded briefly. After the singing of a Latin hymn, "Ad Universitatem," composed for the occasion by Mr. Frank Justus Miller, of the Department of Latin, the convocation address was delivered by Rev. Professor George Adam Smith, D.D., of the Free Church College of Glasgow, Scotland, upon the subject, "The Part Which the Old Testament Has Played in the Education of the Race, and How Far its Power to Educate and Inspire is Affected by Modern Criticism." The President's Quarterly Statement for the Spring Quarter of 1896 and the President's Quinquennial Statement followed. The events of the day were completed by the Convocation Reception in the evening.

On Thursday, July 2, the exercises centered around the Haskell Oriental Museum. In the morning there was an Archæological Conference, with an address by Professor David Lyon, of Harvard University; a Conference on Comparative Religions, with an address by Professor A. V. Williams Jackson, of Columbia University; and a Biblical Conference, with an address by Professor George Adam Smith, of the Free Church College of Glasgow. In the afternoon the formal dedicatory exercises were held, including a

presentation address by George S. Goodspeed, with acceptance by the President; the Dedicatory Address, by Professor Emil G. Hirsch; and the Dedicatory Prayer, by Rev. William H. P. Faunce. The day closed with a reception to visiting oriental scholars held in Haskell Oriental Museum.

On Friday afternoon, July 3, the corner-stones of the Hull Biological Laboratories were laid. The principal address was by Professor George Lincoln Goodale, of Harvard University, upon the theme, "Some of the Relations of the New Natural History to Modern Thought and Modern Life." After the address the President made a brief statement, and the corner-stones of the several laboratories were laid, short addresses being made by Charles O. Whitman, representing Zoölogy; by John M. Coulter, representing Botany; by Jacques Loeb, representing Physiology; and by Henry H. Donaldson, representing Anatomy.

On Saturday morning, July 4, a religious meeting was held in the Chapel, where addresses were made by Rev. William H. P. Faunce and Rev. George Adam Smith. After this the national colors were presented to the University by the first Regiment of Infantry of the Illinois National Guard, the address being made by Colonel H. L. Turner, with response by the President. The oration of the day was then delivered by Professor Bernard Moses, of the University of California, upon the subject, "The Condition and Prospects of Democracy."

The final day of the celebration, Sunday, July 5, was marked by sermons by Rev. George Adam Smith and Rev. W. H. P. Faunce.

The social features of the celebration included the reception already mentioned and several dinners, one by the Trustees to the founder of the University and one by the representatives of the Science Departments to visiting scientists. At the former Mr. Andrew McLeish acted as toastmaster and introduced Rev. A. K. Parker, who spoke on behalf of the Trustees, and Edward G. Mason, Esq., who represented the City of Chicago. A brief response by Mr. Rockefeller was greatly enjoyed.

Five years later, on June 14, 15, 16, 17, and 18, 1901, the Decennial celebration was held. The first day was devoted to the interests of the students of the University, the most prominent feature being the performance of the play, *As You Like It*, under the auspices of the Department of Public Speaking.

Saturday, June 15, was Alumni and Class Day, the various business meetings and the dinner of the alumni being held, as well as the Class Day exercises of the class of 1891. An interesting feature of this occasion was the presentation to the University of a memorial tablet to Hon. Stephen Arnold Douglas, the founder of the first University established in Chicago. The address on behalf of the class was made by Mr. Arthur Eugene Bestor, the class president, and the response on behalf of the University by Franklin MacVeagh, Esq.

This day was also marked by the corner-stone ceremonies of the University Press Building and the Charles Hitchcock Hall, and the formal dedication of the addition to Nancy Foster Hall. The corner-stone of the Press Building was laid by Newman

Miller, Director of the University Press, the address being delivered by Professor J. Laurence Laughlin. The corner-stone of the Charles Hitchcock Hall was laid by the donor of the building, Mrs. Charles Hitchcock, the address being delivered by Professor Paul Shorey. At Nancy Foster Hall, after the presentation to the University by Mr. George E. Adams of the keys of the building, the dedicatory address was made by Mrs. Alice Freeman Palmer.

On Sunday, June 16, four meetings were held. The first was a Bible service, with addresses on the theme "Sacred Wisdom," by the President, who discussed the wisdom of the Old Testament; by Professor Richard G. Moulton, who discussed the wisdom of the Apocrypha; and Professor Shailer Mathews, who discussed the wisdom of the New Testament. The second was the Convocation Religious Service, at which the President delivered the Baccalaureate Address. The third was a vesper service, at which brief addresses were made by Professor Eri B. Hulbert, Rev. Marcus Dods, of New College, Edinburg, Professor Emil G. Hirsch, and Chancellor Elisha Benjamin Andrews of the University of Nebraska. The music on this occasion was furnished by a large Decennial chorus, under the direction of Mr. Lester B. Jones. The closing service of the day was the union meeting of the Young Men's Christian Association and the Young Women's Christian Association, at which addresses were made by Rev. Ernest M. Stires, of Grace Church, Chicago, and by Miss Jane Addams, of Hull House.

Monday, June 17, was devoted to a series of educational conferences. In the morning a general meeting was held, where addresses were delivered upon the theme, "College and University Problems," by Chancellor Andrews of the University of Nebraska, President George E. MacLean of the State University of Iowa, President Charles F. Thwing of Western Reserve University, and Professor Albion W. Small. At the close of this meeting exercises were held marking the official opening of the School of Education, addresses being delivered by Professor Nicholas Murray Butler, Columbia University, and Director Francis Wayland Parker. In the afternoon the conference met in four sessions, representing Science, Language and Literature, History, and Theology. The first was addressed by Jacob Henry van 't Hoff, Professor of Physiological Chemistry in the University of Berlin, and by Mr. Charles Doolittle Walcott, Director of the United States Geological Survey. The second was addressed by Basil L. Gildersleeve, Professor of Greek in the Johns Hopkins University, and George Lyman Kittredge, Professor of Latin in Harvard University. The third was addressed by His Excellency, M. Jules Cambon, Ambassador Extraordinary and Plenipotentiary from the French Republic to the United States of America. The fourth was addressed by Marcus Dods, Professor of New Testament Literature in the New College of Edinburg, Scotland, and by William Newton Clarke, Professor of Christian Theology in Colgate University.

The Decennial Celebration came to an end with the exercises of Tuesday, June 18, centering around the Thirty-eighth University Convocation. Before this meeting there were corner-stone ceremonies connected with the University Commons, the University Tower, the Students' Club House, and the Leon Mandel Assembly Hall. The

ceremony of the laying of the corner-stones of these buildings, in the order just given, was performed by James Milton Sheldon, representing the Junior College Council; Joseph Chalmers Hazen, representing the Divinity School Council; David Allan Robertson, representing the Senior College Council; and Henry McGee Adkinson, representing the Graduate School Council. The addresses at the several sites were given by Professors Albion W. Small, Richard G. Moulton, George E. Vincent and Emil G. Hirsch.

The Convocation exercises were held in the large tent in the center of the Quadrangles, the Decennial Addresses being made by President Martin A. Ryerson, on behalf of the Board of Trustees; by Professor Frank F. Abbott, on behalf of the Faculties of the University; by Mr. Arthur Eugene Bestor, on behalf of the students and alumni; by Mr. George E. Adams, on behalf of the city of Chicago; and by the founder of the University, Mr. Rockefeller. After these addresses the President gave his Decennial Statement.

The presence of the founder of the University and Mrs. Rockefeller, together with the attendance of many distinguished educators as visitors or official guests, gave to the Decennial Celebration a notable social interest. At a series of receptions, luncheons, and dinners there was abundant opportunity to meet and greet the friends of the University. The closing event of the week was the Congregation Dinner, at which six hundred were present. Professor T. C. Chamberlin, Vice-President of the University Congregation, acted as toastmaster. Responses were made by Mr. Charles L. Hutchinson on "The University from the View Point of a Trustee;" by Professor George E. Vincent, on "The Alumni;" by Professor W. W. Goodwin, on "American Universities;" by Professor Marcus Dods, on "European Universities;" by Mr. Rockefeller, on "Requisites in Founding Universities;" and by the President, on "Our Guests."

In connection with some of the University Convocations there have been celebrations of interest, notably on October 17, 1898, when the first honorary degree voted by the Trustees, that of Doctor of Laws, was conferred upon President William McKinley. At this Convocation the addresses were made, on behalf of the Trustees by Rev. Alonzo K. Parker, and on behalf of the University Congregation by Professor Albion W. Small.

During the years covered by this report forty-two Convocations have been held, the date, place, name of the orator, and his subject being as follows:

1. January 2, 1893, Central Music Hall.—Head Professor H. E. von Holst: "The Need of Universities in the United States."
2. April 1, 1893, University Gymnasium.—Head Professor T. C. Chamberlin: "The Mission of the Scientific Spirit."
3. June 23, 1893, Central Music Hall.—Head Professor William Gardner Hale: "The Place of the University in American Life."
4. October 2, 1893, Walker Museum.—Professor Henry Drummond: "Some Higher Aspects of Evolution."
5. January 2, 1894, Central Music Hall.—Professor Ira Remsen: "The Chemical Laboratory."

6. April 3, 1894, Central Music Hall.—Head Professor John M. Coulter: "Some University Fallacies."
7. July 2, 1894, The Graduate Quadrangle.—Head Professor A. A. Michelson: "The Evolution and Influence of Experimental Physics."
8. October 1, 1894, The Graduate Quadrangle.—Rev. John Henry Barrows: "The Greatness of Religion."
9. January 2, 1895, The Auditorium.—President Seth Low: "The University and its Relation to Questions of the Times."
10. April 1, 1895, The Auditorium.—Hon. Chauncey M. Depew: "The Present: Its Opportunities and Perils."
11. July 1, 1895, The Graduate Quadrangle.—Professor Emil G. Hirsch: "The American University."
12. October 1, 1895, The Graduate Quadrangle.—Professor Alexander Balmain Bruce: "The Future of Christianity."
13. January 2, 1896, The Auditorium.—Hon. William Eustis Russell: "Individualism in Government."
14. April 2, 1896, The Auditorium.—Prince Serge Wolkonsky: "Memory and Responsiveness as Instruments of Culture."
15. July 1, 1896, The Central Quadrangle.—Rev. Professor George Adam Smith: "The Part Which the Old Testament Has Played in the Education of the Race, and How Far its Power to Educate and Inspire is Affected by Modern Criticism."
16. October 1, 1896, University Gymnasium.—President Augustus H. Strong: "Modern Tendencies in Theological Thought."
17. January 1, 1897, The Auditorium.—Hon. Henry D. Estabrook: "Lafayette."
18. April 1, 1897, The Auditorium.—Her Excellency the Countess of Aberdeen: "The University and its Effect upon the Home."
19. July 1, 1897, Hull Court.—Right Rev. John H. Vincent: "The Church and the University."
20. October 1, 1897, The University Congregational Church.—Rev. Amory H. Bradford: "The Unity of the World."
21. January 3, 1898, The Auditorium.—Hon. James H. Eckels: "Public Leadership."
22. April 1, 1898, The University Congregational Church.—Professor William Knight: "Poetry and Science; Their Affinities and Contrasts."
23. July 1898, The Graduate Quadrangle.—President William L. Wilson: "The Founders of States and the Founders of Colleges."
24. August 2, 1898, Kent Theater.—Professor Gaston Bonet-Maury: "The University of Paris."
25. October 1, 1898, Studebaker Hall.—Rev. Charles Cuthbert Hall: "Some Essential Elements of the True Academic Spirit."
26. October 17, 1898, Kent Theater.—The Special McKinley Convocation, Rev. Alonzo K. Parker; Professor Albion W. Small.
27. January 4, 1899, Studebaker Hall.—Hon. Carl Schurz: "American Imperialism."
28. April 1, 1899, Studebaker Hall.—Rev. Henry van Dyke: "Democracy and Culture."
29. July 1, 1899, The Graduate Quadrangle.—President James Burrill Angell: "The Old College and the New University."
30. October 2, 1899, Central Music Hall.—Right Rev. John Lancaster Spalding: "The University and the Teacher."
31. January 2, 1900, Studebaker Hall.—President Arthur Twining Hadley: "Our Standards of Political Morality."
32. April 2, 1900, Central Music Hall.—Hon. David Jayne Hill: "The Place of America in World-Politics."

33. June 19, 1900, The Graduate Quadrangle.—President James G. K. McClure: "The True Scholar's Attitude Toward the Past."
34. August 10, 1900, The Graduate Quadrangle.—General Joseph Wheeler: "The Influence of the University of Chicago, and Our Pacific Possessions."
35. September 18, 1900, Studebaker Hall.—Rev. George C. Lorimer: "Race-Problems in the Light of Education."
36. December 18, 1900, Studebaker Hall.—President Frances Landey Patton: "The Idea of God in Intellectual Inquiry."
37. March 19, 1901, Studebaker Hall.—His Excellency Mr. Wu Ting-Fang: "Chinese Civilization."
38. June 18, 1901, The University Quadrangles.—The Decennial Convocation; addresses by Martin A. Ryerson, Esq., Professor Frank Frost Abbott, Mr. Arthur Eugene Bestor, Mr. George E. Adams, Mr. John D. Rockefeller.
39. August 29, 1901, The University Quadrangles.—Rev. Professor Caspar René Gregory: "Education and Labor."
40. December 17, 1901, Studebaker Hall.—Professor John Franklin Jameson: "The Influence of Universities upon Historical Writing."
41. March 18, 1902, Studebaker Hall.—Mr. Albert Shaw: "The Outlook for the Young Man in the New Social and Economic Order."
42. June 17, 1902, The University Quadrangles.—President Henry Smith Pritchett: "The Service of Science to the University, and the Response of the University to That Service."

#### XXVIII. THE FORECAST

In the suggestions which have been made in connection with most of the subjects presented in this Report, I have indicated, so far as it lies in my mind, a forecast of the future as connected with these topics.

On the basis of the ten years of history one may reasonably make certain predictions without incurring the charge of boldness. The most difficult part of the work of organization has been finished. Some traditions have actually been established, and upon these as a foundation others will soon grow up. The essential characteristics of the institution have been determined. The institution promises to become a university, and not simply a large college. Its professional work will be on a level with the so-called graduate work, and will indeed itself be graduate work of the highest order. The Senior Colleges will serve as a clearing-house for the Graduate and Professional Schools; that is, as a period during which the student will work according to his own choice and with his best spirit.

With the Divinity School thoroughly established, the Law School in substantial shape, and the Medical School practically arranged for, there remain only (1) the School of Technology and (2) the Schools of Music and Art. It is hoped that the second ten years will bring these remaining schools, and with them the great Library, with its surrounding buildings for the Departments of the Humanities, a great University Chapel, and the remaining Laboratories of which the institution today stands in such need.

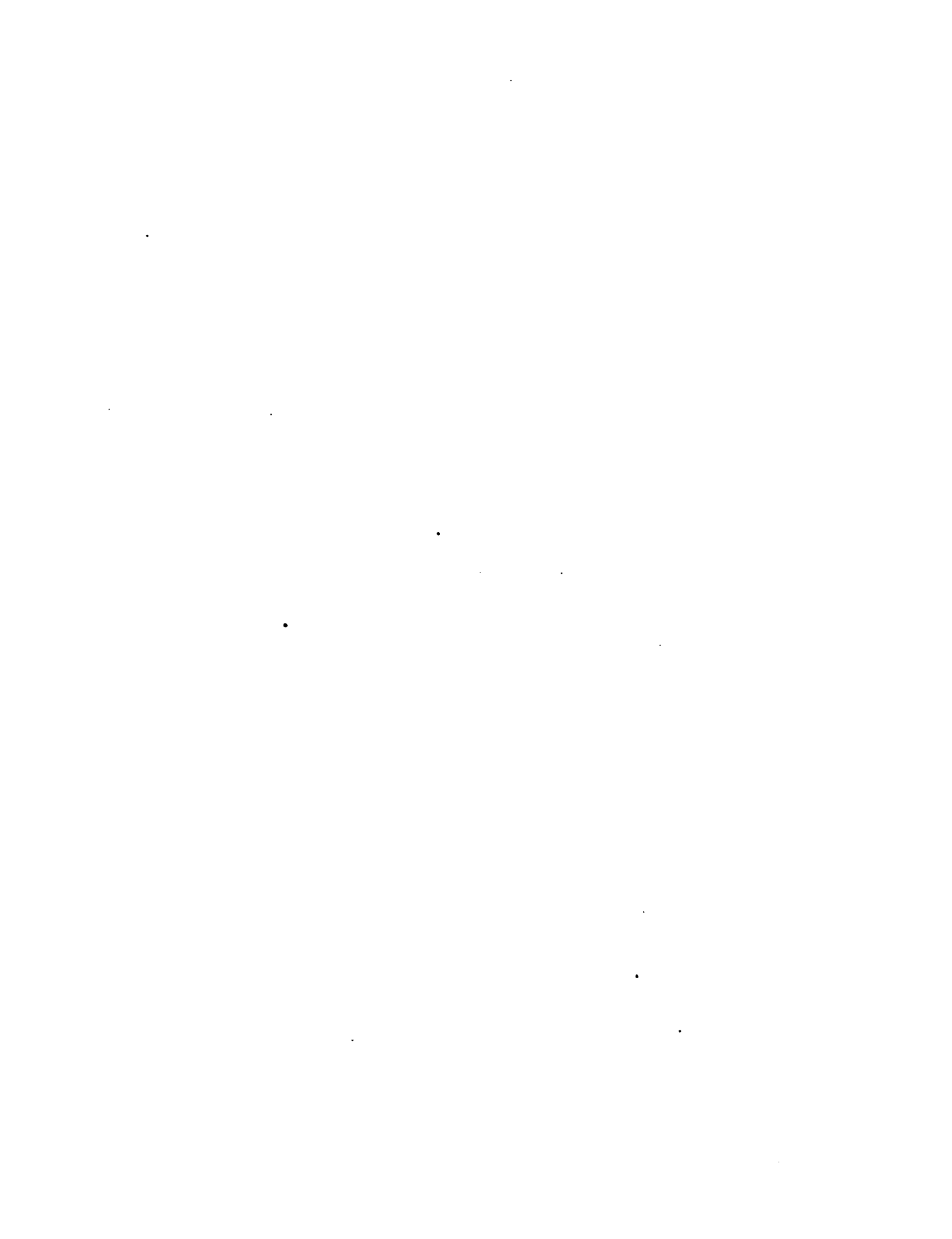
The first ten years have seen the foundations laid and the superstructure erected in the rough. The second ten years will witness the development of the æsthetic side of life and thought.

WILLIAM R. HARPER, *President.*



**REPORTS OF THE DEANS**





# THE FACULTIES OF ARTS, LITERATURE, AND SCIENCE

*To the President of the University:*

SIR: I submit herewith my report on the condition of the Departments of the Faculties of Arts, Literature, and Science for the ten years, 1892-1902.

## I. LEGISLATION AND ADMINISTRATION

At the opening of the University, October 1, 1892, the organization provided by the regulations of the Board of Trustees, adopted December 26, 1890 (*Bulletin No. 1*, pp. 8, 9), was dual in character, consisting of Faculties and administrative authorities.

Each School or College was to have a Faculty comprising all the officers of the University giving instruction in such School or College. The Faculties of the several Colleges were authorized to meet together, for convenience, when there was no special reason for separate meetings. The powers of the several Faculties were to be prescribed by the Board of Trustees.

Provision was made also for administrative officers. The duties of some of these, relating to the University as a whole, included the Schools and Colleges under the care of the Faculties of Arts, Literature and Science. These were the President, the Examiner, the Recorder, the Registrar. Further, there were one or more Deans charged with the general administration of each School or College. At the outset the President assumed the Deanship of the Graduate School of Arts and Literature; there was also a Dean appointed for the Ogden (Graduate) School of Science, a Head Dean of the Colleges, a Dean each in the College of Liberal Arts, the College of Literature, and the College of Science, and two Deans of women.

Still further, there were two Boards of superior jurisdiction — the University Senate and the University Council. The Senate included the President, the Recorder, and the Heads of Departments of Instruction. Its authority was final in all matters of education. The Council included all the administrative officers. Its authority was final in all matters of administration. These two bodies had jurisdiction over all Faculties and Faculty authorities.

Under the regulation of the Board of Trustees permitting Faculties to meet together, the Faculties of the Graduate School of Arts and Literature, of the Ogden (Graduate) School of Science, and the three College Faculties met for a time as one body under the general name of the Faculty of Arts, Literature, and Science. The Board of Trustees never defined the powers of this Faculty, excepting the limitation implied in the superior jurisdiction of the University Senate and the University Council. Accordingly the Faculty of Arts, etc., assumed the functions, legislative and administrative, usually exercised by college Faculties, and continued to hold regular meetings until December, 1896.

It should be added that, from the outset, the President of the University has had the power to disallow the actions of any Faculty or Board; as the University Senate and Council in turn have had the power to disallow the actions of any University authority within their respective jurisdictions.

In the work of the General Faculty it soon appeared that such administrative questions as came before it, either from the Deans or otherwise, could not with advantage be considered, in the first instance, by so large a body. In order to remedy this difficulty various plans were suggested. At the meeting of January 19, 1893, it was moved that there be constituted a standing committee on the Academic Colleges. It was also moved that there be organized two Faculties, one for the Graduate Schools and the University Colleges, a second for the Academic

Colleges; and further that the General Faculty be divided into two such Faculties. All these motions were laid on the table. At a meeting held February 9 the subject was resumed, and it was recommended to the Board of Trustees that four administrative Boards be constituted—for the Graduate School of Arts and Literature, for the Ogden (Graduate) School of Science, for the University Colleges, and for the Academic Colleges, respectively. Favorable action was taken by the Board of Trustees on February 14, and on March 2 the President announced the membership in the new Boards.

Each of these Boards was to contain either twelve members, nominated by the President and appointed for one year by the Board of Trustees, or all members of the Faculty, appointed for a longer time than one year, who offered instruction in the School or College concerned. The former plan was followed with reference to the Boards of the Ogden School and the University Colleges, the latter with reference to the Boards of the Graduate School of Arts and Literature and of the Academic Colleges.

To these Faculty administrative Boards were delegated all powers of the Faculty relating to the enforcement of regulations and to the conduct of discipline, except the infliction of the penalties of dismissal or expulsion. The Boards had no powers of legislation.

By request of the Ogden Board, the Trustees, May 2, 1893, changed its organization to the second plan.

At the same time that the four administrative Boards under the Arts Faculties were constituted, there were also organized University administrative Boards for the business of (1) Libraries, Laboratories, and Museums; (2) Physical Culture and Athletics; (3) the Press; (4) the Affiliations. Each Board consisted of the President (chairman), the administrative officers of the respective divisions (*ex officio*), and five members nominated by the President from the University Faculties and elected by the Board of Trustees. These Boards hold the same relation to the University Senate and Council as that of the various Faculties.

The work of the four Faculty Boards was carried on from their organization in March, 1893, until their dissolution in December, 1895. The President and Deans conducted the ordinary business of administration, under the regulations of Trustees and Faculty, referring to the respective administrative Boards such matters as seemed of sufficient importance, especially such as involved the interpretation of legislation.

It soon appeared in the routine of the Boards that, coming closely in contact with the working of regulations as applied to students, they were often able to make important suggestions to the Faculty—suggestions which in many cases led to modifications in the existing regulations, or to the adoption of new regulations. It also appeared that in the meetings of the General Faculty the younger members were not apt to feel entirely free in the expression of their views, and policies relating to the work of one School or College might often be carried by the votes of those not directly concerned. For these reasons the General Faculty in November, 1895, after full discussion, voted to recommend to the Board of Trustees a plan for the formation of four distinct Faculties in place of the existing four Faculty administrative Boards. This plan was adopted by the Board of Trustees December 10, 1895, and the administrative Boards were disbanded. The composition of the new Faculties was as follows:

The Academic College Faculty consisted of all instructors whose work was largely or exclusively in the Academic Colleges, and of at least one instructor from each Department giving courses in the Academic Colleges.

The University College Faculty consisted of a representative of each of the Departments which furnished instruction to students in the University Colleges, nominated by the President in consultation with the Heads of Departments.

Each Graduate School Faculty—Arts and Literature, and Ogden—consisted of all

instructors appointed for more than one year to give instruction in the Departments under the charge of that Faculty. As a matter of fact, the Faculties of the Graduate Schools usually met together.

The new Faculties met for the first time in January, 1896. The names of the two Colleges were changed, by act of the Board of Trustees, April 1, 1896, from "University" and "Academic" to "Senior" and "Junior," respectively.

Meanwhile the plan of distributing Deans was altered. In lieu of a Dean for each of the three Colleges (Arts, Literature, Science), one Dean was assigned to the University (= Senior) Colleges, and another to the Academic (= Junior) Colleges. This was because the problems in these two groups respectively were believed to have so many things in common that they could with advantage have common administration.

In 1894 the Head Deanship of the Colleges was abolished, and a Deanship of the Faculty (later "Faculties") of Arts, Literature, and Science was established, the Dean to have general charge of the administration of the Schools and Colleges under those Faculties.

Another University administrative Board, that of Student Organizations, Publications, and Exhibitions, was constituted March 10, 1896. The name sufficiently indicates its functions.

At an adjourned meeting of the University Congregation held November 2, 1900, it was voted that the following proposition be the subject for discussion at the next meeting: "That it would be to the best interests of the University to substitute for the present system of Boards and Faculties one Faculty with special committees." Mr. Abbott and Mr. Hendrickson were appointed a committee to prepare briefs.

At the meeting of March 1, 1901 (thirty-two members present), this proposition was discussed, and the following resolution was adopted: "That it is the sense of the Congregation that it is desirable to establish a General Faculty of Arts, Literature, and Science, which shall have supreme authority as to all matters within its sphere."

At the meeting of March 20, 1901, it was voted that a committee of five be appointed by the chair to present a scheme whereby the foregoing action might be carried out, and that a special meeting be held in the Spring Quarter to discuss the question.

At the meeting of May 24, 1901, in view of the fact that the committee was not ready to report, the special meeting was postponed until further notice.

At the meeting of December 18, 1901, the chairman of this committee asked that the special meeting of the Congregation be held in the fourth week in January, which was accordingly ordered.

The special meeting convened January 31, 1902, 122 members being in attendance. The committee report, signed by three members, recommended among other things a Faculty of Arts, Literature, and Science, which should be formed by merging the existing Graduate Faculties and the Senior and Junior College Faculties, the new Faculty to have final power, subject only to the veto of the President, and to like veto of the Senate on matters which might affect some other Faculty, and as to which agreement with that Faculty should not be reached. The University Council was to be discontinued and the various University Boards made directly dependent on the Senate. The legislative power of the Senate on matters affecting mainly a single branch of the University was to be discontinued. The Congregation was to have only an annual meeting.

A minority report signed by two members recommended as a substitute a plan which involved retaining the Faculty of the Junior Colleges, merging the Senior College Faculty and the two Graduate Faculties into one, retaining Senate, Council, University Boards, and Congregation essentially unchanged, and making definite the legislative competence of the Senate.

The minority report was adopted by the Congregation, and statutes enacted by the Board of Trustees provided for the new arrangements.

In accordance with these changes, the new united Faculties came into existence with the Spring Quarter of 1902. A Board, subordinate to this Faculty, was established to administer Senior College affairs, and Group Committees were formed for the consideration of matters relating only to the groups in question. Departments are arranged in Groups as follows: I, the Group of Philosophy and Education; II, the Group of History and the Social Sciences—Political Economy, Political Science, History, and Sociology; III, the Classical Group—Classical Archæology, Sanskrit and Comparative Philology, Greek and Latin; IV, the Modern Language Group—Romance, Germanic, English, Literature (in English); V, the Mathematical Science Group—Mathematics, Astronomy, Physics, Chemistry; VI, the Geological Group—Geology and Geography; VII, the Biological Group—Zoölogy, Anatomy, Physiology, Neurology, Palæontology, Botany, Pathology.

In the Junior College Faculty curriculum committees are formed corresponding to the above Groups, and to any professional or technical schools requiring preparation in the Junior Colleges.

## II. DEPARTMENTS OF INSTRUCTION

The following are the separate Departments now united under the Faculties of Arts, Literature, and Science: Philosophy, Political Economy, Political Science, History, Archæology, Sociology and Anthropology, Comparative Religion, the Semitic Languages and Literatures, Biblical and Patristic Greek, Sanskrit and Indo-European Philology, the Greek Language and Literature, the Latin Language and Literature, the Romance Languages and Literatures, the Germanic Languages and Literatures, English, Literature (in English), Mathematics, Astronomy and Astrophysics, Physics, Chemistry, Geology, Geography, Zoölogy, Anatomy, Physiology, Neurology, Palæontology, Pathology and Bacteriology, Public Speaking, Physical Culture and Athletics, Military Science and Tactics.

At the opening of the University, in 1892, the Department of Apologetics and Christian Ethics was also organized, under the direction of Professor E. G. Robinson, formerly President of Brown University. On the death of Dr. Robinson, in June, 1894, the Department was discontinued.

The Department of Pedagogy was organized in 1895, under the same head as the Department of Philosophy (Professor John Dewey). The name was changed in 1900 to the Department of Education, and in 1901 the Department was merged in that of Philosophy.

The Department of Archæology was established in April, 1894, in charge of Professor F. B. Tarbell.

The Department of Biblical Literature was organized at the opening of the University, courses of instruction being provided mainly by representatives of other Departments. In December, 1897, the Department of Literature (in English) was established, in charge of Professor R. G. Moulton, and in this the Department of Biblical Literature in English was merged.

The biological work of the University was at the outset organized under a single Department, under Professor C. O. Whitman as Head. In February, 1893, the Department of Biology was divided into five biological Departments: Zoölogy, Botany, Anatomy, Physiology, Neurology. In 1901, when the medical work was organized, the Department of Pathology and Bacteriology was organized, and at the same time work in Embryology was added to the Department of Zoölogy.

Military drill was authorized in October, 1897, Lieutenant J. M. Palmer, U. S. A., being assigned by the United States War Department as instructor. In March, 1900, the Department of Military Science and Tactics was created. As Lieutenant Palmer was ordered into active service on the opening of the war with Spain, in 1898, the Department was left in charge of the

cadet captain until 1901, when the War Department assigned to the University Lieutenant-Colonel Henry R. Brinkerhoff, U. S. A. (retired). The war with Spain broke out so soon after the beginning of military drill in the University that but little training had at that time been given, and hence not many were prepared for active service. The following members of the University entered the army or navy :

Associate Professor Samuel Wesley Stratton: commissioned Lieutenant U. S. N., May 24, 1898; attached to U. S. Naval Station of Key West, Fla., May 29; ordered to U. S. S. "Lancaster," June 7; ordered to U. S. S. "Texas," July 28; ordered to U. S. R. S. "Vermont," New York Navy Yard, for temporary duty, November 9; ordered to Chicago in charge of a draft of men, November 11; honorably discharged, November 23, 1898.

Atwood, Harry F., Ph.B. '98: First Illinois Cavalry.

Chace, Henry T., Jr., S.B. '96: First Illinois Cavalry, Troop C.

Clark, Lucius S., Junior College student.

De Sombre, William E., Junior College student: Second Wisconsin Infantry, Company E; served in Porto Rico.

Flanders, Knight F., A.B. '98: First Illinois Infantry; served in the Santiago campaign.

Lansingh, Van Rensselaer, S.B. '96: Third U. S. Volunteer Engineers, Company E.

Leffingwell, Ernest D., Graduate student: U. S. Battleship "Oregon;" served in the battle off Santiago.

LeMaitre, Paul G., Junior College student: First Illinois Infantry, Company L; served in the Santiago campaign; died of yellow fever in the army hospital at Siboney, Cuba, July 31, 1898.

Loeb, Jacob A., Senior College student: served on Battleship "Indiana."

Lloyd, Henry, Graduate student: First Illinois Infantry, Company L; served in the Santiago campaign.

Lozier, Horace G., A.B. '94, Graduate student: First Illinois Infantry, Company L; afterward assigned to First Provisional Engineers, Company A.

Martin, E. Whitney, Senior College Student: Fifty-first Iowa Infantry; served in the Philippines.

Morgan, Thomas S., Senior College student: Engineer in U. S. Volunteer naval service; served on the U. S. Collier "Cassius."

Northrup, Alfred S., A.B. '94: Sixth U. S. Cavalry, Troop H.

Page, Cecil, S.B. '98: U. S. Battleship "Oregon;" served in the battle off Santiago.

Pershing, Ward B., S.B. '98: Lieutenant Sixth U. S. Artillery.

Shaklee, Alfred O., Senior College student: Eighth Illinois Infantry, Company B.

Sharpe, Walter S., Unclassified student: First Illinois Cavalry.

Smith, Webster T., Junior College student: U. S. Battleship "Oregon;" served in the battle off Santiago.

Starkweather, Earnest E., Divinity student: Third Mississippi Infantry, Company C; transferred to U. S. Hospital Corps; served in Hospitals at Lexington, Knoxville, Atlanta, Savannah.

Stevenson, George E. T., D.B. '99: First Illinois Infantry, Company H.

Tolman, Cyrus F., Jr., S.B. '96, Graduate student: First Illinois Infantry, Company L.

Clark, Faith B., Ph.B. '96, Ph.M. '97: served as nurse (though not under government appointment) in Camp Thomas at Fortress Monroe.

Alumni of the Old University or of the Theological Seminary at Morgan Park who were in the service were:

Tolman, Edgar B., A.B. '80: Major First Illinois Infantry; served in the Santiago campaign.

Odell Delevan D., D.B. '85: commissioned August 1, 1898, as Chaplain, Third Illinois Infantry, and served in Porto Rican campaign; mustered out January 1, 1899.

In addition to the above, the following named members of the University have been commissioned in the regular army of the United States:

W. B. Pershing: First Lieutenant, Fourth Cavalry; commissioned in U. S. Army, July 9, 1898.

W. E. DeSombre: Second Lieutenant, Artillery Corps, appointed July 1, 1901.

P. G. Wrightson: Second Lieutenant Twentieth Infantry; appointed October 28, 1902.

Both of the last named were cadet captains in the Department.

By the statutes of the University the officers of instruction of each Department are organized under an executive Head, appointed by the Board of Trustees, who administers the Department, with the aid of its other members. The Head of the Department is responsible for the proper organization of instruction and of research, and for the supervision of departmental publications, and consults with the Dean and with the President with reference to the department budget and to appointments. The permanent head of a Department was originally termed "Head Professor" — a title which was discontinued in 1897. The permanent organization of Departments in this way has been as follows: Philosophy, John Dewey, 1893-; Political Economy, James Laurence Laughlin, 1892-; Political Science, Harry Pratt Judson, 1894-; History, Hermann Eduard von Holst, 1892-1900, John Franklin Jameson, 1901-; Sociology, Albion Woodbury Small, 1892-; Semitic Languages and Literatures, William Rainey Harper, 1892-; Biblical and Patristic Greek, Ernest Dewitt Burton, 1892-; Greek Language and Literature, Paul Shorey, 1895-; Latin Language and Literature, William Gardner Hale, 1892-; Romance Languages and Literatures, William Ireland Knapp, 1892-93; English Language and Literature, John Matthews Manly, 1897-; Mathematics, Eliakim Hastings Moore, 1895-; Physics, Albert Abraham Michelson, 1892-; Chemistry, John Ulric Nef, 1895-; Geology, Thomas Chrowder Chamberlin, 1892-; Biology, Charles Otis Whitman, 1892-93; Zoölogy, Charles Otis Whitman, 1893-; Anatomy, Lewellys Franklin Barker, 1899-; Physiology, Jacques Loeb, 1900-1903; Neurology, Henry Herbert Donaldson, 1895-; Palæontology, Samuel Wendell Williston, 1902-; Botany, John Merle Coulter, 1893-; Pathology and Bacteriology, Ludvig Hektoen, 1901.

### III. THE UNIT OF WORK AND THE UNIT OF TIME

In the original plan of the University, as outlined in *Bulletin of Information No. 1*, it was contemplated that the calendar year should be divided into four Quarters of thirteen weeks each; that in each Quarter the last week should be a recess; and that the remaining twelve weeks should be divided into two Terms of six weeks each. Thus the unit of time would be the Term.

It was then planned that the unit of work should be the Major, which was intended to be a course given twice a day for a Term. A Minor was to be given once a day for a Term. Each exercise was to occupy one hour. An examination was to be given at the end of each Term.

It was arranged that courses might be offered also as double Majors and Minors, such courses to be carried continuously throughout the Quarter.

The practical working of the University soon showed that the Term was too short for a satisfactory time unit, except in the Summer Quarter. The majority of courses accordingly soon became double Minors, a smaller number becoming double Majors.

When it had become quite clear that the actual unit of work was a course of one hour a day for an entire Quarter, it seemed simpler to recognize the fact by a change of nomenclature; and in the year 1895-96 such course was officially recognized as the unit, with the name of Major. The Minor remained unchanged in definition, double Minors and double Majors being courses having two exercises a day for a Term or a Quarter, respectively.

#### IV. THE PLAN OF CONCENTRATION

One of the fundamental plans of the University at the outset was that the student should give his attention at any one time to comparatively few subjects. The first plan was that normal work of a student should consist of one Major and one Minor, or of three Minors, each Term. This would result in concentration on not more than two or three subjects of study at any one time. With the change referred to above, the norm of work became three Majors (in the present acceptation of the term) for one Quarter. That implies concentration on three subjects in equal proportions, taking from four to five exercises a week. This is irrespective of such special requirements in the Colleges as Public Speaking and Physical Culture.

The present system is preferable to that of scattering work over more subjects, taking each from one to three hours a week. In the transfer from one line of thought to another, after a certain point is reached there is a distinct loss of mental effort. This is avoided by minimizing the number of subjects to be put before the mind at any given time, preserving merely sufficient variety to avoid the weariness resulting from monotony. To a large extent that end seems to have been accomplished under our present system.

#### V. THE SYSTEM OF FOUR QUARTERS

Another of the original plans of the University is that of four Quarters in the year, with work so arranged that a student may begin at the opening of any one of them, and be given his degree at any one of four occasions yearly. This has proved an entire success, fully realizing all that was expected from it. It is a great convenience for students to be able to begin work at different periods in the year, and to arrange vacations according to special needs. It is not at all difficult for the University to distribute instruction in such a way that almost any student will find his needs supplied in any Quarter. When the work required is finished, it is not easy to see why it is necessary to delay the granting of the degree.

The four Convocations allow a formal bestowal of such University honors, and at the same time prevent undue delay.

For the Faculty the system of four Quarters is perhaps even more valuable than for students. Besides the flexibility as to vacations which the system permits, it is especially desirable that the younger men should be able from time to time to do some additional work, thus earning longer vacations to be spent in travel and study. Many of the Faculty have availed themselves of this opportunity, and the effect in the scholarly spirit which so largely prevails is very noticeable. The obvious benefits of the system have commended it to the attention of other institutions, and it has been adopted in one state university, in a prominent eastern university and in some of the normal schools of another state.

#### VI. THE SUMMER QUARTER

An essential feature of the four-Quarter system is the regular University work of the Summer. The possibility of carrying on instruction during that season, at least under the climatic conditions of Chicago, has been made entirely evident. The old superstition that a teacher in normal health needs a full fourth of the year for physical recuperation has been removed. A reasonable time for rest and change is undoubtedly a benefit to everybody, but three months are a disproportionate time to give from the year for that purpose. Teachers, accordingly, have been able to give the time of one Term of the Summer Quarter to study at the University, and yet secure sufficient rest. Many hundreds have come from all parts of the country to obtain the benefits of such study in July and August. It is especially noticeable that the southern states have been largely represented. In this way teachers, whether in secondary schools or in



colleges, are able to keep up with the advance of their specialties, and thus to reinforce their work with much added material and from a progressively higher point of view.

The students who are in the University in other Quarters are increasingly availing themselves of the opportunity of summer study. The first Term particularly appeals to them, providing a means of bringing up arrears of work, removing conditions, or making definite advancement toward the degree.

In 1893 the Summer Quarter, following the system of the year, began on the 1st of July and continued for twelve weeks. This was the plan followed until 1901. In that year the Summer Quarter was begun on the nineteenth day of June, the day following the Convocation. Thus the recess between the Spring and Summer Quarters was omitted, and the Summer Quarter was ended on the 31st of August. By this means teachers who wished to continue throughout the quarter were usually able to do so, and yet be in time for the opening of school in September. The entire month of September thus became a recess for all branches of the University.

It must be noticed in this connection that in some cases there is a conflict between the present date of opening the Summer Quarter and the closing of schools in Chicago and of some other cities. Provision is made for remedying this difficulty by furnishing a greater amount of separate work in the Second Term. Teachers who wish to attend a single Term may therefore take their rest in the first Term and do their University work in the second.

The total attendance for the first Summer Quarter (1894) was 537; for the Summer of 1901 it was 1,528.

The work of the Summer is the same in character and quality as that given during other quarters of the year. The only difference lies in the presence on the Faculty of members of the faculties of other universities, who of course are able to give instruction here at that time more readily than at other times; and in the fact that larger provision is made for general lectures. The Summer Quarter, however, is by no means a summer school.

Among representatives of other institutions who have given instruction during the Summer Quarters may be mentioned the following:

In 1894, Sylvester Burnham, Colgate University; Lucius A. Sherman, University of Nebraska.

In 1895, Alexander Balmain Bruce, Free Church College, Glasgow; Caspar René Gregory, University of Leipzig; Charles Davidson, Western Reserve University.

In 1896, George T. Ladd, Yale University; Elisha B. Andrews, Brown University; George Adam Smith, Free Church College, Glasgow; Bernard Moses, University of California; W. B. Chamberlin, Chicago Theological Seminary; Gustaf E. Karsten, University of Indiana; William D. Hyde, Bowdoin College; J. A. Beet, Wesleyan Theological Seminary, Richmond, England; E. Flügel, Leland Stanford University; Rush Rhees, Newton Theological Institution; Edward A. Ross, Leland Stanford University; Emory B. Lease, University of Michigan; Earl Barnes, Leland Stanford University.

In 1897, Charles Rufus Brown, Newton Theological Institution; Lester F. Ward, Smithsonian Institution; Thomas D. Seymour, Yale University; E. B. Poulton, Jesus College, Oxford; H. Morse Stephens, Cornell University; George Hempl, University of Michigan; Frederick Bancroft, Department of State; John C. Metcalf, Georgetown College; Francis A. Wood, Cornell College; Edgar A. Lovett, Princeton University; Hutchins Hapgood, Harvard University; Francis Newton Thorpe, University of Pennsylvania.

In 1898, Noah K. Davis, University of Virginia; Gaston Bonet-Maury, University of Paris; Frederick J. Turner, University of Wisconsin; Arthur T. Walker, University of Kansas; Thomas W. Page, Randolph-Macon College; George A. Miller, Cornell University.

In 1899, Karl Frederick Richard Hockdorfer, Wittenberg College; George E. Dawson, Bible Normal College; Arthur S. Hathaway, Rose Polytechnic Institute; John Bell Henneman, University of Tennessee; Gordon Ferrie Hull, Colby College; Ernst B. Skinner, University of Wisconsin; Henry T. DeWolfe, Newton Theological Institution; Jane Addams, Hull House, Chicago.

In 1900, James Stevenson Riggs, Auburn Theological Seminary; Maurice Bloomfield, Johns Hopkins University; Frederick M. Warren, Western Reserve University; Arthur C. McGiffert, Union Theological Seminary, New York; Henry L. Schoolcraft, University of Illinois.

In 1901, Marcus Dods, New College, Edinboro; Jacobus H. Van't Hoff, University of Berlin; Edward G. Bourne, Yale University; Alcée Fortier, Tulane University; Bernhard E. Fernow, Cornell University; Fred B. R. Hellems, University of Colorado; Louis Celeste Morrin, Armour Institute; William D. Merrell, University of Rochester; J. B. E. Jonas, Purdue University.

In many cases students who have come to the University for the Summer Quarter only have afterward arranged their plans so as to take up further work at other periods of the year, and have thus been able to complete the requirements for a degree. In still other cases students have been able to complete those requirements by attendance during summers only.

Attention is asked to the report of the Dean of the Senior Colleges dealing with this subject.

VII. ATTENDANCE OF STUDENTS

The tables of statistics appended give details as to student attendance. The total number of different students on the rolls in the first year of the University (1892-93) was 540. During the year 1901-2 the number was 3,471.

A considerable addition is made to the roll by the Summer Quarter, in which many attend who are not present at other Quarters. A mere total, therefore, does not afford an adequate basis of comparison with other institutions. For this reason the total attendance is now reported on a basis of reduction to three Quarters, the usual period of attendance of any one student. For the year 1901-2, in which there were 3,471 students in attendance, the number reduced to the three-Quarter basis was 2,373 (see Table II).

TABLE I  
ATTENDANCE IN THE GRADUATE SCHOOLS AND THE COLLEGES, FOR EACH QUARTER AND YEAR OF THE DECENNIAL PERIOD  
(THE DEPARTMENTS OF ARTS, LITERATURE, AND SCIENCE)

		1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-0	1900-1	1901-2
Total Arts, Literature, and Science	Summer	...	...	537	783	892	1,094	1,264	1,410	1,453	1,528
	Autumn	412	589	786	917	927	986	1,427	1,475	1,760	1,868
	Winter	476	678	826	926	891	991	1,387	1,459	1,709	1,790
	Spring	389	627	822	852	973	907	1,026	1,081	1,234	1,309
	Year	540	779	1,265	1,610	1,795	2,168	2,750	2,012	3,346	3,471
Total Graduate Schools	Summer	...	...	245	418	459	542	600	663	643	689
	Autumn	170	232	291	343	328	339	373	338	338	346
	Winter	179	286	308	347	285	329	358	359	343	331
	Spring	163	281	331	300	331	304	326	319	331	336
	Year	217	297	493	648	717	875	951	1,008	999	1,032
Total Undergraduates	Summer	...	...	292	365	433	552	664	747	810	839
	Autumn	242	357	495	574	601	647	1,054	1,089	1,422	1,522
	Winter	297	392	518	579	606	662	1,029	1,100	1,366	1,459
	Spring	226	366	491	552	642	603	700	762	903	173
	Year	323	482	772	962	1,078	1,293	1,799	1,904	2,347	2,439

TABLE I—Continued

		1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-0	1900-1	1901-2
Total Seniors	Summer	...	...	38	36	66	91	120	125	159	197
	Autumn	32	43	65	109	123	167	211	215	263	287
	Winter	41	46	80	135	159	199	228	240	277	296
	Spring	31	73	85	140	195	216	246	238	290	326
	Year	41	84	110	187	240	308	356	366	465	512
Total Juniors	Summer	...	...	83	128	116	117	153	157	155	186
	Autumn	137	226	318	331	314	327	415	438	603	616
	Winter	164	250	309	310	308	305	403	457	539	547
	Spring	139	214	285	278	338	256	326	412	499	520
	Year	180	274	366	427	438	446	545	636	733	772
Total Unclassified	Summer	...	...	171	201	251	344	391	465	496	456
	Autumn	73	88	112	134	164	153	157	167	140	144
	Winter	92	96	129	134	139	158	137	150	134	135
	Spring	56	79	121	134	109	131	128	112	114	127
	Year	102	124	266	347	400	539	592	648	674	640
Total University College	Summer	...	...	...	...	...	...	...	...	...	...
	Autumn	...	...	...	...	...	...	271	219	416	475
	Winter	...	...	...	...	...	...	261	253	416	481
	Spring	...	...	...	...	...	...	...	...	...	...
	Year	...	...	...	...	...	...	306	254	475	515

TABLE II

ATTENDANCE ON THE BASIS OF THREE QUARTERS  
(THE DEPARTMENTS OF ARTS, LITERATURE, AND SCIENCE)  
Number of Students according to Quarters in Residence

1898-99

Schools	One-Quarter	Two-Quarter	Three-Quarter	Four-Quarter	Three-Quarter Basis
The Graduate Schools.....	571	108	198	70	552%
The Senior Colleges.....	114	75	128	42	270
The Junior Colleges.....	122	120	267	36	435%
The College for Teachers...	90	215	...	...	173%
The Unclassified Students.	437	77	65	13	279%
Total.....	1,334	593	656	161	
Three-Quarter basis...	444%	395%	656	214%	1,710%

1901-2

The Graduate Schools.....	647	91	195	72	567%
The Senior Colleges.....	188	107	173	44	365%
The Junior Colleges.....	184	129	410	49	622%
Unclassified Students.....	506	56	70	6	284%
University College.....	70	439	...	..	316
Medical Students.....	40	13	188	5	216%
Total.....	1,637	835	1,036	176	
Three-Quarter basis...	545%	556%	1,036	234%	2,373

It should be noted that University Extension students are not included in the records of the Faculties of Arts, Literature, and Science.

The attendance during the Autumn and Winter Quarters will be seen to be about the same. There was a slight excess in the Winter Quarter for the first four years, and for the year 1897-98. In the remaining years the excess has been in the Autumn, although the Winter has not differed widely. The Spring Quarter has uniformly shown a smaller attendance than any other. This is in part due to the fact that usually more are graduated at the close of the Autumn and Winter Quarters than are apt to enter at the opening of the Quarter next following; partly to the fact that some are regularly in residence for two successive Quarters only, spending the remaining half-year in remunerative employment, or in travel; partly to the fact that some prefer the Summer to the Spring for study. The Quarter system allows much flexibility in such arrangements.

### VIII. SCHOOLS AND COLLEGES

The Graduate Schools are more or less interwoven with the Senior Colleges, so far as much of the work of the various Departments is concerned, and in like manner, although not to the same extent, the Senior Colleges with the Junior Colleges. Many Graduate courses are electives for Seniors who have had the proper preliminary work, and many graduates find it desirable to take courses normally listed for Seniors. The same considerations apply to some degree as between Senior and Junior courses—although this is modified by the number of courses which are required of Juniors. Undergraduates are under some restrictions—such as attendance at the Chapel Assembly of the College and attendance at Division Lectures, each coming once a week, the number of courses permitted, and a few others—which do not apply to graduates. Undergraduates are not permitted to attend Seminars, and certain other courses are limited to graduates. In general constituency and tone, however, the Schools and the Colleges are quite clearly differentiated.

### IX. THE GRADUATE SCHOOLS

#### I. ADMISSION

The regulations of the University permit graduates of colleges which maintain a standard sufficiently high to be admitted to the Graduate Schools.

In the administration of this regulation it has been the practice to grant admission to students whose colleges do not fall more than about a year short of the requirements of the Colleges of the University. In many cases such students do not become candidates for any degree. In other cases they are encouraged to take the Bachelor's degree. If the deficiency in college work is considerable, such students are transferred to the Senior Colleges; but if the deficiency is less than a year, the student remains in the Graduate School and is recommended for a Bachelor's degree. In other cases students in the School whose college work is somewhat deficient are permitted to become candidates for the Master's or Doctor's degree. These candidates are required to do enough work to make up the deficiency in addition to the work required for the degree.

The list of institutions in Table III, therefore, must be understood as including all whose students have at any time been admitted to the Graduate Schools, whether provisionally or permanently; but it does not at all follow that the graduates of all these institutions have been found fitted at once to take up graduate work which leads directly to a higher degree.

TABLE III  
INSTITUTIONS FROM WHICH STUDENTS HAVE ENTERED THE GRADUATE SCHOOLS

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Acadia C. (N. S. Can.).....	6	2	8	..	..	..	6	2	8
Add-Ran U. (Tex.).....	3	..	3	..	..	..	3	..	3
Adelphi C. (N. Y.).....	1	..	1	..	2	2	1	2	3
Adrian C. (Mich.).....	3	1	4	1	1	2	4	2	6
Alabama Poly. Inst. ....	2	..	2	3	..	3	5	..	5
Albion C. (Mich.).....	13	5	18	6	..	6	19	5	24
Alfred U. (N. Y.).....	2	..	2	2	..	2	4	..	4
Allegheny C. (Pa.).....	5	7	12	3	..	3	8	7	15
Alma C. (Mich.).....	1	1	2	2	..	2	3	1	4
Alma C. (Can.).....	1	..	1	..	..	..	1	..	1
Amherst C. (Mass.).....	10	..	10	4	..	4	14	..	14
Amity C. (Ia.).....	1	1	2	1	..	1	2	1	3
Andrew C. (Ga.).....	..	1	1	..	..	..	..	1	1
Andrew Female C. ....	..	1	1	..	..	..	..	1	1
Antioch C. (O.).....	2	1	3	2	..	2	4	1	5
Arkansas C.....	1	..	1	..	..	..	1	..	1
Arkansas Cumberland C. ..	1	..	1	..	..	..	1	..	1
Arkansas Industrial C. ....	..	2	2	2	..	2	2	2	4
Armour Institute.....	..	..	..	1	..	1	1	..	1
Atlanta C. (Ga.).....	1	..	1	..	..	..	1	..	1
Augustana C. (Ill.).....	3	..	3	2	..	2	5	..	5
Austin C. (Tex.).....	2	..	2	..	..	..	2	..	2
Austrian Mil. Realschule ..	..	..	..	1	..	1	1	..	1
Avalon C. (Mo.).....	1	..	1	..	..	..	1	..	1
Baker U. (Kan.).....	6	2	8	4	..	4	10	2	12
Baldwin U. (O.).....	2	3	5	3	1	4	5	4	9
Bates C. (Me.).....	2	2	4	2	..	2	4	2	6
Battle Creek C. (Mich.)....	..	..	..	..	1	1	..	1	1
Baylor U. (Tex.).....	5	7	12	2	..	2	7	7	14
Beaumont C. (Ky.).....	..	1	1	..	..	..	..	1	1
Bellevue C. (Neb.).....	1	3	4	..	..	..	1	3	4
Belmont C.....	..	2	2	..	..	..	..	2	2
Beloit C. (Wis.).....	13	2	15	16	..	16	29	2	31
Bethany C. (Kan.).....	1	2	3	..	..	..	1	2	3
Berea C. (Ky.).....	3	..	3	..	..	..	3	..	3
Bethel C. (Ky.).....	6	..	6	1	..	1	7	..	7
Blackburn U. (Ill.).....	1	1	2	1	..	1	2	1	3
Black Hills C. (S. D.).....	1	1	2	..	..	..	1	1	2
Blue Mountains Female C..	..	1	1	..	..	..	..	1	1
Boston U.....	2	7	9	3	..	3	5	7	12
Bowdoin C. (Me.).....	4	..	4	2	..	2	6	..	6
Brigham Young C. (Utah)..	1	..	1	2	..	2	3	..	3
Brown U. (R. I.).....	20	1	21	4	..	4	24	1	25
Bruzer Communalobergym.	1	..	1	..	..	..	1	..	1
Bryn Mawr C. (Pa.).....	..	6	6	..	4	4	..	10	10
Buchtel C. (O.).....	2	2	4	2	..	2	4	2	6
Bucknell U. (Pa.).....	6	3	9	1	..	1	7	3	10
Burritt C. (Tenn.).....	1	..	1	..	..	..	1	..	1
Butler C. (U. of Ind.).....	7	10	17	4	..	4	11	10	21
Cambridge U. (Eng.).....	..	1	1	..	1	1	..	2	2
Campbell U. (Kan.).....	1	..	1	1	..	1	2	..	2
Carleton C. (Minn.).....	5	7	12	2	3	5	7	10	17
Carrier Sem.....	1	..	1	..	..	..	1	..	1
Carson-Newman C. (Tenn.)	1	1	2	..	..	..	1	1	2
Carthage C. (Ill.).....	..	1	1	1	..	1	1	1	2

TABLE III—Continued

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Case S. of Appl. Science (O.)	..	..	..	1	..	1	1	..	1
Cedarville C. (O.)	..	..	..	1	..	1	1	..	1
Central C. (Ind. Terr.)	..	..	..	1	..	1	1	..	1
Centenary C. (La.)	1	..	1	..	..	..	1	..	1
Central C. (Mo.)	6	2	8	6	..	6	12	2	14
Central C. (Tenn.)	..	..	..	1	..	1	1	..	1
Central C. (Turkey)	1	..	1	..	..	..	1	..	1
Central U. (Ky.)	1	..	1	..	..	..	1	..	1
Central U. (Ia.)	..	3	3	..	..	..	..	3	3
Central Wesleyan C.	4	1	5	1	..	1	5	1	6
Central Wesleyan C. (Mo.)	2	1	3	..	..	..	2	1	3
Centre C. (Ky.)	1	..	1	..	..	..	1	..	1
Chaddock C. (Ill.)	..	..	..	1	..	1	1	..	1
Christian C. (Mo.)	2	..	2	..	..	..	2	..	2
Charleston C. (S. C.)	1	..	1	..	..	..	1	..	1
Christian Bros. C. (Mo.)	2	..	2	..	..	..	2	..	2
Claffin U. (S. C.)	1	..	1	..	..	..	1	..	1
Clemson C.	..	..	..	1	..	1	1	..	1
Coates C. (Ind.)	..	..	..	..	1	1	..	1	1
Coe C. (Ia.)	1	5	6	2	..	2	3	5	8
Colby C. (Me.)	5	2	7	3	1	4	8	3	11
Colgate U. (N. Y.)	16	..	16	6	..	6	22	..	22
Colorado Agricultural C.	..	1	1	2	..	2	2	1	3
Colorado C.	..	1	1	..	..	..	..	1	1
Columbia U. (N. Y.)	10	..	10	2	..	2	12	..	12
Columbia School of Mines	..	..	..	1	..	1	1	..	1
Columbian U. (Wash.)	1	..	1	1	..	1	2	..	2
Columbus Female C.	..	1	1	..	..	..	..	1	1
Concordia C. (Ind.)	1	..	1	..	..	..	1	..	1
Converse C. (S. C.)	..	1	1	..	..	..	..	1	1
Copenhagen U.	..	..	..	1	..	1	1	..	1
Cornell C. (Ia.)	8	18	26	8	4	12	16	22	38
Cornell U. (N. Y.)	17	18	35	14	11	25	31	29	60
Cotner U. (Neb.)	..	1	1	..	..	..	..	1	1
Cumberland U. (Tenn.)	5	1	6	2	..	2	7	1	8
Dalhousie U. (N. S.)	1	..	1	..	..	..	1	..	1
Dartmouth C. (N. H.)	9	..	9	5	..	5	14	..	14
Daughters C. (Ky.)	..	..	..	..	1	1	..	1	1
Davidson C. (N. C.)	3	..	3	1	..	1	4	..	4
Denison U. (O.)	17	4	21	8	..	8	25	4	29
De Pauw U. (Ind.)	29	20	49	13	..	13	42	20	62
Des Moines C. (Ia.)	5	3	8	..	..	..	5	3	8
Detroit C. (Mich.)	..	..	..	1	..	1	1	..	1
Dickinson C. (Pa.)	6	..	6	1	..	1	7	..	7
Doane C. (Neb.)	2	3	5	..	..	..	2	3	5
Doshisha U. (Japan)	1	..	1	..	..	..	1	..	1
Drake U. (Ia.)	6	6	12	1	..	1	7	6	13
Drury C. (Mo.)	1	1	2	2	1	3	3	2	5
Earlham C. (Ind.)	2	2	4	7	2	9	9	4	13
Elmira C. (N. Y.)	..	5	5	..	..	..	..	5	5
Eminence C.	1	..	1	..	..	..	1	..	1
Emory C. (Ga.)	17	..	17	6	..	6	23	..	23
Emory & Henry C. (Va.)	1	..	1	1	..	1	2	..	2
Emporia C. (Kan.)	2	4	6	..	..	..	2	4	6
Erskine C. (S. C.)	..	1	1	1	..	1	1	1	2
Eureka C. (Ill.)	4	1	5	..	..	..	4	1	5
Evelyn C. (N. J.)	..	..	..	..	1	1	..	1	1

TABLE III—Continued

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Ewing C. (Ill.).....	..	..	..	1	..	1	1	..	1
Fairlawn C.....	..	1	1	..	..	..	..	1	1
Florida Agricultural C.....	..	..	..	1	..	1	1	..	1
Franklin C. (Ind.).....	12	5	17	3	..	3	15	5	20
Franklin & Marshall C. (Pa.)	2	..	2	4	..	4	6	..	6
Fredericktown U.....	..	..	..	1	..	1	1	..	1
Findley C. (O.).....	2	2	4	2	..	2	4	2	6
Fisk U. (Tenn.).....	..	..	..	1	..	1	1	..	1
Folk Real Gym. (Berlin)...	..	..	..	1	..	1	1	..	1
Furman U. (S. C.).....	2	1	3	..	..	..	2	1	3
Geneva C. (Pa.).....	2	..	2	2	..	2	4	..	4
Georgetown U. (Dist. of C.)	1	..	1	..	..	..	1	..	1
Georgetown C. (Ky.).....	5	1	6	2	..	2	7	1	8
Gallaudet C. (Dist. of C.)...	..	..	..	1	..	1	1	..	1
German Wallace C. (O.).....	1	..	1	1	..	1	2	..	2
Göttingen U.....	2	..	2	2	..	2	4	..	4
Grand Island C. (Neb.).....	..	1	1	..	..	..	..	1	1
Greenville C. (S. C.).....	..	1	1	1	..	1	1	1	2
Greenville Female C.....	..	1	1	..	..	..	..	1	1
Grove City C. (Pa.).....	..	1	1	..	..	..	..	1	1
Gymnasium, Karlsruhe.....	1	..	1	..	..	..	1	..	1
Hamilton C. (N. Y.).....	7	1	8	1	..	1	8	1	9
Hamline U. (Minn.).....	4	2	6	2	..	2	6	2	8
Hampden-Sidney C. (Va.)...	7	..	7	1	..	1	8	..	8
Hanover C. (Ill.).....	4	3	7	6	2	8	10	5	15
Hardin C. (Ky.).....	..	2	2	..	..	..	..	2	2
Harvard U.....	58	..	58	24	..	24	82	..	82
Hastings C. (Neb.).....	2	3	5	1	..	1	3	3	6
Haverford C. (Pa.).....	3	..	3	4	..	4	7	..	7
Healdsburg C. (Pa.).....	..	..	..	1	..	1	1	..	1
Hedding C. (Ill.).....	3	1	4	2	..	2	5	1	6
Heidelberg U. (O.).....	1	1	2	2	..	2	3	1	4
Heidelberg U. (Germany)...	4	1	5	2	..	2	6	1	7
Hendricks C. (Ark.).....	..	..	..	1	..	1	1	..	1
Highland U. (Kas.).....	..	2	2	..	..	..	..	2	2
Hillsboro C.....	..	1	1	..	..	..	..	1	1
Hillsdale C. (Mich.).....	9	9	18	5	1	6	14	10	24
Hiram C. (O.).....	8	3	11	2	..	2	10	3	13
Hiwassee C. (Tenn.).....	1	..	1	1	..	1	2	..	2
Hobart C. (N. Y.).....	2	..	2	2	..	2	4	..	4
Hope C. (Mich.).....	2	..	2	..	..	..	2	..	2
Howard C. (Ala.).....	5	..	5	4	..	4	9	..	9
Howard Payne C. (Tex.)....	..	1	1	1	1	2	1	2	3
Illinois C.....	9	..	9	4	..	4	13	..	13
Illinois Wesleyan U.....	13	6	19	5	..	5	18	6	24
Imp. Gym. of Kozan (Rus.)...	1	..	1	..	..	..	1	..	1
Iowa C.....	16	28	44	14	3	17	30	31	61
Ia. St. C. of Agr. and Mech..	..	1	1	2	2	4	2	3	5
Iowa Wesleyan U.....	3	1	4	..	1	1	3	2	5
Irving C. (Pa.).....	..	1	1	..	..	..	..	1	1
Jewell C. (Ia.).....	2	..	2	..	..	..	2	..	2
William Jewell C. (Mo.)....	1	..	1	1	..	1	2	..	2
John B. Stetson U. (Fla.)...	1	..	1	2	1	3	3	1	4
Johns Hopkins U. (Md.)....	6	..	6	18	..	18	24	..	24
Kalamazoo, C. (Mich.).....	4	1	5	..	..	..	4	1	5
Kansas State Agr. C.....	1	4	5	6	1	7	7	5	12
Kansas Wesleyan U.....	1	..	1	..	..	..	1	..	1

TABLE III—Continued

INSTITUTION	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Kenyon C. (O.)	2	..	2	..	..	..	2	..	2
Kentucky State C.	5	..	5	..	..	..	5	..	5
Kentucky Wesleyan U.	1	..	1	..	..	..	1	..	1
Keogijikuc C.	2	..	2	..	..	..	2	..	2
Knox C. (Ill.)	7	13	20	8	..	8	15	13	28
Königl. Real-Gym. (Berlin)	1	..	1	..	..	..	1	..	1
Lake Forest U. (Ill.)	6	9	15	5	4	9	11	13	24
Lafayette C. (Ala.)	1	..	1	1	..	1	2	..	2
Lagrange C. (Mo.)	1	..	1	..	..	..	1	..	1
Lane U. (Kan.)	1	..	1	..	..	..	1	..	1
Lawrence U. (Wis.)	5	3	8	4	2	6	9	5	14
Lebanon Valley C. (Pa.)	1	..	1	..	..	..	1	..	1
Lehigh U. (Pa.)	..	..	..	2	..	2	2	..	2
Leland Stanford Jr. U. (Cal.)	4	6	10	14	2	16	18	8	26
Lexington Female C. (Ky.)	..	1	1	..	1	1	..	2	2
Lincoln U. (Ill.)	1	1	2	1	..	1	2	1	3
Lombard U. (Ill.)	5	3	8	1	..	1	6	3	9
London U. (Eng.)	..	1	1	2	..	2	2	1	3
Lucy Cobb C.	1	..	1	..	..	..	..	1	1
Luther C. (Ia.)	5	..	5	1	..	1	6	..	6
Macalester C. (Minn.)	1	..	1	2	..	2	3	..	3
Maine State C.	..	..	..	5	..	5	5	..	5
Marietta C. (O.)	11	..	11	5	..	5	16	..	16
Mary Sharp C. (Tenn.)	..	1	1	1	..	1	1	1	2
Maryville C. (Tenn.)	1	1	2	..	..	..	1	1	2
Mass. Institute Technology	..	1	1	3	3	6	3	4	7
McGill U. (Can.)	..	2	2	..	..	..	..	2	2
McKendree C. (Ill.)	2	..	2	1	1	2	3	1	4
McMaster U. (Can.)	4	..	4	6	6	12	10	6	16
McMinneville Bap. C. (Ore.)	2	2	4	..	..	..	2	2	4
Mercer U. (Ga.)	13	..	13	4	..	4	17	..	17
Miami U. (O.)	3	1	4	3	1	4	6	2	8
Michigan State Agr. C.	4	..	4	3	3	6	7	3	10
Middlebury C. (Vt.)	1	1	2	1	..	1	2	1	3
Milligan C. (Tenn.)	2	..	2	..	..	..	2	..	2
Millsaps C. (Miss.)	..	1	1	1	..	1	1	1	2
Milton C. (Wis.)	2	2	4	..	..	..	2	2	4
Mississippi C.	9	..	9	1	..	1	10	..	10
Miss. Agr. and Mech. C.	5	..	5	4	..	4	9	..	9
Miss. Industrial Institute	..	9	9	..	5	5	..	14	14
Missouri C. (Valley)	2	2	4	2	..	2	4	2	6
Missouri School Mines	..	..	..	1	..	1	1	..	1
Monmouth C. (Ill.)	4	10	14	3	..	3	7	10	17
Moore's Hill C. (Ind.)	5	..	5	1	1	2	6	1	7
Mt. Allison C.	1	..	1	..	..	..	1	..	1
Mt. Holyoke C. (Mass.)	..	8	8	..	9	9	..	17	17
Mt. Union C. (O.)	1	1	2	2	..	2	3	1	4
Muhlenberg C. (Pa.)	..	..	..	1	..	1	1	..	1
Muskingum C. (O.)	..	2	2	2	..	2	2	2	4
Newberry C. (S. C.)	..	..	..	2	..	2	2	..	2
N. Hamp. Agr. and Mech. C.	..	..	..	1	..	1	1	..	1
Northwestern Sci. C. (Jap.)	..	..	..	1	..	1	1	..	1
Northwestern C. (Ill.)	2	..	2	..	..	..	2	..	2
Northwestern U. (Ill.)	33	18	51	24	6	30	57	24	81
North Georgia C.	5	..	5	1	..	1	6	..	6
Oakland City C. (Ind.)	..	1	1	..	..	..	..	1	1
Oberlin C. (O.)	19	27	46	11	9	20	30	36	66



TABLE III—Continued

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Ohio Normal U.....	1	..	1	1	..	1	2	..	2
Ohio State U.....	8	1	9	14	2	16	22	3	25
Ohio Wesleyan U.....	10	8	18	14	2	16	24	10	34
Olivet C. (Mich.).....	4	5	9	4	1	5	8	6	14
Omaha U. (Neb.).....	1	..	1	..	..	..	1	..	1
Oskaloosa C. (Ia.).....	..	1	1	..	1	1	..	2	2
Otterbein U. (O.).....	6	1	7	6	..	6	12	1	13
Ottawa U. (Kans.).....	6	..	6	6	1	7	12	1	13
Ottawa U. (Can.).....	1	..	1	..	..	..	1	..	1
Ouachita C. (Ark.).....	3	3	6	1	..	1	4	3	7
Oxford U. (Eng.).....	1	2	3	..	..	..	1	2	3
Oxford C. (O.).....	..	4	4	..	..	..	..	4	4
Park C. (Mo.).....	1	3	4	2	..	2	3	3	6
Pacific U. (Ore.).....	..	1	1	1	..	1	1	1	2
Parsons C. (Ia.).....	2	1	3	1	1	2	3	2	5
Peabody Normal C. (Tenn.)..	..	1	1	..	..	..	..	1	1
Penn C. (Ia.).....	6	3	9	4	1	5	10	4	14
Pa. C. for Women.....	..	2	2	..	..	..	..	2	2
Philomath C. (Ore.).....	..	..	..	1	..	1	1	..	1
Pierre C. (N. Dak.).....	..	1	1	..	..	..	..	1	1
Princeton U. (N. J.).....	11	..	11	17	..	17	28	..	28
Purdue U. (Ind.).....	3	5	8	11	..	11	14	5	19
Queen's U. (Ont.).....	2	1	3	2	..	2	4	1	5
Racine C. (Wis.).....	1	..	1	..	..	..	1	..	1
Radcliffe C. (Mass.).....	..	3	3	..	..	..	..	3	3
Randolph-Macon C. (Va.)..	1	..	1	2	..	2	3	..	3
Randolph-Macon Wom. C..	..	1	1	..	4	4	..	5	5
Richmond C. (O.).....	6	1	7	4	..	4	10	1	11
Ripon C. (Wis.).....	1	3	4	..	..	..	1	3	4
Rockford C. (Ill.).....	..	5	5	..	6	6	..	11	11
Rogerville Synodical C....	..	1	1	..	..	..	..	1	1
Roger Williams U. (Tenn.)..	1	..	1	..	..	..	1	..	1
Rose Poly. Inst. (Ind.).....	..	..	..	3	..	3	3	..	3
Royal U. of Ireland.....	1	..	1	..	..	..	1	..	1
Rutger's C. (N. J.).....	3	..	3	2	..	2	5	..	5
Saline U.....	1	..	1	..	..	..	1	..	1
Savannah U. (Ga.).....	..	..	..	1	..	1	1	..	1
Scarritt Coll. Inst. (Mo.)..	..	1	1	..	..	..	..	1	1
Scio C. (Ohio).....	3	..	3	..	..	..	3	..	3
Shepardson C. (O.).....	..	5	5	..	..	..	..	5	5
Shorter C. (Ga.).....	..	1	1	..	..	..	..	1	1
Shurtleff C. (Ill.).....	..	2	2	2	1	3	2	3	5
Simpson C. (Ia.).....	..	4	4	2	1	3	2	5	7
Smith C. (Mass.).....	..	38	38	..	7	7	..	45	45
Sophie Newcomb C. (La.)..	..	1	1	..	..	..	..	1	1
Southern U. (Ala.).....	1	..	1	1	..	1	2	..	2
S. Carolina C.....	..	..	..	1	..	1	1	..	1
S. Carolina Mil. Acad.....	1	..	1	1	..	1	2	..	2
S. Georgia Male & Female C.	..	1	1	..	..	..	..	1	1
Southwest Baptist U. (Tenn.)	3	1	4	..	..	..	3	1	4
Southwest Kansas C.....	1	1	2	1	..	1	2	1	3
Southwest U.....	3	..	3	..	..	..	3	..	3
St. Ignatius C. (Calif.).....	1	..	1	..	..	..	1	..	1
St. John's C. (Md.).....	1	..	1	..	..	..	1	..	1
St. Lawrence U. (N. Y.).....	1	1	2	..	..	..	1	1	2
St. Mary's C. (Balt., Md.)..	..	..	..	1	..	1	1	..	1
St. Mary's C. (Kansas).....	1	..	1	..	..	..	1	..	1

TABLE III—Continued

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
St. Mary's Sem.....	..	1	1	..	..	..	..	1	1
St. Mary's U. (Balt.).....	1	..	1	1	..	1	2	..	2
St. Olaf's C. (Minn.).....	..	..	..	1	..	1	1	..	1
St. Thomas C.....	1	..	1	..	..	..	1	..	1
Stephens C.....	..	2	2	..	..	..	..	2	2
Swarthmore C. (Pa.).....	8	7	15	3	1	4	11	8	19
Syracuse U. (N. Y.).....	..	..	..	5	1	6	5	1	6
Tabor C. (Iowa).....	1	2	3	..	1	1	1	3	4
Tarkio C. (Mo.).....	1	..	1	3	..	3	4	..	4
Taylor U. (Ind.).....	1	..	1	..	..	..	1	..	1
Thiel C. (Pa.).....	..	1	1	..	..	..	..	1	1
Throop Pol. Inst. (Calif.)...	..	..	..	1	..	1	1	..	1
Trinity C.....	..	..	..	1	..	1	1	..	1
Trinity C. (Conn.).....	..	..	..	1	..	1	1	..	2
Trinity C. (N. C.).....	2	..	2	..	..	..	2	..	1
Trinity U. (Texas).....	1	1	2	1	..	1	2	1	3
Trinity U. (Toronto).....	1	..	1	..	..	..	1	..	1
Tufts C. (Mass.).....	1	..	1	..	..	..	1	..	1
Tulane U. (La.).....	1	2	3	1	..	1	2	2	4
Tuskaloosa C.....	..	..	..	..	1	1	..	1	1
Union C. (Ky.).....	2	..	2	..	..	..	2	..	2
Union U. (N. Y.).....	..	..	..	2	..	2	2	..	2
Union Christian C. (Ind.)...	6	..	6	..	..	..	6	..	6
U. of Alabama.....	7	..	7	2	..	2	9	..	9
U. of Arkansas.....	1	4	5	2	..	2	3	4	7
U. of Berlin.....	2	..	2	4	..	4	6	..	6
U. of Berne (Switzerland)...	..	..	..	1	..	1	1	..	1
U. of California.....	5	10	15	9	1	10	14	11	25
U. of Chicago.....	141	158	299	110	38	148	251	194	445
Old U. of Chicago.....	3	3	6	..	..	..	3	3	6
U. of Colorado.....	1	..	1	..	..	..	1	..	1
U. of Cincinnati (O.).....	..	7	7	2	1	3	2	8	10
U. of North Dakota.....	1	..	1	3	..	3	4	..	4
U. of South Dakota.....	5	2	7	2	..	2	7	2	9
U. of Denver, Col.....	1	1	2	1	1	2	2	2	4
U. of Erlangen (Bavaria)...	..	..	..	1	..	1	1	..	1
U. of Edinburgh.....	1	..	1	..	..	..	1	..	1
U. of France.....	3	..	3	..	..	..	3	..	3
U. of Georgia.....	11	..	11	..	..	..	11	..	11
U. of Idaho.....	1	..	1	..	..	..	1	..	1
U. of Glasgow.....	..	..	..	1	..	1	1	..	1
U. of Illinois.....	11	4	15	20	..	20	31	4	35
Indiana U.....	57	20	77	31	2	33	88	22	110
State U. of Iowa.....	21	28	47	13	6	19	34	32	66
U. of Kansas.....	17	23	40	15	3	18	32	28	58
U. of Kentucky.....	3	..	3	7	3	10	10	3	13
U. of Kiel (Germany).....	1	..	1	..	..	..	1	..	1
U. of Leipzig (Germany)...	1	..	1	3	..	3	4	..	4
U. of Louisiana.....	2	..	2	4	..	4	6	..	6
U. of Lausanne (Switzerland)...	1	..	1	..	..	..	1	..	1
U. of Manitoba (Canada)...	4	..	4	..	..	..	4	..	4
U. of Michigan.....	52	50	102	41	10	51	93	60	153
U. of Minnesota.....	16	20	36	10	4	14	26	24	50
U. of Mississippi.....	9	1	10	7	..	7	16	1	17
U. of Missouri.....	15	9	24	7	..	7	22	9	31
U. of Montana.....	1	2	3	..	..	..	1	2	3
U. of Munich (Germany)...	..	..	..	2	1	3	2	1	3

TABLE III — *Continued*

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
U. of Nashville (Tenn.).....	26	7	33	10	3	13	36	10	46
U. of Nebraska.....	13	14	27	8	3	11	21	17	38
U. of New Brunswick.....	1	1	2	..	..	..	1	1	2
U. of the City of New York..	1	1	2	2	..	2	3	1	4
U. of New York.....	2	..	2	1	..	1	3	..	3
U. of North Carolina.....	2	..	2	1	..	1	3	..	3
U. of Northwest.....	1	..	1	..	..	..	1	..	1
U. of Oregon.....	..	..	..	2	1	3	2	1	3
U. of Stockholm.....	..	..	..	1	..	1	1	..	1
U. of Pennsylvania.....	4	..	4	4	2	6	8	2	10
U. of Rochester (N. Y.).....	16	..	16	8	..	8	24	..	24
U. of South Carolina.....	2	..	2	2	..	2	4	..	4
U. of Tennessee.....	3	..	3	1	..	1	4	..	4
U. of Texas.....	3	9	12	8	4	12	11	13	24
Toronto U. (Canada).....	30	3	33	13	2	15	43	5	48
Urbana U. (O.).....	..	..	..	1	..	1	1	..	1
U. S. Grant U. (Tenn.).....	1	..	1	1	..	1	2	..	2
Upper Iowa U.....	6	2	8	1	..	1	7	2	9
U. of Utah.....	3	1	4	1	..	1	4	1	5
U. of Vermont.....	1	..	1	2	1	3	3	1	4
U. of Vienna (Austria).....	2	..	2	1	..	1	3	..	3
U. of Virginia.....	5	..	5	5	..	5	10	..	10
U. of Washington.....	1	1	2	3	..	3	4	1	5
U. of W. Virginia.....	6	1	7	..	..	..	6	1	7
U. S. Naval Acad.....	..	..	..	1	..	1	1	..	1
U. of Wisconsin.....	15	35	50	21	8	29	38	43	79
U. of Wyoming.....	..	1	1	..	..	..	..	1	1
Utah Agr. C.....	..	..	..	..	..	2	2	..	2
Upper Canada C.....	..	..	..	1	..	1	1	..	1
Uppsala U. (Sweden).....	1	..	1	..	..	..	1	..	1
Wooster U. (O.).....	7	5	12	7	2	9	14	7	21
Vanderbilt U. (Tenn.).....	14	2	16	6	..	6	20	2	22
Vassar C. (N. Y.).....	..	53	53	..	17	17	..	70	70
Vermont Conference C.....	1	..	1	..	..	..	1	..	1
Victoria U.....	1	..	1	2	..	2	3	..	3
Virginia Mil. Inst.....	1	..	1	1	..	1	2	..	2
Wabash C. (Ind.).....	3	..	3	5	..	5	8	..	8
Wake Forest C. (N. C.).....	12	1	13	3	..	3	15	1	16
Washburn C. (Kan.).....	4	2	6	4	..	4	8	2	10
Washington C.....	1	..	1	1	..	1	2	..	2
W'sh't'n and J'f'rs'n C. (Pa.)	2	..	2	..	..	..	2	..	2
W'sh't'n and Lee U. (Va.)..	2	..	2	..	..	..	2	..	2
Waynesburg C. (Pa.).....	4	3	7	..	..	..	4	3	7
Wellesley C. (Mass.).....	..	62	62	..	15	15	..	77	77
Wells C. (N. Y.).....	..	3	3	..	..	..	..	3	3
Wesleyan Female C. (Ga.)..	..	3	3	..	..	..	..	3	3
Wesleyan U.....	4	..	4	7	..	7	11	..	11
Wesleyan U. (Conn.).....	1	..	1	3	..	3	4	..	4
Wesleyan U. (Neb.).....	..	..	..	1	..	1	1	..	1
Washington U. (Mo.).....	3	3	6	..	..	..	3	3	6
Western C. (Ia.).....	3	3	6	..	..	..	3	3	6
Western Maryland C.....	2	1	3	..	..	..	2	1	3
Western Reserve U. (O.)...	2	6	8	5	1	6	7	7	14
Westfield C. (Ill.).....	2	1	3	2	..	2	4	1	5
Westminster C. (Pa.).....	4	1	5	1	1	2	5	2	7
Wheaton C. (Ill.).....	3	1	4	5	..	5	8	1	9
Wheeling C.....	..	1	1	..	..	..	..	1	1

TABLE III—Continued

INSTITUTIONS	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Wilberforce C. (O.).....	1	..	1	1	..	1	2	..	2
William & Mary C. (Va.)...	3	..	3	..	..	..	3	..	3
Williams C. (Mass.).....	6	..	6	3	..	3	9	..	9
Williamsburg Inst. (Ky.)...	1	..	1	..	..	..	1	..	1
Wilmington C. (O.).....	1	2	3	2	..	2	3	2	5
Wilson C. ....	..	1	1	..	1	1	..	2	2
Wittenberg C. (O.).....	3	2	5	1	2	3	4	4	8
Wofford C. (S. C.).....	4	..	4	2	..	2	6	..	6
Woman's C. (Balt.) .....	..	6	6	..	3	3	..	9	9
Worcester Poly. In. (Mass.)	2	..	2	..	..	..	2	..	2
Yale U. (Conn.) .....	23	..	23	14	..	14	37	..	37
Yankton C. (S. Dak.).....	2	1	3	1	..	1	3	1	4
Zürich U. (Switz.).....	1	2	3	2	..	2	3	2	5
Unknown .....	8	2	10	4	1	5	12	3	15
Total .....	1,528	1,120	2,648	1,060	267	1,327	2,588	1,387	3,975

II. ATTENDANCE

The statistics herewith submitted show in detail the attendance from the opening, October, 1892, for ten years.

In both schools there have been altogether 3,969 persons in attendance. Of these there have been 2,359 whose attendance has amounted to less than one year (three Quarters), leaving 1,659 whose attendance has been for one year or more. It should be added that a considerable number of those who have been in attendance for less than a year will, in fact, continue their work later; 584 attended a full year (three Quarters), 149 two years, 83 three years, and 268 more than three years.

Students have come from every state and territory in the Union (excepting Alaska, Porto Rico, and the Philippine Islands), and also from Turkey, Austria, Denmark, England, Scotland, Germany, Switzerland, and the Dominion of Canada.

The 162 Graduate students in the School of Arts and Literature and 55 in the School of Science of 1892-93, became 643, and 389 respectively in 1901-1902. The total number in both schools (1032) doubled since 1894-95, the first year in which there was a session during the Summer Quarter.

TABLE IV  
ATTENDANCE  
(THE GRADUATE SCHOOLS OF ARTS, LITERATURE, AND SCIENCE)

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-0	1900-1	1901-2
Arts and Literature .....	162	214	338	439	470	594	609	655	644	643
Science .....	55	83	155	209	247	281	342	353	355	389
Total Graduate Students .....	217	297	493	648	717	875	951	1,008	999	1,032





TABLE V—Continued

		½	1	2	3	4	5	6	7	8	9	10	11	12
		M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T
Minnesota	Arts	6 13 19	6 5 11	4 4 8	7 4 11	3 1 4	3 3	.....	1 1 2	2 2	1 1 1	1 1 2	1 1	.....
	Sci.	5 5 10	6 1 7	1 1 1	1 1 2	.....	.....	2 2	1 1	.....	1 1	1 1	.....	.....
Missouri	Arts	16 14 30	11 3 14	6 3 9	8 3 11	5 3 8	2 1 3	2 2	1 1	.....	1 2 3	.....	1 1	.....
	Sci.	11 11	6 3 9	6 1 7	4 1 5	2 2	3 1 4	.....	.....	.....	2 2	.....	1 1	.....
Montana	Arts	2 1 3	1 1 1	.....	2 2	.....	.....	1 1	.....	.....	.....	.....	1 1	.....
	Sci.	1 1 2	1 1 1	1 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska	Arts	7 6 13	4 4 8	3 4 7	1 3 4	3 3	1 1	1 1	1 1	1 1	3 3	.....	.....	1 1
	Sci.	9 9	4 1 5	2 1 3	1 1 2	1 1	1 1	1 1	1 1	1 1	.....	.....	.....	1 1
Nevada	Arts	.....	1 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
N'w Hampshire	Arts	.....	1 1	2 2	.....	1 1	.....	.....	.....	.....	.....	1 1	.....	.....
	Sci.	.....	1 1	.....	1 1 2	1 1	.....	1 1	.....	.....	.....	.....	.....	.....
New Jersey	Arts	1 1 2	1 1 2	1 1	1 2 3	.....	.....	.....	1 1	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	1 1 1	.....	.....	.....	.....	.....	.....	1 1	.....	.....
Mississippi	Arts	7 10 17	5 2 7	6 3 9	8 1 9	2 2 4	1 1	1 1	.....	1 2 3	1 1 1	1 1 1	.....	.....
	Sci.	3 2 5	1 1 2	3 2 5	3 3	.....	.....	1 1	.....	.....	1 1	1 1 2	.....	.....
New Mexico	Arts	1 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York	Arts	12 6 18	11 10 21	3 5 8	7 6 13	1 1 2	1 1	2 1 3	1 2 3	3 1 4	4 3 7	1 1 1	2 1 3	1 1
	Sci.	7 7	8 2 10	2 1 3	5 5 10	1 1	2 2	1 1	.....	2 2	1 1 2	1 1	.....	.....
N. Carolina	Arts	1 1 1	1 1 2	.....	2 2 1	1 2 2	1 1	2 2	.....	.....	2 2	.....	.....	1 1
	Sci.	4 1 5	1 1	.....	1 1 1	.....	.....	.....	1 1	.....	.....	.....	.....	.....
N. Dakota	Arts	2 1 3	3 3	1 1	.....	.....	1 1	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	1 1	1 1	.....	.....	.....	.....	.....	.....	.....	1 1	.....	.....

		13	14	15	16	17	18	19	21	22	24	27	Total		
		M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T
Minnesota	Arts	1 1	.....	.....	.....	.....	1 1	.....	.....	.....	.....	1 1	34	32	66
	Sci.	.....	.....	.....	.....	.....	.....	1 1	.....	.....	.....	.....	19	7	26
Missouri	Arts	.....	.....	1 1	.....	.....	.....	1 1	.....	.....	.....	.....	53	31	84
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	6	41
Montana	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	4	8
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	4
Nebraska	Arts	1 1	.....	.....	1 1	.....	.....	.....	.....	.....	.....	.....	25	20	45
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21	4	25
Nevada	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
N'w Hampshire	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	4
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3	5
New Jersey	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	5
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	3
Mississippi	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33	20
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	6	19
New Mexico	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 1
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York	Arts	1 1	1 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49	38
	Sci.	.....	.....	2 2	1 1	.....	.....	.....	.....	.....	.....	.....	.....	28	14
N. Carolina	Arts	.....	.....	.....	.....	.....	1 1	.....	.....	.....	.....	.....	.....	13	1
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	2
N. Dakota	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	2
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....

TABLE V—Continued

		½	1	2	3	4	5	6	7	8	9	10	11	12	
		M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T
Ohio	Arts	19 20 39	18 16 34	8 20 28	11 13 24	10 6 16	4 4 8	5 3 8	1 2 3	1 2 3	1 2 3	1 1 2	1 1 1	1 1 1	1 1 1
	Sci.	17 5 22	16 4 20	12 8 15	10 4 14	5 3 8	1 1 3	3 3 8	1 9 4	1 5 1	1 1 2	2 1 1	2 1 1	2 1 2	2 1 2
Oklahoma	Arts	3 2 5													
	Sci.														
Oregon	Arts	1 2 3 3	3			1 1 2	1 1								
	Sci.	1 1 1	1 2 2								1 1				
Pennsylvania	Arts	10 5 15	10 1 11	7 6 13	3 4 7	3 3 2 2 4	2 1 3	4 1 5 3	3			1 1			
	Sci.	11 2 13	4 1 5	5 2 7	1 1 2	1 1 2 2 2	2 2 2				2 2			1 1	
Rhode Island	Arts	2 2 2 2	1 1 1					1 1 2							
	Sci.		1 1		1 1			1 1							
S. Carolina	Arts	3 3 6 6 1 7	1 1 1	1 1 1	1 1 1	1 1	1 1		1 1						
	Sci.	3 3 5 5 2 2							1 1						
S. Dakota	Arts	5 5 5 5 3 1 4	3 1 4					1 1							
	Sci.	1 1	1 1										1 1	1 1	
Tennessee	Arts	10 5 15	9 1 10	4 1 5 2	2 3 1 4			1 1				1 1	1 1		
	Sci.	4 4 3 3 1 1 4 4								1 1	1 1 1 1	1 1			
Texas	Arts	14 5 19	5 5 10	2 4 6 7 1 8	3 3 6 2	2 1 1 2	2 2 2 2	2 2 2 2				1 1	1 1		
	Sci.	5 1 6 2 1 3	3 1 4 5 1 6	4 4 2 2	1 1 2 1 1	2 2 1 1	2 2 1 1							1 1	
Utah	Arts	3 1 4	1 1 2 1 3 1	1			1 1								
	Sci.	1 1 2 3 3 1 1 2 2					1 1								
Vermont	Arts	1 1 1 1 2	2 2	2 2						1 1					
	Sci.		1 1	1 1	1 1	1 1									
Virginia	Arts	6 1 7 7	7 3 2 5	1 2 3 2	2 2 1 1 2 1 1										
	Sci.	5 2 7 1 1	3 3 1 1	1 1	1 1	1 1	1 1						1 1		

		13	14	15	16	17	18	19	21	22	24	27	Total			
		M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T			
Ohio	Arts	2 2		1 1			1 1 2							84	91	175
	Sci.	1 1 1 1					1 1							83	23	106
Oklahoma	Arts													3	2	5
	Sci.															
Oregon	Arts													6	3	9
	Sci.													5		5
Pennsylvania	Arts		1 1 2	1 1										45	23	68
	Sci.			1 1										29	7	36
Rhode Island	Arts													4	4	8
	Sci.														2	2
S. Carolina	Arts													13	5	18
	Sci.													11		11
S. Dakota	Arts													16	3	19
	Sci.													3		3
Tennessee	Arts													29	9	38
	Sci.													14	1	15
Texas	Arts													37	21	58
	Sci.		1 1											28	5	31
Utah	Arts													6	4	10
	Sci.													8	1	9
Vermont	Arts													2	6	8
	Sci.													1	1	2
Virginia	Arts													21	6	27
	Sci.	1 1												10	6	16





TABLE V—Continued

		½	1	2	3	4	5	6	7	8	9	10	11	12
		M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T
Nova Scotia	Arts	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Switzerland	Arts	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scotland	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
Grand total		586	462	374	357	196	120	105	73	72	65	45	39	36
		373 959	249 711	215 589	227 584	89 265	43 163	44 149	31 104	23 100	18 83	17 62	10 49	10 46

		13	14	15	16	17	18	19	21	22	24	27	Total
		M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T	M W T
Nova Scotia	Arts	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
	Sci.	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1
Switzerland	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Scotland	Arts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sci.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Grand total		31	12	14	6	3	7	3	1	0	1	0	2,588
		6 37	8 20	7 21	0 6	3 6	2 9	3 6	1 2	0 1	1 1	0 2	1,887 3,975

III. CANDIDACY FOR DEGREES

1. *Non-candidates.*—A large proportion of Graduate students are not candidates for a degree. Some of these are pursuing studies which rank as undergraduate, in the desire to acquire some specific addition to their knowledge which for a variety of reasons was not attained during the undergraduate course. Others are doing graduate work, but also for special purposes, and without planning to spend sufficient time to satisfy the requirements for a degree. Both of these groups of students are registered in the Graduate Schools.

Without attempting a detailed report on this subject for the decennial period, the facts for a single Quarter are appended, as sufficiently illustrative.

In the Autumn Quarter of 1901 there were 2,239 registrations in Junior College classes. Of these 81 were by graduates. In the same Quarter there were 2,600 registrations in Senior College classes. Of these 417 were by graduates. There were 346 Graduate students, with 1,050 registrations. It thus appears that of the Graduate registrations 52.6 per cent. were in courses listed as primarily for Graduates, 39.7 per cent. in courses listed for Senior College students, and 7.7 per cent. in courses listed for Junior College students.

Again, of the 766 registrations in courses listed as primarily for graduates, 552 were by Graduate students, 108 by Senior College students, 41 by Junior College students, 35 by Unclassified students, and 30 by Divinity students.

It should be noted, however, that in several Departments there are courses which are intended indifferently for Graduates or Seniors, and which are usually listed for Seniors. The presence of Juniors in Graduate courses is explained by the few cases of mature students, usually Unclassified at the outset, who are making up work leading to a Bachelor's degree and are therefore temporarily registered in the Junior Colleges.

2. *Candidates.*—As has been said, membership in the Graduate School does not in itself admit the student to candidacy for a higher degree. Admission to candidacy is determined in each case by direct vote of the Faculty, based on compliance with certain specific conditions. The candidate's college course must be fully equivalent to that in the University of Chicago. If on investigation it appears that there is a deficiency, such deficiency must be made up before the student can become a candidate. If the deficiency relates to some specific requirement, rather than to the total quantity of work, some concessions are made, especially, in case of students appointed to Fellowships, but there is no concession as to the quantity of the requirements.

A candidate for the degree of Doctor of Philosophy is required to have a reading knowledge of French and German. This requirement is tested by the Departments concerned. The test is confined to ascertaining the student's ability to read at sight, within the limits of the special field of work.

#### IV. THE AWARD OF HIGHER DEGREES

The degree of Master of Arts, Philosophy, or Science, and the degree of Doctor of Philosophy, are granted by the University only for specific work done.

The Master's degree implies at least one full year of graduate work done at the University. This work may be specialized, or may be of a general character. In the former case the work may be all in one Department, or mainly in one with a less amount in a second. A dissertation is required. The general degree implies no dissertation, and allows the work to be distributed among three Departments, under certain restrictions. Rather more work is required for the general degree than in case of the specialized degree. The examination for the Master's degree covers all the work on the basis of which the degree is sought.

The Doctor's degree implies usually three years of university work. At least half of this is expected to be done at the University of Chicago, although in some cases the degree is voted after only one year. Work done in other institutions having graduate schools of recognized standing is accepted. A thesis based on original investigation is required. The examination covers all work on the basis of which the degree is sought.

The work for the Doctorate is mainly in one Department, but a specified amount must be done in one or two Secondary Departments.

The examination for the Doctorate is conducted by a committee of the Faculty, and is oral or written, or both, at the discretion of the committee. It is not customary to dispense with the oral examination.

An acceptable thesis must be presented as a condition precedent to the examination. This thesis must be the result of original investigation, must constitute an addition to knowledge, and must conform to specified conditions as to form of publication. One hundred printed copies are deposited in the University Library.

In the School of Arts and Literature 130 students have been granted the degree of Doctor of Philosophy (220 in both schools), and 118 the degree of Master of Arts, Literature, or Science. The greatest number of Doctors in any one Department (18) has been in the Department of History, Philosophy following with 14, Sociology with 13, Political Economy, Semitics and German each with 11. The Department which has been chosen as secondary by the greatest number of Doctors (22) has been the Department of Political Science.

The greatest number of Masters (28) is found in the Department of English, Political Science following with 16, Latin with 13, and History with 12.

In the School of Science there have been granted 88 degrees of Doctor of Philosophy, and 43 Master's degrees. The greatest number of Doctors in any one Department (21) has been in Zoology, Chemistry following with 15, Mathematics and Botany each with 12, and Geology with

10. The Department of Science which has been chosen as secondary of the greatest number of Doctors (18) has been Physics.

The greatest number of Masters in any Science Department (16) has been in Mathematics.

As candidates for the Master's degree students may also offer non-specialized work, lying in three Departments and involving no thesis. As this system has but just been begun, no report is submitted. It is by no means easy for the student to attain this form of the degree, as few are able to do graduate work in more than two Departments.

TABLE VI  
HIGHER DEGREES IN THE GRADUATE SCHOOLS  
(THE GRADUATE SCHOOL OF ARTS AND LITERATURE)

	DOCTORS OF PHILOSOPHY						MASTERS					
	Men		Women		Total		Men		Women		Total	
	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.
Philosophy .....	11	12	3	2	14	14	5	3	4	1	9	4
Education .....	2	12	2	..	4	2	4	..	2	..	6	..
Political Economy ...	10	3	1	1	11	4	2	4	1	..	3	4
Political Science.....	3	21	3	1	6	22	11	4	5	..	16	4
History .....	17	4	1	2	18	6	5	5	7	2	12	7
Archæology .....	..	..	..	..	..	..	..	..	2	..	2	..
Sociology .....	11	4	2	6	13	10	6	1	3	2	9	3
Comparative Religion	..	1	1	..	1	1	..	..	..	..	..	..
Semitics .....	11	1	..	..	11	1	5	..	..	..	5	..
Bib. and Patris. Greek	1	..	..	..	1	..	1	..	..	..	1	..
Sanskrit .....	4	1	2	1	6	2	..	..	1	..	1	..
Greek .....	8	8	2	2	8	10	5	2	2	4	7	6
Latin .....	9	8	..	2	9	10	3	1	10	2	13	3
Romance .....	5	5	2	1	7	6	1	1	3	..	4	1
German .....	10	2	1	4	11	6	2	..	..	1	2	1
English .....	4	5	5	..	9	5	16	1	12	1	28	2
Literature(in English)	..	..	..	..	..	..	..	..	..	..	..	..
Total .....	106	77	25	22	131	99	66	22	52	13	118	35
Duplicates .....	..	..	..	..	..	..	(2)	..	(2)	..	(4)	..

(THE OGDEN (GRADUATE) SCHOOL OF SCIENCE)

	DOCTORS OF PHILOSOPHY						MASTERS					
	Men		Women		Total		Men		Women		Total	
	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.	Prin.	Sec.
Mathematics .....	12	7	..	1	12	8	13	2	3	..	16	2
Astronomy .....	1	7	..	..	1	7	4	3	..	1	4	4
Physics .....	7	16	1	2	8	18	..	..	..	..	..	..
Chemistry .....	14	2	1	..	15	2	1	..	..	..	1	..
Geology .....	10	12	..	1	10	13	7	..	1	..	8	..
Zoology .....	18	11	3	2	21	13	5	..	4	..	9	..
Anatomy .....	..	1	..	..	..	1	..	..	..	..	..	..
Physiology .....	5	11	3	2	8	13	..	..	..	..	..	..
Neurology .....	2	8	..	1	2	9	1	..	..	..	1	..
Pathology .....	1	..	..	..	1	..	..	..	..	..	..	..
Botany .....	11	3	1	1	12	4	2	..	2	..	4	..
Total .....	81	78	9	10	90	88	33	5	10	1	43	6
Duplicates .....	..	..	..	..	..	..	(3)	..	(3)	..	(6)	..

TABLE VII  
DOCTORS AND MASTERS BY STATES

	ARTS				SCIENCE				TOTALS			
	Men		Women		Men		Women		Arts		Science	
	Ph.D.	Master	Ph.D.	Master	Ph.D.	Master	Ph.D.	Master	Ph.D.	Master	Ph.D.	Master
Arkansas.....	..	2	..	..	..	..	..	..	..	2	..	..
California.....	3	2	2	1	4	..	..	..	5	3	4	..
Chicago.....	32	9	6	11	15	7	2	3	37	20	17	10
Colorado.....	1	..	..	..	1	1	..	..	1	..	1	1
Connecticut.....	1	..	..	..	1	..	..	..	1	..	1	..
District of Columbia.....	..	1	1	..	..	..	..	..	1	1	..	..
Florida.....	..	..	..	..	..	..	..	1	..	..	..	1
Georgia.....	1	3	..	..	..	..	..	..	1	3	..	..
Illinois.....	6	6	1	5	13	4	..	1	7	11	13	5
Indiana.....	5	6	..	2	3	2	..	..	5	8	3	2
Iowa.....	1	3	2	2	1	1	..	1	3	5	1	2
Kansas.....	..	..	..	..	2	1	..	..	..	..	2	1
Kentucky.....	1	1	1	1	1	..	..	1	2	2	1	1
Maine.....	2	1	..	..	1	1	..	..	2	1	1	1
Maryland.....	1	..	..	1	..	..	..	..	1	1	..	..
Massachusetts.....	3	..	1	2	1	..	1	..	4	2	2	..
Michigan.....	4	4	..	2	6	3	2	..	4	6	8	3
Minnesota.....	4	2	1	1	2	..	..	..	5	3	2	..
Mississippi.....	1	2	..	1	..	2	..	..	1	3	..	2
Missouri.....	4	4	..	2	3	..	..	..	4	6	3	..
Montana.....	..	..	..	..	..	..	..	1	..	..	..	1
Nebraska.....	3	2	..	..	1	..	..	2	3	2	1	2
New Hampshire.....	..	..	..	..	..	1	..	..	..	..	..	1
New Jersey.....	..	..	..	1	..	2	..	..	..	1	..	2
New York.....	3	3	3	3	2	1	1	1	6	6	3	2
North Carolina.....	1	..	..	..	3	..	1	..	1	..	4	..
North Dakota.....	..	..	..	1	..	..	..	..	..	1	..	..
Ohio.....	5	4	..	2	5	..	2	1	5	6	7	1
Pennsylvania.....	3	2	2	2	..	1	1	..	5	4	1	1
Rhode Island.....	..	..	..	..	..	..	..	..	..	..	..	..
South Carolina.....	..	..	..	1	1	..	..	..	..	1	1	..
South Dakota.....	1	..	..	..	1	..	..	..	1	..	1	..
Tennessee.....	..	..	..	1	..	..	..	..	..	1	..	..
Texas.....	3	1	..	2	4	1	..	..	3	3	4	1
Utah.....	..	1	..	1	..	..	..	..	..	2	..	..
Vermont.....	..	..	..	1	..	..	..	..	..	1	..	..
Virginia.....	1	..	..	..	..	..	..	..	1	..	..	..
Wisconsin.....	3	1	2	4	4	4	1	..	5	5	5	4
Wyoming.....	..	..	..	1	..	..	..	..	..	1	..	..
Canada.....	7	2	..	1	5	..	..	..	7	3	5	..
England.....	..	..	1	..	..	..	..	..	1	..	..	..
Manitoba.....	..	..	..	..	1	..	..	..	..	..	1	..
Nova Scotia.....	2	..	1	1	..	..	..	..	3	1	..	..
Sweden.....	..	..	..	..	..	..	..	..	..	..	..	..
Japan.....	1	..	..	..	1	..	..	..	1	..	1	..
Austria.....	..	1	..	..	..	..	..	..	..	1	..	..
Scotland.....	..	..	..	..	1	..	..	..	..	..	1	..
Total.....	103	63	24	53	83	32	11	12	127	116	94	44
Duplicates.....	..	(2)	..	(4)	..	(3)	..	(1)	..	(6)	..	(4)

## V. THESES

The table appended (Table VIII) gives a list of the subjects of all the Doctor's theses. Some of these have taken the form of books of respectable proportions and important character.

TABLE VIII

## THESIS SUBJECTS OF DOCTORS OF PHILOSOPHY

Allen, Philip Schuyler, 1897. <i>Germanic.</i>	"Wilhelm Müller and the German Volkslied."
Almstedt, Herman Benjamin, 1900. <i>Germanic.</i>	"Das Mittelniederdeutsche Laiendoctrinal."
Ames, Edward Scribner, 1896. <i>Philosophy.</i>	"Agnosticism in its Historical Development."
Arnold, Joseph Kahn, 1899. <i>Semitics.</i>	"The Balaam Utterances in Strophe."
Asada, Eliji, 1893. <i>Semitics.</i>	"The Hebrew Text of Zechariah."
Ashley, Myron Lucius, 1901. <i>Philosophy.</i>	"The Origin and Function of Hypothesis."
Bain, Harry Foster, 1897. <i>Geology.</i>	"Relations of the Wisconsin and Kansas Drift Sheets in Central Iowa, and Related Phenomena."
Balch, Ernest Alanson, 1898. <i>History.</i>	"Recent Phases of Reciprocity in the United States."
Baldwin, James Fosdick, 1897. <i>History.</i>	"Scutage and Knight Service."
Barrows, David Prescott, 1897. <i>Anthropology.</i>	"The Ethno-Botany of the Coahuila Indians of Southern California."
Batt, Max, 1901. <i>Germanic.</i>	"The Treatment of Nature in German Literature from Günther to the appearance of Goethe's <i>Werther</i> ."
Bawden, Henry Heath, 1900. <i>Philosophy.</i>	"Theory of the Criterion."
Beatty, Wallace Appleton, 1902. <i>Chemistry.</i>	"Action of Sodium Alcoholates on Salts of Fatty Acids."
Bechtel, Edward Ambrose, 1900. <i>Latin.</i>	"Syntax and Style of the So-called <i>Peregrinatio</i> of Sancta Sylvania."
Beckmann, Frederick Ernest, 1900. <i>Romance.</i>	"Spanish Influence in Eikendorf."
Bernhard, Adolph, 1894. <i>Chemistry.</i>	"Ueber die Einführung von Acylen in dem Benzoylessigäther."
Berry, George Ricker, 1896. <i>Semitics.</i>	"The Letters of the Rassam II. Collection."
Béziat de Bordeas, André, 1899. <i>Romance.</i>	"Études sur la Béarnais: Dialecte de Béalansum, Basses Pyrénées."
Biddle, Henry Chalmers, 1900. <i>Chemistry.</i>	"Ueber Derivate des Isuretins und der Formhydroxamsäure und ihre Beziehungen zur Knallsäure."
Bliss, Gilbert Ames, 1900. <i>Mathematics.</i>	"The Geodesic Lines on the Anchor Ring."
Bowen, Mary, 1897. <i>English.</i>	"Influence of Petrarch on the Elizabethan Sonnet."
Boyd, Carl Evans, 1897. <i>Political Science.</i>	"The Development of Government in Illinois."
Bray, William L., 1898. <i>Botany.</i>	"The Xerophytic Flora of the Texan Plains."
Breckinridge, Sophonisba Preston, 1901. <i>Political Science.</i>	"Legal Tender: A Study in English and American Monetary History."
Bristol, Charles Lawrence, 1897. <i>Zoology.</i>	"The Metamerism of Nephelis."
Brode, Howard Stidham, 1896. <i>Zoology.</i>	"A Contribution to the Morphology of <i>Dero vaga</i> ."
Bronk, Isabelle, 1900. <i>Romance.</i>	"Antoine Furetière: A Study of His Life and Works."
Brown, George Lincoln, 1900. <i>Mathematics.</i>	"Ternary Linear Transformation Group G 3360 and its Complete Invariant System."

- Buckley, Edmund, 1894.  
*Comparative Religion.*
- Burchard, Herbert Morse, 1900.  
*Greek.*
- Burgess, Theodore Chalon, 1898.  
*Greek.*
- Bushnell, Charles Joseph, 1901.  
*Sociology.*
- Caldwell, Otis William, 1898.  
*Botany.*
- Calhoun, Fred Harvey Hall, 1902.  
*Geology.*
- Carpenter, Frederic Ives, 1895.  
*English.*
- Case, Ermine Cowles, 1896.  
*Paleontology.*
- Chamberlain, Charles Joseph, 1897.  
*Botany.*
- Cipriani, Lisi Cecilia, 1898.  
*Romance.*
- Clapp, Cornelia Maria, 1896.  
*Zoology.*
- Clark, Hannah Belle, 1897.  
*Sociology.*
- Clark, William Arthur, 1900.  
*Education.*
- Claypole, Agnes Mary, 1896.  
*Zoology.*
- Coffin, Fulton Johnson, 1898.  
*Semitics.*
- Cooke, Elizabeth, 1896.  
*Physiology.*
- Comparette, Thomas Louis, 1901.  
*Latin.*
- Coulter, John Gaylord, 1900.  
*Botany.*
- Cowles, Henry Chandler, 1898.  
*Botany.*
- Crabb, Wilson Drane, 1897.  
*Romance.*
- Cummings, John, 1894.  
*Political Economy.*
- Dains, Frank Burnett, 1898.  
*Chemistry.*
- Davenport, Herbert Joseph, 1898.  
*Political Economy.*
- Davies, Howell Emlyn, 1900.  
*Bacteriology.*
- Davis, Katherine Bement, 1900.  
*Political Economy.*
- Dickson, Leonard Eugene, 1896.  
*Mathematics.*
- Dopp, Katherine Elizabeth, 1902.  
*Education.*
- Downing, Elliott Rowland, 1901.  
*Zoology.*
- Earhart, Robert Francis, 1900.  
*Physics.*
- "Japanese Phallicism."
- "Homeric Influence on the Palatine Anthology."
- "Epideictic Oratory."
- "A Study of the Stock-Yards Community at Chicago."
- "Morphology of Lemna, with Ecological Notes."
- "The Relations of the Kewatin Ice Sheet to the Mountain Glaciers of Montana."
- "Metaphor and Simile in the Minor Elizabethan Drama."
- "On the Osteology and Relationships of Protostaga."
- "Contributions to the Life-History of *Salix*."
- "Gui de Burgogne: A Critical Edition; with Introduction, Notes, and Glossary."
- "The Lateral Line System of *Batrachus Tau*."
- "The Public Schools of Chicago: A Sociological Study."
- "Suggestion in Education."
- "The Embryology of *Anurida Maratimaguén*."
- "The Third Commandment."
- "Investigations in the Asmotic Properties of the Muscle."
- "The Inscriptional Hexameters."
- "Contribution to the Life-History of *Sium*."
- "An Ecological Study of the Sand-Dune Flora of Northern Indiana."
- "An Inductive Study of *Aymeri de Narbonne*."
- "The Poor-Law System of the United States."
- "On the Isoorea Ethers and Other Derivatives of Ureas."
- "The French War Indemnity."
- "The Occurrence of the Typhoid Bacillus in Typhoid Fever Patients."
- "Causes Affecting the Standard of Living and Wages."
- "The Analytic Representation of Substitutions on a Power of a Prime Number of Letters; with a Discussion of the Linear Group."
- "The Place of Industry in Elementary Education."
- "The Spermatogenesis in Hydra."
- "Sparkling Distances Between Plates for Small Distances."

- Eggert, Carl Edgar, 1901.  
*German.*
- Ellwood, Charles Abram, 1899.  
*Sociology.*
- Enteman, Minnie Marie, 1901.  
*Zoology.*
- Eycleshymer, Albert Chauncey, 1895.  
*Zoology.*
- Fenneman, Nevin Melancthon, 1901.  
*Geology.*
- Fertig, James Walter, 1898.  
*History.*
- Folin, Otto, 1898.  
*Chemistry.*
- Forrest, Jacob Dorsey, 1900.  
*Sociology.*
- Findlay, William, 1901.  
*Mathematics.*
- Fowler, Frank Hamilton, 1896.  
*Indo-European Philology.*
- France, Wilmer Cave, 1895.  
*Greek.*
- Franklin, Frank George, 1900.  
*History.*
- Gale, Henry Gordon, 1899.  
*Physics.*
- Garner, James Burt, 1897.  
*Chemistry.*
- Garrey, Walter Eugene, 1900.  
*Physiology.*
- Garrison, George P., 1896.  
*History.*
- Gillespie, William, 1900.  
*Mathematics.*
- Gordon, Charles Henry, 1895.  
*Geology.*
- Gore, Willard Clark, 1901.  
*Philosophy.*
- Gregory, Emily Ray, 1899.  
*Zoology.*
- Greeley, Arthur White, 1902.  
*Physiology.*
- Guyer, Michel Frederic, 1900.  
*Zoology.*
- Hammond, Eleanor Prescott, 1898.  
*English.*
- Hardesty, Irving, 1899.  
*Neurology.*
- Harper, Eugene Howard, 1902.  
*Zoology.*
- Harris, Mary Belle, 1900.  
*Sanskrit.*
- Harris, Norman Dwight, 1901.  
*History.*
- Hatai, Shinkishi, 1902.  
*Neurology.*
- "Middle Low German Version of the Legend of Maria Magdalena."
- "Some Prolegomena to Social Psychology."
- "Coloration of *Polistes* (the Common Paper Wasp)."
- "Early Development of *Amblystoma*; with Observations on Some Other Vertebrates."
- "Development of the Profile of Equilibrium of the Subaqueous Shore Terrace."
- "Secession and Reconstruction of Tennessee."
- "On Urethans."
- "The Development of Industrial Organizations."
- "The Sylow Subgroups of the Symmetric Group on  $K$  Letters."
- "The Indo-European Negatives."
- "The Emperor Julian."
- "Naturalization in the United States; with a Special Reference to its Legislative History from the Declaration of Independence to the Civil War."
- "On the Relation between Density and Index of Refraction of Air."
- "Condensation of Benzoin by Means of Sodium Ethylate."
- "The Effect of Ion upon the Aggregation of Infusoria."
- "History of Federal Control of Congressional Elections."
- "On the Reduction of Hyper-Elliptic Integrals ( $p = 3$ ) to Elliptic Integrals by Transformation of the Second and Third Degrees."
- "Syenite-Gneiss from the Apache Region, Ottawa County, Canada."
- "Spinoza's Theory of the Imagination."
- "Observations on the Development of the Excretory System in Turtles."
- "Studies on the Effects of Low Temperatures upon Morphogenetic Processes."
- "The Spermatogenesis of Normal and Hybrid Pigeons."
- "Selections from the Shorter Poems of John Lydgate; with Introduction and Notes."
- "The Number and Arrangement of the Fibers Forming the Spinal Nerves of the Frog."
- "History of the Fertilization and Early Development of the Pigeon's Egg."
- "Lyric of *Kalidasa*; its Form and Subject Matter."
- "The History of Negro Servitude, and the Slavery Agitation in Illinois."
- "Studies on the Nervous System of the White Rat and Foetal Cat."



- Hatfield, Ethel Glover, 1898.  
*Political Science.*
- Hatfield, Henry Rand, 1897.  
*Political Economy.*
- Hayes, Edward Cary, 1902.  
*Sociology.*
- Heidel, William Arthur, 1895.  
*Greek.*
- Hellems, Fred Burton Renney, 1898.  
*Latin.*
- Heller, Otto, 1900.  
*Germanic.*
- Hesse, Bernard Conrad, 1896.  
*Chemistry.*
- Hessler, John Charles, 1899.  
*Chemistry.*
- Holmes, Samuel Jackson, 1897.  
*Zoology.*
- Hopkins, Thomas Cramer, 1900.  
*Geology.*
- Howerth, Ira Woods, 1898.  
*Sociology.*
- Hull, Gordon Ferrie, 1897.  
*Physics.*
- Hulley, Lincoln, 1895.  
*Semitics.*
- Hutchinson, John Irwin, 1896.  
*Mathematics.*
- Inskip, Annie Lucy, 1898.  
*Political Science.*
- Jeffreys, Elizabeth, 1898.  
*Chemistry.*
- Jewett, Frank Baldwin, 1902.  
*Physics.*
- Johnson, Herbert Parlin, 1894.  
*Zoology.*
- Johonnot, Edwin Sheldon, 1898.  
*Physics.*
- Jones, Jessie Louise, 1897.  
*German.*
- Jones, Lauder William, 1897.  
*Chemistry.*
- Jones, Haydn Evan, 1898.  
*Semitics.*
- Jonas, Johannes Benoni Eduard, 1899.  
*Germanic.*
- Kelly, Frederick Thomas, 1901  
*Semitics.*
- Kern, Paul Oskar, 1897.  
*German.*
- Kummel, Henry Barnard, 1895.  
*Geology.*
- Lehmer, Derrick Norman, 1900.  
*Mathematics.*
- Lawson, Anstruther Abercrombie, 1901.  
*Botany.*
- Lewis, Edwin Herbert, 1894.  
*English.*
- "The Interior Department."
- "Municipal Bonding in the United States."
- "The Socialist's Object of Attention."
- "Pseudo-Platonica."
- "Lex de Imperio Vespasiani."
- "Die Ahaswerussage in der Litteratur."
- "On Malonic Nitrite and Some of its Derivatives."
- "On Alkyl Malonic Nitrite Derivatives."
- "The Early Development of *Planorbis Trivolvis*."
- "The Genesis of Certain Limonite Ores."
- "The Social Aim in Education."
- "On the Use of the Interferometer in the Study of Electrical Waves."
- "The Decalog, a Growth in Form and Ideas."
- "On the Reduction of Hyperelliptic Functions to Elliptic Functions by a Transformation of the Second Degree."
- "Local Government in California in 1879."
- "On Urethanes."
- "A New Method of Measuring Vapor Density of Metals at Low Temperatures."
- "A Contribution to the Morphology and Biology of the Stentors."
- "Thickness of the Black Spot in Liquid Films."
- "The Phonology of the Elis Saga."
- "On Nitroparaffine Salts and the Acylated Hydroxylamine Derivatives."
- "Selected Assyrian Letters."
- "The Poems of Heinrich Teichner."
- "The Strophic Structure of Habakkuk."
- "Das starke Verbum bei Grimmelshausen: Ein Beitrag zur Geschichte des Frühneuhochdeutschen."
- "Lake Passaic: An Extinct Glacial Lake."
- "Asymptotic Evaluation of Certain Totient Sums."
- "Studies on the Morphology of the Nucleus."
- "The Development of the English Paragraph."

- Lillie, Frank Rattray, 1894.  
*Zoology.*
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*Zoology.*
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*Botany.*
- Linscott, Henry Farrar, 1896.  
*Latin.*
- Locy, William Albert, 1895.  
*Zoology.*
- Logan, William Newton, 1900.  
*Paleontology.*
- Lyon, Elias Potter, 1897.  
*Physiology.*
- Lyon, Florence May, 1901.  
*Botany.*
- Maxwell, Samuel Steen, 1896.  
*Physiology.*
- Mead, Albert Davis, 1896.  
*Zoology.*
- Merrell, William Dayton, 1898.  
*Botany.*
- Meyer, John Jacob, 1900.  
*Sanskrit.*
- Miller, John Anthony, 1899.  
*Mathematics.*
- Miller, Merton Leland, 1897.  
*Anthropology.*
- Millerd, Clara, 1901.  
*Greek.*
- Millis, Harry Alvin, 1899.  
*Political Economy.*
- Mitchell, Samuel Childs, 1899.  
*Political Science.*
- Mitchell, Wesley Clair, 1899.  
*Political Economy.*
- Moncreiff, William Franklin, 1900.  
*Philosophy.*
- Monroe, Paul, 1897.  
*Sociology.*
- Moon, Elizabeth Laetitia, 1899.  
*Comparative Religion.*
- Moore, Anne, 1901.  
*Physiology.*
- Moore, Ernest Carroll, 1898.  
*Philosophy.*
- Moore, Addison Webster, 1898.  
*Philosophy.*
- Morgan, Oscar Tunstall, 1902.  
*Semitics.*
- Moulton, Forest Ray, 1900.  
*Astronomy.*
- Munson, John P., 1897.  
*Zoology.*
- McCaleb, Walter Flavius, 1900.  
*History.*
- McCaskill, Virgil Everett, 1901.  
*Zoology.*
- "The Embryology of the Unionidæ."
- "Excretory Organs of *Arenicola Christata*."
- "The Role of Diffusion and Osmotic Pressure in Plant Physiology."
- "The Latin Third Declension: A Study in Syncretism and Metaplasm."
- "Contribution to the Structure and Development of the Vertebrate Head."
- "A North American Epicontinental Sea of Jurassic Age."
- "A Contribution to Animal Geotrophism."
- "Development of the Sporangium and Gametophyte of *Selaginella rupestris*."
- "Beiträge zur Gehirnphysiologie der Anneliden."
- "The Early Development of Marine Annelida."
- "Contributions to the Life-History of *Silphium*."
- "Translation of the Decakumaracaritam, with Introduction and Notes."
- "Concerning Certain Elliptic Modular Functions of Square Rank."
- "A Preliminary Study of the Pueblo of Taos."
- "Aristotle's Conception of Pre-Socratic Philosophy."
- "History of the Finances of the City of Chicago."
- "The Change from Colony to Commonwealth in Virginia."
- "History of the United States Notes."
- "Examination of Mill's Inductive Canons."
- "Profit-Sharing: A Study in Social Economics."
- "Ideas of Future Life among the Algonquins."
- "The Effect of Electrolytes on Rigor Mortis."
- "The Relation of Education to Philosophy in Greece and Early Christianity."
- "Implications of the Theological Character in Locke's *Essay on the Human Understanding*."
- "The Wisdom Element in the Prophets."
- "A Particular Class of Periodic Solutions of the Problem of Three Bodies."
- "The Ovarian Egg of *Limulus*."
- "The Aaron Burr Conspiracy."
- "The Metamerism of *Hirudo Medicinalis*."

- McCoy, Herbert Newby, 1898.  
*Chemistry.*
- McDonald, John Hector, 1900.  
*Mathematics.*
- McKee, Ralph Harper, 1901.  
*Chemistry.*
- McLean, Annie Marion, 1900.  
*Sociology.*
- McLean, Simon James, 1897.  
*Political Economy.*
- McLennan, Simon Fraser, 1896.  
*Philosophy.*
- McMillan, Daniel Peter, 1899.  
*Philosophy.*
- McNeal, Edgar Holmes, 1902.  
*History.*
- McPherson, William, 1899.  
*Chemistry.*
- Neff, Theodore Lee, 1896.  
*Romance.*
- Nelson, Nels Lawrence, 1899.  
*Botany.*
- Norlin, George, 1900.  
*Greek.*
- Norman, Wesley Walker, 1899.  
*Physiology.*
- Overton, James Bertram, 1901.  
*Botany.*
- Owen, William Bishop, 1901.  
*Greek.*
- Padan, Robert Samuel, 1901.  
*Political Economy.*
- Paschal, George Washington, 1900.  
*Greek.*
- Peck, Paul Frederick, 1901.  
*History.*
- Perrin, John William, 1895.  
*History.*
- Poyen-Bellisle, René, 1894.  
*Romance.*
- Prather, John McClellan, 1901.  
*Zoology.*
- Pratt, Alice Edwards, 1897.  
*English.*
- Putnam, Thomas Milton, 1902.  
*Mathematics.*
- Ransom, James Harvey, 1899.  
*Chemistry.*
- Raymond, Jerome Hall, 1895.  
*Sociology.*
- Reichmann, Fritz, 1901.  
*Physics.*
- Rickert, Martha Edith, 1899.  
*English.*
- Rogers, Arthur Kenyon, 1898.  
*Philosophy.*
- "On the Hydrochlorides of Carbophenylimide Derivatives."
- "Concerning the System of the Binary Cubic and Quadratic, with Application to the Reduction of Hyperelliptic Integrals to Elliptic Integrals by a Transformation of Order Four."
- "The Isourea Ethers."
- "The Acadian Element in the Population of Nova Scotia."
- "The Railway Policy of Canada."
- "The Theory of Impersonal Judgment."
- "The Negative Judgment."
- "Minors and Mediocres in Germanic Tribal Codes."
- "The Constitution of the Oxyazo Compounds."
- "Satire on Women in Old French Lyric Poetry."
- "Revision of the North American Species of *Solanum*."
- "Cosmogenical Theories of the Greeks."
- "The Reaction of Lower Animals upon Injuries and the Theory of Pain Sensations."
- "Parthogenesis in *Thalictrum purpurascens*."
- "The Custom and Laws of Naturalization at Athens."
- "Studies in Interest."
- "Quintus of Smyrna: A Study."
- "The Development of the Theory of Succession Under the Early Norman Kings."
- "The History of Compulsory Education in New England."
- "The Sounds and Forms of the French Creole in the West Indies."
- "The Skeleton of *Salaux Microdon*."
- "Use of Color in the Verse of the English Romantic Poets."
- "On the Quaternary Linear Homogeneous Group and the Ternary Linear Fractional Group."
- "The Molecular Rearrangement of O-Animophenol Derivatives."
- "American Municipal Government."
- "Capacities at Small Distances."
- "Emare: A Middle English Romance."
- "The Doctrine of Psychophysical Parallelism from a Metaphysical Point of View."

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*English.*
- Rullkoetter, William, 1899.  
*History.*
- Sanders, Frederick William, 1895.  
*Sociology.*
- Schlicher, John Jacob, 1900.  
*Latin.*
- Schoolcraft, Henry Lawrence, 1899.  
*History.*
- Schub, Frederick Otto, 1901.  
*German.*
- Scofield, Cora Louisa, 1898.  
*History.*
- Searles, Helen McGaffey, 1898.  
*Greek.*
- Seidenadel, Charles William, 1897.  
*Greek.*
- Sellery, George Clarke, 1901.  
*History.*
- Sethre, John Olaf, 1901.  
*History.*
- Seward, Ora Philander, 1899.  
*German.*
- Shiple, Frederic William, 1901.  
*Latin.*
- Sidey, Thomas Kay, 1900.  
*Latin.*
- Sinclair, Samuel Bower, 1901.  
*Education.*
- Skinner, Ernest Brown, 1900.  
*Mathematics.*
- Slaught, Herbert Ellsworth, 1898.  
*Mathematics.*
- Smith, Wilson Robert, 1899.  
*Zoology.*
- Smith, Warren Rufus, 1894.  
*Chemistry.*
- Soares, Theodore Geraldo, 1894.  
*Semitics.*
- Sparks, Edwin Erle, 1900.  
*History.*
- Sterns, Worthy Putnam, 1900.  
*Political Economy.*
- Stuart, Henry Walgrave, 1900.  
*Philosophy.*
- Stone, Isabella, 1897.  
*Physics.*
- Stevens, Frank Lincoln, 1900.  
*Botany.*
- Sturtevant, Edgar Howard, 1901.  
*Sanskrit.*
- Swartz, Samuel Ellis, 1896.  
*Chemistry.*
- Tanner, Amy Eliza, 1896.  
*Philosophy.*
- "Treatment of Nature in English Poetry between Pope and Wordsworth."
- "Legal Protection of Woman among the Ancient Germans."
- "An Exposition in the Outline of the Relation of Certain Economic Principles to Social Readjustment."
- "Origin of the Rhythmical Verse in Late Latin."
- "The Genesis of the Grand Remonstrance."
- "Middle Low German Poems from Helmstedt Codices."
- "The Court of Star Chamber."
- "A Lexicographical Study of Greek Inscriptions."
- "Quid de musices universae eiusque aliquot partium singularum potestate Hooe aut Hooe et exprimendi et efficiendi veterum Graecorum scriptores imprimis Plato nec non Aristoteles indicarint."
- "The Suspension of Habeas Corpus During the Civil War."
- "The Political History of Minnesota Prior to Her Admission into the Union."
- "Middle High German Negative Strengthened by the Specification of Some Things of Small Size or Value."
- "A Palaeographical Study of an Unused Manuscript of Livy, Cod. Reg. 762."
- "The Participle in Plautus, Petronius, and Apuleius."
- "The Possibility of a Science of Education."
- "On Ternary Monomial Substitution-Groups of Finite Order with Determinant + 1."
- "The Cross-Ratio Group of 120 Quadratic Cremona Transformations of the Plane."
- "A Contribution to the Life-History of *Isotes*."
- "On the Additional Products of the Aromatic Isocyanides."
- "A Contribution to the Criticism of the Book of Chronicles."
- "The Cumberland National Road as a Union-Making Factor."
- "Studies on the Foreign Trade of the United States."
- "The Theory of the Process of Valuation."
- "On the Electrical Resistance of Thin Films."
- "The Compound Oosphere of *Albugo Bliti*."
- "Contraction in the Case Forms of the Latin *io* and *ia* stems, and of *dens*, *is*, and *idem*."
- "The Action of Sodium Ethylate on the Imide-Bromides."
- "Imagery, with Special Reference to Association of Ideas."

Thomas, William Isaac, 1896. <i>Philosophy.</i>	"On a Difference in the Metabolism of the Sexes."
Thompson, James Westfall, 1895. <i>History.</i>	"The Growth of the French Monarchy under Louis VI."
Thompson, Helen Bradford, 1900. <i>Philosophy.</i>	"Psychological Norms."
Tibbetts, William Frank, 1901. <i>Latin.</i>	"The Indicative Indirect Question in Latin."
Tight, William George, 1902. <i>Geology.</i>	"Origin and Development of the Ohio River."
Treadwell, Aaron Lewis, 1899. <i>Zoology.</i>	"The Cytogeny of Podarke."
Triggs, Oscar Lovell, 1895. <i>English.</i>	"'Assembly of Gods; or the Accord of Reason and Sensuality in the Fear of Death,' by John Lydgate."
Tunell, George Gerard, 1897. <i>Political Economy.</i>	"Transportation on the Great Lakes of North America."
Van Deman, Esther Boise, 1898. <i>Latin.</i>	"The Cult of <i>Vesta Publica</i> , and the Vestal Virgins."
Vincent, George Edgar, 1896. <i>Sociology.</i>	"The Social Mind and Education."
Votaw, Clyde Weber, 1898. <i>Biblical Greek.</i>	"The Infinitive in Biblical Greek."
Walker, Arthur Tappan, 1898. <i>Latin.</i>	"The Sequence of Tenses in Latin."
Walker, Dean Augustus, 1895. <i>Semitics.</i>	"The Semitic Negative, with Special Reference to the Negative in Hebrew."
Wallace, Malcolm William, 1899. <i>English.</i>	"Influence of Plautus on the Dramatic Literature of England in the Sixteenth Century."
Welch, Jeannette Cora, 1897. <i>Physiology.</i>	"On the Measurement of Mental Activity through Muscular Activity and the Determination of a Constant of Attention."
Wilder, Frank Alonzo, 1902. <i>Geology.</i>	"The Age and Origin of the Gypsum of Webster County, Iowa."
Willis, Henry Parker, 1898. <i>Political Economy.</i>	"History of the Latin Monetary Union."
Willett, Herbert Lockwood, 1896. <i>Semitics.</i>	"The Development of the Doctrine of Immortality among the Hebrews."
Wood, Francis Asbury, 1895. <i>German.</i>	"I, Verner's Laws in Gothic; II, The Reduplicative Verbs in Germanic."
Wyckoff, Charles Truman, 1897. <i>History.</i>	"Feudal Relations between the Crowns of England and Scotland under the Early Plantagenets."
Young, Ella Flagg, 1900. <i>Education.</i>	"Isolation in School Systems."
Zoethout, William Douwes, 1898. <i>Physiology.</i>	"The Physiological Effects of High Temperatures and Lack of Oxygen upon Lower Organisms."

#### VI. POSITIONS OF DOCTORS AND MASTERS

An interesting question with all universities is how far there will be openings for those who may take higher degrees. With the great increase in the number of institutions doing university work and in the number of higher degrees bestowed, this question is a very practical one.

Of the 131 Doctors of Philosophy of the School of Arts and Literature the present occupation of 11 is not reported. Of the remaining 120, 79 are teaching in institutions of collegiate rank, 7 are in the faculties of professional schools, 10 are teaching in secondary schools, 6 are pursuing further studies, and 18 are engaged in other professional work or occupations.

Of the 90 Doctors of Philosophy in the Departments of Science, the present occupation of 8 is not reported. Of the remaining 82, 56 are teaching in institutions of collegiate rank, 8 are

TABLE IX  
POSITIONS HELD BY DOCTORS AND MASTERS  
A. DOCTORS OF PHILOSOPHY

	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
<b>UNIVERSITY OF CHICAGO:</b>									
1. Teaching .....	24	3	27	17	1	18	41	4	45
2. Docent .....	1	1	2	3	..	3	4	1	5
3. Student .....	2	2	4	..	..	..	2	2	4
<b>OTHER UNIV. AND COLL.:</b>									
1. President .....	1	..	1	..	..	..	1	..	1
2. Dean .....	..	1	1	..	..	..	..	1	1
3. Teaching .....	39	9	48	32	3	35	71	11	82
Teaching (abroad) .....	1	..	1	..	..	..	1	..	1
4. Fellow .....	..	..	..	..	..	..	..	..	..
5. Student .....	..	..	..	..	..	..	..	..	..
Student (abroad) .....	..	2	2	..	1	1	..	3	3
<b>PROFESSIONAL SCHOOLS:</b>									
1. Teaching .....	1	..	1	3	1	4	4	1	5
2. Student .....	..	..	..	..	..	..	..	..	..
<b>NORMAL SCHOOLS:</b>									
1. President or Principal .....	2	..	2	..	..	..	2	..	2
2. Teaching .....	3	1	4	4	..	4	7	1	8
<b>SECONDARY SCHOOLS:</b>									
1. Supt. or Principal .....	1	1	2	3	..	3	4	1	5
2. Teaching .....	5	3	8	4	1	5	9	4	13
<b>LEARNED PROFESSIONS:</b>									
1. Ministry .....	2	..	2	..	..	..	2	..	2
2. Mining Engineer .....	..	..	..	1	..	1	1	..	1
3. Geologist .....	..	..	..	2	..	2	2	..	2
4. Librarian .....	1	..	1	..	..	..	1	..	1
5. Journalist .....	1	..	1	..	..	..	1	..	1
6. Teaching .....	8	1	9	5	..	5	13	1	14
7. Business .....	2	..	2	1	..	1	3	..	3
8. Women having married .....	..	3	3	..	..	..	..	3	3
Total .....	94	27	121	75	7	82	169	33	202
Unknown .....	..	..	10	..	..	9	19	..	19
Total .....	..	..	..	..	..	..	188	33	221

B. MASTERS

<b>UNIVERSITY OF CHICAGO:</b>									
1. Teaching .....	1	3	4	2	..	2	3	3	6
2. Fellow .....	1	..	1	3	1	4	4	1	5
3. Student .....	3	2	5	3	..	3	6	2	8
<b>OTHER UNIV. AND COLL.:</b>									
1. President .....	2	..	2	..	..	..	2	..	2
2. Dean .....	1	1	2	..	..	..	1	1	2
3. Teaching .....	7	3	10	7	1	8	14	4	18
Teaching (abroad) .....	..	1	1	..	..	..	..	1	1
4. Fellow .....	1	..	1	..	..	..	1	..	1
5. Student .....	1	1	2	1	1	2	2	2	4
Student (abroad) .....	..	1	1	..	..	..	..	1	1
<b>PROFESSIONAL SCHOOLS:</b>									
1. Teaching .....	1	1	2	..	..	..	1	1	2
2. Student .....	2	..	2	..	..	..	2	..	2
<b>NORMAL SCHOOLS:</b>									
1. President or Principal .....	..	1	1	..	..	..	..	1	1
2. Teaching .....	2	..	2	1	..	1	3	..	3

TABLE IX—Continued

## B. MASTERS

	ARTS AND LITERATURE			SCIENCE			TOTALS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
<b>SECONDARY SCHOOLS:</b>									
1. Supt. or Principal.....	5	3	8	..	..	..	5	3	8
2. Teaching .....	5	10	15	3	1	4	8	11	19
<b>LEARNED PROFESSIONS:</b>									
1. Ministry .....	4	..	4	..	..	..	4	..	4
2. Medicine .....	..	..	..	1	..	1	1	..	1
3. Law .....	3	..	3	..	..	..	3	..	3
4. Geologist .....	..	..	..	1	..	1	1	..	1
5. Librarian .....	..	1	1	..	..	..	..	1	1
6. Journalism .....	1	1	2	..	..	..	1	1	2
7. Teaching .....	6	8	14	4	5	9	10	13	23
Business .....	4	..	4	1	..	1	5	..	5
Married .....	..	3	3	..	..	..	..	3	3
Total .....	50	40	90	27	9	36	77	49	126
Unknown .....	..	..	..	..	..	..	22	13	35
Total .....	..	..	..	..	..	..	99	62	161

in the faculties of professional schools, 1 is pursuing further studies, 8 are teaching in secondary schools, and 9 are pursuing other professional occupations.

Of the 19 whose position is unknown, it is of course possible that some are out of employment. That is not likely to be the case with many, as in such cases graduates are very apt to communicate with the University authorities in the hope of securing places.

A significant fact in the above statement is the number of Doctors (18) who are engaged in secondary schools. An increasing number may be expected to take such places, as the demands of those schools for specialized training are steadily becoming more definite.

## VII. FELLOWSHIPS

From the outset a definite fund has been set aside for annual stipends to Fellows.

It has been the policy of the University to assign Fellowships to Graduate students of special promise who may thereby be encouraged to finish their work for the degree of Doctor of Philosophy. That this end has been attained appears plainly from the fact that of the 221 persons who have been given that degree 176 have held Fellowships—a percentage of 79.7.

On the other hand, Fellowships have been given to 450 persons. Of these, 176 have taken the degree of Doctor and 33 that of Master. In other words, 39 per cent. of the Fellows have taken the former degree and 7 per cent. have taken the latter. Only 2 persons have taken both degrees.

It may be noted that of the 161 persons who have received the Master's degree only 33 have held Fellowships. This is to be expected, as, on the one hand, the Fellow naturally is looking forward to a longer term of residence, while, on the other hand, a student not receiving a Fellow's stipend quite frequently is unable to continue work during the long period required for the Doctorate.

The percentage of Fellows who have taken the Doctor's degree should have been higher. The University has not adopted the policy of requiring a pledge from Fellows as to taking the degree, although it would seem that usually a moral obligation would certainly exist. Fellows

who have made such progress as to be measurably near the degree have in a number of cases been drawn away from the University in one of two ways. Many have been tempted by the offer of good positions—apparently quite as good as could have been secured after waiting for the degree. Others have been induced to take the degree in other institutions which offer unusually remunerative Fellowships, either immediately preceding or immediately following the award of the Doctorate. For the first of these things there is no remedy at present. Probably in the course of time the demand for specially trained men will be adequately met by those who have finished their work for the Doctor's degree, and it will not then be necessary to draw on those whose work is incomplete. As to the other matter the situation is different. No doubt the University has adequate resources to protect itself by entering on a policy of competition and reprisal. Whether such a relation between universities, however, is in accordance with the dignity which should characterize such institutions, is hardly open to question. The better way would undoubtedly be for universities concerned in the award of Fellowships to adopt an understanding which might lead to some uniformity of policy. Failing such an understanding, no doubt the advisability of a change of plans here will have to be considered at no distant date.

The stipends of Fellows vary from the mere tuition fees—\$120 a year—to \$520 a year. It has been thought best to make the stipends thus moderate in order that a greater number of students may have the benefit. In case of a change of plans, as above suggested, the number of annual appointments will doubtless have to be reduced.

Another matter which concerns universities in general should here be noted. It is the custom of some students to file simultaneous applications for Fellowships in different institutions, in the hope that, failing in one place, there may yet be success in another, or that in case of more than one appointment being received the most attractive may be accepted. An inter-university agreement, again, could remedy an undesirable situation of this sort. If such an arrangement is not made, it will doubtless become desirable to adopt new requirements in our own plans of assigning Fellowships.

It has been and is a regulation of the University that each Fellow whose stipend exceeds the tuition fee shall render a certain amount of service. This is not to exceed one-sixth of the student's available time, and is intended to put the Fellowship on the basis of a business arrangement, the Fellow being an officer of the University. The service usually consists of attendance in the Library, assistance in laboratories or museums, editorial work on departmental publications, or, in some cases, instruction of college classes.

The value and effect of this system were exhaustively discussed by the University Congregation at the meetings of September and October, 1899, and February and April, 1900.

It was objected that the service takes time from the Fellow's main occupation at the expense of his scholarly work, that the service fails of being thoroughly efficient on account of its transitory character, and that the system renders our Fellowships less desirable than those of institutions which do not have the requirement. On the other hand, it was urged that in many cases the service, especially when of the nature of assistance on departmental publications, reading themes, and laboratory assistance, is a real help to the Fellow in direct line with his main occupation. A special committee of the Congregation reported (January 3, 1900) that the money value of the services of Fellows is to be estimated at not to exceed \$7,000 per annum. The Congregation voted (April 3, 1900) to recommend the continuance of the system, with certain minor modifications.

#### VIII. THE OGDEN (GRADUATE) SCHOOL OF SCIENCE

Attention is called to the report of the Dean of the Ogden School, which deals with questions relating to that School alone.





POLITICAL ECONOMY -- Continued		No. of	No. of
		Fellowships	Fellows
1896-1897:			
H. R. Hatfield, Ph.D. '97,			
William L. King,			
S. J. McLean, Ph.D. '97,			
E. S. Mead,			
W. C. Mitchell,			
George Tunell, Ph.D. '97,			
H. P. Willis, Ph.D. '98	- - 7		5
1897-1898:			
W. H. Allen,			
H. J. Davenport, Ph.D. '98,			
Katharine B. Davis,			
E. S. Mead,			
W. C. Mitchell,			
W. P. Sterns	- - - - 6		4
1898-1899:			
Joseph C. Freehoff,			
Delos Oscar Kinsman,			
Harry Alvin Millis, Ph.D. '99,			
Worthy Putnam Sterns,			
Wesley Clair Mitchell, Ph.D. '99	5		3
1899-1900:			
Trevor Arnett,			
Katharine B. Davis, Ph.D. '00,			
Alfred Lawrence Fish,			
John Lamar Hopkins,			
Worthy Putnam Sterns, Ph.D. '00	5		3
1900-1901:			
Alfred Lawrence Fish,			
William Buck Guthrie,			
Stephen Butler Leacock,			
Svant Godfrey Lindholm,			
Robert Samuel Padan, Ph.D. '01	5		4
1901-1902:			
Stephen Butler Leacock,			
Svant Godfrey Lindholm,			
Walter Dudley Nash,			
Seldon F. Smyser	- - - 4		2
	54		37
Doctors, 11 ; Masters, 1.			
1894-1895:			
E. M. Heim,			
J. R. Mosley,			
G. Tunell, - - - - -	3		3
1895-1896:			
C. E. Boyd,			
Ethel A. Glover Hatfield,			
E. M. Heim,			
J. R. Mosley,			
E. S. Noyes	- - - - 5		3
1896-1897:			
C. E. Boyd, Ph.D. '97,			
Ethel A. Glover Hatfield, Ph.D. '98,			
E. M. Heim,			
W. C. Wilcox	- - - - 4		1
1897-1898:			
Sophonisba P. Breckinridge, A.M. '97,			
F. A. Cleveland	- - - - 2		2
1898-1899:			
Sophonisba P. Breckinridge,			
Frederick A. Cleveland,			
Charles Elmer Goodell,			
Samuel Chiles Mitchell, Ph.D.	- 4		2
1899-1900:			
Sophonisba P. Breckinridge,			
Charles Elmer Goodell,			
Susan Wade Peabody,			
Samuel Chiles Mitchell	- - 4		1
1900-1901:			
James Dowse Bradwell,			
Sophonisba P. Breckinridge, Ph.D. '01,			
Augustus Raymond Hatton,			
William Edwin Miller,			
Susan Wade Peabody,			
George Winfield Scott	- - 6		4
1901-1902:			
Burton L. French,			
Augustus Raymond Hatton	- 2		2
		33	20
Doctors, 4 ; Masters, 2 ; 1 duplicate.			

POLITICAL SCIENCE

1892-1893:		
Madeline Wallin	- - - 1	1
1893-1894:		
Helen H. Tunnicliffe,		
Madeline Wallin, A.M. '93	- 2	1

HISTORY

1892-1893:		
R. C. H. Catterall,		
Elizabeth Wallace,		
W. C. Webster	- - - 3	3



SOCIOLOGY AND ANTHROPOLOGY—Continued			No. of	No. of
	No. of	No. of	Fellowships	Fellows
	Fellowships	Fellows		
1901-1902:				
Romanzo Colfax Adams,				
Edward Cary Hayes, Ph.D. '02,				
Victor Lathrop O'Brien,				
Thomas James Riley - - - 4		4		
		<u>4</u>		
Doctors, 9.		25		
COMPARATIVE RELIGION				
1893-1894:				
Edmund Buckley, Ph.D. '94 - 1		1		
1894-1895:				
F. J. Coffin - - - - 1		1		
1895-1896:				
F. J. Coffin - - - - 1		0		
1896-1897:				
F. J. Coffin - - - - 1		0		
1897-1898:				
F. J. Coffin, Ph.D. '98 - - 1		0		
1898-1899:				
No appointments.				
1899-1900:				
No appointments.				
1900-1901:				
Caroline May Breyfogle - - 1		1		
1901-1902:				
No appointments.				
		<u>6</u>		<u>3</u>
Doctors, 2.				
SEMITIC LANGUAGE AND LITERATURE				
1892-1893:				
E. Asada, Ph.D. '93,				
E. J. Goodspeed,				
Lincoln Hulley, Ph.D. '95 - - 3		3		
1893-1894:				
G. R. Berry, Ph.D. '95,				
E. J. Goodspeed, Ph.D. '98,				
H. F. Mallory,				
D. A. Walker - - - - 4		3		
1894-1895:				
H. F. Mallory,				
O. T. Morgan,				
D. A. Walker, Ph.D. '95 - - 4		2		
1895-1896:				
H. E. Jones,				
H. F. Mallory,				
O. T. Morgan, Ph.D. '02,				
C. C. Sherman - - - - 4		2		
1896-1897:				
J. K. Arnold, Ph.D. '99,				
H. E. Jones, Ph.D. '98,				
William Mebane - - - 3		2		
1897-1898:				
T. A. Gessler,				
J. M. P. Smith - - - - 2		1		
1898-1899:				
Alois Barta,				
Winfred Nichols Donovan,				
John M. P. Smith, Ph.D. '99 - 3		2		
1899-1900:				
Alois Barta, Ph.D. '00,				
Lutie Rebecca Corwin,				
Emanuel Schmidt - - - 4		3		
1900-1901:				
Preston Pishon Bruce,				
Lutie Rebecca Corwin,				
Clifton Daggett Gray, Ph.D. '01 5		3		
1901-1902:				
Preston Pishon Bruce,				
Lutie Rebecca Corwin - - 2		0		
		<u>34</u>		<u>21</u>
Doctors, 11.				
COMPARATIVE PHILOLOGY				
1892-1893:				
F. H. Fowler,				
W. B. Owen - - - - 2		2		
1893-1894:				
F. H. Fowler,				
H. F. Linscott,				
W. B. Owen, Ph.D. '01 - - 3		1		
1894-1895:				
F. H. Fowler, Ph.D. '96,				
H. F. Linscott, Ph.D. '96 - - 2		0		
1895-1896:				
Helen M. Searles - - - 1		1		
1896-1897:				
Helen M. Searles - - - 1		0		
1897-1898:				
Helen M. Searles, Ph.D. '98 - 1		0		
1898-1899:				
Marion Schibsby,				
Charles Henry Shannon,				
Edgar Howard Sturtevant - 3		3		

COMPARATIVE PHILOLOGY—Continued			LATIN		
	No. of Fellowships	No. of Fellows		No. of Fellowships	No. of Fellows
1899-1900:			1892-1893:		
John Jacob Meyer, Ph.D. '00,			Mabel Banta,		
Edgar Howard Sturtevant - 2	2	1	W. F. Brewer,		
1900-1901:			E. Antoinette Ely,		
Edgar H. Sturtevant, Ph.D. '01	1	0	F. W. Valentine,		
1901-1902:			A. T. Walker - - - - 5	5	
William Cyrus Gunnerson,			1893-1894:		
Roy Batchelder Nelson - - 2	2	2	C. K. Chase,		
Doctors, 6.	18	10	E. Antoinette Ely,		
			W. C. France, Ph.D. '95,		
			Emma L. Gilbert,		
			J. C. Nelson,		
			A. T. Walker, Ph.D. '98 - - 6	4	
			1894-1895:		
			Emma L. Gilbert,		
			F. W. Shipley - - - - 2	1	
			1895-1896:		
			C. E. Dixon,		
			F. A. Gallup,		
			F. B. R. Hellems,		
			D. J. Holmes,		
			J. J. Schlicher, Ph.D. '00,		
			F. W. Shipley,		
			C. G. Swearingen,		
			Cleveland K. Chase - - - 8	7	
			1896-1897:		
			C. E. Dixon,		
			F. B. R. Hellems,		
			Esther B. van Deman, Ph.D. '98,		
			F. W. Shipley, Ph.D. '01 - - 4	1	
			1897-1898:		
			E. A. Bechtel,		
			C. E. Dixon,		
			Mary B. Harris,		
			F. B. R. Hellems, Ph.D. '98,		
			O. M. Washburn - - - 5	3	
			1898-1899:		
			Edward Ambrose Bechtel, Ph.D. '00,		
			Charles Edward Dixon,		
			Mary Belle Harris,		
			Thomas Kay Sidey, Ph.D. '00 - 4	1	
			1899-1900:		
			Tenny Frank,		
			Mason DeWitt Gray,		
			Mary Belle Harris, Ph.D. '00,		
			David Thomson,		
			Oliver Miles Washburn - - 5	3	
			1900-1901:		
			Tenny Frank,		
			Mason DeWitt Gray,		
			David Thomson - - - 3	0	
Doctors, 7; Masters, 1.	28	22			



## ENGLISH LANGUAGE AND LITERATURE—Continued

	No. of Fellowships	No. of Fellows
Emily K. Reynolds, V. P. Squires, A.M. '85, Florence M. Walker, Ph.M. '85, Jane K. Weatherlow - - - 7	7	5
1895-1896: Mary Bowen, Ph.D. '97, Gertrude Buck, J. W. Bray, Eleanor P. Hammond, Alice E. Pratt, Ph.D. '97, Emily K. Reynolds, V. P. Squires - - - 7	7	3
1896-1897: Eleanor P. Hammond, Ph.D. '98 Emily K. Reynolds, V. P. Squires - - - 3	3	0
1897-1898: P. B. Kohlsaas, F. B. Lindsay, A. W. Leonard, Katharine Merrell, M. W. Wallace, Frances Williston - - - 6	6	6
1898-1899: Grace Patten Conant, Gottfried Hult, Frederick Brooks Lindsay, Malcolm William Wallace, Ph.D. '99, Philemon Bulkley Kohlsaas, Frances Williston - - - 6	6	2
1899-1900: Harriet Emeline Crandall, Grace Patten Conant, George Linnæus Marsh, A.M. '99 3	3	2
1900-1901: Harriet Emeline Crandall, George Linnæus Marsh - - 2	2	0
1901-1902: Reginald Harvey Griffith, John Robertson MacArthur, Henry Cables Penn, Richard Holmes Powell, Jr., George Fullmer Reynolds - 5	5	5
	52	34
Doctors, 7; Masters, 4; 1 Duplicate.		

## MATHEMATICS

	No. of Fellowships	No. of Fellows
1892-1893: N. B. Heller, J. I. Hutchinson, H. E. Slaught, J. A. Smith, Mary F. Winston - - - 5	5	5
1893-1894: William Gillespie, J. L. Hutchinson, Ph.D. '93, H. E. Slaught, Ph.D. '93, J. A. Smith - - - 4	4	1
1894-1895: G. L. Brown, L. E. Dickson, William Gillespie, S. A. Joffe - - - 4	4	3
1895-1896: G. L. Brown, Ph.D. '00, L. E. Dickson, Ph.D. '96, E. B. Escott, M.S. '96, William Gillespie, Alice B. Gould - - - 5	5	2
1896-1897: William Gillespie, Ph.D. '96, Thomas McKinney, A. Ranum - - - 3	3	2
1897-1898: J. C. Hammond, M.S. '97, H. Lloyd, J. H. McDonald - - - 3	3	3
1898-1899: Elting Houghtelling Comstock, Derrick Norman Lehmer, Henry Lloyd, John Hector McDonald - - 4	4	2
1899-1900: Gilbert Ames Bliss, Ph.D. '00, William Findlay, Derrick Norman Lehmer, Ph.D. '00, Henry Lloyd, John Hector McDonald, Ph.D. '00 5	5	2
1900-1901: Morton Clark Bradley, William Findlay, Ph.D. '01, Thomas M. Putnam, Ph.D. '02 - 3	3	2

MATHEMATICS — <i>Continued</i>			No. of	No. of
	No. of	No. of	Fellowships	Fellows
1901-1902:				
Herbert Edwin Jordan,				
William James Rusk,				
Arthur Whipple Smith, M.S. '00,				
Oswald Veblen - - - - 4		4		
		<u>40</u>		<u>26</u>
Doctors, 10; Masters, 3.				
ASTRONOMY				
1894-1895:				
Storrs B. Barrett - - - 1		1		
1895-1896:				
Storrs B. Barrett,				
David A. Drew - - - - 2		1		
1896-1897:				
W. H. Wright - - - - 1		1		
1898-1899:				
Clement Eugene Rood,				
Delonzo Tate Wilson - - 2		2		
1899-1900:				
Walter Sydney Adams,				
Arthur Constant Lunn,				
Clement Eugene Rood,				
Delonzo Tate Wilson - - 4		2		
1900-1901:				
William Otis Beal,				
Arthur Constant Lunn, M.A. '02 2		1		
1901-1902:				
William Otis Beal, M.S. '02 - 1		0		
		<u>13</u>		<u>8</u>
Doctors, 0; Masters, 2.				
PHYSICS				
1893-1894:				
A. W. Whitney - - - - 1		1		
1894-1895:				
A. W. Whitney - - - - 1		0		
1895-1896:				
G. F. Hull, Ph.D. '97 - - 1		1		
1896-1897:				
J. L. Lake - - - - - 1		1		
1897-1898:				
H. G. Gale,				
E. S. Johonnot, Ph.D. '98,				
J. L. Lake - - - - - 3		2		
1898-1899:				
Henry Gordon Gale, Ph.D. '99,				
Fritz Reichman - - - - 2		1		
1899-1900:				
Clark Wells Chamberlain,				
Robert Francis Earhart, Ph.D. '00,				
Hopson Owen Murfee,				
Fritz Reichman - - - - 4			3	
1900-1901:				
Benjamin Oscar Hutchison,				
Frank Baldwin Jewett, Ph.D. '02,				
Fritz Reichman, Ph.D. '01 - 3			2	
1901-1902:				
Benjamin Oscar Hutchison,				
John Mills,				
Mary Isabel Northway - - 3			2	
		<u>19</u>	<u>13</u>	
Doctors, 6; Masters, 0.				
CHEMISTRY				
1892-1893:				
Adolph Bernhard,				
J. L. Bridge,				
W. R. Smith,				
S. E. Swartz - - - - - 4			4	
1893-1894:				
Adolph Bernhard, Ph.D. '94,				
B. C. Hesse,				
W. R. Smith, Ph.D. '01,				
S. E. Swartz,				
R. W. Wood - - - - - 5			2	
1894-1895:				
F. R. Dains, Ph.D. '98,				
Nellie Goldthwaite,				
B. C. Hesse,				
S. E. Swartz, Ph.D. '96 - - 4			2	
1895-1896:				
James B. Garner, Ph.D.,				
Nellie Goldthwaite,				
B. C. Hesse, Ph.D. '96,				
L. W. Jones - - - - - 4			2	
1896-1897:				
Nellie Goldthwaite,				
L. W. Jones, Ph.D. '97,				
H. N. McCoy,				
F. Neher,				
J. F. Sellers - - - - - 5			3	
1897-1898:				
H. C. Biddle, Ph.D. '00,				
H. N. McCoy, Ph.D. '98,				
F. Neher - - - - - 3			1	



CHEMISTRY—Continued		No. of Fellowships	No. of Fellows	No. of Fellowships	No. of Fellows
1898-1899:	Solomon Farley Acree, Heyman Elijah Goldberg, William McCracken, Max Darwin Slimmer	-	4	4	4
1899-1900:	Solomon Farley Acree, Heyman Elijah Goldberg, William McCracken, Eugene Paul Schoch, Max Darwin Slimmer	-	5	1	1
1900-1901:	Solomon Farley Acree, William McAfee Bruce, Francis William Bushong, John Wilkes Sheperd	-	4	3	3
1901-1902:	Wallace Appleton Beatty, Ph.D. '02, Roy Hutchison Brownlee, William McAfee Bruce, Francis William Bushong, Alfred Ogle Shaklee	-	5	3	3
	Doctors, 10; Masters, 0.		43	25	
GEOLOGY					
1892-1893:	J. A. Bownocher, C. H. Gordon, H. B. Kummel, C. E. Peet	-	4	4	4
1893-1894:	J. A. Bownocher, C. H. Gordon, Ph.D. '95, T. C. Hopkins, H. B. Kummel, C. E. Peet, E. C. Quereau	-	6	2	2
1894-1895:	C. H. Gordon, T. C. Hopkins, Ph.D. '00, H. B. Kummel, Ph.D. '95, C. E. Peet	-	4	0	0
1895-1896:	H. C. Cowles, D. P. Nicholson, A. H. Purdue	-	3	3	3
1896-1897:	W. C. Alden, H. F. Bain, Ph.D. '97, J. P. Goode, Samuel Weidman	-	4	4	4
1897-1898:	W. C. Alden, M.A. '98, C. E. Siebenthal, C. F. Tolman	-	3	2	2
1898-1899:	John Wellington Finch, Russell George, William Newton Logan, Claude Ellsworth Siebenthal	-	4	3	3
1899-1900:	Wallace Walter Atwood, Russell George, Willis Thomas Lee, William Newton Logan, Ph.D. '00, William George Tight, Ph.D. '02	5	3	3	3
1900-1901:	John Mason Boutwell, Fred Harvey Hall Calhoun, Nevin Melancthon Fenneman, Russell George	-	4	3	3
1901-1902:	Fred Harvey Hall Calhoun, Ph.D. '02, Nevin Melancthon Fenneman, Ph.D. '01, George Henry Garey, M.S. '02, Frank Alonzo Wilder, Ph.D. '02	4	2	41	26
	Doctors, 9; Masters, 2.				
ZOOLOGY					
1892-1893:	C. L. Bristol, A. C. Eycleshymer, Ph.D. '95, H. P. Johnson, W. A. Locy, Ph.D. '95, A. D. Mead, H. L. Russell	-	6	6	6
1893-1894:	E. R. Boyer, C. L. Bristol, Ph.D. '97, Cornelia M. Clapp, H. P. Johnson, Ph.D. '94, A. D. Mead, J. P. Munson, Ph.D. '97, A. L. Treadwell	-	7	4	4

ZOÖLOGY—Continued		No. of Fellowships	No. of Fellows		No. of Fellowships	No. of Fellows
1894-1895:	E. R. Boyer, H. S. Brode, Ph.D., Cornelia M. Clapp, A. D. Mead, Ph.D. '96, Harriet B. Merrill, Charles M. Child - - - 6		3	1901-1902: Marion Elizabeth Hubbard, Charles Christopher Adams, Bennett Mills Allen - - - 3		2
					59	35
				Doctors, 18; Masters, 1		
1895-1896:	H. S. Brode, Ph.D., Cornelia M. Clapp, Ph.D. '96, Agnes M. Claypole, Ph.D., S. J. Holmes, Harriet B. Merrill, L. Murbach - - - 6		3	1898-1899: No appointments.		
1896-1897:	H. R. Fling, S. J. Holmes, Ph.D. '97, W. H. Packard, Mary M. Sturges, M.S. '96 - 4		3	1899-1900: No appointments.		
1897-1898:	F. L. Charles, Emily R. Gregory, M. F. Guyer, G. W. Hunter, W. H. Packard, Mary M. Sturges, A. L. Treadwell, Ph.D. '99 - 7		4	1900-1901: No appointments.		
1898-1899:	Howell Emlyn Davies, Emily Ray Gregory, Ph.D. '99, Michael Frederick Guyer, Ralph Stayner Lillie, Horatio Hackett Newman, Wales H. Packard - - - 6		3	1901-1902: Daniel Graisbury Revell, Louis Neill Tate - - - 2		2
1899-1900:	Howell Emlyn Davies, Ph.D. '00, Michael Frederick Guyer, Ph.D. '00, Mary Hefferan, Horatio Hackett Newman, Ralph Stayner Lillie, Anne Moore, Minnie Marie Enteman - - 7		3	Doctors, 0.	2	2
1900-1901:	Charles Christopher Adams, Elliott Rowland Downing, Ph.D. '01, Minnie Marie Enteman, Ph.D. '01, Eugene Howard Harper, Ph.D. '02, Ralph Stayner Lillie, Ph.D. '01, William J. Moenkhaus, Horatio Hackett Newman - - 7		4	1896-1897: Irving Hardesty - - - 1		1
				1897-1898: Irving Hardesty - - - 1		0
				1898-1899: Irving Hardesty, Ph.D. '99 - 1		0
				1899-1900: David Martin Schoemaker, Shinkishi Hatai - - - 2		2
				1900-1901: Shinkishi Hatai - - - 1		0
				1901-1902: Shinkishi Hatai, Ph.D. '02, Charles Ingbert - - - 2		1
				Doctors, 2; Masters, 0.	8	4
				1893-1894: O. P. Hay - - - 1		1
				1895-1896: Ermine C. Case, Ph.D. '96 - 1		0
				Doctors, 1; Masters, 0.	2	2
				1893-1894: Elizabeth Cooke, Ph.D. '96 - 1		1
				1894-1895: William James Baird - - 1		1



## THE OGDEN GRADUATE SCHOOL OF SCIENCE

*To the President of the University:*

SIR: I submit herewith my report on the condition of the Ogden (Graduate) School of Science. The statistics of attendance in the Ogden School of Science are included in the statistics of Graduate Students, pp. 21-7. They show that the Graduate Students of Science have increased from 25 per cent. of the total number of Graduate Students during the first year of the University, to 37 per cent. during the tenth year. In actual numbers, the increase has been from 55 during the first year to 385 during the tenth, the last number including those in attendance during the Summer Quarter only. The increase in numbers has been uninterrupted, and the increase in percentage, as compared with the total number of Graduate Students, has been hardly less regular. The attendance by years and the distribution of the students among the several Departments are shown in the accompanying tables. The percentages of the Science Students for the first ten years are as follows: 25, 28, 31, 32, 34, 32, 36, 35, 36 and 37. Of the Students in the Ogden School, about 18 per cent. have been women, the range being from 15 per cent. to 21 per cent.

All the Departments of Science have had a notable, and, on the whole, satisfactory growth during the ten years of the University's history. All Departments have been more or less embarrassed by the limitations of equipment incident to a new institution, but facilities for work have steadily increased, and in some Departments are approaching adequacy. Other Departments are still embarrassed by lack of space, apparatus, and books, and there is no Department which could not profitably utilize a larger equipment and a larger instructional and investigative force.

The first effort of the Departments has very properly been to make adequate provision for their students. For creditable instructional work, a somewhat extensive equipment in the way of buildings, apparatus, books, and men is necessary. No Department is so hampered at the present time that such work is not done, though some Departments are seriously crippled for lack of adequate space and appropriate appointments. The second great aim of the several Departments has been to make themselves centers of investigative work, quite in advance of that which may be undertaken by the student body. For such investigative work, facilities in excess of those demanded for satisfactory instructional work are needed. Such work demands additional space, additional apparatus, and a more extensive library, while the investigators themselves must have time at their command for the prosecution of their work. In spite of the fact that epoch-marking investigative work has been done by men in several of the departments of science, adequate provision for this sort of work, which properly follows that of instructional work, has not yet been made. Many of the Departments have reached that point where a relatively small additional outlay might be made productive of very large returns—returns much more than commensurate with their cost.

The idea that investigative work is one of the great functions of a university is one which has but recently come to due recognition in America; but it has been widely adopted during the last decade, and promises to be a controlling factor in the future development of universities. The rapid growth of the departments of science during the years which have passed leads to the hope that the additional provision necessary for larger investigative work in the future will not be long delayed. In this connection it is proper to add that the development of investigative work, which should be furthered in every possible way, should not be allowed to overshadow or in any way dwarf the work of instruction. The tendency which occasionally

finds expression—to belittle the work of instruction, as compared with the work of investigation, should never be allowed to become prevalent. Each is necessary to the other, for the successful prosecution of instructional work must of necessity have much to do with the development of investigative work, and at the same time investigative work cannot be divorced from the most advanced grades of instructional work. The two great phases of university work should be developed side by side.

Some of the especial needs of the Ogden School of Science are set forth in the statements which follow, under the heads of the several Departments. In addition to the needs there specified, it is in every way desirable that steps be taken to secure more effectual co-operation and unification of the several Departments. In many cases, the borderlands of the several fields of science are unoccupied, and it is important that those phases of work which lie between two or more Departments be represented both in the instructional and investigative force of the University. By this means, the several Departments can be of mutual assistance, and the work of unification furthered. For the most part, the several Departments have responded with the greatest generosity to the calls of neighbor Departments; but, in spite of this, certain important lines of work lying between Departments, as now organized, are partially or wholly unrepresented.

Among the additions which are especially desirable, by way of connecting existing Departments more closely, are the following:

1. *Provision for work in Mechanics and Applied Mathematics.*—Such work would be of great advantage to all Departments of Physical Science, and is of special importance in connection with the new methods of work which the Department of Mathematics is desirous of establishing.

2. *Provision for work in Physical Chemistry.*—This great and growing branch of Chemistry, now being developed into prominence in several of our leading universities, remains but slightly represented here. The methods and principles of Physical Chemistry are, it is true, made use of by the Department, but no opportunity is offered for advanced work in this line. The work in Physical Chemistry would be advantageous not only to the Departments of Chemistry and Physics, but also to the Department of Geology, and to all members of the biological group.

3. *Provision for work in Paleo-Botany.*—This field remains to the present time essentially uncultivated, not only here, but in most universities, though Paleo-Zoölogy (Paleontology) has long been a field of fruitful research. Because of its newness, the field of Paleo-Botany offers exceptional inducements for strong investigative work, work which would be of great advantage to the Departments of Geology and Botany.

4. *Provision for adequate instruction in Geography.*—The time is ripe for the development of work in this line on an extensive scale. Probably no other line of work could be named which has so many connections, and which would go farther toward bringing various Departments now in existence into appropriate and vital relations with one another. The influence of such work would be felt outside the Departments of Science, and would help to establish the proper relations between Geology, Zoölogy, and Botany, on the one hand, and History, Political Economy, and Sociology, on the other.

In most of the cases indicated above, the instruction in the subjects specified might properly be assigned to some of the Departments now in existence. In other cases, as in Paleo-Botany, the instruction might be assigned to the Department of Paleontology, or it might be given partly in the Department of Botany, and partly in the Department of Geology. It is earnestly hoped that generous provision for these lines of work may be made at an early day, though most of it cannot be regarded as more pressing than enlarged facilities for work already established.

## THE DEPARTMENT OF MATHEMATICS

The Department of Mathematics is occupying temporary and inadequate quarters in the Ryerson Physical Laboratory and, in addition, has the use of certain class-rooms in Cobb Hall. These quarters are not only inadequate for the work of the Department, but the rooms in Ryerson Laboratory will be needed at once by the Department of Physics. It is therefore clear that the Department of Mathematics should have other and more commodious rooms at its disposal. Furthermore, the Department is desirous of introducing laboratory methods in its work. A beginning in this direction has already been made with excellent results, but the successful execution of the plan on the desired scale calls for much more space than is now available. This Department and the Department of Astronomy, which is in equal need of more commodious quarters, could be accommodated in a common building. While the idea that the Department of Mathematics needs laboratory facilities especially adapted to its peculiar needs, the same as the other sciences, is a relatively new one, it is not without a sound basis, and the enterprise of the Department in this direction should be encouraged.

The Department has recently introduced certain elementary courses in Applied Mathematics. With the exception of these elementary courses, its work is at present virtually confined to Pure Mathematics. The interests of the University will be materially furthered if provision can be made for a wider range of work in the lines of Applied Mathematics. Provision for work of this sort will be of advantage not only to the Department of Mathematics, but to the Departments of Physics, Astronomy, and Geology as well. The center of the work along these lines would be found in the application of Mathematics to the various problems of Physics, Astronomy, and Geology on the basis of initial hypotheses furnished by the physicist, the astronomer, and the geologist. Such work would help to unify the scientific work of the University by connecting the work of the several Departments concerned.

The laboratory equipment needed by the Department of Mathematics is less than that needed by most other Departments of Science; yet many things in the way of models and instruments, in addition to that which the Department now has would be helpful for its work.

The teaching force of the Department is made up of two Professors, one Associate Professor, three Assistant Professors, and one Instructor. All of these officers carry full instructional work, and four of them give instructional work to the extent of eight Majors per year. The number of students in the Department is such that it is necessary to call on Fellows for instructional work.

Important lines of research work have been carried on by various members of the Department since the beginning of the University. So much of it as has been published is mentioned in the bibliography accompanying this report.

## THE DEPARTMENT OF ASTRONOMY

The location of the Yerkes Observatory at Lake Geneva makes necessary the maintenance of a second observatory, which can be used as a student laboratory on the campus. The observatory on the campus at the present time is altogether inadequate for the needs of the work. A new observatory, perhaps best in connection with a building for the Department of Mathematics, and a substantial increase in its equipment are necessary for the most effective instructional work.

In spite of the rich equipment of the Observatory at Lake Geneva, the Director and the Visiting Committee have pointed out various lines in which additions might be advantageously made. One of the things especially desired is a great reflecting telescope. Such a great reflector is regarded by astronomers as the next important step in the development of telescopic work.

The essential optical part of such a telescope has been constructed at Yerkes Observatory. When suitably mounted, it is believed that it will yield results beyond the reach of any existing instrument. The researches in which it would be certain to surpass the largest reflecting telescope are (1) the photography of nebulae; (2) the photographic study of stellar spectra; (3) the photometric observations (mainly photographic) of faint, variable stars beyond the reach of other telescopes; and (4) the measurement of the heat radiation of the stars. The best results from the use of this telescope would come, it is believed, from its installation in various positions at various times. It might be used to great advantage in a climate similar to that of California for a few years, and then in a position south of the equator. The cost of mounting the mirror, and of providing a suitable building, with all necessary accessories, would be considerable, but the results would also be great.

The scientific force at the Yerkes Observatory, with its present instrumental equipment, is able to produce more photographs of the sun, moon, stars, nebulae, and their spectra, than can be measured and reduced with the present force. In the opinion of the Director, an additional income of a few thousand dollars, available for the employment of assistants and computers, would double the output of the Observatory. Under these circumstances, it would seem that some additional expenditure would be wise economy.

The Department is in need of a publication fund. Many of the results of the work done at the Observatory are of such a nature that their publication is necessarily expensive, and not to be undertaken save by a fund especially provided for this purpose. One of the most important pieces of astronomical work ever executed, a general catalogue of all known double stars, prepared by Professor Burnham, has already been awaiting publication for several years because of the lack of funds available for this purpose.

The teaching and investigative force of the Department consists of four Professors, one Assistant Professor, two Instructors, and three Assistants, in addition to the Secretary and Librarian. All except two of these officers are stationed at the Yerkes Observatory. No other Department of the University devotes so large a proportion of its time and energy to research work. The ends to which it is directed are indicated in the report of the Director of the Yerkes Observatory. The results which it has already accomplished have commanded the attention of the astronomical world.

#### THE DEPARTMENT OF PHYSICS

The Department of Physics occupies the larger part of the Ryerson Physical Laboratory. Well adapted as this building is to the needs of the Department, it would be of advantage if a small building could be erected in the rear of the present hall, which might be used as a shop and testing laboratory. The removal of such heavy work from the present building would facilitate the prosecution of refined work.

The equipment of the Department consists of something like 1,400 pieces of apparatus, many of which have been constructed in the Laboratory. The equipment for many lines of work is adequate, but provision for certain other lines has never been made. Thus, there is little equipment for work in Applied Electricity, or for work in high and low temperatures. Equipment for these lines of work is one of the special needs of the Department. Such equipment would make possible the inauguration of some lines of work which have never been undertaken. It would also be of great advantage, not only to the Department of Physics, but to several other Departments as well, if more extensive work in Mechanics were provided.

The teaching force of the Department consists of one Professor, who is Head of the Department and Director of the Laboratory, two Assistant Professors, three Instructors, one Research Assistant, and two Instrument Makers. The Department offers annually forty-four Majors of instruction, twenty of which are in the Graduate School.

The following lines of investigative work are now being prosecuted in the Laboratory:

1. The production of diffraction gratings.
2. The accurate determination of the velocity of light.
3. The nature of coherer action.
4. Measurement of the mean free path by means of spark potentials.
5. The viscosity of gases.
6. Peculiarities in the iron spectrum.

The publications of the Department are enumerated elsewhere in this report.

#### THE DEPARTMENT OF CHEMISTRY

Two new lines of work should be undertaken by the Department as early as practicable. First and foremost is work in Physical Chemistry. While the Department was among the first to apply the results and methods of Physical Chemistry, it has been impossible, up to the present time, to meet the needs of this important branch of the subject, and, so far as this work is concerned, the University is falling behind other institutions. The need for the establishment of this work is the greater, in that many other Departments—namely, Physics, Geology, Physiology, Botany, and Medicine—would profit by it. The present needs in this line might be met by the appointment of an instructor of high rank, and by providing means for equipment. For the adequate establishment of this work a sum of not less than \$10,000 would be required for equipment. The present Laboratory could not afford appropriate quarters for the work, so long as the work now done there remains.

A second need of the Department is the establishment of work in Technical Chemistry. These courses cannot be postponed beyond the time when technical work is established, and even now there is much and reasonable demand for them.

The Faculty of the Department of Chemistry consists of one Professor, two Associate Professors, three Instructors, four Assistants, and one Laboratory Instructor. The large Kent Laboratory, built expressly for this Department, is already overcrowded, and provision will need to be made for additional students in the immediate future. The equipment of the Department, as originally planned, has never been completed, and such completion is much to be desired.

Important lines of investigation have been carried on in the Department since the organization of the University. The problems now under investigation are the following:

1. The dissociation phenomena of polyhydric alcohols, etc., which is intended to include the carbohydrates, and to embrace finally a study of fermentation from a chemical point of view.
2. The determination of the molecular weight of calomel vapor, and the study of the relations of amorphous to crystalline sulphur.
3. A study of saponification phenomena and imido-ethers, with a view to obtaining light on esterification phenomena in general.
4. The velocity of molecular rearrangements.
5. The determination of the affinity constant of the second hydrogen ion of carbonic acid.
6. Methods of liquefying gases.

#### THE DEPARTMENT OF GEOLOGY

Since the second year of the University, the Department of Geology has occupied temporary quarters in the Walker Museum. This building, originally constructed for other purposes, is ill adapted to the use of the Department, and is urgently needed for museum purposes. The library, laboratory, and the class-room facilities are all insufficient for the



present needs of the Department, and are becoming annually more so. Lack of room, and of the facilities which room would make possible, constitute a serious hindrance to some of the work now done, and are prohibitory of other phases of work which should be inaugurated. Under these circumstances, the first need of the Department is a suitable building which shall furnish not only adequate space, but special appointments adapted to the work of the Department.

It is important that certain phases of the subject not now provided for should receive adequate treatment. This is especially true of Economic Geology. It would seem that the work which deals with one of the largest of our natural resources should not remain neglected. Such work will be indispensable so soon as the work in Technology is established, and is in notable demand at the present time. Another desideratum of the Department is provision for expeditions to more or less distant points in the interest of the science. Such expeditions are already a factor of the work in several other universities, and should be inaugurated here as soon as proper provision can be made. Such work might advantageously be carried on in connection with the Department of Paleontology.

It is eminently desirable that permanent instructors should replace, to some extent at least, the temporary assistants who are now called on from time to time to meet the needs of instruction. This is especially true of the work in physiographic lines, and in the elementary field work in Geology.

As in some other Departments, some of the instructors are overburdened with instructional work, and their opportunities for investigative work are thereby restricted. This difficulty would be relieved by the appointment of Research and Laboratory Assistants.

The resident instructional force of the Department consists of three Professors, one Assistant Professor, and an Assistant (part time). In addition, one special course is given every second year by a non-resident Professor, and another at irregular intervals by a second non-resident Professor. Special Assistants are also employed from time to time, especially during the Summer Quarter.

Important investigative work, some of it of a fundamental nature, has been done by various members of the Department (see Bibliography), and work of equal importance is now in progress. Among the more notable lines of work are :

1. The published and unpublished contributions to the theory of the origin of the earth, and to the fundamental doctrines of Geology.
2. Notable contributions to the theory of metamorphism and ore deposits.
3. A new and thoroughgoing classification of igneous rocks, to which one member of the Department has contributed.
4. Important studies in Pleistocene Geology, prosecuted at various points in the United States.
5. Contributions to Paleontologic Geology.

#### THE DEPARTMENT OF ZOÖLOGY

The Department of Zoölogy has a building of its own, but this building is shared, at the present time, with other Departments. Notable additions to its equipment, both in laboratory and library, are urgently needed by the Department for the most successful prosecution of its present work. The library of the Department has never been ample. The limited funds available for this purpose have made it necessary to forego many needed books, some of which are rare and expensive. The best conditions for work in the laboratory will never be afforded until the library facilities are extended much beyond their present limits. It is estimated that the library now receives less than 20 per cent. of the current publications in Zoölogy, and it is

still more notably deficient in the literature published before the beginning of the University. The equipment of the laboratories is less deficient than that of the library, and fairly meets the needs of the ordinary phases of departmental work. In material for a working museum, however, large additions could be utilized to good advantage, and are needful for many phases of the work.

There are great and attractive possibilities in the way of extension of the work of this Department. One line of extension which would be most profitable is in the establishment of vivaria, equipped with facilities for maintaining numerous forms of animal life under conditions as nearly normal as possible. The importance of such vivaria, which should include a marine aquarium, can hardly be overestimated, and would hardly be less for Botany and for the various Departments concerned with medical work, than for Zoölogy. The expense of establishing and maintaining such vivaria would be large, but the wide range of interests affected would seem to afford justification for it.

The Department also regards a lake biological station as of great importance. The ideal place for such a station is on some of the smaller lakes, such as abound in southern Wisconsin. In close connection with such a biological station, a biological farm should, if possible, be developed. The union of these two projects properly supported, would mark an epoch of unprecedented importance in the history of biology. The farm is of especial importance in providing facilities for the study of living organisms, as laboratories provide facilities for the study of dead ones. The biological farm would provide the material for the study of questions of heredity, variation, adaptation and evolution, questions of fundamental importance which can never be adequately studied in the laboratory. The need for provision for this sort of work has been felt since the time of Darwin, and has been strongly urged by many biologists; but the project has never been realized except on a small scale through individual effort. Such a farm should be so developed as to afford facilities not only for zoölogical, but also for other phases of biological work.

The instructional force of the Department consists of one Professor, two Associate Professors, and one Assistant, besides temporary Assistants appointed from time to time.

The investigative work of the Department is not less in amount or subordinate in importance to that of the other Departments of Science. In the nature of the case, many of the investigations in biological work demand long periods of time, and many of the most important lines of investigation have not yet reached their final conclusion. The publications of the Department are enumerated in the bibliographic volume of this report.

#### THE DEPARTMENT OF ANATOMY

The Department of Anatomy has its own building which it shares with the Department of Neurology. Though this building is but a few years old, it is already too small for the work of the Departments by which it is occupied. This is the result of the rapid growth of the work in Anatomy, consequent on the establishment of medical work at the University. A considerable increase of room is needed, even with the present number of students, and this number is likely to increase rapidly with the development of medical work. Many phases of work which the Department, in conjunction with the associated Departments, should undertake, are now impossible on account of lack of space.

The Department is well equipped with instruments and models for the ordinary phases of medical instruction, but it is without the equipment necessary for many phases of advanced work which it is desirable to establish. Much of the needed equipment would be equally serviceable to the other biological Departments. The need of vivaria is referred to under the Department of Zoölogy; but they would be equally serviceable to the Departments more imme-

diately concerned with medical work. Provision for animal experimentation is also a great desideratum, and a working museum, which would be serviceable to other biological Departments is indispensable for the best results. The library of the Department is sufficient to meet the needs of the ordinary medical student, but does not afford proper facilities for those phases of research work which demand extended library facilities.

From the point of view of the University in general, as well as from the point of view of the Departments immediately concerned, it is most desirable that facilities for work in medical lines be extended far beyond those necessary for the work leading to the medical degree. The field of research here is as broad, and at least as important, as in any other department of science, and liberal provision for research work is likely to be productive of large results. To this end, appropriate space and equipment should be provided, and time for research accorded to those who are skilled in such work.

The Laboratory has afforded facilities for advanced work to a number of professors and instructors in other colleges and universities, and to several practicing physicians in the vicinity. This phase of work should be encouraged and adequate facilities for it provided as soon as practicable.

The Faculty of the Department consists of (June, 1902) one Professor, two Assistant Professors, one Instructor, three Associates, and two Assistants.

#### THE DEPARTMENT OF PHYSIOLOGY

The work of the Department of Physiology as now organized includes, in addition to Physiology proper, Physiological Chemistry, which is administered as a Sub-department, and Pharmacology, which is administered in connection with Physiological Chemistry.

The expansion of the work in these Departments incident to the establishment of medical work at the University, has rendered some phases of its equipment deficient. There is need for a larger amount of material which may be used for demonstration purposes, and the increased laboratory work makes an increase in the annual appropriation for the maintenance of the Laboratory necessary. At present, the appropriation is not sufficient to maintain the Laboratory at its past standard.

One of the urgent needs of the Department, in common with other Departments, is provision for the keeping and breeding of animals. If adequate animal houses or a proper animal farm were established along the lines indicated in connection with the Department of Zoölogy, the needs of this Department would be met.

In Physiological Chemistry, the laboratory equipment is fairly satisfactory, but the library is meager, and the room available is insufficient, and is likely to be wanted soon for work in Physiology proper.

The work in Pharmacology is in a less satisfactory condition. It has no space of its own, and has little equipment beyond that which it shares with Physiological Chemistry. Its library and its investigative work are hardly established.

The force of the Department in Physiology proper consists of one Professor, one Assistant Professor, one Instructor, one permanent and one temporary Assistant. In Physiological Chemistry, the force consists of one Assistant Professor and two Assistants, who also have charge of the work in Pharmacology.

Among the investigative studies now being carried on by members of the Faculty are the following:

1. The study of the action of solutions upon the heart and respiration of mammals.
2. The cause of the rhythmical activity of the heart.
3. Studies in fermentation.

4. The stimulating action of salts on motor nerves, and the relation of salts to nerve irritability.
5. The relation of the activity of trypsin to its electrical dissociation.
6. The Chemistry of nervous tissues, and a method for the quantitative chemical examination of developing tissues.
7. The rôle of lecithin in cell phenomena.
8. The conversion of trypsinogen into trypsin.
9. The relation of lecithin to the nucleins in the embryo chick (in connection with Anatomy).
10. A comparative study of the Chemistry of the brain at different stages of development (in connection with Neurology).

In addition to the above, investigative work is being carried on in the Laboratory by several physicians and advanced students.

#### THE DEPARTMENT OF NEUROLOGY

The work of the Department is now done on the second floor of the Anatomy Building. The equipment of the Department for general elementary work is fairly good, while that for investigative work is less than could be desired. In the investigative work of this Department it is important that research students have separate rooms, or, at any rate, space at their individual command, in which their material may be free from the disturbance of a public room. Such space is not now available.

The Department is desirous of making a very complete series of microscopic preparations of different portions of the nervous system. Such a collection should include sections from different animals at different ages, prepared by different methods. It would be invaluable for investigation here, and for the verification of results attained elsewhere. The labor and expense of preparing and maintaining such a series of sections is beyond the present resources of the Department.

For completeness, certain new lines of work should be inaugurated by the Department. These are as follows: (1) The comparative Anatomy of the nervous system, a line of work which has many important bearings. Its connections are morphological. (2) Cytological work, which has many affiliations, but which is destined to be of special use in Pathology. (3) The study of the nervous system as modified through experimental injuries. This line of work, trenching somewhat on the domain of Psychology and Physiology, would be of service in elucidating the finer Anatomy of the central nervous system.

The instructional force of the Department consists of one Professor and three Assistants.

At present, the investigative work of the Department is directed to problems arising from the study of growth. Within this general field, numerous problems are now under investigation.

#### THE DEPARTMENT OF PALEONTOLOGY

The Department of Paleontology, discontinued after the death of Professor Baur, was re-established at the end of the decade. Because of its protracted suspension, the growth of this Department has not kept pace with that of the other Departments of Science. No Department of the University depends more completely on collections, and there is especial reason, in its lack of material, for liberal support. This can be most effectively provided by appropriations for expeditions to the best collecting grounds. There is added reason for prompt action in this direction, since the collecting grounds are being rapidly appropriated. Such expeditions would also confer great benefit on the Departments of Geology and Zoölogy.

## THE DEPARTMENT OF BOTANY

The Department of Botany is housed in its own building, which is adequate for the work now done by the Department. The equipment for the elementary work is reasonably satisfactory, but that for the advanced work is meager. The Department has given precedence to equipment for elementary courses, both because such equipment is less expensive than that for advanced work, and because such work necessarily antedates the higher work.

The greatest need of the Department is such extension of its equipment as will make the advanced and research work already begun, more efficient. Among the things urgently needed in this direction is an officer to take charge of supplies. The material to be supplied to students in this Department must be secured at different seasons and from different parts of the country, and the supply must be steadily maintained. It is impracticable for an instructor doing full work to assume this extra burden. Another urgent need is museum material, especially demonstration collections, for use in the various laboratories of the Department.

After proper provision for the present work has been made, it is desirable to add such phases of work as will keep the Department abreast with the modern development of the science. To this end, the important needs are as follows:

1. *Plant houses and garden.*—No botanical institution can maintain its place as a center of botanical investigation without suitable plant houses and gardens equipped for handling plants under varied conditions. Such facilities have made German universities centers for botanical work. Similar facilities are being provided in the principal universities of this country. For this purpose, a space equivalent in area to a city block, and readily accessible to the campus, is desired. Without such houses and gardens, many of the problems of Plant Physiology, Morphology, and Ecology cannot be attacked in an effective way. A temporary and undesirable substitute for such an equipment could be provided by giving to the Department control of Hull Court for greenhouse and garden purposes.

2. *Expeditions.*—As soon as practicable, it is desirable to provide for expeditions to more or less distant regions. One of the most important lines of botanical investigation today consists in the study of the vegetation of definite regions in relation to its physiographic environment. Such expeditions are becoming more and more frequent in connection with botanical establishments, and are in every way to be encouraged.

3. *Experimental Morphology.*—This phase of botanical work should be introduced whenever plant houses and gardens are available. In the near future, any botanical center that is unable to offer facilities for this line of work will be seriously handicapped.

4. *Pathology.*—Provision for instruction and investigation in Plant Pathology is greatly to be desired. The practical work of the national government and of state agricultural colleges calls for men with suitable scientific training along this line. This work has not been adequately provided for in this country.

5. *Anatomy.*—A plant anatomist, who should combine with his anatomical study of living forms a knowledge of Paleo-Botany, should be added to the botanical staff. At present, this important phase of instruction and research is entirely unrepresented, except as touched on incidentally in morphological work. Work in Paleo-Botany would be of advantage to the Department of Geology, as well as the Department of Botany.

The instructional force of the Department consists of two Professors, three Instructors, one Associate, and two Assistants.

No Department of Science has extended its influence more widely in secondary schools than the Department of Botany.

The research problems now under investigation are numerous. Some of them are in the field of Morphology, some in the field of Cytology, some in the field of Physiology, and some in the field of Ecology.

## THE DEPARTMENT OF PATHOLOGY AND BACTERIOLOGY

The work in Pathology, inaugurated when the medical courses were established, is carried on in temporary quarters in the Zoölogy and Anatomy Buildings. The space in which this work is done is so limited as to necessitate the repetition of elementary courses to a burdensome extent, and restricts the development of research work.

The absence of University hospitals renders the securing of the necessary gross material irksome, and the lack of autopsy facilities is a serious drawback. The development of advanced work in Pathology, for which the time and conditions are ripe, waits on the increase of equipment and space.

The work in Bacteriology is now carried on in the Zoölogy Building. Work in this subject has been in progress for several years, though it has been recognized as a Sub-department only since the establishment of the medical courses. The medical work has so increased the demand for this work, that the space formerly allotted to it is now too small. This necessitates an otherwise unnecessary repetition of work with classes, since but small numbers can be accommodated at one time, and also interferes with investigative work. The work of the Department is also hampered for want of a proper house for animals, without which it is impossible to enter upon certain promising fields of experimental work.

The establishment of the work in medicine has increased the demand for work in Hygiene, and the present quarters do not afford adequate facilities for it. Much of the equipment used in bacteriological work could be utilized for work in Hygiene, were the quarters more commodious.

The instructional force of the Department consists of one Professor, one Associate, and one Assistant in Pathology, and of one Associate Professor, one Associate and one Assistant in Bacteriology and Hygiene.

This branch of the Department now has in progress studies dealing with the natural and acquired resistance shown by organisms to disease germs, and other injurious agencies.

Respectfully submitted,

ROLLIN D. SALISBURY, *Dean.*

## THE SENIOR COLLEGES

To the President of the University:

SIR: I submit herewith my report on the condition of the Senior Colleges for the academic years 1899-1900, 1900-1901, and 1901-2; also statistics and considerations relating to the Senior Colleges for the preceding years:

### TOTAL MEMBERSHIP OF THE SENIOR COLLEGES

The total membership of the Senior Colleges since the opening of the University up to June, 1902, is shown by the following table:

TABLE A  
TOTAL MEMBERSHIP OF THE SENIOR COLLEGES TO JUNE, 1902

	Men	Women	Total
I. <i>Graduates</i> .....	699	598	1,297
II. <i>Non-graduates</i> :			
Dismissed to other institutions.....	14	10	24
Transferred to Graduate School.....	..	3	3
Transferred to Divinity School.....	1	..	1
Withdrawn.....	1	3	4
Removed.....	2	..	2
Deceased.....	1	4	5
Advanced standing only, no residence in Senior College.....	1	5	6
Received Associate title, but took no work in Senior College.....	10	10	20
In residence 1901-2, not graduated.....	122	116	238
Not in residence 1901-2:			
Summer only.....	12	6	18
Returned to University, Summer, 1902.....	17	13	30
Announced intention of returning.....	9	12	21
Will not return.....	12	6	18
Doubtful.....	8	6	14
No response to inquiries.....	38	30	68
Total.....	947	822	1,769

In the above table it appears that out of the 1,769 students who have been matriculated in the Senior Colleges since the opening of the University, 189 have neither graduated nor been in attendance during the year 1901-2. The corresponding number of three years ago was sixty-four. It might thus appear that a considerable number of students had entered upon the work of the Senior Colleges within the past three years who apparently would not be graduated. But from this total it is proper to deduct, in the first place, students who have merely received the Associate degree, but have taken no work in the Senior College. Of these, as appears above, there are twenty; and although for certain purposes it may be convenient to class a student in the Senior College as soon as he has received the Associate title, it is not proper to consider him as really a Senior College student. The very small number of students (ten men and ten women) who have left the University immediately upon receipt of the Associate title would indicate that there is no general disposition as yet to regard the completion of the work of the Junior College as a natural stopping-point. As will be shown later on, in the case of a typical class, the great proportion of students who have left college without completing the work for the Bachelor's degree, have left before completing the work of the Junior Colleges. Their departure then, or after they have entered upon the work of the Senior College, is due to a variety of reasons; but there is little or no tendency to leave merely because the work of the Junior Colleges has been completed.

Another class of students which should properly be deducted from Senior College students, out of residence, is that of those students who were here registered for the summer only. Such students are the members of other colleges and universities, who take advantage of our Summer Quarter to pursue work which shall count toward a degree in their own institutions. They do not become candidates for a degree in the University of Chicago, and hence are not properly to be considered as among those who fail to graduate. It is interesting to note that thirty of the students who were not in residence during the year 1901-2 returned for work in the summer of 1902.

In reply to inquiries sent to all Senior College students out of residence, replies were received from fifty-four. Of these, nineteen do not expect to return; fourteen were doubtful. The remainder expect to return or have since returned. Of those who expect to return, five are absent on account of sickness, six teaching, five for financial reasons, and five for various other reasons. The number of students, therefore, who have not been in residence this year and who have not replied to inquiries is reduced to sixty-eight.

ATTENDANCE IN THE SENIOR COLLEGES

The statistics covering the attendance in the Senior Colleges for the ten years are presented in the following table:

TABLE B  
ATTENDANCE IN THE SENIOR COLLEGES 1892-1901. ANALYSIS BY QUARTERS AND SEXES

	SUMMER			AUTUMN			WINTER			SPRING			YEAR		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
1892-93.....	...	...	...	28	6	32	26	5	31	26	5	31	33	7	40
1893-94.....	...	...	...	32	11	43	32	14	46	42	31	73	50	34	84
1894-95.....	28	10	38	38	27	65	43	37	80	44	41	85	61	49	110
1895-96.....	23	13	36	62	47	109	82	53	135	85	55	140	113	74	187
1896-97.....	40	26	66	69	54	123	88	71	159	116	79	195	125	115	240
1897-98.....	62	29	91	97	70	167	115	84	199	123	93	216	172	138	308
1898-1899:															
A.B.....	38	18	56	56	42	98	63	43	106	64	43	107	92	60	152
Ph.B.—L.....	18	25	43	33	56	89	35	62	97	33	78	111	50	104	154
Ph.B.—C.....	1	..	1	..	..	..	..	..	..	..	28	1	..	1	
S.B.....	17	3	20	17	7	24	17	8	25	19	9	..	35	14	49
Total.....	74	46	120	106	105	211	115	113	228	116	130	246	178	178	356
1899-1900:															
A.B.....	36	24	60	56	44	100	66	43	109	61	41	102	97	72	169
Ph.B.—L.....	18	27	45	27	61	88	31	63	94	33	67	100	43	98	141
Ph.B.—C.....	1	1	2	..	1	1	2	3	1	2	3	2	2	4	
S.B.....	17	4	21	22	9	31	22	10	32	23	11	34	39	13	52
Total.....	72	56	128	105	115	220	120	118	238	118	121	239	181	185	366
1900-1901:															
A.B.....	51	14	65	64	49	113	76	45	121	72	51	123	109	69	178
Ph.B.—L.....	20	41	61	39	72	111	41	75	116	37	79	116	67	132	199
Ph.B.—C.....	1	1	1	..	1	4	..	4	6	..	6	7	2	9	
S.B.....	25	6	31	25	12	37	23	12	35	26	17	43	53	23	76
Not candidates for degree.....	1	..	1	..	1	1	1	1	2	1	..	1	2	1	3
Total.....	97	62	159	129	134	263	144	133	277	143	147	290	238	227	465
1901-1902:															
A.B.....	47	24	71	69	50	119	66	52	118	62	55	117	102	77	179
Ph.B.—L.....	33	46	79	49	71	120	50	74	124	38	87	125	70	138	208
Ph.B.—C.....	9	..	9	4	1	5	10	2	12	15	2	17	18	2	20
S.B.....	27	9	36	31	12	43	22	12	34	27	15	42	51	25	76
S.B. pre-medical.....	..	..	..	..	..	..	6	..	6	22	..	22	22	..	22
A.B. pre-medical.....	..	..	..	..	..	..	2	..	2	3	..	3	5	..	5
Not candidates.....	2	..	2	..	..	..	..	..	..	..	..	..	2	..	2
Total.....	118	79	197	153	134	287	156	140	296	167	159	326	270	242	512



The table shows a constant growth in the attendance of the Senior Colleges. This rate of increase is nearly uniform in absolute gain, although not in the percentage of gain, with the exception of the past three years. For the year 1899-1900 the gain was but ten; in the year 1900-1901 there was a gain of ninety-nine; and in the year 1901-2 there has been a gain of forty-seven. The gain during the past two years has been nearly uniform throughout the four Quarters, and may be attributed in part to an increasing attendance in the summers of students from affiliated colleges, who have in this way fulfilled their three months' required residence; in part to an increasing number of students received from other institutions; and in part to the larger number of students received from the Junior Colleges. One cause of increase during the year 1901-2 was the establishment of medical work at the University. During the Spring Quarter 1902 it will be noted that twenty-five students in the Senior Colleges were registered for medical work. The third source of increase, viz., the number entering from the Junior Colleges, corresponds to the fact that the entering classes in the Junior Colleges in the autumn of 1899, and also in the autumn of 1900, were considerably larger than the number in the preceding years.

In estimating the attendance of the Senior Colleges, it may further be noted that at the close of the Spring Quarter, 1901, in addition to the students who received the title of Associate at the June Convocation, there were forty-five students in the Junior Colleges who had eighteen or more Majors' credit, but were prevented from receiving the title of Associate by reason of failure to complete fifteen Majors of the required work of the Junior Colleges. It is noticeable that of these forty-five students, twenty-nine were students who had entered with advanced standing from other institutions, and, therefore, would naturally be more irregular in their classification, while only sixteen students who had taken all their work in the University were included in this class. The full statement of these students follows:

STUDENTS REMAINING IN JUNIOR COLLEGES, WITH EIGHTEEN OR MORE MAJORS' ADVANCED STANDING

	All Work in University of Chicago	Admitted with Advanced Standing	Total
Men .....	11	13	24
Women .....	5	16	21
Total .....	16	29	45

In the corresponding figures for the Spring Quarter, 1902, which follow, the ratio is reversed:

	All Work in University of Chicago	Admitted with Advanced Standing	Total
Men .....	26	15	41
Women .....	9	6	15
Total .....	35	21	56

Comment upon the relative numbers of men and women, and upon the registrations by degrees, will be presented at a later place in this report.

PROPORTION OF STUDENTS IN THE SENIOR COLLEGES WHO HAVE TAKEN ALL THEIR COLLEGE WORK IN THE UNIVERSITY

In my report for the year 1898-99 I presented statistics concerning the total number of students who had been enrolled in the Senior Colleges, from which it appeared that out of 929 students who had been enrolled in the Senior Colleges, 424, or 46 per cent., had taken all their work in the University, and that 505, or 54 per cent., had done more or less of their college work

in other institutions. Those figures did not represent the facts of the case in the most adequate way; for inasmuch as there is a large number of students who enter for one year, or less, of work in the Senior Colleges, it is evident that the percentage of students with advanced standing in the total enrolment would not be so great as the percentage of graduates who had entered with advanced standing. I have, therefore, prepared the statistics of the graduating classes for the four years 1898-1902, in which the proportion of students who come to us from other institutions is shown to be a rapidly increasing one.

TABLE C

YEAR	ALL WORK DONE IN UNIVERSITY OF CHICAGO	ENTERING FROM OTHER INSTITUTIONS WITH ADVANCED STANDING										Total with Advanced Standing	FROM GRADUATE AND DIVINITY SCHOOLS	FROM AFFILIATED SCHOOLS WITHOUT RESIDENCE	TOTAL GRADUATES
		With Less than 18 Majors of Advanced Standing				With 18 or More Majors of Advanced Standing									
		Less than 9	9 Majors	9 to 18	Total Less than 18	18 Majors	More than 18 Less than 27	With 27	With 33	Total 18 or more Majors					
<i>1898-1899:</i>															
Men ....	46	4	1	9	14	2	13	14	..	29	43	2	1	92	
Women..	30	4	2	11	17	3	8	18	1	30	47	..	2	79	
Total..	76	8	3	20	31	5	21	32	1	59	90	2	3	171	
<i>1899-1900:</i>															
Men ....	36	5	..	9	14	4	3	7	4	18	32	5	..	73	
Women..	32	9	2	17	28	3	11	8	5	27	55	2	..	89	
Total..	68	14	2	26	42	7	14	15	9	45	87	7	..	162	
<i>1900-1901:</i>															
Men ....	30	19	2	11	32	2	13	11	14	40	72	2	..	104	
Women..	29	13	4	15	32	4	14	13	9	40	72	2	1	104	
Total..	59	32	6	26	64	6	27	24	23	80	144	4	1	208	
<i>1901-1902:</i>															
Men ....	51	17	9	13	39	5	21	20	12	59	98	3	..	151	
Women..	31	17	6	12	35	8	28	28	4	65	100	4	..	138	
Total..	82	34	15	25	74	13	47	48	16	124	198	7	..	287	

SUMMARY

	1898-1899				1899-1900				1900-1901				1901-1902			
	M.	W.	T.	%	M.	W.	T.	%	M.	W.	T.	%	M.	W.	T.	%
All work in U. of C.	46	30	76	44	36	32	68	42	30	29	59	28	51	31	82	28.6
3 years in U. of C...	5	6	11	6+	5	11	16	10	21	17	38	19	28	23	49	17.1
2 years in U. of C...	11	14	25	15+	13	20	33	20	13	19	32	16	18	20	38	13.2
1 year in U. of C....	17	28	53	31+	10	19	29	18	24	27	51	34	41	54	95	33.1
1 Quarter in U. of C.	..	1	1	1	4	5	9	6	14	9	23	11	12	4	16	5.6
Transfer or without residence.....	3	2	5	3	5	2	7	4	2	3	5	2	3	4	7	2.4
Total.....	92	79	171		73	89	162		104	104	208		151	136	287	

In the above table, one year is understood to mean at least one year, but less than two; two years, at least two years, but less than three; and three years, at least three years, but less than four.

These tables show that the proportion of students who are received on advanced standing is considerably larger than the figures of the former report indicated. They further show the surprising fact that for the four years in question, although the total number of graduates

increased from 171 to 287, the number who had taken all the college work in the University of Chicago had increased in actual numbers but six—from 76 to 82; and the percentage of such students has actually decreased from 44 to 28. In fact, during the first three of the years in question, the actual number in the graduating classes who had taken all of their work in the University of Chicago decreased from 76 to 59. The increase, therefore, in the number of graduates during the past four years has been entirely, or almost entirely, due to an increase in the number who have entered with advanced standing from other institutions, of whom there were 90 in the graduating class of the year 1898-99 and 198 in that of the year 1901-2.

It will be noted further that this increase has been distributed with considerable equality among the different classes of students who have come with one, two, and three years respectively of advanced standing, but that there has been a large increase in the number of students who have received their degree after one Quarter of residence. This latter class of students, however, has not been so large during the year 1901-2 as during the year 1900-1901, in which there were 23, or 11 per cent of the graduating class who were here for but one Quarter. If the number 23 be deducted from the total of 208 graduating in 1900-1901, it will be seen that the remaining number of 185 does not represent any marked increase in the number of graduates for those three years. The number of graduates in the year 1901-2, however, after deducting the 16 who have had but one Quarter in residence, is 271—a very marked increase over the 185 of the preceding year. Inasmuch as most of these students who take one Quarter of residence in the Senior College do their work in the Summer Quarter, in which the undergraduate life is essentially different from that during the remainder of the year, it is evident that these students really form a distinct class. They do not come in contact with any of the factors of undergraduate life other than those of the class-room, and even the class-room work is considerably modified in the summer, by the fact that so large a portion of the students who are in residence are teachers, and are therefore in a certain sense technical students.

The presence in the undergraduate body of so large a proportion of students who have done part of their work elsewhere undoubtedly modifies the general character of undergraduate life. Some of these students come to us from other colleges of similar character to our own. A relatively large proportion, however, is probably made up of students who have been engaged in teaching, or who have completed work at some institution, and wish our Bachelor's degree in addition to theirs. These students are all of a serious sort and are anxious to make the most of their opportunities for study. On the other hand, they are not so apt to blend in the social life of the institution, and it is probable that, for a large proportion, the technical aim is prominent in their work. Further comment upon the distinction that is here suggested will be made below. It would be premature, on the basis of the above figures, to hazard a prediction as to whether the figures for the three years in question represent a permanent tendency or a temporary phase in the growth of the Senior Colleges, but if a sentiment of solidarity and a fairly consistent standard of method and efficiency are to be maintained, it is certainly desirable that our Bachelor's degree should not signify, for the most part, that only a portion, and perhaps a very small portion, of the work has been performed in the University. It would practically transform the University, so far as its undergraduate work is concerned, from an institution which gives a course of training and cultivation, to an institution which estimates the work of various smaller institutions and confers degrees. It is, of course, not implied that the University should refuse to receive serious students who desire its facilities and the opportunity for completing work with us, but it is certainly desirable, in the interests of the cultivation and education which come from intimate association, through a long period of undergraduate life, that the proportion of students who do all, or nearly all, of their work at the University should be larger than it is.

## SUMMER WORK

One of the unique features of the University at its beginning was the Summer Quarter. It was recognized at once that this presented unusual opportunities for teachers in schools and colleges, but it was supposed, naturally, that the advantages of the Summer Quarter would be sought much more extensively by teachers, who would naturally enroll in either the Graduate School or as unclassified students, than by the regular undergraduates. It is therefore of interest to see how far undergraduate students have availed themselves of the opportunities of the Summer Quarter. Tables D, E, and F, which follow, present statistics which show how many students of the classes which have already graduated have taken any or all of their work during the Summer Quarter, and also show how much work has been so taken. In these tables the figures under the columns headed 1894-95, 1895-96, etc., refer to the graduates of those years, *e. g.*, of the 129 who graduated in the year 1896-97, 76 took summer work at some time during the course, 1 completed the required residence work by attendance during the three Summer Quarters (this of course was the case of a student who had credit for three years of work elsewhere), and 52 took no summer work.

The accompanying figures indicate that from the beginning a large number of undergraduate students have availed themselves of the Summer Quarter. During the past six years the absolute number of students who have attended during the Summer Quarter has remained about the same, except for the year 1901-2. The number of students who have not attended during the Summer Quarter has remained nearly stationary, except for the years 1900-1902. It is premature to draw an inference as to whether the figures for the last years indicate a permanent tendency or not, but, as will be seen from certain figures later on, the class graduating in the year 1900-1901 embraced more students who have taken what might be called a normal college course of four years—nine months in each year—and there are indications that the students are planning their work to some degree with the design of graduating in June, at the Convocation when a larger number of their associates will graduate.

The figures in Tables E and F indicate that, as might be expected, a large proportion of those who attend during the summer attend for a short period. In the figures showing attendance by Quarters, the number set down as attending for one Quarter does not necessarily imply that these students attended three months continuously. It includes also those who have attended for two periods of six weeks each. Similarly the number of those who have attended for a total period of two Quarters covers some who may have been here a part of three or four. If then, as is probable, about one-half of those who are indicated as having attended one Quarter have attended for two periods of six weeks each, it will be seen that a very large proportion of those who have done work in the summer have done work for a period of six weeks at a time. This still leaves about two months for vacation. When the figures showing the total number who have taken work in the summer are compared with the figures in the tables which will follow, showing the number of students who have shortened their course by summer work, it will be seen that very many students have taken summer work who have not shortened their course. The difference between the respective numbers indicates in general that a considerable number of students take summer work to counterbalance short work at some other time of the year; to make up conditions, or the extra work imposed by excessive absences; or, finally, that they find it more practicable to take a vacation at some other period of the year when they may engage in teaching or other work.

The question may arise as to what proportion of the above students who have taken summer work has taken such work as a substitute for work at some other time of the year, and what proportion has taken it as continuous work, in addition to the full work of the ordinary academic year. The figures covering the students who have graduated from 1898 to 1901 give

TABLE D  
STUDENTS TAKING ALL OR PART OF THEIR RESIDENT WORK IN THE SUMMER QUARTER

	1894-95			1895-96			1896-97			1897-98			1898-99			1899-1900			1900-1901			1901-1902			TOTAL		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
Summer work.....	14	3	17	43	18	61	51	25	76	56	27	83	64	34	98	45	41	86	50	44	94	97	68	165	420	280	690
Summer work only	..	..	..	..	..	..	1	..	1	..	1	2	3	5	3	4	7	10	5	15	11	10	21	28	24	52	
No summer work..	16	19	35	16	26	42	25	27	52	25	33	58	26	40	66	23	45	68	44	54	98	41	58	99	216	302	518
No residence!.....	..	..	..	..	..	..	..	..	..	1	1	..	2	2	1	..	1	..	1	1	1	2	..	2	3	4	7
Total.....	32	23	52	59	44	103	77	52	129	82	63	145	92	79	171	72	90	162	104	104	208	151	136	287	767	590	1257

<sup>1</sup> Students from affiliated schools who received the highest grade in their respective classes and consequently received the Bachelor's degree from the University without residence.

TABLE E  
NUMBER OF STUDENTS WHO HAVE TAKEN SUMMER WORK, AND THE AMOUNT OF SUCH WORK, RECKONED IN QUARTERS

	1894-95			1895-96			1896-97			1897-98			1898-99			1899-1900			1900-1901			1901-1902			TOTAL			
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	
1/4 Quarter.....	4	2	6	9	9	18	6	10	16	10	6	16	17	15	32	10	14	24	10	10	20	10	17	27	76	83	159	
1/2 Quarter.....	10	1	11	18	7	25	17	7	24	16	12	28	19	11	30	18	14	32	18	12	30	42	21	63	158	85	243	
3/4 Quarters.....	..	..	..	10	1	11	13	3	16	8	3	11	9	2	11	2	4	6	8	8	16	7	10	17	57	31	88	
2 Quarters.....	..	..	..	6	1	7	10	5	15	15	5	20	13	4	17	6	7	13	8	7	15	15	10	25	73	39	112	
2 1/4 Quarters.....	..	..	..	..	..	..	1	..	4	..	4	..	3	1	4	5	1	6	2	3	5	5	2	7	20	7	27	
3 Quarters.....	..	..	..	..	..	..	4	..	4	2	1	3	3	..	3	1	1	2	3	3	6	11	3	14	24	8	32	
3 1/4 Quarters.....	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	1	1	1	2	3	1	4	6	2	8	
4 Quarters.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	3	2	5	4	2	6	
4 1/4 Quarters.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	1	1	1	1	1	2	3
5 Quarters.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	2	1	1	2	3
Total.....	14	3	17	43	18	61	51	25	76	56	27	83	64	34	98	45	41	86	50	44	94	97	68	165	420	280	690	

TABLE F  
STUDENTS DOING SUMMER WORK. MAJORS GAINED

	1894-95			1895-96			1896-97			1897-98			1898-99			1899-1900			1900-1901			1901-1902			TOTAL		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
1/4 Major.....	13	..	12	..	2	2	1	..	1	..	..	..	1	2	3	1	1	2	..	1	1	..	2	2	4	8	12
1/2 Major.....	2	1	3	..	1	1	1	4	5	3	1	4	1	3	3	3	4	7	3	3	8	7	8	8	24	35	
3/4 Major.....	..	1	1	8	3	11	4	4	8	8	5	13	4	6	10	5	8	13	6	6	13	10	13	21	44	62	
2 Majors.....	2	..	2	5	4	9	4	2	6	8	4	12	4	6	11	4	4	8	7	7	10	5	5	7	14	29	
2 1/4 Majors.....	3	1	4	5	1	6	5	1	6	1	2	3	1	1	5	5	4	6	6	6	10	5	2	7	31	45	
3 Majors.....	4	..	4	5	5	10	8	4	12	10	3	13	9	3	12	6	7	13	6	6	10	8	23	39	72	101	
3 1/4 Majors.....	..	..	..	5	5	10	2	2	4	2	1	4	3	5	6	2	2	5	4	4	6	7	7	13	15	29	
4 Majors.....	2	..	2	7	..	7	4	3	7	5	3	8	5	3	8	2	2	5	3	3	5	3	3	6	17	31	
4 1/4 Majors.....	..	..	..	1	1	2	3	3	3	3	2	5	3	3	3	1	3	3	2	2	2	2	3	3	10	17	
5 Majors.....	..	..	..	2	1	3	4	1	5	1	4	6	1	1	1	..	..	1	1	1	1	1	1	1	4	6	
5 1/4 Majors.....	..	..	..	1	1	2	3	2	4	1	1	3	2	2	3	..	..	3	3	3	5	3	3	3	8	12	
6 Majors.....	..	..	..	2	..	2	3	2	5	1	4	5	1	1	1	..	..	2	2	2	3	5	5	4	15	25	
6 1/4 Majors.....	..	..	..	..	..	..	1	1	2	1	1	3	3	..	..	..	..	2	2	2	3	5	4	6	12	18	
7 Majors.....	..	..	..	2	..	2	1	1	2	6	1	7	..	..	..	..	..	2	2	2	3	5	5	6	12	18	
7 1/4 Majors.....	..	..	..	..	..	..	1	1	1	1	1	1	1	..	..	..	..	2	2	2	3	4	4	6	12	18	
8 Majors.....	..	..	..	..	..	..	1	1	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	3	7	
8 1/4 Majors.....	..	..	..	1	..	1	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	14	
9 Majors.....	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	
9 1/4 Majors.....	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	1	2	2	1	3	4	1	1	3	11	
10 Majors.....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	5
10 1/4 Majors.....	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
11 1/4 Majors.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
12 1/4 Majors.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1
13 1/4 Majors.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1
Total.....	14	3	17	43	18	61	51	25	76	56	27	83	64	34	98	45	41	86	50	44	94	97	62	162	420	280	690

<sup>2</sup> Received no credit.

## SUMMARY TO TABLES D, E, AND F

	Men	Women	Total
Total number of Bachelors who have done summer work.....	420	260	680
Total number Quarters summer work.....	596	322	918
Total number Majors summer work.....	1694 $\frac{1}{2}$	874 $\frac{1}{2}$	2569
Average number Quarters per student.....	1.2	1	1.1
Average number Majors per student.....	3.9	2.9	3.2
Average number Majors per Quarter.....	2.9	2.8	2.9

the basis for ascertaining this. During these years the number of students who have taken summer work as continuous work, and who therefore did not take full vacation during the year in which they took summer work, is as follows:

TABLE G  
STUDENTS TAKING SUMMER WORK AS A FOURTH (ADDITIONAL) QUARTER, AND NOT AS A SUBSTITUTE FOR ANOTHER QUARTER

	1898-1899			1899-1900			1900-1901		
	M.	W.	T.	M.	W.	T.	M.	W.	T.
One-half Quarter.....	6	5	11	5	9	14	8	7	15
One Quarter.....	17	7	24	11	8	19	18	9	27
One and one-half Quarter.....	8	1	9	4	3	7	8	7	15
Two Quarters.....	11	5	16	5	5	10	6	2	8
Two and one-half Quarters.....	..	..	..	3	2	5	1	2	3
Three Quarters.....	1	..	1	2	..	2	..	1	1
Three and one-half Quarters.....	1	..	1	..	..	..	..	..	..
Four and one-half Quarters.....	..	..	..	1	..	1	..	..	..
Total.....	44	18	62	31	27	58	41	28	69

These figures, however, need to be further corrected by an examination of the following table, which shows the number of Quarters during which the students who took continuous summer work were in residence. It is evident that the students who took only one-half Quarter were able to have seven weeks' vacation; that those who took one and one-half Quarters were able to have seven weeks' vacation in one of the years; and, further, that a considerable number of those who are recorded as having taken one Quarter took this in the form of two terms of six weeks each. Hence the number of students who have worked continuously, without any vacation, must be correspondingly reduced.

## FLEXIBILITY OF THE COURSE

A second unique feature of the University curriculum has been the flexibility of the course. The tables of graduation which will follow later will show to what extent the privilege of graduating at other times than June has been utilized by undergraduate students. It will appear that, in general, about one-half of the Bachelors have received degrees at Convocations other than the June Convocation. A more detailed view of the extent to which students have availed themselves of the flexibility of the course is furnished by the immediately following tables, which show the proportion of students who have taken what might be called a normal course—meaning by this the course of four academic years of nine months each; and, further,

what proportion of students has extended or shortened this course. There are several ways in which the course may be extended or shortened. The course may be extended by taking less than normal work during the time of residence, or by being out of residence for more than the ordinary vacation of three months. It may be shortened by residence during the summer, or by extra work during the time of residence, or by both of these means. In Table I the statistics show, in the case of students who have graduated in the years 1898 to 1901, the number who have graduated upon what might be called the "normal date," reckoned according to the ordinary academic year; *i. e.*, for a student entering in October, 1896, the normal date of graduation would be June, 1900. In estimating the numbers in this column, no account has been made of the fact that certain of these students entered with entrance conditions, because in the ordinary college, students make up such conditions and graduate with their class. The column headed "Number of Quarters," under "Normal," gives the number of students who have taken the precise number of Quarters for graduation that would normally be required; *i. e.*, twelve Quarters, of twelve weeks each, equivalent to four academic years of thirty-six weeks each. The similar columns under "Extended" and "Shortened" indicate respectively the numbers of students who have taken more or less than the normal time, and therefore have done less or more than regular work when in residence. The table is accordingly to be read as follows:

In the class of 1898-99, 27 men and 36 women were in residence the normal number of Quarters (that is, for those who took all their work in the University, 12 Quarters; for others, a correspondingly less number); 36 men and 28 women were in residence more than this normal number; 26 men and 22 women, less than the normal number. In like manner, 33 men and 41 women graduated at the time at which they would normally graduate under the usual college curriculum; 25 men and 22 women graduated at a later date; and 24 men and 10 women, at an earlier date.

It will be noted that more students have hastened the date of graduation than have shortened the number of Quarters. This would mean that the date had been hastened by summer work, rather than by extra work. It will be noted, on the other hand, that for the past two years the number of those who have been in residence the normal number of Quarters is approximately the same as that of those who have graduated upon the normal date.

TABLE H  
NUMBER OF STUDENTS IN THREE GRADUATING CLASSES WHO HAVE EXTENDED OR SHORTENED THEIR COURSE

	1898-1899			1899-1900			1900-1901		
	M.	W.	T.	M.	W.	T.	M.	W.	T.
<i>Normal:</i>									
Number of Quarters.....	27	26	53	20	31	51	34	38	72
Date.....	33	41	74	23	33	56	33	36	69
Per cent., Quarters.....	31	30	31	30	39	35	38	42	41
Per cent., Date.....	38	54	45	36	40	38	36	40	38
<i>Extended:</i>									
Number of Quarters.....	36	28	64	24	25	49	19	23	42
Date.....	25	22	47	20	32	52	37	32	69
Per cent., Quarters.....	39	42	40	35	33	34	21	25	22
Per cent., Date.....	35	34	34	31	39	37	41	36	38
<i>Shortened:</i>									
Number of Quarters.....	26	22	48	23	23	46	37	29	66
Date.....	24	10	34	21	17	38	20	22	42
Per cent., Quarters.....	30	28	29	35	28	31	41	33	37
Per cent., Date.....	27	12	21	33	21	25	23	24	24





TABLE J  
NUMBER OF QUARTERS RESIDENCE

	¼ Qr.	1 Qr.	1½ Qrs.	2 Qrs.	2½ Qrs.	3 Qrs.	3½ Qrs.	5 Qrs.	6 Qrs.	6½ Qrs.	9 Qrs.	10½ Qrs.	Total	Av. Qrs.
<b>1898-1899:</b>														
<b>a) Normal:</b>														
Men .....	..	..	..	..	..	..	..	..	..	..	..	..	27	...
Women .....	..	..	..	..	..	..	..	..	..	..	..	..	26	...
Total .....	..	..	..	..	..	..	..	..	..	..	..	..	53	...
<b>b) Increased:</b>														
Men .....	16	9	3	1	4	2	..	1	..	..	..	..	36	1.2
Women .....	8	11	3	3	1	1	..	1	..	..	..	..	28	1.3
Total .....	24	20	6	4	5	3	..	2	..	..	..	..	64	1.2
<b>c) Decreased:</b>														
Men .....	11	7	3	1	4	..	..	..	..	..	..	..	26	1.1
Women .....	12	4	4	1	1	..	..	..	..	..	..	..	22	0.9
Total .....	23	11	7	2	5	..	..	..	..	..	..	..	48	1.0
<b>1899-1900:</b>														
<b>a) Normal:</b>														
Men .....	..	..	..	..	..	..	..	..	..	..	..	..	20	...
Women .....	..	..	..	..	..	..	..	..	..	..	..	..	31	...
Total .....	..	..	..	..	..	..	..	..	..	..	..	..	51	...
<b>b) Increased:</b>														
Men .....	12	5	1	3	1	..	..	..	..	..	1	..	24	1.1
Women .....	..	15	3	2	1	2	1	..	..	1	..	1	25	2.4
Total .....	12	20	4	5	2	..	1	..	..	1	1	1	49	1.9
<b>c) Decreased:</b>														
Men .....	7	7	2	3	1	..	..	..	..	..	..	..	20	1.1
Women .....	11	9	2	3	1	..	..	..	..	..	..	..	28	1.0
Total .....	18	16	4	6	2	..	..	..	..	..	..	..	48	1.0
<b>1900-1901:</b>														
<b>a) Normal:</b>														
Men .....	..	..	..	..	..	..	..	..	..	..	..	..	34	...
Women .....	..	..	..	..	..	..	..	..	..	..	..	..	38	...
Total .....	..	..	..	..	..	..	..	..	..	..	..	..	72	...
<b>b) Increased:</b>														
Men .....	10	5	1	2	..	1	..	..	..	..	..	..	19	0.9
Women .....	10	4	3	3	1	1	1	..	..	..	..	..	23	1.2
Total .....	20	9	4	5	1	2	1	..	..	..	..	..	42	1.0
<b>c) Decreased:</b>														
Men .....	10	9	10	5	..	2	..	..	1	..	..	..	37	1.4
Women .....	6	14	3	3	2	1	..	..	..	..	..	..	29	1.2
Total .....	16	23	13	8	2	3	..	..	1	..	..	..	66	1.3

#### GRADUATION WITHIN THREE YEARS

One of the important results of the above statistics is the light thrown upon the question as to how far our undergraduates are availing themselves of the opportunities of our system to reduce their undergraduate course to a period of three years. This, of course, means doing the work of the ordinary four academic years within a three-year period. The discussion as to the desirability of such a shortening of the course has been largely with reference to those students who are to enter professional schools. It is evident that for such students it will answer the purposes of a three-year course, if they can receive their Bachelor's degree in August or September. Hence, if a student shortens his course by nine months, as compared with the ordinary college curriculum, it will practically serve the purpose of a three-year course.

The above tables show that the numbers of students receiving their degrees in the years 1898 to 1901, who have shortened their course by nine months or more, are as follows :

TABLE Ja

1898-1899				1899-1900				1900-1901			
Men	Women	Total	Per Cent.	Men	Women	Total	Per Cent.	Men	Women	Total	Per Cent.
12	5	17	10	14	7	21	13	14	7	21	10

This shows, as might be expected, that more men than women have shortened their course to the extent named.

MEANS BY WHICH COURSE HAS BEEN SHORTENED

The means by which the date of graduation has been hastened will be shown by Table K, which follows :

TABLE K

	Extra Work Only	Summer Work Only	Extra Work, and Summer Work	Correspondence Only	Correspondence and Summer Work	Correspondence, Extra Work, and Summer Work	Teachers College, Correspondence, and Summer Work	Teachers College, Correspondence, and Extra Work	Teachers College, Summer Work, and Extra Work	Correspondence and Extra Work	Teachers College and Extra Work	Totals
<b>1898-1899:</b>												
Men .....	8	3	24	..	..	6	..	..	..	..	..	41
Women .....	9	3	5	1	..	..	..	..	..	1	..	19
Total .....	17	6	29	1	..	6	..	..	..	1	..	60
<b>1899-1900:</b>												
Men .....	..	1	14	..	1	8	..	..	..	1	1	26
Women .....	7	4	7	..	1	..	..	..	..	1	..	20
Total .....	7	5	21	..	2	8	..	..	..	2	1	46
<b>1900-1901:</b>												
Men .....	7	4	13	1	2	..	1	2	1	..	..	31
Women .....	6	2	11	1	..	2	..	..	..	..	..	22
Total .....	13	6	24	2	2	2	1	2	1	..	..	53

It will be seen from the above table—what has been apparent in registration—that a student who takes summer work is likely to wish to do extra work during part or all of the rest of the year. In the case of a student who has no conditions or penalties for absences to make up, it is evident that this would naturally be the case, because it would be of no value to a student to complete six weeks of summer work, unless he was enabled to hasten his graduation by some other means.

LENGTHENING THE COURSE

Tables H, I, and J show also the number of students who have graduated upon a date later than the normal date, and those who have been in residence more than the normal number of Quarters. The following tables, L and M, show, respectively, the number of Quarters in which less than normal work has been done by students graduating in the years 1898-1901, and the number of Majors which have been lost by completing less than normal work in a given Quarter. In Table M three ways are shown by which a student may have completed less than normal work: (1) he may have registered for less than three courses; (2) he may have failed in a course; (3) his absences may have been sufficiently numerous to reduce his credit in that course, according to the rule that when the absences in a course amount to 25 per cent. of the total number of exercises in that course, only half credit for the course can be received.

TABLE L  
NUMBER OF QUARTERS IN WHICH LESS THAN NORMAL WORK (THREE MAJORS) WAS DONE

	1/4	1	1 1/4	2	2 1/4	3	3 1/4	4	4 1/4	5	6	6 1/4	7	7 1/4	8	9	9 1/4	10	12	13	16 1/4	Total	
<b>1899-1899:</b>																							
Men .....	..	17	2	11	..	5	1	2	2	3	4	..	..	1	1	1	..	1	..	1	..	..	52
Women .....	..	14	..	9	..	6	..	6	..	6	2	1	1	1	1	1	1	..	..	..	..	..	49
Total .....	..	31	2	20	..	11	1	8	2	9	6	1	1	2	1	2	..	1	..	1	..	..	101
<b>1899-1900:</b>																							
Men .....	2	19	3	7	1	5	2	3	..	2	1	1	2	1	1	..	..	..	..	1	1	1	52
Women .....	3	18	4	5	..	6	1	4	..	4	1	..	..	..	1	..	..	..	..	1	1	1	48
Total .....	5	37	7	12	1	11	3	7	..	6	2	1	2	1	1	1	..	..	..	1	1	1	100
<b>1900-1901:</b>																							
Men .....	1	9	2	8	..	1	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	24
Women .....	3	7	..	5	1	3	1	1	1	1	1	..	1	..	..	..	..	..	..	..	..	..	25
Total .....	4	16	2	13	1	4	1	3	1	2	1	..	1	..	..	..	..	..	..	..	..	..	49

TABLE M  
MAJORS LOST BY CARRYING LESS THAN NORMAL WORK IN A GIVEN QUARTER

		1. BY REGISTRATION																		Total						
	1/4	1	1 1/4	2	2 1/4	3	3 1/4	4	4 1/4	5	5 1/4	6	6 1/4	7	7 1/4	8	8 1/4	9	9 1/4	10	11 1/4	12	16 1/4	18 1/4		
<b>1899-1899:</b>																										
Men .....	6	3	4	9	4	1	..	2	2	3	2	4	..	2	1	..	..	1	1	..	..	1	..	..	..	46
Women .....	6	7	1	4	2	7	4	6	..	2	..	2	1	2	1	..	2	1	2	1	1	1	..	..	..	50
Total .....	12	10	5	13	6	8	4	8	2	5	2	6	1	4	2	..	2	2	1	1	1	1	..	..	..	96
<b>1899-1900:</b>																										
Men .....	9	10	5	6	2	3	..	4	..	3	..	1	2	..	..	..	1	..	2	..	..	..	..	..	..	47
Women .....	8	11	4	5	1	3	..	4	..	1	..	5	2	1	..	..	..	1	1	2	..	..	..	1	1	46
Total .....	16	21	9	11	3	6	..	8	..	4	..	6	2	1	..	..	1	1	2	..	..	..	..	1	1	93
<b>1900-1901:</b>																										
Men .....	1	10	3	6	2	3	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29
Women .....	5	7	..	2	3	2	..	2	1	..	1	1	1	..	..	1	..	..	..	1	..	..	..	..	..	27
Total .....	6	17	3	8	5	5	1	3	2	1	1	1	1	..	..	1	..	..	..	1	..	..	..	..	..	56

		2. BY FAILURE												3. BY ABSENCES					Total						
	1/4	1	1 1/4	2	2 1/4	3	3 1/4	4	4 1/4	6	6 1/4	13	Total	1/4	1	1 1/4	2	2 1/4	Total						
<b>1899-1899:</b>																									
Men .....	2	7	2	1	..	2	1	2	2	..	..	..	19	2	2	1	1	..	..	6	..	..	..	6	
Women .....	1	4	..	2	1	2	..	2	..	1	..	..	11	2	1	1	..	..	..	4	..	..	..	4	
Total .....	3	11	2	3	1	4	1	4	2	1	..	..	30	4	3	2	1	..	..	10	..	..	..	10	
<b>1899-1900:</b>																									
Men .....	..	10	..	2	..	3	..	..	..	..	1	1	17	1	2	..	..	..	..	4	..	..	..	..	4
Women .....	..	5	..	1	..	..	..	..	..	..	..	..	6	1	..	..	..	..	..	1	..	..	..	..	1
Total .....	..	15	..	3	..	3	..	..	..	..	..	..	23	1	2	..	..	..	..	5	..	..	..	..	5
<b>1900-1901:</b>																									
Men .....	1	3	1	1	1	1	..	..	..	..	..	..	8	1	1	..	..	..	..	2	..	..	..	..	2
Women .....	..	2	..	2	..	1	..	..	..	..	..	..	4	..	1	..	..	..	..	1	..	..	..	..	1
Total .....	1	5	1	3	1	1	..	..	..	..	..	..	12	1	2	..	..	..	..	3	..	..	..	..	3

The exact reasons for short registration cannot be given, but it would appear, I think, that most of the men who have registered for less than normal work have done so to enable them to do outside work as a means of defraying their expenses; while the women in many cases have taken less than normal work on grounds of health.

In contrast with this table, the following tables, N and O, will show: (1) the number of Quarters during which more than normal work was taken; (2) the number of Majors gained by graduates of this same period, by carrying more than normal work in one or more Quarters; and (3) the purpose, so far as it can be estimated, for which the students carried this extra work:

TABLE N  
NUMBER OF QUARTERS DURING WHICH MORE THAN NORMAL WORK (3 MAJORS) WAS CARRIED

	½	1	1½	2	2½	3	3½	4	4½	5	6	6½	7	Total
<b>1898-1899:</b>														
Men.....		25	3	6	4	12	2	7	2	1	1	...	...	63
Women.....		16	1	14	1	5	...	3	1	3	...	...	1	45
Total.....		41	4	20	5	17	2	10	3	4	1	...	1	108
<b>1899-1900:</b>														
Men.....	1	9	1	14	1	10	1	2	...	...	1	...	...	40
Women.....	1	25	1	6	...	10	2	2	...	...	...	...	...	45
Total.....	2	34	2	20	1	20	3	4	...	...	1	...	...	85
<b>1900-1901:</b>														
Men.....	3	8	1	8	2	2	1	2	...	...	1	...	1	33
Women.....	1	10	5	11	...	2	...	2	...	2	1	1	...	31
Total.....	4	18	6	19	2	4	1	4	...	2	2	1	1	64

TABLE O  
MAJORS GAINED BY CARRYING MORE THAN NORMAL WORK IN A GIVEN QUARTER

	1. TO MAKE UP SHORT WORK									2. TO MAKE UP FAILURE					3. TO MAKE UP ABSENCES				
	½	1	1½	2	2½	3	3½	4	Total	½	1	1½	2	3	Total	½	1	2½	Total
<b>1898-1899:</b>																			
Men.....	10	10	1	5	3	2	..	..	31	2	8	2	1	2	15	1	2	..	3
Women.....	8	13	4	2	..	3	..	1	31	2	3	..	..	..	5	..	..	..	..
Total.....	18	23	5	7	3	5	..	1	62	4	11	2	1	2	20	1	2	..	3
<b>1899-1900:</b>																			
Men.....	9	6	1	2	2	1	1	..	22	1	10	1	1	1	14	3	1	1	5
Women.....	10	11	3	..	1	1	..	..	26	1	2	..	..	..	3	1	..	..	1
Total.....	19	17	4	2	3	2	1	..	48	2	12	1	1	1	17	4	1	1	6
<b>1900-1901:</b>																			
Men.....	3	10	3	..	1	1	..	..	18	1	1	2	..	..	4	1	..	..	1
Women.....	7	7	2	2	..	..	..	..	18	..	4	..	..	..	4	..	1	..	1
Total.....	10	17	5	2	1	1	..	..	36	1	5	2	..	..	8	1	1	..	2

	4. TO MAKE UP CONDITIONS						5. TO SHORTEN TIME REQUIRED FOR GRADUATION												
	½	1	1½	2½	3	Total	½	1	1½	2	2½	3	3½	4	4½	5	5½	6	Total
<b>1898-1899:</b>																			
Men.....	..	3	1	..	..	4	9	5	4	..	2	4	..	2	1	..	..	..	25
Women.....	1	3	..	..	..	4	3	3	8	..	1	1	..	1	1	..	..	..	20
Total.....	1	6	1	..	..	8	12	8	12	..	3	5	..	3	2	..	..	..	45
<b>1899-1900:</b>																			
Men.....	1	3	..	1	..	5	4	2	2	2	1	1	..	..	..	..	..	..	11
Women.....	4	2	..	2	8	7	7	..	1	..	1	3	..	..	..	..	..	..	20
Total.....	5	5	..	1	2	13	11	9	2	3	1	2	3	..	..	..	..	..	31
<b>1900-1901:</b>																			
Men.....	1	1	1	..	..	3	6	3	3	3	1	1	..	..	1	1	..	..	19
Women.....	..	1	..	..	..	1	1	1	1	..	..	..	..	1	..	1	1	1	7
Total.....	1	2	1	..	..	4	7	4	4	3	1	1	..	1	1	2	1	1	26

CONTRAST BETWEEN THE MEMBERSHIP OF A CLASS GRADUATING FROM THE UNIVERSITY OF CHICAGO, 1900-1901, AND A CLASS GRADUATING FROM A TYPICAL EASTERN INSTITUTION

The statistics presented in the preceding tables, especially in tables C, H, I, and J, give the basis for a very interesting comparison between the constituency of a graduating class at the University of Chicago, from the time of its entrance to the time of its graduation, as compared with the graduating classes of the older institutions. In the University of Chicago, as the tables show, about one-third of a class graduate in the normal time; about one-third in less than normal time; and about one-third in more than normal time; and, moreover, as has already been shown in the summary to Table C, only a relatively small proportion—from 28 per cent. to 40 per cent.—have completed all of their work at the University of Chicago. This makes an additional element of irregularity.

On the other hand, in the ordinary college of the usual type, the great majority of the class does all of its work at the institution in question, and the class graduates with very nearly the same constituency with which it entered. For instance, at one of the typical institutions of the East, which is selected because its graduating class for 1901, of 232, is not very far from the size of the University of Chicago class of 208, of the same year, the published statistics state that the class entered with 298 men. Sixty-six dropped out, six died, and twenty-four subsequently joined the class. In order to make the comparison more accurate, however, the following tables and accompanying chart have been prepared, showing two sets of data. The first, presented in Table P, traces the history of the students who entered the University without advanced standing during the year July, 1898, to April, 1899, inclusive. These students would correspond roughly to the Freshman class that would be expected to graduate in June, 1901. The table shows (1) how many of these have dropped out, and the dates upon which they have dropped out; (2) how many have remained in residence and have not yet graduated, with the amount of Majors standing to their credit, from which it is possible to see when they will graduate, if they continue in residence; and (3) the number who have graduated either during this present year or the preceding year.

TABLE P

RECORD OF STUDENTS ENTERING THE JUNIOR COLLEGE WITHOUT ADVANCED STANDING IN THE YEAR 1897-98; I. E., OF THE FRESHMAN CLASS ENTERING JULY, 1897, TO APRIL, 1898

ENTERED	DROPPED				STILL IN RESIDENCE	GRADUATED							Total Grad.
	Years					Sp. '00	Sum. '00	Total 3 years	Aut. '00	Win. '01	Sp. '01	Total	
	First	Second	Third	Total									
<i>1897—Summer</i>													
Men.....	....	1	....	1	5	2	....	2	....	1	....	1	
Women.....	....	....	....	....	2	....	2	2	....	1	....	1	
Total.....	....	1	....	1	7	2	2	4	....	2	....	2	
<i>Autumn:</i>													
Men.....	8	4	7	19	8	2	1	3	1	2	20	23	
Women.....	9	1	....	10	9	3	1	4	2	3	18	23	
Total.....	17	5	7	29	17	5	2	7	3	5	38	46	
<i>Winter:</i>													
Men.....	....	....	....	....	5	....	1	1	....	....	1	1	
Women.....	3	1	2	6	2	....	....	....	....	....	1	1	
Total.....	3	1	2	6	7	....	1	1	....	....	2	2	
<i>Spring:</i>													
Men.....	....	....	....	....	1	....	....	....	....	....	....	....	
Women.....	....	....	....	....	2	....	....	....	....	1	1	2	
Total.....	....	....	....	....	3	....	....	....	....	1	1	2	
<i>Summary:</i>													
Men.....	8	5	7	20	19	4	2	6	1	3	21	25	31
Women.....	12	2	2	16	15	3	3	6	2	5	20	27	33
Total.....	20	7	9	36	34	7	5	12	3	8	41	52	64

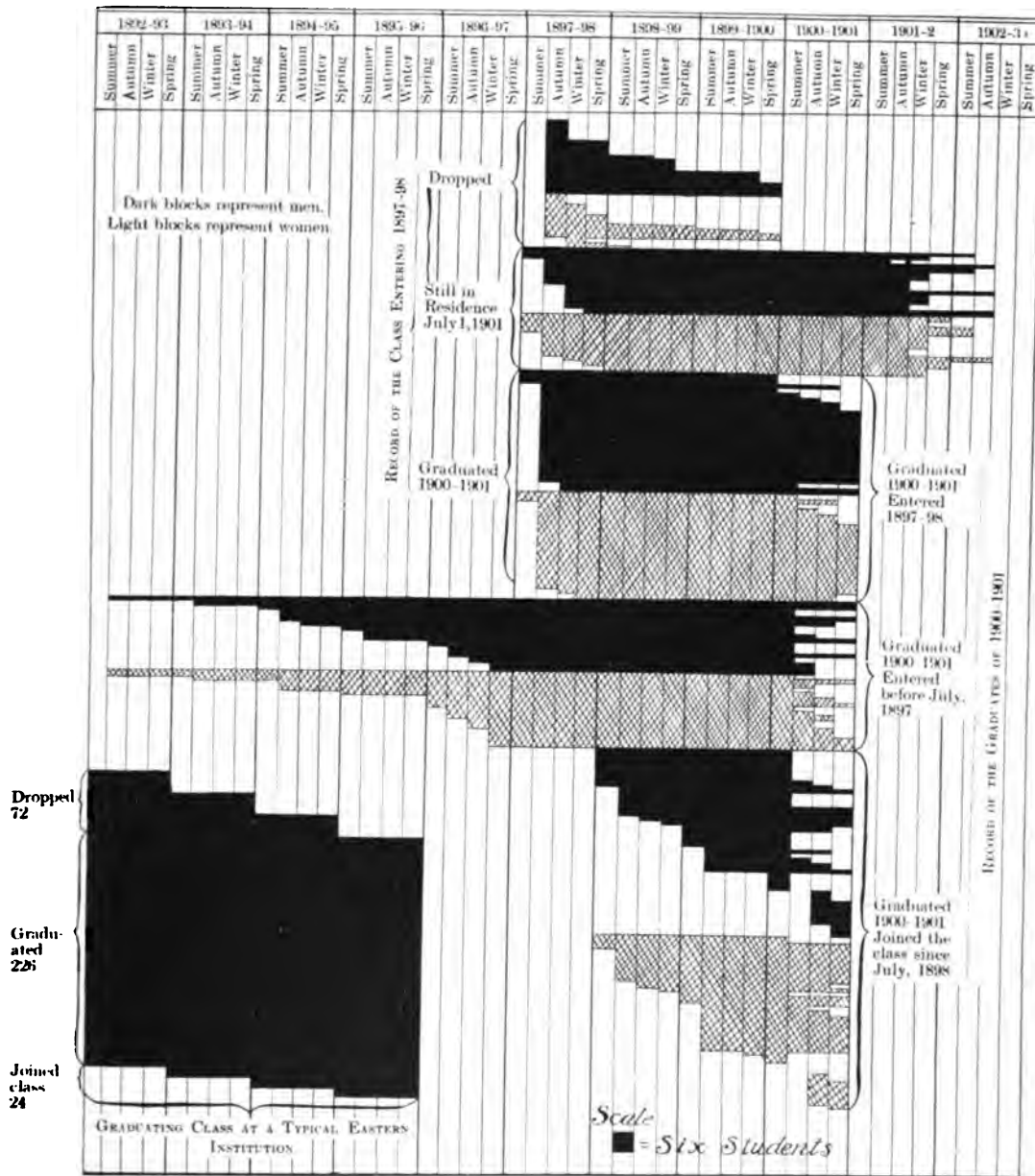


CHART SHOWING THE COLLEGIATE HISTORY OF THE CLASS ENTERING 1897-98, CONJOINTLY WITH THAT OF THE CLASS GRADUATING 1900-1901

(TO ILLUSTRATE TABLES P AND Q)



It thus appears that of the 36 students who have dropped out, 20 dropped out at the end of the first year and 16 during or at the close of the second year, of whom 3 left on receiving their Associate title. It appears that there are 35 still (July 1, 1901) in residence who have not graduated; that 7 graduated within the year 1899-1900; and, if we include those graduating in the summer of 1900, inasmuch as these latter students would have the opportunity of entering a professional school or beginning work as tutors in the autumn, it would appear that 11 brought their period of graduation within what may be fairly called three years, leaving 44 who graduated in four years, or approximately four years, after their entrance.

Table Q, which follows, presents the counterpart of this, and shows the previous history of the class of 208 who graduated during the year 1900-1901. It appears that three members of the class entered in the year in which the University opened, 1892-93, and that others have entered at various intervals since, many having been here only for the past year or for one Quarter.

TABLE Q  
RECORD OF GRADUATES, ARRANGED ACCORDING TO YEAR OF ENTRANCE AND QUARTER OF GRADUATION

QUARTER OF GRADUATION	ENTERED								
	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901
<i>Summer:</i>									
Men .....			2	2	4	5	12	7	4
Women .....	1		1	.....	1	3	3	.....	3
Total .....	1		3	2	5	8	15	7	7
<i>Autumn:</i>									
Men .....			.....	1	9	2	1	1	.....
Women .....		1	1	.....	6	3	.....	2	.....
Total .....		1	1	1	15	5	1	3	.....
<i>Winter:</i>									
Men .....			1	.....	.....	4	2	4	3
Women .....			1	1	2	4	2	1	3
Total .....			2	1	2	8	4	5	6
<i>Spring:</i>									
Men .....	1	1	2	.....	1	17	7	3	10
Women .....	1	.....	.....	1	3	20	12	13	8
Total .....	2	1	2	1	4	37	19	16	18
<i>Summary:</i>									
Men .....	1	1	5	3	14	28	22	15	17
Women .....	2	1	3	2	12	30	17	16	14
Total .....	3	2	8	5	26	58	39	31	31

Grand total: men, 102; women, 101; total, 203.<sup>a</sup>

The above figures are shown more forcibly by the attached chart. The upper part of the chart represents the history of the students who entered in 1897-98, as shown in Table P. The lower part of the chart represents the history of the students who graduated in 1900-1901. The space in which the two overlap shows, of course, the number of students who entered in 1897-98 and graduated in 1900-1901. The heavier-colored spaces represent the men and the lighter the women. The space in which the two overlap, therefore, would represent more nearly the constituency of an ordinary college class. It is seen that this makes a relatively small portion of the total constituency of those who have graduated in the year 1900-1901. In the case of the one man and two women who, according to the chart, entered the University in the year 1892-93, it is, of course, not the case that they were in continuous residence up to the time of their graduation; and the same is true of others who entered at an early date. The groups of students who were in the University for short periods, indicated in the lower parts of the chart, entered with advanced standing from other institutions.

<sup>a</sup> Five students took the degree without residence as undergraduates, making a total of 208. Compare with Table C.



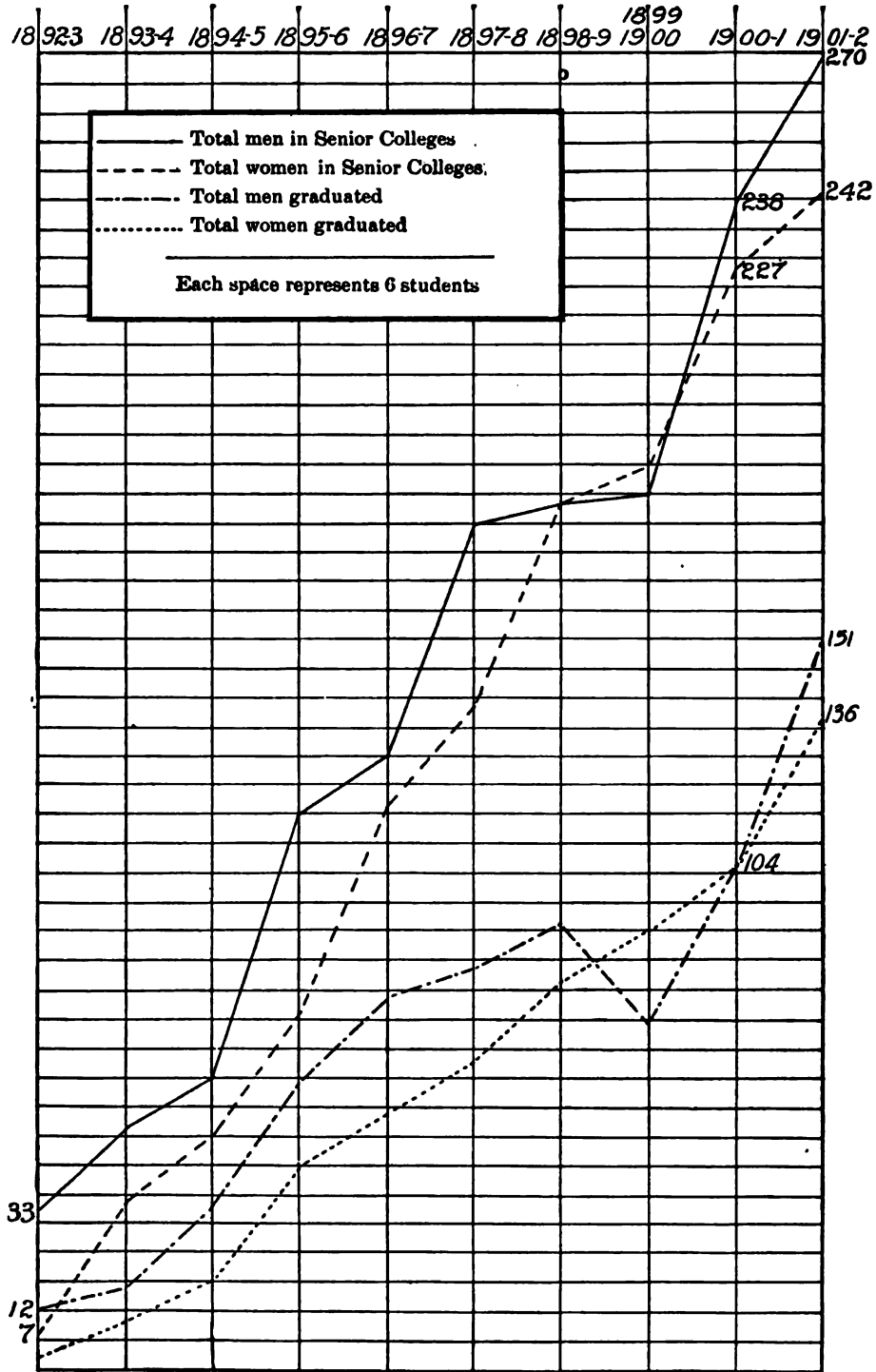


CHART TO ILLUSTRATE TABLES B AND R

GRADUATION BY DEGREES AND SEXES

TABLE B  
THE SENIOR COLLEGES

Graduation (College Degrees Conferred) at the Convocations Held at the Close of the Respective Quarters

	SUMMER			AUTUMN			WINTER			SPRING			TOTAL		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
<b>1892-1893:</b>															
A.B.	...	...	...	...	...	...	...	...	...	9	1	10	9	1	10
Ph.B.	...	...	...	...	...	...	...	...	...	3	1	4	3	1	4
S.B.	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1
Total	...	...	...	...	...	...	...	...	...	12	3	15	12	3	15
<b>1893-1894:</b>															
A.B.	...	...	...	3	...	3	...	1	1	8	2	10	11	3	14
Ph.B.	...	...	...	...	...	...	...	...	...	2	3	5	2	3	5
S.B.	...	...	...	...	...	...	...	...	...	3	3	6	3	3	6
Total	...	...	...	3	...	3	...	1	1	13	8	21	16	9	25
<b>1894-1895:</b>															
A.B.	1	...	1	2	...	2	3	...	3	13	10	23	19	10	29
Ph.B.	1	...	1	1	2	3	2	...	2	6	5	11	10	7	17
S.B.	1	...	1	1	1	2	...	...	...	3	3	6	5	1	6
Total	3	...	3	4	3	7	5	...	5	22	15	37	34	18	52
<b>1895-1896:</b>															
A.B.	1	2	3	6	4	10	5	5	10	17	11	28	29	22	51
Ph.B.	4	2	6	...	1	1	5	1	6	10	11	21	19	15	34
S.B.	2	...	2	2	...	2	...	1	9	4	13	13	5	18	
Total	7	4	11	8	5	13	10	7	17	36	26	62	61	42	103
<b>1896-1897:</b>															
A.B.	6	2	8	6	1	7	5	4	9	16	15	31	33	22	55
Ph.B.	2	...	2	2	2	4	5	5	10	16	19	35	25	26	51
S.B.	1	1	2	5	2	7	7	1	8	6	...	6	19	4	23
Total	9	3	12	13	5	18	17	10	27	38	34	72	77	52	129
<b>1897-1898:</b>															
A.B.	6	4	10	5	5	10	8	2	10	20	9	29	39	30	59
Ph.B.	4	5	9	3	5	8	2	6	8	17	21	38	26	37	63
S.B.	3	3	6	2	...	2	...	...	2	10	3	13	17	6	23
Total	13	12	25	10	10	20	12	8	20	47	33	80	82	63	145
<b>1898-1899:</b>															
A.B.	6	4	10	...	1	1	11	5	16	31	20	51	48	30	78
Ph.B.	4	3	7	5	4	9	6	5	11	11	32	43	26	44	70
S.B.	6	2	8	2	...	2	1	...	1	8	4	12	17	6	23
Total	16	9	25	7	5	12	18	10	28	50	56	106	91	80	171
<b>1899-1900:</b>															
A.B.	6	8	14	2	5	7	9	5	14	19	20	39	36	38	74
Ph.B.—L.	4	4	8	...	6	6	5	8	13	10	26	36	19	44	63
Ph.B.—C. and A.	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1
S.B.	3	1	4	1	...	1	4	1	5	8	6	14	16	8	24
Total	14	13	27	3	11	14	18	14	32	37	52	89	72	90	162
<b>1900-1901:</b>															
A.B.	15	7	22	4	4	8	3	1	4	24	21	45	46	33	79
Ph.B.—L.	10	6	16	6	13	19	5	8	13	8	33	41	29	60	89
Ph.B.—C. and A.	...	1	1	...	...	...	...	...	...	1	1	2	1	2	3
S.B.	11	1	12	3	1	4	3	3	6	11	5	16	28	10	38
Total	36	15	51	13	18	31	11	12	23	44	60	104	104	105	209
<b>1901-1902:</b>															
A.B.	16	13	29	10	2	12	8	1	9	28	34	62	62	50	112
Ph.B.—L.	11	14	25	4	5	9	13	13	26	23	40	63	51	72	123
Ph.B.—C. and A.	...	...	...	1	...	1	...	...	...	6	...	6	7	...	7
S.B.	6	3	9	2	1	3	2	3	5	6	5	11	16	12	28
S.B. pre-med.	1	...	1	...	...	...	...	...	...	12	2	14	13	2	15
A.B. pre-med.	...	...	...	...	...	...	...	...	...	2	...	2	2	...	2
Total	34	30	64	17	8	25	23	17	40	77	81	158	151	138	287

\* Ph.B.—L. stands for the Degree of Bachelor of Philosophy conferred on graduates from the College of Literature; Ph.B.—C. and A. for the same degree in the College of Commerce and Administration.

## SUMMARY

Graduations for the Years 1892-1902, by Degrees, Quarters, and Sexes

	SUMMER			AUTUMN			WINTER			SPRING			TOTAL		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
A.B.....	57	40	97	38	22	60	52	24	76	184	144	328	331	230	561
Ph.B.—L.....	40	34	74	21	38	59	43	46	89	108	191	297	211	308	519
Ph.B.—C. and A.....	1	1	2	1	...	1	...	...	...	7	1	8	9	2	11
S.B.....	33	11	44	18	5	23	19	9	28	64	31	95	134	56	190
S.B. pre-med.....	1	...	1	...	...	...	...	...	...	12	2	14	13	2	15
A.B. pre-med.....	...	...	...	...	...	...	...	...	...	2	...	2	2	...	2
Total.....	132	86	218	78	65	143	114	79	193	375	369	744	700	598	1298

Table R, with its accompanying summary, gives a complete statement of those who have received the Bachelor's degree since the beginning of the University, arranged according to Quarters, sexes, and degrees received. As regards Quarters, it appears that the graduates in the Spring Quarter number just about one-half of the total number, and that the graduates in the Summer Quarter have been more numerous than those of any other Quarter except the Spring.

As regards degrees, the comparison should really begin about the year 1896-97, because that was the first year in which there was really a full graduating class. From that time, it appears that the number of Bachelors receiving the A.B. degree has had a slow but fairly constant increase, that the number of Bachelors receiving the S.B. degree has remained almost absolutely stationary until the last two years, and that the number receiving the Ph.B. degree has increased more than the number receiving either of the other degrees. This latter fact is connected with the fact that in four of the six years in question there has been a proportionately larger increase of women than men among those receiving the Bachelor's degree, and among women by far the greater portion receive the degree of Ph.B. Very few women receive the degree of S.B. The degree of A.B. is conferred upon more men than women, but of those taking the degree of Ph.B. in the College of Literature the ratio of women to men is about 2 to 1. In the case of the degree of S.B., it should be further mentioned that the increase in the number who have received that degree in the past year, as compared with the number receiving it in the years 1896-99 inclusive, is apparently due largely, if not entirely, to the establishment of medical work. Of the forty-five receiving the degree of S.B. in the year 1901-2, fifteen have been pursuing medical work. A less number in the case of the other degrees have been registered for such work; viz., two for the degree of A.B. and none for the degree of Ph.B.

As regards the respective numbers of men and women who have received degrees, no important inferences can be drawn from the figures of the first four years, because the Senior College was very small during that period. From the year 1896-97 to the current year there have been fluctuations in the relative increase of men and women receiving degrees. During the earlier part of this period, the increase of men was relatively less, but during the latter part, and especially during the last two years, the increase of men for graduation has been marked, showing an increase from 72 in the year 1899-1900 to 151 in the year 1901-2. Thus the number of men receiving the Bachelor's degree has doubled during the past two years, whereas the number of women has increased from 90 to 136, an increase of only 50 per cent. It is evident from these figures that no conclusion can be drawn respecting the relative numbers of the sexes, if the figures for a small number of years are considered. It is further probable that the

development of the work in law and medicine will provide for a steady or even accelerated rate of increase on the part of the men. It is also to be expected that the increased facilities for the social life of men, which will be afforded in the new buildings which are now in process of erection, will tend to increase, not only the number of men, but a healthful college spirit.

#### CHARACTER OF THE STUDENT BODY

The constituency of the Senior Colleges differs materially from that of the similar part of an ordinary college. Owing to the fact, already referred to, that we receive a large number of students who are of mature age and have been engaged in teaching for some time, but wish to take further work and receive a Bachelor's degree, the average age of our Senior College students has been found to be considerably greater than that in an ordinary institution. But aside from this, it is probable that an unusually large proportion of the students are making their own way, largely or in part, through college. This gives an air of seriousness and earnestness to the student body as a whole. It is further probable that an unusually large proportion of our students are from non-professional parents. The following Table, T, shows the occupations of the parents of students graduating in June, 1902. There is no reason to suppose that a larger number of cases would show a very wide variation from these percentages. I have not the figures for comparison, but I feel confident that in an eastern college the proportion of students whose parents are engaged in the professions of ministry, law, teaching, and medicine would be much larger than among our students. The reason for this probably is that professional men send their sons east to their own colleges.

TABLE T  
OCCUPATIONS OF PARENTS

	Men	Women	Per Cent. of Men	Per Cent. of Women
Ministry.....	5	7	6.5	8.5
Law.....	8	4	10.3	5.0
Teaching.....	2	5	2.6	6.0
Medicine.....	8	7	10.3	8.5
Farming.....	10	8	12.6	10.0
Business.....	30	32	40.0	40.0
Government position.....	1		1.3	....
Trades.....	10	13	12.6	16.0
Not stated.....	3	5	3.8	6.0
Total.....	77	81		

The above table, showing the occupations of parents, is followed by Table Ua, which indicates the occupations of alumni of the Senior Colleges, so far as they can be gathered from the alumni list.

The statistics regarding women, it will be seen, are rendered somewhat dubious by the large number whose occupations are unknown. It may be inferred, perhaps, that most of these are living at home. The striking feature of the whole survey is the very large proportion of students who have engaged in teaching, amounting in the case of men to 36 per cent. and of women to 44 per cent. The percentage of women engaged in teaching is not surprising, because this is the occupation which is most widely and favorably open to them, but the percentage of men engaged in teaching is surprising. It is no doubt partly due to the fact that so many of

TABLE U<sub>a</sub>  
OCCUPATIONS OF THE ALUMNI OF THE SENIOR COLLEGES

	Men	Women	Per Cent. of Men	Per Cent. of Women	Per Cent. of All
Have pursued higher studies	15	28	3.0	7.0	5.0
Ministry.....	50	...	10.0	....	5.0
Law.....	72	...	14.0	....	7.0
Teaching.....	174	172	36.0	44.0	40.0
Medicine.....	23	2	5.0	0.6	2.8
Business.....	61	1	12.0	0.4	6.2
Journalism.....	13	4	2.0	1.0	1.5
Engineering.....	10	..	2.0	....	1.0
Architecture and designing.	2	3	1.0	1.0	1.0
Musician.....	1	..	1.0	....	0.5
Librarian.....	2	4	0.4	1.0	0.7
Missionary.....	2	..	0.4	....	0.2
Actor.....	1	..	0.2	....	0.1
Farmer.....	1	..	0.2	....	0.1
Chemist.....	4	..	0.8	....	0.4
United States service.....	9	..	2.0	....	1.0
Printer.....	1	..	1.0	....	0.5
Unknown.....	43	116	9.0	35.0	22.0
Women who have married..	..	39	....	10.0	5.0
<b>Total.....</b>	<b>469</b>	<b>349</b>			

our students are already teachers before they enter the University. It is not, therefore, so much the fact that a large number of our students decide to become teachers as that a large proportion of them are already teachers before coming here, and remain such after graduation.

It may be of interest to compare with the above table the following table, U<sub>b</sub>, giving information as regards the prospective occupations of those receiving the Bachelor's degree from December, 1901, to June, 1902, inclusive.

TABLE U<sub>b</sub>  
OCCUPATIONS OF GRADUATES  
December, March, and June Convocations, 1901-1902

	Men	Women	Per Cent. of Men	Per Cent. of Women	Per Cent. of Total
Teaching.....	28	71	24.0	67.0	45.5
Law.....	19	1	16.0	0.9	8.5
Business.....	21	1	18.0	0.9	9.5
Physician.....	21	..	18.0	....	9.0
Journalism.....	5	..	4.4	....	2.2
Graduate study.....	5	2	4.4	1.8	3.1
Ministry.....	5	..	4.4	....	2.2
Art and music.....	1	2	0.8	1.8	1.3
Librarian.....	..	1	....	0.9	0.5
At home.....	..	5	....	4.7	2.3
Undecided.....	11	13	9.3	12.0	10.6
Unknown.....	1	10	0.7	10.0	5.8
<b>Total.....</b>	<b>117</b>	<b>106</b>			

## CURRICULUM

The most important changes relating to the curriculum within the past three years, since the publication of my last report, have been (1) the organization of the College of Commerce and Administration, which now makes a fourth Senior College, similar to the previously existing Colleges of Arts, Literature, and Science; (2) the arrangement and establishment of courses in Medicine and Law.

*The College of Commerce and Administration* was at first organized merely as an arrangement of certain courses in the Departments of Political Economy, Political Science, History, and Sociology, and several tentative curricula were arranged by a committee of the Faculty of the Senior Colleges. In the last year this organization has been superseded by the establishment of a separate faculty, with a Dean for the administration of the affairs of this College. The curriculum, while falling mainly within the four Departments mentioned, diverges from the general regulations for the students in the other Colleges, in that the work is much more highly specialized, requiring for three of the groups, viz., Banking, Transportation, and Trade and Industry, 14½ or 15 Majors in one Department, and not requiring the courses in Philosophy which are prescribed for the Bachelor's degree in the other Colleges. As yet few students have registered for this College, owing in part to the large amount of required courses in its curriculum. It is evident that a student can take practically all of the work desired without necessarily registering in the College. It is, however, to be noted that in the Junior Colleges there has been a marked increase during the present year in the students who are registered in this College, and it may be expected that this will be followed by an increase in the Senior Colleges. The figures covering registration and graduation in this College will be found in connection with the general tables.

*The work in Medicine.*—The work already offered at the University in Chemistry, Biology, Physiology, Microscopic Anatomy, Bacteriology, and Embryology has been supplemented by new courses in Gross Anatomy, Physiological Chemistry, Pharmacology, and Pathology. This work forms the scientific part of the medical course, as distinguished from the more distinctly technical studies of the later years. The oversight of this work, which was at first in charge of a committee of the Senior College Faculty, has been transferred to a separate Medical Board, but all the students who are to be candidates for the Bachelor's degree remain under the charge of the Board of the Senior Colleges, the constitution of which has been stated above. At present there are also many medical students who are not registered as candidates for the Bachelor's degree, but it is expected that the standard of admission to medical work will be raised in future until two years of college work are presupposed for entrance upon medical courses. All medical students will then be either Senior College students or graduate students.

Candidates for the degree of S.B., registered for pre-medical work, are allowed to substitute Science for 1 Major of required Philosophy or History. Candidates for the degrees of A.B. and Ph.B., registered for pre-medical work, are required to take but 4 Majors in the Departments I–XVI, inclusive. It is therefore possible for the candidate for the degree of S.B. who has followed regularly the recommendations of the Medical Board with regard to his preliminary work to receive the degree of S.B. and M.D. in six years, and for the candidates for the degrees Ph.B. and A.B. to receive these degrees and the degree of M.D. in from six years and three months to six years and nine months.

*The curriculum for the student of Law* is similarly planned, except that, as professional law studies occupy three years, the grouping is slightly different. The arrangement in this case is that the first year of the professional Law course may be taken as the fourth year of undergraduate work. For the third year of undergraduate work, in the case of students desiring to enter upon the study of Law, 6 Majors in Political Economy and in Constitutional

History of England and the United States are prescribed. This leaves 3 elective Majors, which the student is advised to select from the courses in History, Economics, Political Science, Sociology, or Philosophy. As it is seldom the case, however, that the student enters upon the work of the Senior Colleges with all the requirements fulfilled, it is probable that he will either be unable to elect from these studies, or will be obliged to lengthen his course somewhat beyond the minimum time in order to complete the work of the pre-legal year, and also the first year of the professional work, within the twelve Quarters formally required for the Bachelor's degree. In fact, in the case of the candidate for the degree of A.B., the three electives of the Junior College are not sufficient to provide for the 4 required Majors in History and Philosophy. Candidates for the Ph.B. degree who have pursued in the high school and in the Junior College the subjects recommended may complete all their required work by using the electives in the Junior College.

It appears that by means of the above arrangements the student may receive the degree of J.D. in about six years from the date of entrance to the University, or even in less time, if he shortens his undergraduate course by means of summer work or extra work. A similar arrangement has been in force for some time with regard to work in Theology.

The question may arise as to whether this does not introduce undue preparation for professional work into the undergraduate course. In considering this question, another fact should be considered, which is not usually taken into account. This is that, in the University of Chicago at least, a large amount of the Senior College work taken by students who are already teachers, or who expect to be teachers, is really professional work. The student who is taking Latin or Mathematics or Science, with the intention of teaching that subject, is or may be taking it with as strictly a professional purpose as though he were taking Anatomy or Law or Theology. The choice of electives by students is, in many cases, determined very largely by their plans for teaching, and it might almost be said that there is almost as truly "a course for students preparing for examinations for teachers in the Chicago high schools" as there is a course for students intending to enter upon medical work. This raises the question as to whether the distinction between liberal and professional study may not need some restatement. It seems arbitrary to say that a student who is studying Latin with the intention of teaching it is not getting from it the value of a liberal study, as we should certainly be obliged to say if we made the "professional" equivalent to the "non-liberal."

It is a well-known fact that the student brings a greater interest to studies which are connected in his view with his life-work, and there are sound reasons for this. So far as the disciplinary and informational value of study is concerned, it would therefore seem that the general tendency toward bringing the work of the undergraduate course into more direct relation with professional work of all kinds is along the right direction. It would further appear that if the undergraduate department is to have a suitable proportion of men, there must probably be increasing lines of connection between undergraduate work and the professional work or the work of business life. Such a connection has already been attempted by the University, in its College of Commerce and Administration, but as yet the Senior Colleges have not felt the effect of this organization of studies because, as will be seen by Tables B and R, very few students have yet been received in the Senior College in this course. As has been noted, the curriculum of our Senior College is, as it stands, capable of being utilized by teachers as a professional school. It is such a professional school for the training of women teachers to a slightly larger degree than for the training of men teachers. Equalization of the number of men and women students may therefore be maintained in part by introducing additional lines of connection for the professional work of men, as above noted.

But in addition to the disciplinary and informational value of studies, there are others

which it would be most unfortunate for the University to neglect in establishing its policy for undergraduates. The duty of the University to its students and to the community is not merely to give discipline and information, but to broaden a student's interests, both in the outer world in which he lives and in all the various manifestations of the human culture of which he is a part. It is to give him such acquaintance with the social and political institutions through which civilization achieves its progress, as to equip him to be not merely a cultured looker-on, but an intelligent and efficient citizen. Such broadening of interests and such capacity for fuller, larger measures of satisfaction and usefulness are not provided by the arrangement of undergraduate work above referred to. The required curricula of the Junior Colleges may be supposed to be arranged, to some extent, with this in view; but examination of the requirements will show that they are not primarily designed for this purpose. They continue the work of the high schools, and thereby serve useful purposes of discipline, or of equipment with tools for later use. The courses in Modern Languages are designed primarily to give the student a working knowledge of those languages rather than a large amount of distinctive culture. Inasmuch as not more than two years of work is required in either French or German, and inasmuch as in many cases there is only a year of work taken in one or the other of these subjects, the student does not read enough of the classical literature of either language to bring him into full appreciation of the culture and literature of the German or French people.

The courses in Ancient Languages cover necessarily a very small range, from the standpoint of literature and history of civilization. The courses in Science might serve for at least an introduction to one or more aspects of this group of subjects, but unfortunately these are very largely anticipated in the high school by the very students (A.B. and Ph.B.) who need them most for purposes of a liberal education. The courses in History, which are usually taken as the required work of the Junior College, do not bear closely upon the problems of present-day citizenship. The course in Ethics does concern itself with the fundamental principles underlying these problems, but this falls in the requirements of the Senior College, and in the case of certain classes of students is not a required course.

It is therefore to the Senior College that we must look for the cultural and, if I may use the term, citizenship aspects of college work; and so far as it falls within my province to give advice to students respecting their electives, it is my practice to encourage A.B. and Ph.B. students to elect work in Science; scientific students, to elect work in the Departments which bring them into closer acquaintance with human civilization, thought, and literature; and all students, to elect some course which shall fit them for more intelligent participation in the duties of the American citizen.

In this connection, a recommendation for further broadening of the course by the addition of courses in Music and Art may be noted. This subject was considered by a committee of the Congregation, and the approval by the Congregation of courses in History and Theory of Art and Music was reported to the Senior College Faculty. It is to be hoped that, for the sake of the women students especially, such courses may be established in the near future. It may be mentioned also that division lectures to the lower Seniors, during the last two years, have been given by Professors Tarbell Schwill, and Breasted, upon the History of Art, and have been much appreciated.

#### TRANSFORMATION OF THE ELECTIVE SYSTEM

The plans outlined above for the courses leading to Medicine and Law, when taken in connection with the plans for the development of the College of Commerce and Administration, suggest forcibly the complete transformation of the elective system, so far as these lines of work are concerned, and foreshadow possible developments along other lines. As has already been



shown, the student preparing for work in Medicine or in Law, if he follows the lines marked out for him with a view to completing both the requirement for the Bachelor's degree and that for the professional degree, has practically not a single free elective from his entrance upon the high school to his graduation from the professional school. The work of ten or eleven years, with no exception worthy of mention, is thus a rigidly prescribed course, except in so far as the student, at the beginning of his high-school course, decides for the A.B., Ph.B., or S.B. degree. There is no question that a more rapid progress toward graduation from the professional school is attained by this plan of study. Further, there is little doubt that for many students it is preferable that the work be thus rigorously mapped out. Many students scatter their energies amid the wide field of electives and very likely come to the end of the undergraduate course with less thoroughly organized material than they would have possessed under a better-arranged plan. On the other hand, it may well be questioned whether it is not possible to proceed too far in the reaction against the free elective system. Is it desirable that every lawyer should have absolutely the same courses, from the grammar school until he receives the degree of J.D.; or that every physician should pass through identically the same curriculum? Is it not desirable that there should still be opportunity for the introduction of persons of varying tastes to the various fields of culture and discipline, which may give the individual element an opportunity for more latitude in his development? It may be necessary for many to take the shortest possible cut into the professions, but should there not also be encouragement for those who can afford the additional year or more of time to obtain a somewhat broader outlook upon the fields of science, or of human culture and achievement, in which they do not expect to find their chief work?

As regards the Law course, it appears, as has already been stated, that most A.B. and Ph.B. students anticipate the required science during the high-school course, and therefore take no natural science in college. As regards the medical students, the defect is greatest along the lines of the political and social sciences.

The organization of work along the lines of Law, Medicine, Divinity work, and Commerce and Administration is likely to be followed by some organization of courses for those looking to the profession of the teacher. I am confident that such organization is desirable, provided it is not too rigorous. A combination of courses in a group of subjects which the student expects to teach, with certain courses of a professional character in the philosophic and practical aspects of education, could easily be arranged. This would guide the student to some degree in the choice of courses and, what is of even more importance, would give the student some conception of educational problems in their broader aspects, and suggest to the prospective master of the schoolroom that, while in the grammar school and the high school, it is highly important to teach mathematics and language and science with thoroughness, it is of even greater importance to train boys and girls to become broad-minded, responsible, and sympathetic men and women.

If such organization of work were effected, in addition to the plan already announced for professional work, it would probably have some effect upon the work of various Departments, in the way of curtailing registration for certain courses and increasing that for others. Our wide range of courses has grown up under the free elective system, and there will doubtless continue to be a demand for a wide range of work. At the same time, the tendency is undoubtedly just at present toward the closer definition of curriculum.

Tables are appended showing the registration of Senior College students for the years 1899-1902, also the registration of all students in Senior College courses. If it is desired to estimate the elective work of Senior College students, this can be best judged from the registration of the Seniors in Senior and Graduate courses.

TABLE V  
SENIOR REGISTRATIONS IN 1899-1900

DEPARTMENT	SENIOR COURSES			DIVINITY COURSES			GRADUATE COURSES			JUNIOR COURSES			TOTALS		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
1A. Philosophy.....	40	39	79	..	..	..	6	8	14	96	118	214	142	165	307
1B. Pedagogy.....	5	10	15	..	..	..	1	..	1	..	..	..	6	10	16
2. Political Economy ..	20	1	21	..	..	..	22	2	24	47	29	76	89	32	121
3. Political Science.....	59	12	71	..	..	..	60	4	64	3	3	6	122	19	141
4. History.....	99	128	227	..	..	..	37	28	65	24	16	40	160	172	332
5. Archaeology.....	..	..	..	..	..	..	..	2	2	..	..	..	..	2	2
6. Sociology.....	64	43	107	5	3	8	31	19	50	18	24	42	118	89	207
7. Comparative Relig'n.	..	..	..	..	..	..	..	3	3	..	..	..	..	3	3
8. Semitic Languages..	..	..	..	23	50	73	..	..	..	..	..	..	23	50	73
9. Biblical Greek.....	..	..	..	25	32	57	..	..	..	..	..	..	25	32	57
10. Sanskrit.....	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1
11. Greek.....	12	28	40	..	..	..	5	2	7	14	15	29	31	45	76
12. Latin.....	14	55	69	..	..	..	3	3	6	23	44	67	40	102	142
13. Romance.....	24	37	61	..	..	..	2	1	3	53	58	111	79	96	175
14. German.....	12	29	41	..	..	..	1	11	12	43	43	86	56	83	139
15. English.....	58	143	201	..	..	..	2	11	13	25	36	61	85	190	275
16. Lit. in English.....	9	3	12	..	..	..	..	..	..	..	..	..	9	3	12
17. Mathematics.....	7	1	8	..	..	..	8	..	8	24	14	38	39	15	54
18. Astrophysics.....	..	..	..	..	..	..	..	..	3	7	10	3	7	10	10
19. Physics.....	12	..	12	..	..	..	1	..	1	21	6	27	34	6	40
20. Chemistry.....	24	6	30	..	..	..	25	2	27	14	13	27	63	21	84
21. Geology.....	27	25	52	..	..	..	3	5	8	15	10	25	45	40	85
22. Zoology.....	20	4	24	..	..	..	9	..	9	8	15	23	37	19	56
23. Anatomy.....	29	9	38	..	..	..	1	..	1	..	..	..	30	9	39
24. Physiology.....	20	10	30	..	..	..	..	..	18	15	33	38	25	63	63
25. Neurology.....	..	..	..	..	..	..	12	3	15	..	..	..	12	3	15
26. Paleontology.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27. Botany.....	12	4	16	..	..	..	5	..	5	3	7	10	20	11	31
28. Public Speaking.....	1	3	4	3	..	3	..	..	..	22	16	38	26	19	45
29. Physical Culture.....	242	203	445	..	..	..	..	..	..	..	..	..	242	203	445
41. Old Testament.....	..	..	..	2	..	2	..	..	..	..	..	..	2	..	2
42. New Testament.....	..	..	..	6	2	8	..	..	..	..	..	..	6	2	8
43. Biblical Theology...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44. Systematic Theology	..	..	..	2	1	3	..	..	..	..	..	..	2	1	3
45. Church History.....	..	..	..	5	..	5	..	..	..	..	..	..	5	..	5
46. Homiletics.....	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1
Totals.....	810	793	1,603	70	90	160	235	104	339	474	479	963	1,591	1,474	3,065

SENIOR REGISTRATIONS IN 1900-1901

1A. Philosophy.....	29	35	64	..	..	..	5	1	6	111	88	199	145	124	269
1B. Pedagogy.....	10	29	39	..	..	..	7	4	11	..	..	..	17	33	50
2. Political Economy ..	35	2	37	..	..	..	21	4	25	47	23	70	103	29	132
3. Political Science.....	74	17	91	..	..	..	23	5	28	11	8	19	108	30	138
4. History.....	138	137	273	..	..	..	23	18	41	45	66	111	204	221	425
5. Archaeology.....	..	..	..	..	..	..	1	3	4	..	..	..	1	3	4
6. Sociology.....	46	47	93	12	5	17	44	19	63	14	24	38	116	95	211
7. Comparative Relig'n.	1	..	1	..	37	..	1	5	6	..	..	..	2	5	7
8. Semitic Languages..	..	..	..	31	60	68	..	..	..	..	..	..	31	37	68
9. Biblical Greek.....	..	..	..	56	..	116	..	..	..	..	..	..	56	60	116
10. Sanskrit.....	1	..	1	..	..	..	3	..	3	..	..	..	4	..	4
11. Greek.....	19	27	46	..	..	..	2	2	2	30	23	53	49	52	101
12. Latin.....	25	44	69	..	..	..	7	25	32	20	46	68	52	115	167
13. Romance.....	21	28	47	..	..	..	2	4	6	57	67	124	80	97	177
14. German.....	18	53	71	..	..	..	9	2	11	59	56	115	86	111	197
15. English.....	72	159	231	..	..	..	9	13	22	56	47	103	137	219	356
16. Lit. in English.....	19	33	52	..	..	..	7	13	20	..	..	..	26	46	72
17. Mathematics.....	3	9	12	..	..	..	6	..	6	26	40	66	35	49	84

TABLE V—Continued

DEPARTMENT	SENIOR COURSES			DIVINITY COURSES			GRADUATE COURSES			JUNIOR COURSES			TOTALS		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
18. Astrophysics.....	..	..	..	..	..	..	..	..	..	7	5	12	7	5	12
19. Physics.....	7	1	8	..	..	..	13	2	15	34	10	44	54	13	67
20. Chemistry.....	40	2	42	..	..	..	18	..	18	36	21	57	94	23	117
21. Geology.....	30	23	53	..	..	..	2	3	5	13	15	28	45	41	86
22. Zoology.....	27	11	38	..	..	..	6	1	7	18	13	31	51	25	76
23. Anatomy.....	25	10	35	..	..	..	..	..	..	..	..	..	25	10	35
24. Physiology.....	13	4	17	..	..	..	4	..	4	16	10	26	33	14	47
25. Neurology.....	4	..	4	..	..	..	2	2	4	2	1	3	8	3	11
26. Paleontology.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27. Botany.....	3	7	10	..	..	..	2	6	8	5	21	26	10	34	44
28. Public Speaking.....	21	3	24	..	..	..	..	..	..	39	40	79	60	43	103
29. Physical Culture.....	257	218	475	..	..	..	..	..	..	..	..	..	249	218	467
41. Old Testament.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42. New Testament.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43. Biblical Theology.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44. Systematic Theology.....	..	..	..	5	2	7	..	..	..	..	..	..	5	2	7
45. Church History.....	..	..	..	7	3	10	..	..	..	..	..	..	7	3	10
46. Homiletics.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals.....	936	897	1,833	111	107	218	215	132	347	646	624	1,270	1,906	1,759	3,667

SENIOR REGISTRATIONS IN 1901-1902

1A. Philosophy.....	31	26	57	..	..	..	3	4	7	128	115	243	162	145	307
1B. Pedagogy.....	32	23	55	..	..	..	9	8	17	..	..	..	41	31	72
2. Political Economy.....	66	12	78	..	..	..	27	3	30	64	13	77	157	28	185
3. Political Science.....	26	11	37	..	..	..	139	12	151	..	..	..	165	23	188
4. History.....	158	155	313	..	..	..	11	12	23	45	39	84	214	206	420
5. Archaeology.....	..	..	..	..	..	..	3	17	20	..	..	..	3	17	20
6. Sociology.....	85	93	178	2	3	5	20	22	42	9	13	22	118	131	247
7. Comparative Relig'n.....	..	..	..	..	..	..	7	3	10	..	..	..	7	3	10
8. Semitic Languages.....	..	..	..	13	12	25	..	..	..	..	..	..	13	12	25
9. Biblical Greek.....	..	..	..	30	45	75	..	..	..	..	..	..	30	45	75
10. Sanskrit.....	1	..	1	..	..	..	2	5	7	..	..	..	3	5	8
11. Greek.....	6	35	41	..	..	..	1	5	6	22	29	51	29	69	98
12. Latin.....	21	73	94	..	..	..	3	11	14	10	28	38	34	112	146
13. Romance.....	26	33	59	..	..	..	5	7	12	56	61	117	87	101	188
14. German.....	12	33	45	..	..	..	7	8	15	45	51	96	64	92	156
15. English.....	97	151	248	..	..	..	1	11	12	38	44	80	134	206	340
16. Lit. in English.....	26	59	85	..	..	..	..	..	..	..	..	..	26	59	85
17. Mathematics.....	10	6	16	..	..	..	5	5	10	27	27	54	42	38	80
18. Astrophysics.....	12	3	15	..	..	..	1	..	1	1	3	4	14	6	20
19. Physics.....	23	11	34	..	..	..	..	..	..	44	19	63	67	30	97
20. Chemistry.....	54	16	70	..	..	..	19	3	22	59	20	79	132	39	171
21. Geology.....	38	42	80	..	..	..	..	..	..	15	17	32	53	59	112
22. Zoology.....	9	4	13	..	..	..	4	..	4	16	14	30	29	18	47
23. Anatomy.....	63	..	63	..	..	..	3	..	3	..	..	..	66	..	66
24. Physiology.....	18	..	18	..	..	..	..	..	..	7	11	18	25	11	36
25. Neurology.....	4	..	4	..	..	..	1	..	1	..	..	..	5	..	5
26. Paleontology.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27. Botany.....	7	13	20	..	..	..	1	5	6	14	19	33	22	37	59
28. Public Speaking.....	13	9	22	..	..	..	..	..	..	38	25	63	51	34	85
29. Physical Culture.....	960	990	1,950	..	..	..	..	..	..	..	..	..	960	990	1,950
41. Old Testament.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42. New Testament.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43. Biblical Theology.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44. Systematic Theology.....	..	..	..	4	1	5	..	..	..	..	..	..	4	1	5
45. Church History.....	..	..	..	8	2	10	..	..	..	..	..	..	8	2	10
46. Homiletics.....	..	..	..	3	..	3	..	..	..	..	..	..	3	..	3
Pathology.....	7	..	7	..	..	..	..	..	..	4	1	5	11	1	12
Totals.....	1,905	1,798	3,603	60	63	123	272	141	413	640	549	1,189	2,777	2,551	5,328

TABLE W  
REGISTRATIONS IN SENIOR COLLEGE COURSES, 1899-1900

DEPARTMENT	GRADUATES			SENIOR			JUNIOR			UNCLASSIFIED			DIVINITY		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
Philosophy	74	16	90	40	30	79	9	7	16	10	12	22	29	1	30
Pedagogy	79	18	97	5	10	15	3	3	6	22	44	66	22	4	26
Political Economy	35	6	41	20	1	21	13	...	13	5	3	8	3	...	3
Political Science	65	2	67	59	12	71	21	...	21	17	1	18	2	...	2
History	68	37	105	99	128	227	86	72	158	22	47	69	6	4	10
Archæology	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sociology	23	14	37	64	43	107	19	21	40	13	20	33	35	4	39
Comparative Religion	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Semitic Languages	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Biblical Greek	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sanskrit	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greek	65	41	106	12	28	40	5	10	15	...	4	4	3	1	4
Latin	107	73	180	14	55	69	2	7	9	1	19	20	...	...	...
Romance	39	27	66	24	37	61	11	20	31	4	23	27	1	...	1
Germanic	17	19	36	12	29	41	9	21	30	4	38	42	...	1	1
English	176	267	443	58	143	201	40	59	99	41	306	349	16	2	18
Literature in English	30	47	77	3	9	12	6	9	15	6	27	33	67	12	79
Mathematics	82	13	95	7	1	8	...	1	1	6	5	11	...	...	...
Astronomy	18	...	18	...	...	...	...	...	...	1	2	3	...	...	...
Physics	88	15	103	12	...	12	5	4	9	16	4	20	...	...	...
Chemistry	36	10	46	24	6	30	22	...	22	26	1	27	...	...	...
Geology	53	15	68	27	25	52	34	25	59	13	31	44	...	...	...
Zoology	60	12	72	20	4	24	14	...	14	8	3	11	...	...	...
Anatomy	24	3	27	29	9	38	16	1	17	24	1	25	...	...	...
Physiology	40	13	53	20	10	30	7	...	7	11	...	11	1	...	1
Neurology	...	...	...	...	...	...	...	1	1	...	7	7	1	...	1
Botany	35	18	53	12	4	16	4	3	7	7	9	16	1	...	1
Public Speaking	10	2	12	1	3	4	5	4	9	6	4	10	6	1	7
Physical Culture	7	26	33	242	203	445	704	526	1230	33	87	120	1	...	1

REGISTRATIONS IN SENIOR COLLEGE COURSES, 1900-1901

Philosophy	62	16	78	29	35	64	12	6	18	9	20	29	11	1	12
Pedagogy	74	26	100	10	29	39	7	7	14	27	60	87	2	...	2
Political Economy	36	6	42	35	2	37	19	1	20	9	...	9	1	...	1
Political Science	47	8	55	74	17	91	54	11	65	20	12	32	...	...	...
History	83	59	142	136	137	273	102	76	178	31	102	133	4	...	4
Archæology	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sociology	22	14	36	46	47	93	45	26	71	16	24	40	21	1	22
Comparative Religion	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
Semitic Languages	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Biblical Greek	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sanskrit	8	...	8	1	...	1	...	...	...	...	...	...	...	...	...
Greek	49	29	78	19	27	46	3	9	12	6	2	8	2	...	2
Latin	60	52	112	25	44	69	8	20	28	15	18	33	1	...	1
Romance	30	20	50	21	26	47	14	21	35	7	16	23	...	...	...
Germanic	18	29	47	18	53	71	14	25	39	6	23	29	1	...	1
English	203	280	483	72	159	231	37	78	115	50	275	325	6	...	6
Literature in English	38	42	80	19	33	52	8	23	31	3	51	54	6	...	6
Mathematics	70	17	87	3	9	12	6	6	12	4	4	8	...	...	...
Astronomy	31	2	33	...	...	...	...	2	2	...	1	1	...	...	...
Physics	75	3	78	7	1	8	6	1	7	5	1	6	...	...	...
Chemistry	60	6	66	40	2	42	29	5	34	22	2	24	2	...	2
Geology	39	16	55	30	23	53	43	15	58	14	9	23	...	...	...
Zoology	76	21	97	27	11	38	18	10	28	28	10	38	1	...	1
Anatomy	59	5	64	25	10	35	14	1	15	23	...	23	...	...	...
Physiology	66	13	79	13	4	17	9	...	9	18	3	21	...	...	...
Neurology	13	3	16	4	...	4	1	...	1	1	...	1	...	...	...
Botany	36	8	44	3	7	10	4	10	14	20	2	22	1	...	1
Public Speaking	11	3	14	21	3	24	6	4	10	1	3	4	4	...	4
Physical Culture	60	31	91	257	218	475	732	649	1381	20	10	121	4	...	4

TABLE W—Continued  
REGISTRATIONS IN SENIOR COLLEGE COURSES, 1901-1902

DEPARTMENT	GRADUATES			SENIOR			JUNIOR			UNCL'S'S'F'D			DIVINITY			MEDICINE			SCHOOL OF EDUCATION			
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	
Philosophy	63	27	90	31	26	57	5	7	12	12	16	28	8	...	8	...	...	...	1	...	1	
Pedagogy	45	21	66	32	23	55	2	3	5	10	21	31	...	...	...	...	...	...	...	...	...	
Political Economy	67	7	72	66	12	78	36	1	37	10	3	13	4	1	5	...	...	...	...	...	...	
Political Science	6	4	10	26	11	37	44	7	51	1	3	4	...	...	...	...	...	...	...	...	...	
History	110	52	162	158	155	313	85	67	152	44	84	128	8	...	8	...	...	...	...	3	3	
Archæology	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sociology	37	23	60	85	93	178	42	73	115	14	36	50	23	1	24	...	...	...	...	3	3	
Comparative Religion	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Semitic Languages	2	...	2	1	...	1	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Biblical Greek	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sanskrit	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greek	25	15	40	6	35	41	...	2	2	1	...	1	...	...	...	...	...	...	...	...	...	...
Latin	52	103	155	21	73	94	6	12	18	2	21	23	3	...	3	...	...	...	...	...	...	...
Romance	29	39	68	26	33	59	11	28	39	1	17	18	...	1	1	...	...	...	...	...	...	...
Germanic	27	39	66	12	33	45	13	29	42	1	37	38	...	1	1	...	...	...	...	...	...	...
English	192	225	417	97	151	248	27	80	107	30	166	196	1	2	3	...	...	...	...	5	1	6
Literature in English	40	64	104	26	59	85	5	35	40	8	43	51	3	1	4	...	...	...	...	...	...	...
Mathematics	73	15	88	10	6	16	1	3	4	3	6	9	...	...	...	...	...	...	...	...	...	...
Astronomy	44	6	50	12	3	15	3	4	7	1	3	4	...	...	...	...	...	...	...	...	...	...
Physics	80	13	93	23	11	34	8	1	9	18	1	19	...	...	...	...	...	...	...	...	...	...
Chemistry	75	15	83	54	16	70	40	6	46	21	2	23	...	...	124	...	124 <sup>c</sup>	...	...	...	...	...
Geology	87	16	103	38	42	80	51	14	65	7	14	21	...	...	...	...	...	...	...	7	7	...
Zoology	60	19	79	9	4	13	4	4	8	12	2	14	...	...	...	...	...	...	...	...	...	...
Anatomy <sup>b</sup>	66	7	73	63	...	63	10	2	12	27	4	31	...	...	422	...	3 425 <sup>c</sup>	...	...	...	...	...
Physiology <sup>b</sup>	24	5	29	18	...	18	1	1	2	2	2	4	...	...	126	...	126 <sup>c</sup>	...	...	...	...	...
Neurology <sup>b</sup>	7	2	9	4	...	4	1	...	1	9	...	9	...	...	...	...	...	...	...	...	...	...
Pathology <sup>b</sup>	8	2	10	7	...	7	2	2	4	...	...	...	...	...	111	...	111	...	...	...	...	...
Botany	48	24	72	7	13	20	3	7	10	8	6	14	...	...	...	...	...	...	...	...	...	...
Public Speaking	17	9	25	13	9	22	9	8	17	7	18	25	11	...	11	...	...	...	...	...	...	...
Physical Culture	14	11	25	24	21	45	66	67	133	42	82	124	3	1	4	...	...	...	...	...	...	...

TABLE X

OFFICERS OF INSTRUCTION

Number of Instructors Giving Courses in the Senior Colleges

Rank	1899-1900	1900-1901	1901-1902
Professors	25	33	34
Associate Professors	11	10	20
Assistant Professors	27	23	27
Instructors	24	22	28
Associates	4	5	6
Assistants	11	11	4
Docents	4	5	1
Fellows	3	1	..
Lecturers	8	..	4
Total	107	110	124

<sup>b</sup> Two Quarters only.

<sup>c</sup> One Quarter only.

TABLE Y  
MATRICULATIONS IN SENIOR COLLEGES

	SUMMER			AUTUMN			WINTER			SPRING			TOTAL		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
<b>1899-1900:</b>															
<b>Affiliated Schools:</b>															
A.B.	4	1	5	.....	1	1	1	.....	1	1	.....	1	6	2	8
Ph.B.	1	2	3	.....	.....	.....	.....	.....	.....	.....	1	1	1	3	4
S.B.	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1
C. & A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	5	3	8	1	1	2	1	.....	1	1	1	2	8	5	13
<b>Other Institutions:</b>															
A.B.	.....	1	1	5	5	10	.....	.....	.....	.....	.....	.....	5	6	11
Ph.B.	5	3	8	3	7	10	1	1	2	.....	.....	.....	9	11	20
S.B.	.....	.....	.....	5	1	6	.....	.....	.....	.....	.....	.....	5	1	6
C. & A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	5	4	9	13	13	26	1	1	2	.....	.....	.....	19	18	37
<b>Summer Only:</b>															
A.B.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2
Ph.B.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
S.B.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. & A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	3
<b>1900-1901:</b>															
<b>Affiliated Schools:</b>															
A.B.	5	.....	5	2	4	6	.....	.....	.....	.....	1	1	7	5	12
Ph.B.	1	4	5	3	2	5	.....	.....	.....	1	1	2	5	7	12
S.B.	1	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	1	1	2
C. & A.	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1
Total	7	4	11	6	7	13	.....	.....	.....	1	2	3	14	13	27
<b>Other Institutions:</b>															
A.B.	2	1	3	11	7	18	.....	1	1	2	.....	2	15	9	24
Ph.B.	1	.....	1	10	12	22	.....	.....	.....	2	4	6	13	16	29
S.B.	2	.....	2	3	5	8	.....	.....	.....	2	.....	2	7	5	12
C. & A.	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1
Total	5	1	6	25	24	49	.....	1	1	6	4	10	36	30	66
<b>Summer Only:</b>															
A.B.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ph.B.	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	3
S.B.	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2
C. & A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	1	4	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4	5
<b>1901-1902:</b>															
<b>Affiliated Schools:</b>															
A.B.	6	2	8	1	1	2	.....	.....	.....	1	.....	1	8	3	11
Ph.B.	3	2	5	1	1	2	.....	.....	.....	.....	1	1	4	4	8
S.B.	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3
C. & A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	11	5	16	2	2	4	.....	.....	.....	1	1	2	14	8	22
<b>Other Institutions:</b>															
A.B.	4	2	6	9	5	14	.....	.....	.....	.....	.....	.....	13	7	20
Ph.B.	4	3	7	3	10	13	1	1	2	.....	.....	.....	8	14	22
S.B.	3	1	4	6	.....	6	.....	.....	.....	.....	.....	.....	9	1	10
C. & A.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Total	12	6	18	18	15	33	1	1	2	.....	.....	.....	31	22	53
<b>Summer only:</b>															
A.B.	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Ph.B.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
S.B.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
C. & A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3

TABLE Z  
GEOGRAPHICAL DISTRIBUTION. THE SENIOR COLLEGE

	1892-1893	1899-1900	1900-1901	1901-1902		1892-1893	1899-1900	1900-1901	1901-1902
Alabama .....	..	...	2	2	New York .....	3	2	13	11
Arkansas .....	..	3	1	1	North Carolina ..	1	...	...	...
California .....	1	1	3	1	North Dakota ..	1	...	...	...
Colorado .....	1	2	1	2	Ohio .....	4	10	15	16
Connecticut .....	1	...	2	1	Oklahoma .....	..	...	...	...
Florida .....	..	...	1	3	Oregon .....	..	...	2	2
Georgia .....	..	2	2	5	Pennsylvania .....	..	1	7	8
Idaho .....	..	...	...	...	Rhode Island .....	1	...	...	...
Illinois .....	14	238	281	297	South Carolina ..	..	2	2	2
Indiana .....	1	17	25	27	South Dakota ..	..	...	...	1
Indian Territory ..	..	...	...	...	Tennessee .....	..	1	6	3
Iowa .....	..	19	18	28	Texas .....	..	...	...	9
Kansas .....	2	2	8	16	Utah .....	..	...	...	1
Kentucky .....	..	...	2	4	Vermont .....	..	2	2	...
Louisiana .....	..	...	1	...	Virginia .....	1	1	1	3
Maine .....	..	...	1	...	Washington .....	1	2	2	4
Maryland .....	..	...	...	...	West Virginia ..	..	2	1	1
Massachusetts .....	..	14	1	4	Wisconsin .....	2	18	13	15
Michigan .....	..	3	17	16	Austria .....	..	...	1	...
Minnesota .....	1	1	4	7	Canada .....	..	1	2	3
Mississippi .....	..	11	4	4	England .....	1	...	...	...
Missouri .....	1	3	12	6	France .....	..	...	1	1
Montana .....	..	5	4	3	India .....	..	...	...	1
Nebraska .....	1	...	6	2	Nova Scotia .....	..	...	1	1
New Hampshire .....	..	...	...	...	Russia .....	..	1	...	...
New Jersey .....	..	...	...	...	Total .....	38	364	465	512
New Mexico .....	..	...	...	1					

TABLE AA  
NUMBER OF SENIOR STUDENTS TAKING EXTRA OR SHORT WORK

	NO. TAKING SHORT WORK (LESS THAN 3 MAJORS)			NO. TAKING EXTRA WORK (MORE THAN 3 MAJORS)			NO. TAKING SUNDAY WORK			TOTAL TAKING IRREGULAR WORK		
	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
<b>1900-1901:</b>												
Summer .....	24	18	42	19	8	27	6	10	16	49	36	85
Autumn .....	13	9	22	13	8	21	12	10	22	38	27	65
Winter .....	12	8	20	15	9	24	12	12	24	39	29	68
Spring .....	12	11	23	17	13	30	17	21	38	46	45	91
Total .....	61	46	107	64	38	102	47	53	100	172	137	309
<b>1901-1902:</b>												
Summer .....	1	9	10	25	11	36	6	9	15	32	29	61
Autumn .....	2	3	5	23	12	35	14	24	38	39	39	78
Winter .....	2	3	5	17	20	37	9	13	22	28	36	64
Spring .....	2	1	3	30	18	48	5	17	22	37	36	73
Total .....	7	16	23	95	61	156	34	63	97	136	140	276





Table BB shows the number of failures and conditions of students in the Senior College since the preceding report. If this is compared with the table of failures and conditions published in the report of the Junior Colleges, it will be seen that there are very few failures and conditions in the Senior Colleges. This result may doubtless be attributed to three causes:

1. Natural selection. The poorest students drop out of college before reaching the Senior College.

2. The prevailing elective character of the work of the Senior College students. This operates in two ways: (a) It is universally recognized that our required courses in Mathematics or Language are exceptionally difficult for certain students who may do good work in other lines. (b) In addition to this negative reason, there is also a positive reason of greater interest and success in elective work.

3. The student undoubtedly profits by the discipline of the earlier years and learns how to work more successfully. It would probably be impossible to determine which of these reasons is the most effective in reducing the number of failures and conditions.

Respectfully submitted,

JAMES HAYDEN TUFTS, *Dean*.

## THE JUNIOR COLLEGES

*To the President of the University :*

SIR: I submit herewith my report on the condition of the Junior Colleges for the ten years, 1892-1902.

In the arrangement of this report of ten years of work, the more statistical portion precedes that which deals with the discussion of educational and historical questions pertaining to the Junior Colleges. It must be borne in mind that, except for occasional specific references to other branches of the University, the statements and tables apply simply to the Junior Colleges and their students.

The Junior Colleges include the first two years' work of students who are candidates for one of the degrees A.B., Ph.B., and S.B. The work of the Junior Colleges is conducted under its own administrative officers. The organization of the work, while similar to that of the Senior Colleges, does not resemble the latter in every detail. The courses offered in the Junior Colleges, while also open to students of the Senior Colleges, the Graduate Schools, and the School of Education, and to the students in Medicine, are conducted especially with a view to the needs of the Junior College students, who form in these courses an overwhelming majority. Fifteen out of the eighteen Majors of work are prescribed, and at least two-thirds of the work of the first two years must be selected from these required courses. The accomplishment of at least twelve Majors of the required work and of a total of eighteen Majors is marked by the conferring of the title of Associate in Arts, Literature, or Science, as the case may be, and transference to the corresponding Senior College. Thus, while Junior students may sometimes take work offered in the Senior Colleges, and may sometimes remain in the Junior Colleges more than two years on account of failure for one reason or another to complete a sufficient number of the required courses, on the whole, the students of the Junior Colleges are a fairly homogeneous body, and the classes in which they recite are fairly homogeneous in composition.

### REGISTRATION IN THE JUNIOR COLLEGES

The following table of registrations in the Junior Colleges for the first ten years of the University shows the number of students that have been dealt with, and their distribution by sex and degree sought. The year 1892-93 is omitted, as the records do not in every case show the degrees sought.

It will be observed that the distribution of the students in reference to candidacy for particular degrees has undergone a marked change during the period covered by the statistics. In the earlier years the number of candidates for the A.B. and Ph.B. degrees was each more than twice as great as those registered in the S.B. course. Yet even this does not completely express the preferences for particular lines of work in the University. Until recently, while the preparation required for admission to each course was quantitatively the same, the freedom to postpone the last two years of preparatory Latin and to take them in the College made the terms of admission to the S.B. course more liberal and caused an artificial swelling of the number in that course, by the classification in it of students whose real preference lay, not in the direction of scientific, but along literary and historical, lines. The later application of the same liberal provision to the A.B. and Ph.B. courses, and the introduction of the new curriculum—Commerce and Administration—relieved the scientific course of this artificial inflation. Thus the very marked increase in the proportion of the whole number of students who are

TABLE I  
REGISTRATION IN THE JUNIOR COLLEGES, BY SEX AND DEGREE SOUGHT

	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
<i>A.B.:</i>									
Men.....	79	120	113	120	107	125	111	101	75
Women.....	47	43	56	53	65	69	63	69	64
Total.....	126	163	169	173	172	194	174	170	139
<i>Ph.B.:</i>									
Men.....	49	62	88	84	70	81	96	81	90
Women.....	56	79	94	101	110	156	178	231	276
Total.....	105	141	182	185	180	237	274	312	366
<i>S.B.:</i>									
Men.....	39	51	59	58	71	68	111	125	126
Women.....	4	11	17	22	19	36	30	47	52
Total.....	43	62	76	80	90	104	141	172	178
<i>C. and A.:</i>									
Men.....	...	...	...	...	...	10	36	71	82
Women.....	...	...	...	...	...	...	11	8	7
Total.....	...	...	...	...	...	10	47	79	89
<i>Total:</i>									
Men.....	167	233	260	262	248	284	354	378	373
Women.....	107	133	167	176	194	261	282	355	399
Total.....	274	366	427	438	442	545	636	733	772

candidates for the degree of S.B. is all the more noteworthy. The percentage has risen steadily from 15.7 in 1893-94 to 23.1 in 1901-2.

The ever-increasing tendency of incoming students to gravitate toward the Ph.B. course is even more marked. The percentage has risen from 38.3 in 1893-94 to 47.4 in 1901-2. On the other hand, not only has the relative number of students in the A.B. course declined, but the actual number registered in this course has even diminished, in spite of the greatly increased attendance of the Junior Colleges as a whole. In 1893-94 the percentage was 46, in 1901-2 it was 18.

The relations in respect to sex, brought out by the above data, are also worthy of notice. It will be seen that, while in the first three years over 60 per cent. of the students in the Junior Colleges were men, in the tenth year the proportion had fallen to 50 per cent.

When the details are scrutinized, we find that, while at the beginning the number of men was greatest in the A.B. course and least in the S.B. course, in the later years the order has been completely reversed. The number of men in the Ph.B. and A.B. courses has practically stood still, while that in the S.B. course has rapidly advanced, having (in fact) tripled itself in ten years. Simultaneously the new course leading to the degree of Ph.B. in Commerce and Administration has grown rapidly and without drawing any appreciable number of women. Thus during the tenth year the percentage of the men of the Junior Colleges in the four courses stood as follows: S.B., 33.8; Ph.B. (Lit.), 24.1; Ph.B. (C. and A.), 22.0; A.B., 20.1.

Turning to the women, we find that, while in the year 1893-94 the preference of the women in the matter of degrees seemed the same as that of the men, the Ph.B. (Lit.) course came to the front in the next year, and has maintained a position of increasing predominance ever since. In the tenth year the percentages of the women choosing each of the four courses was as follows: Ph.B. (Lit.), 69.1; A.B., 16.0; S.B., 13.0; Ph.B. (C. and A.), 1.8.

The beginning made during 1900 in the definite organization of a course preparatory to Medicine accounts largely for the rather sudden acceleration of the flow of students, both men and women, into the S.B. course during the last two years.

While in the Summer Quarter most of the courses of instruction required of Junior College students are offered, the number of classified Junior College students in residence in Summer Quarters has been only about one-third of the average number in attendance during the other three Quarters. Their places are taken largely by teachers pursuing similar work, many of whom intend eventually to classify and take a degree. The extent to which students in residence during the Spring Quarter continue their work in the Summer is shown by the fact that of the 520 students in residence during the Spring of 1902, no less than 151 (or about 30 per cent.) were registered for the Summer Quarter. These students, together with 21 entering and 4 returning students, made up the total of 176 classified Juniors. Of these, 140 remained in residence throughout both Terms.

## REGISTRATION BY DEPARTMENTS

The distribution of the work of the students of the Junior Colleges among the various departments is affected chiefly by the requirements of the several courses. Two-thirds of the work of the student must be selected from the required list and, if the rather mobile requirements in History and Philosophy are anticipated in the Junior Colleges, no truly elective work representing the free choice of the student will be taken in the first two years. If the student has presented an irregular group of admission credits, his electives may be displaced by required studies so as to raise the minimum of work required during the first two years to five-sixths of the whole. Thus the table showing the courses actually taken by the students of the Junior Colleges represents the composite resultant of the operation of individual requirements superimposed on A.B., Ph.B., or S.B. degree requirements, with a minimum of individual preference. These influences are discussed in greater detail below.

The following table shows the requirements for the various degrees as they existed during the year 1901-2. The changes, which during the earlier years were numerous, are given in a table in Dean Capps's report for 1897-98 (p. 90).

TABLE II  
JUNIOR COLLEGE REQUIREMENTS (IN MAJORS) FOR VARIOUS DEGREES, 1901-2

	Pol. Ec.	Pol. Sci.	Hist.	Soc.	Greek	Latin	Mod. Lang. <sup>1</sup>	English	Math.	Sciences	Elective
A.B. ....	..	..	..	..	3	3	3	2	2	2	3
Ph.B. ....	..	..	2	..	..	3	3	3	2	2	3
S.B. ....	..	..	..	..	..	..	3	3	3	6 <sup>2</sup>	3
Ph.B. (C. & A.)	2	1	3	1	..	..	3	3	2	2	1

The college requirements, as applied to each individual, are affected by the particular subjects offered for admission. There are certain commonly occurring irregularities in the admission groups offered which modify the college curricula of large groups of students. Thus many offer but two years of Latin for admission, and so the College work of these individuals is altered by the inclusion of four (or, as in the case of the S.B. student, of three) more Majors of Latin. Again, the three years of Modern Languages expected in the preparation of S.B. and Ph.B. students are often represented by one or two years only. Thus, two or four Majors of French or German are added to the Junior College requirements. Then many fail to offer Solid Geometry or

<sup>1</sup>In S.B. and Ph.B. courses, if one modern language only is offered for admission, three Majors of the other are required in college.

<sup>2</sup>Specified as Chemistry, Botany, or Zoology, Geology, two Majors each, excepting so far as one unit of any of them has been offered for admission.



Physics, and thus one Major of Mathematics in the former case, and two Majors of Physics in the latter, appear among the college courses.

The courses actually taken in the Junior Colleges may now be given. In the accompanying table there is shown the percentage by Departments of the total number of Majors of work done in all the twenty-seven Departments by Junior students. The ten years of the University are given complete, and in the three divisions of the columns for each year are given the percentages for men, for women, and for both sexes together.

Scrutiny of the table shows that the registrations in Languages, and particularly Modern Languages, are very numerous. This is accounted for by the fact that (1) the college requirements in Language, including English, are large, varying from six to eleven Majors according to the course; (2) these requirements are increased by the amounts, often considerable, by which the Language work offered for admission has fallen short of that recommended; (3) the school training seems to foster the habits of mind employed in Language study more successfully than those needed in Mathematics and Science; (4) the bent of the very numerous women students is toward Language work. Again, the registrations in Philosophy and Political Economy are larger than might be expected in view of the impediments detailed above, and of the additional fact that, by rule of the Departments concerned, Psychology cannot be taken before the fifth Quarter and Political Economy, except in the case of students in the College of Commerce and Administration, not before the fourth Quarter. History, although not a Junior College requirement in two of the four courses, is usually taken early in the curriculum by all students.

The preference for various departments of work, in its relation to sex, is illustrated by arranging the departments in the order of preference for each sex separately. The result furnishes some indication of the trend of taste in the two sexes, so far as the very limited opportunity for exercising choice in the Junior Colleges can affect figures pertaining mainly to required curricula which are the same for men and women. The order for the year 1901-2 is given as a sample :

TABLE IV

DEPARTMENTS ARRANGED IN ORDER OF THE PROPORTION OF WORK DONE IN THEM BY JUNIOR COLLEGE STUDENTS

Men	Per Cent.	Women	Per Cent.
English.....	19	English.....	22
Mathematics.....	11	Latin.....	15
History.....	10	German.....	11
German.....	9	Mathematics.....	11
Political Economy.....	8	History.....	10
Latin.....	7	Romance.....	9
Romance.....	7	Sociology.....	4
Chemistry.....	6	Greek.....	3
Geology.....	4	Physics.....	3
Philosophy.....	3	Sanskrit.....	2
Political Science.....	3	Chemistry.....	2
Greek.....	3	Botany.....	2
Sociology.....	2	Philosophy.....	1
Physics.....	2	Political Science.....	1
Physiology.....	2	Literature in English..	1
Zoölogy.....	1	Geology.....	1
Anatomy.....	1	Physiology.....	1
Botany.....	1	Political Economy.....	0.3
Semitics.....	0.4	Zoölogy.....	0.2
Sanskrit.....	0.2	Pedagogy.....	0.1
Literature in English....	0.2	Archæology.....	0.1
Archæology.....	0.1	Astronomy.....	0.1
Astronomy.....	0.1	Anatomy.....	0.1

MATRICULATION

The Quarter System enables students to matriculate and begin work in the University with equal advantage on any one of four occasions during the year. Naturally the majority of the new students of each year's class enter on the first of October, yet the numbers entering on the other three dates is very considerable. The following table shows the numbers of our students matriculated in the Junior Colleges during each of the four Quarters of the last six years. The sexes are shown separately. A summary for the first five years of the University occupies the first column. It will be noted, therefore, that the year 1896-97 appears separately and is included also in the summary:

TABLE V  
MATRICULATIONS BY QUARTERS ACCORDING TO SEX AND DEGREE SOUGHT

	1892-97			Quarters	1896-97			1897-98			1898-99			1899-1900			1900-1901			1901-1902		
	Summary				M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.	M.	W.	T.
	Arts	7	2		9	Summer..	8	2	10	5	2	7	20	12	32	4	2	6	5	3	8	6
	223	112	335	Autumn..	27	17	44	38	19	57	46	27	73	28	25	53	33	28	61	21	27	48
				Winter....	7	1	8	8	5	13	7	7	14	6	..	6	4	4	8	2	2	4
				Spring....	4	3	7	1	..	1	4	1	5	2	..	2	2	1	3	2	..	2
	230	114	344	Total....	46	23	69	52	26	78	77	47	124	40	27	67	44	36	80	31	33	64
Literature	1	1	2	Summer..	..	2	2	2	8	10	3	18	21	13	14	27	4	7	11	3	10	13
	154	179	333	Autumn..	13	22	35	14	34	48	40	75	115	30	82	112	28	102	130	35	107	142
				Winter...	4	7	11	3	9	12	7	17	24	4	8	12	..	9	9	1	11	12
				Spring....	3	4	7	5	6	11	4	6	10	1	3	4	1	6	7	2	4	6
	155	180	335	Total....	20	35	55	24	57	81	54	116	170	48	107	155	33	124	157	41	132	173
Science	6	...	6	Summer..	4	1	5	8	1	9	11	3	14	14	..	14	7	2	9	3	3	6
	108	27	135	Autumn..	15	2	17	24	6	30	24	19	43	45	6	51	49	24	73	37	15	52
				Winter....	3	2	5	6	3	9	1	1	2	10	..	10	6	1	7	8	1	9
				Spring....	2	..	2	4	1	5	1	2	3	4	..	4	3	1	4	3	1	4
	114	27	141	Total....	24	5	29	42	11	53	37	25	62	73	6	79	65	28	93	51	20	71
Commerce and Administrat'n				Summer..	..	..	..	..	..	..	1	..	1	..	..	3	..	3	..	..	..	..
				Autumn..	..	..	..	..	..	..	8	..	8	20	3	23	31	1	32	43	4	47
				Winter....	..	..	..	..	..	..	..	..	..	4	..	4	1	1	2	2	..	2
				Spring....	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	1	..	1
	...	...	...	Total....	..	..	..	..	..	..	9	..	9	25	3	28	36	2	38	46	4	50
Total.....	499	321	820	Total....	90	63	153	118	94	212	177	188	365	186	143	329	178	190	368	169	189	358

The states, territories, and foreign countries from which these students have come is given in the next table.

It will be seen that every state, with the exception of North Dakota, Delaware, Idaho, Nevada, North Carolina, and Rhode Island, has been represented. At the same time the Junior College students are drawn to a much greater extent from the city of Chicago and surrounding territory than is the case in the Graduate Schools. The percentage of the whole number of students coming from Chicago during the ten successive years has been: 43.3, 47.1, 49.7, 53.9, 57.3, 60.1, 58.2, 53.8, 51.4, 54.9. The corresponding numbers for Illinois, including Chicago, have been: 71.7, 70.4, 70.8, 73.1, 75.3, 73.6, 75.0, 69.0, 69.8. During the year 1901-2 there came from Iowa 6.9 per cent.; from Indiana, 3.9 per cent.; from Wisconsin, 2.8 per cent.; from Ohio, 2.2 per cent.; from Missouri, 2.1 per cent.; from New York and Tennessee, about 1 per cent. each.

TABLE VI  
GEOGRAPHICAL DISTRIBUTION BY ANNUAL REGISTRATIONS

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Alabama	..	..	..	1	..	..	1	2	2	2
Arizona	..	..	..	..	..	..	..	..	1	..
Arkansas	..	..	..	..	..	1	2	4	2	2
California	1	..	1	1	3	1	1	2	1	3
Colorado	1	2	2	2	3	5	1	3	5	5
Connecticut	..	1	..	1	..	..	1	1	..	1
Florida	..	1	..	..	..	..	..	1	..	..
Georgia	..	..	..	1	..	..	1	..	2	2
Illinois	51	64	77	81	79	60	92	97	129	115
Chicago	78	129	182	230	251	267	317	342	377	424
Indiana	4	6	17	15	13	17	23	29	28	30
Iowa	3	10	19	17	19	17	13	26	41	53
Kansas	4	5	5	3	5	6	8	12	13	12
Kentucky	3	3	1	2	1	2	6	7	12	6
Louisiana	..	..	..	..	1	2	1	..	..	..
Maine	..	1	..	..	1	1	..	1	2	..
Massachusetts	2	1	1	1	1	..	..	..	5	1
Maryland	..	..	..	..	1	1	2	..	..	..
Michigan	..	..	1	6	7	3	4	7	7	2
Minnesota	1	4	6	4	2	1	7	2	11	11
Mississippi	..	..	..	..	1	..	1	1	..	2
Missouri	3	3	3	6	4	5	10	14	2	16
Montana	..	1	1	1	..	1	1	1	..	3
Nebraska	2	2	5	4	6	5	..	6	8	3
New Hampshire	..	..	..	..	1	1	..	..	..	..
New Jersey	1	3	3	4	..	..	..	1	..	2
New Mexico	..	1	1	1	..	..	1	1	1	..
New York	7	10	7	9	3	5	6	9	7	7
Ohio	4	8	7	10	8	11	7	16	23	17
Oklahoma	..	..	..	..	..	..	1	..	..	..
Oregon	1	1	..	..	1	..	..	..	..	1
Pennsylvania	2	4	7	7	6	1	3	7	6	10
South Carolina	..	..	1	2	..	1	2	2	1	1
South Dakota	1	..	..	2	..	..	1	2	1	1
Tennessee	1	2	3	3	1	1	3	5	3	7
Texas	..	..	1	1	1	2	2	7	6	3
Utah	..	..	1	..	..	..	..	..	1	..
Vermont	..	..	..	..	..	..	..	..	1	..
Virginia	..	..	..	..	..	1	1	1	1	1
Washington	..	..	..	1	2	1	2	4	4	3
West Virginia	1	..	..	..	..	..	1	..	..	..
Wisconsin	7	8	9	8	16	25	22	21	25	22
Wyoming	..	..	..	..	..	..	..	..	..	2
Manitoba	..	..	..	..	..	..	..	..	2	..
New Brunswick	..	..	1	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	1	1	1	1
Quebec	..	..	..	..	..	..	..	1	..	1
Great Britain	..	..	..	..	1	..	..	..	..	..
Italy	..	..	..	1	..	..	..	..	..	..
Germany	1	1	..	..	..	..	..	..	..	..
Hawaii	..	..	..	1	..	..	..	..	..	..
Japan	..	1	..	..	..	..	..	..	..	..
Russia	1	1	3	1	..	..	..	..	..	..
Samoa	..	..	1	..	..	..	..	..	..	..
Sweden	..	1	..	..	..	..	..	..	..	..
Total	180	274	366	427	438	444	545	630	733	772



## STATISTICS OF ADMISSION

The students of the Junior Colleges are drawn from five distinct sources, each of which bears a different relation to the University. These are (1) the Morgan Park Academy, an institution which is an integral part of the University; (2) the affiliated schools, which are closely allied, although independent institutions; (3) the co-operating schools, which are chiefly public high schools, visited periodically by representatives of the University; (4) other secondary schools, whose pupils are admitted chiefly by examination; (5) institutions of college rank whose pupils are admitted with advanced standing. The following table shows the percentage of the whole number admitted which came from each of these sources. As in the table of matriculations, the first five years are summarized and the last six are given separately. The apparent variations in the proportion admitted with advanced standing is due in large part to changes in the mode of classifying those who are admitted in this way. All who receive credit for eighteen Majors or more are now classified as Senior College students, even when the specific subjects offered do not coincide with the requirements of the University of Chicago.

TABLE VII  
PERCENTAGE OF STUDENTS ADMITTED FROM EACH OF THE FIVE SOURCES

	1892-97	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
Morgan Park .....	7.6	5.6	9.9	5.5	5.7	7.3	2.6
Affiliated schools .....	14.1	18.8	18.6	12.3	14.8	13.1	12.1
Co-operating schools .....	26.1	29.4	27.3	44.5	46.8	47.4	52.7
Other secondary schools .....	18.5	14.0	15.1	10.0	14.0	18.8	17.4
With advanced standing .....	33.7	32.2	29.1	27.7	18.7	13.4	15.2

The numbers of students entering the four courses offered by the Junior Colleges, as related to the class of institutions in which the previous training has been obtained, is highly significant. In the following table the students coming to the University during the last three years from a given class of institutions have been divided so as to show the per cent. entering upon each of the four curricula:

TABLE VIII  
PERCENTAGE OF STUDENTS ADMITTED TO EACH COLLEGE, CLASSIFIED BY PREVIOUS SCHOOLS (1899-1902)

	A.B.	Ph.B.	S.B.	C. & A. (Ph.B.)	Total
Morgan Park Academy .....	33.4	31.5	18.5	16.6	100
Affiliated schools .....	25.5	39.0	22.7	12.8	100
Co-operating schools .....	17.7	50.0	21.0	11.3	100
Other secondary schools .....	14.5	46.4	26.3	12.8	100
With advanced standing .....	23.5	43.3	26.5	6.7	100

TABLE IX  
PROPORTIONS OF THE STUDENTS IN JUNIOR COLLEGES, 1892-1902, WHO (1) WERE CONDITIONED, AND (2) FAILED; ESTIMATED ACCORDING TO SEX

		1892-93				1893-94				1894-95				1895-96				1896-97			
		S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.
CONDITIONS (1) ..	Men.....	11.5	7.7	3.6	..	4.3	12.6	8.0	3.1	12.9	13.8	12.5	4.1	15.6	16.0	11.5	7.7	13.4	12.0	13.1	
	Women.....	4.5	2.1	2.4	..	1.3	4.7	3.6	..	5.9	4.7	2.1	8.7	7.4	4.8	1.7	2.5	4.5	6.2	1.4	
FAILURES (2).....	Men.....	14.9	11.5	10.8	..	6.5	5.6	8.0	4.7	4.7	8.4	6.2	2.7	4.4	8.3	11.5	5.2	10.0	3.4	6.0	
	Women.....	4.5	2.1	7.1	..	1.3	4.7	2.4	..	5.1	3.8	3.2	..	7.0	3.2	..	2.5	1.5	0.7	2.1	

TABLE IX—Continued

		1897-98				1898-99				1899-1900				1900-1901				1901-1902			
		S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.
CONDITIONS (1) ...	Men.....	7.8	14.2	9.4	10.6	5.8	10.0	14.0	10.0	7.8	13.5	7.7	8.8	2.4	10.8	11.3	11.7	14.4	16.2	14.7	11.8
	Women.....	..	6.9	4.1	4.6	..	3.2	6.0	7.3	1.4	7.4	8.0	5.1	2.8	7.6	6.6	7.4	6.3	12.3	9.2	8.6
FAILURES (2).....	Men.....	15.6	8.2	3.5	4.6	1.1	7.4	7.2	3.3	4.5	7.3	5.0	3.3	4.9	7.6	12.7	7.8	4.4	13.0	11.6	8.7
	Women.....	..	0.6	2.9	1.7	1.5	1.6	2.5	3.3	..	3.7	1.5	5.1	2.8	3.4	6.3	4.5	1.0	9.4	7.1	4.5

COLLEGE FAILURES AND CONDITIONS

The table shows the proportion of the students in the Junior Colleges who were conditioned or failed in any study. The sexes are considered separately, as are also the Quarters of each of the ten years. Failures may be due to five causes: (1) insufficient preparation; (2) insufficient ability; (3) lack of diligence, on account of athletic and social distractions; (4) necessity of earning a livelihood while in college; (5) introduction to unfamiliar methods of study. Often a combination of two or more of these causes may be accountable for lack of success. The first Quarter of residence is likely to show the results of some of these influences most prominently, and hence, as the Autumn Quarter is the first Quarter for a majority of Junior students, it is in this Quarter that the greatest percentage of failures or conditions appears. After the first Quarter the student either adapts himself more perfectly to the novel conditions or withdraws.

WITHDRAWALS

During the last three years a systematic effort has been made to learn the intentions of all students withdrawing from the Junior Colleges. The greater number of withdrawals are accounted for by graduation into the Senior Colleges. Some of the chief reasons given are shown in the following table. The numbers in each column apply to students who were members of the Junior Colleges during the preceding Quarter and failed to return. Thus in the Spring of 1900, sixty-seven graduated into the Senior Colleges, and sixty-nine went out of residence for reasons enumerated, and therefore did not reappear in this list for the Summer Quarter of the same year:

TABLE X  
WITHDRAWALS

	1899-1900				1900-1901				1901-1902			
	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.
1. Graduation into Senior Col.	62	9	41	26	67	10	47	28	79	10	36	39
2. Vacation .....	29	5	9	10	16	10	18	22	33	7	23	10
3. To teach.....	12	3	5	2	13	10	8	2	23	6	2	4
4. Business.....	6	4	4	2	7	3	4	11	13	4	7	6
5. Profession .....	3	..	1	..	1	1	..	1	2	..	..	2
6. Lack of funds....	10	2	7	10	5	4	4	4	8	10	4	1
7. Another institut'n	10	4	8	6	20	6	9	5	35	17	23	6
8. Poor health.....	6	8	11	10	6	6	17	12	8	15	14	8
9. Miscellaneous....	1	..	5	1	1	1	1	4	3	..	3	1
10. No reasons given.	6	..	5	..	..	6	4	2	7	2	4	..

It will be seen that the number on vacation is greatest in summer, but is considerable also in winter and spring. Those withdrawing to teach usually intend to return later. Those entering other institutions have been chiefly men going to technical, medical, and law schools,

and women going to women's colleges. Among the miscellaneous reasons were "loss of a parent" (4); "home duties" (4); "travel" (3); "death" (1); "leaving city" (5); "family reasons" (2); "unforeseen circumstances" (2).

#### RELATIONS OF JUNIOR AND SENIOR COLLEGES

The relation of the Junior College to the Senior has already received incidental mention. A certain number of students remain classified as Juniors even after they have earned more than eighteen Majors of credit. This occurs (1) when entrance conditions remain unfulfilled; (2) when the requisite minimum of twelve Majors of required Junior College work has not yet been reached; and (3) when a student has entered with advanced standing of such a nature that the required courses remaining to be taken are so numerous as to make impossible graduation when eighteen Majors have been received. The percentage of Junior College students who were thus classified as Juniors for a longer period than two years was as follows:

1894-95	-	-	-	-	7.5 per cent.
1895-96	-	-	-	-	12.6 "
1896-97	-	-	-	-	13.9 "
1897-98	-	-	-	-	6.3 "
1898-99	-	-	-	-	2.1 "
1899-00	-	-	-	-	3.6 "
1900-01	-	-	-	-	4.9 "
1901-02	-	-	-	-	7.1 "

Juniors who have the necessary preparation may take courses offered in the Senior Colleges. Thus the electives are often taken in work of this kind, and students who have overrun the eighteen Majors are also frequently to be found in Senior College courses. The registration of Junior students in Senior courses is given along with other data in the next table. The

TABLE XI

	JUNIORS IN SENIOR COURSES					SENIORS IN JUNIOR COURSES				
	1897-98	1898-99	1899-00	1900-01	1901-02	1897-98	1898-99	1899-00	1900-01	1901-02
Philosophy .....	6	9	16	18	12	156	197	214	190	226
Education .....	3	12	6	15	4	..	..	1	..	..
Political Econ'y.	3	14	13	18	40	40	61	75	75	77
Political Science	24	9	21	66	48	49	30	5	..	..
History .....	107	123	158	189	152	46	58	42	90	84
Archæology .....	3	..	1	..	..	6	1	..	..	..
Sociology .....	45	5	38	75	116	29	54	42	38	22
Greek .....	9	15	15	12	2	25	48	29	32	51
Latin .....	20	20	9	32	18	86	48	93	67	38
Romance .....	22	38	31	39	39	78	110	115	120	84
German .....	30	24	30	39	41	49	67	93	104	106
English .....	59	93	84	121	108	55	52	66	78	80
Lit. (in Eng.)....	44	20	35	30	40	..	19	..	..	..
Mathematics....	19	12	1	13	4	25	19	38	54	54
Astronomy .....	3	1	..	4	7	..	..	8	24	4
Physics .....	11	6	9	6	9	38	38	29	50	73
Chemistry .....	23	15	22	35	46	43	17	29	70	79
Geology .....	19	46	59	58	65	29	20	22	30	32
Zoology .....	4	5	15	28	8	12	22	23	23	30
Anatomy .....	..	3	16	15	12	..	..	..	..	..
Physiology .....	6	4	7	9	2	4	9	33	26	25
Neurology .....	2	1	..	1	..	..	..	..	..	..
Botany .....	..	8	7	8	10	17	30	10	18	33
Public Speaking	..	11	9	10	17	34	48	38	89	63

very large registration in some Departments seems to indicate that more Junior College courses might usefully be offered in those Departments. The total number of registrations of Juniors in Senior College courses was small compared to those in Junior courses: in 1897-98, 465; in 1898-99, 494; in 1899-1900, 602; in 1900-1901, 847; in 1901-2, 800. These were respectively 17, 14.4, 15.7, 19, and 17.5 per cent. of the total registrations.

Many Senior College students entering with advanced standing have Junior College requirements still to fulfil. Many others take Junior College studies as electives. For this reason Junior College courses frequently contain a fair proportion of Senior College students. The accompanying table gives the number of registrations by Senior College students in Junior College courses.

FOURTH COURSES

The regulations lay upon the Dean the duty of deciding, after investigation of the previous record and the circumstances of the application, whether a student may be permitted to carry more than three Majors of work in one Quarter. The proportion of students applying for this privilege is not great, and many of the applications are refused. The table shows the percentage of Junior College students doing extra work. The data for men and women are treated separately and the figures for all Quarters of the ten years are given.

TABLE XII  
PROPORTIONS OF THE STUDENTS IN JUNIOR COLLEGES 1892-1902 WHO TOOK FOURTH COURSES  
ESTIMATED ACCORDING TO SEX

		1892-93				1893-94				1894-95				1895-96				1896-97				
		S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	
FOURTH COURSES	Men .....	11.5	11.5	7.7	9.6	5.1	8.4	39.4	4.7	7.6	13.8	11.0	8.2	5.6	15.4	16.6	10.4	2.8	11.4	7.1		
	Women .....	15.9	2.1	16.6	4.1	10.6	32.9	7.4	4.2	7.6	18.3	2.1	3.7	16.0	15.8	10.0	2.2	9.4	4.3			

		1897-98				1898-99				1899-1900				1900-1901				1901-1902					
		S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.	S.	A.	W.	Sp.		
FOURTH COURSES	Men .....	7.8	6.6	17.1	2.6	4.6	2.9	15.0	5.6	5.6	6.9	10.5	0.4	2.3	2.8	3.5	3.9	8.9	3.6	5.3	2.4		
	Women .....	12.9	4.1	9.0	5.1	8.9	5.9	8.0	5.3	11.7	11.6	7.5	2.0	7.1	1.4	1.9	2.0	7.3	1.9	1.7	1.5		

THE CURRICULA OF THE JUNIOR COLLEGE

The history of the Junior College curriculum was so completely set forth by Dean Capps in his report for the year 1897-98 that it remains only to summarize the chief problems which have arisen, and to describe the solutions, complete or partial, which have been worked out. A few minor changes made since July 1, 1898, will also be included.

At the outset in 1892 the University of Chicago adopted the plan of certain eastern universities and colleges in announcing that all students who sought admission must pass entrance examinations. It is instructive to trace the gradual modification of this policy, as the institution has sought, on the one hand, to bring itself into closer relations with the secondary schools of the middle West, and, on the other, to meet the demands of professional training. It may be profitable to discuss this process of adjustment under the following divisions:

1. The adjustment of entrance requirements.
2. The adjustment of the Junior College curriculum to the changes in entrance requirements.
3. The modification of the Junior College curriculum to meet the demands of different curricula and of professional schools.

## ADMISSION REQUIREMENTS

In 1892 the University indicated the following subjects as acceptable for admission, viz.:

Greek.  
 Latin.  
 Greek and Roman History.  
 Mathematics.  
 English.  
 French (first and second year).  
 German (first and second year).  
 Physics.  
 Chemistry.

These subjects were appraised in terms of a "unit," which was described as the work accomplished in a secondary school in a subject pursued for thirty-six weeks of daily recitations. Inasmuch as the amount of work accomplished in a four-years' high-school course was deemed equivalent to thirteen such units, this number was fixed upon as the requirement for admission.

An examination of the high-school system of the middle West soon made it plain that a large number of subjects were being taught which were not recognized by the University. The institution therefore enlarged the list of entrance subjects by adding in 1893 the following:

Biology.  
 Physiography.  
 Geology.  
 Astronomy.  
 Solid Geometry.  
 Elementary United States History (for which at first no credit was given).  
 Mediæval and Modern History.  
 Third-year French.  
 Third-year German.

This enlargement of the entrance list brought the University into much closer relation with the secondary schools, and no further change was made until 1896, when Elementary United States History, which henceforth was given credit value, Advanced United States History, Elementary and Advanced English History, and Civics were added.

These entrance units include practically everything offered in the high schools of the West, with the exception of the two subjects of Drawing and Music. The drawing of the public schools is in many cases subdivided into mechanical and free-hand drawing. There was considerable complaint from the high schools of Chicago that many hours devoted to these subjects were not recognized by the University of Chicago. A proposal to include at least Mechanical Drawing in the list was considered for several Quarters by committees and discussed by the Junior College Faculty, with the final result in 1901 of making Mechanical Drawing an elective admission subject with a maximum credit of one unit. Thus in the course of ten years the number of admission subjects has increased from eleven to twenty-seven. It would be a serious mistake, however, to infer from this enlargement of the admission group that the subjects added after the first year are offered to the same extent as those originally announced. The margin however, does afford relief to large numbers of students whose preparation varies by one, two, or three units from that recommended by the University. The failure to recognize the need of a more liberal policy as regards the number of admission units would have isolated the University from the secondary schools. The absence in the West of large preparatory schools whose energies are directed to fitting students for the requirements

of certain colleges and universities makes it absolutely essential that western institutions of higher education should adapt themselves to the public secondary schools.

Another step in this attempt to articulate the secondary schools with the Junior College was taken in November, 1897, when the value of the unit was modified, and the number of units required for admission was raised from thirteen to fifteen. This change was made in order that a more just relative valuation might be placed upon the different admission subjects, as well as upon the work of a school as a whole. A most serious injustice in the old system was that which assigned to Mathematics, including Solid Geometry, only two units, although the best schools devote two and a half to three years of preparation in this subject; while assigning to English only one unit for four years of work, however unsystematic, was obviously absurd. This change in unit value made it possible to give two and a half units to Mathematics and two to English, while some of the elective subjects could be appraised more fairly at a half unit. The new unit value was defined as the equivalent of one hundred and fifty hours of prepared work, two hours of laboratory work being considered equal to one hour of prepared work. With the improvement of instruction in some of the preparatory subjects, it is conceivable that still further modifications of the unit may become desirable. One advantage which would accrue from reducing the value of the unit and increasing the number of units demanded would be the possibility thus afforded of making nicer discriminations. It would enable the University to assign one value to a subject studied in the first year of the high school, and a greater value to the same subject when pursued, for example, in the last year.

A third change which is significant may be noted briefly. It is the change from an examination to a modified certificate system for admission purposes. Soon after the opening in 1892 it became evident that a strict examination policy in a region where the certificate system had been universally adopted would for a long time at least isolate the University and seriously retard its growth in numbers and influence. After full discussion as to the wisdom of maintaining the examination system or of adopting the certificate plan of the state universities, a compromise method was finally chosen. Instead of accepting a certificate from a high school as a whole, it was decided to require certificates from individual teachers in the schools. It was thought that this would fix responsibility definitely, and would be a stimulus to teachers and a safeguard to the University. There are no data for determining the comparative results of the two systems. The significant fact is that the University has practically conformed to the system which prevails in the middle West.

#### COLLEGE REQUIREMENTS

The widening of choice in entrance subjects had an inevitable influence upon the curricula of the Junior Colleges. In both theory and practice the Junior College curriculum in the University belongs rather to a six-year period of preparation than to a four-years' college course. The Junior College is commonly described as a "clearing-house" between the secondary school, on the one hand, and the higher work of the Senior College and Graduate Schools, on the other. The clearing-house system is based upon (1) the assumed equivalence of preparatory and college subjects; (2) the necessity of adjustment to the enlarged curricula of the secondary schools; (3) the necessity of securing a minimum common to all curricula, and of shaping the student's course for one of the three degrees granted by the University. In theory the system is ingenious and natural. In practice it comes nearer to giving complete satisfaction than such machinery often does. The assumed equivalence of preparatory and college subjects is one of the weak points of the system. This weakness displays itself conspicuously in subjects begun in high school and continued in college. Where later work is dependent upon earlier courses the inadequacy of preparation makes itself felt. In English, French, and German,

to some extent in Physics and Chemistry, the chief difficulties appear. It is not unusual for students who have received credit for a year or two of French or German to be quite unable to maintain successfully the college course which theoretically continues from the point where they have left off. On the other hand, in the case of Latin, Greek, and Mathematics there is comparatively little difficulty. This seems to show that where methods of instruction have been worked out carefully, conventionalized, and adopted almost universally, the clearing-house system is successful, but in those subjects which have not yet been organized effectively, and in the sciences to which modern laboratory methods are essential, the equivalence between preparatory and college work is far from being a fact. The difference in the maturity of the student at various stages is another factor which affects certain pursuits more than others. Its influence on language-study is, for example, very different from its effect on science.

In order to make the clearing-house system theoretically complete, the University might offer beginning courses in all subjects which it requires of candidates for its degrees. As a matter of fact, however, the number of beginning subjects which students for various reasons are unlikely to offer on admission is comparatively small. The accumulation of entrance conditions in these subjects has pointed out from time to time the need of adding certain elementary courses. This has been done, until now the University offers beginning courses (including those given from the outset) in Greek, French, German, Physics, Chemistry, Solid Geometry, and History. The proposal to add beginning courses in Latin has so far been defeated, although it is not illogical to urge this further extension of the plan. When the Secondary School of the University is fully organized, it may conceivably provide special college classes in beginning subjects. This would be a consistent carrying out of the theory that the Junior College is a part of the preparation course, rather than the beginning of higher work. The public opinion which distinguishes so sharply between high school and college would for a long time, however, make it difficult to assert formally this relationship between the secondary school and the first two years of the old-fashioned college course.

It is appropriate in this place to point out some of the effects of the clearing-house which at the outset were not distinctly foreseen. When the Junior College curriculum was organized and differentiated for the three degrees offered by the University, specific requirements were made which have left for election a maximum of three Majors in three of the courses and of one Major in the course in Commerce and Administration. Theoretically, these three Majors in the three courses of A.B., Ph.B. in Literature, and S.B. were provided to permit from the beginning of the course continuity of work in one Department or group of Departments. In practice, however, it has become evident that the election is actually made to a very large degree, not in college, but in the high school. Certain entrance subjects are demanded absolutely for admission. If they are not offered, they become entrance conditions. Other subjects are only recommended for admission, but they become requirements for graduation in case other entrance subjects have been substituted for them. Thus electives are seriously encroached upon by the college requirements accruing from a preparation which varies from the type recommended by the University. This variation is marked, and results in a serious reduction of electives. As an illustration of this may be cited the fact that, of 111 A.B. students in residence in the Winter Quarter, 1901, 72 had on entrance the full number of three electives, 19 had two electives, 17 had one, and 8 had no margin of choice. Of 209 candidates for the degree of Ph.B. in Literature, 85 had three electives, 47 had two, 39 had one, and 38 were without any flexibility in their curricula. Of 59 Ph.B. students in the Commerce and Administration course, 34 had the one elective normally provided, while 25 had none. Out of 123 candidates for the B.S. degree, 31 had three electives, 9 had two, 24 had one, and 59 were without choice. These facts, which may be regarded as fairly representative of conditions during the past five years, make it evident that

the candidates for the A.B. degree who have passed through the more conventional preparatory course come nearest to the theoretical demands of the University and retain the electives originally assigned. The candidates for the Ph.B. are in worse case, and are unable to preserve the continuity of special work for which the electives were provided. The students in the scientific course are decidedly at a disadvantage, and obviously need the various measures of relief which have been devised from year to year to meet the serious problem involved. The fact that nearly half of the S.B. students in 1901 offered only two units of Latin on entrance, and were compelled under the general rules to complete three Majors of Latin in college, was a leading, but not the only, cause of this encroachment upon the electives.

Another effect of the clearing-house system is the replacing of college work by high-school studies; for example, in the case of Science, the rules do not directly recognize the equivalence in the values of subjects. Nevertheless interchanges take place indirectly. For example, none of the preparatory Science is accepted for advanced standing in college, but a student who offers an excess of Science on entrance, substituting it for some other admission unit, is relieved of a certain amount of Science requirement in the Colleges of Arts and Philosophy (but not of Science). Thus, out of a certain 196 students, A.B. and Ph.B., who matriculated in the Junior College in the autumn of 1900, 134 were wholly exempt from college Science requirements, for which acceptable but not recommended entrance subjects (usually French or German, sometimes History or Solid Geometry) were substituted. Thus in reality the college Science of the A.B. and Ph.B. courses was in the great majority of cases displaced by preparatory Science.

To a limited extent the same effects are noticeable in the case of History. Up to the Winter Quarter of 1901 the required courses in History had not conformed to the clearing-house system; that is, students who offered European (Mediæval and Modern) History should theoretically have been relieved from all History requirements in college, but until action was taken by the Junior College Faculty in February, 1901, the presentation of entrance credits in Mediæval and Modern History merely conferred the right to substitute Senior College History Courses for the Junior requirements. As this practice was clearly in violation of the principle of the clearing-house and worked to the disadvantage of other subjects which did conform, the change was made by the Faculty. Statistics are not yet available, but it is safe to say that the effect of this action will be to substitute in some measure high-school for college History.

#### ADJUSTMENT TO PROFESSIONAL SCHOOLS

Up to this point, attention has been directed to the relations existing between the Junior College and the high school. It remains to consider some of the problems which concern the relation of the Junior College to the Senior College, and to the curricula which lead to the three degrees granted by the University. The further tendency to shape undergraduate work in preparation for professional training, as, for example, in the so-called Pre-Medical course, the Law course,<sup>3</sup> the School of Commerce and Administration, and in the early future the School of Technology, gives rise also to problems of adjustment. The chief conflict comes over the use of the electives which have already been mentioned. These electives, as has been pointed out, serve two purposes, although they were originally planned for one. They were designed to give the student opportunity from the outset of his course to pursue uninterrupted work in one Department or group of Departments. As a matter of fact, it has been shown that these electives are to a very large degree, notably in the S.B. course, used to compensate for irregularities in admission. It is instructive to note the gradual modification of the clearing-house system to meet this practical difficulty. The best illustration is afforded by the various devices for preserving the electives in the S.B. course.

<sup>3</sup>This course at present does not make any special demands for substitution.



1. On the original theory of the clearing-house, students entering the S.B. course with only two units of Latin should take four Majors in college. By action of the Faculty, this requirement of four Majors was reduced to three. This is constructively a substitution of one Major for S.B. students.

2. The above provision was, however, far from liberal enough to meet certain exigencies. Oftentimes S.B. students presented for admission an excess of Language and History, with the minimum of Science. Under the operation of the clearing-house their electives might be seriously reduced and continuity of work in Science made impossible. A complicated measure was worked out and adopted in 1899. This permits a student in Science whose electives have been encroached upon to "recover such electives if he wishes to use them for Science or Mathematics to an extent not to exceed one Major for each half-unit by which the amount of Science offered for entrance may fall short of three and one-half units." A careful study of this provision shows that it gives relief to the student whose preparation has been one-sided, and permits him to substitute Science and Mathematics usually for Latin, sometimes for French and German.

3. In spite of the flexibility provided in 1 and 2 above, cases have occurred in which still further relief has seemed imperative. It sometimes happened that the Junior College requirements, together with the recovered electives, demanded more than eighteen Majors for a Junior College course. This case was met by another action of the Faculty, taken in 1899, which further declared that the Junior College course must never exceed eighteen Majors, and that where the general rules demanded such excess in the S.B. group, the Latin and Modern Language requirement might be reduced "not to exceed three Majors in either, to the extent of four Majors in all. These reductions shall be granted after consideration of each case by the Committee on Curriculum."

A number of other modifications of the clearing-house system have been made, all of them designed to meet such difficulties as those already described. The more important of these provisions are as follows:

1. Students preparing for Medicine in the S.B. course are permitted to substitute Biological Science for the third Major of Mathematics and for one of the two Majors of Geology.

2. Students in Commerce and Administration receive the Ph.B. degree. When they offer four units of Latin on admission, they are excused from further Latin requirement and permitted to substitute four Majors of Political Economy, Political Science, and Social Science. Students in this course are also excused from taking Psychology and Ethics, which are often taken in the Senior College, but are largely pursued by Junior College students in their second year.

3. Still another provision for substitution has been made in the case of those students who enter the University with advanced standing. The amount of substitution is naturally in proportion to the amount of such advanced standing. This provision does not directly affect the Junior College, except in the case of students who enter with less than eighteen Majors' credit. If such students come from an "approved college," that is, one whose work in grade and general scope is regarded as equivalent to that of the University, none of the Junior College requirements are enforced. This is constructively the permission to substitute in such cases to the extent by which the curricula of approved colleges vary from that of the Junior College. In the case of students, however, who enter with eighteen Majors from colleges not on the approved list, four Majors of substitution are permitted.

It is evident from the facts which have been presented that the limit of flexibility in the system is being rapidly approached. If provisions for substitution are multiplied, the time will be reached when the exceptions will far exceed in number the original general principles. In these circumstances two classes of proposals have begun to appear. Both seek greater freedom,

one by enlarging the clearing-house policy, the other by minimizing the system of requirements.

A little reflection will show that the clearing-house principle can be maintained and at the same time greater flexibility may be secured by enlarging the interchangeable subjects or groups of subjects which are "cleared." Certain proposals made within the last two or three years are significant in connection with this idea :

1. The Senate proposed to the Junior College Faculty in the autumn of 1900 to group Mathematics with Science in the requirements in the A.B. and Ph.B. courses, that is, suggested that, instead of demanding two Majors of Mathematics and two Majors of Science, the Faculty require "four Majors of Mathematics *and* Science." It has also been proposed to require "one unit of Science" for admission, instead of specifying Physics.

2. No action has been taken upon certain proposals to create a single subject, Language, which shall include Greek, French, German, English, etc., or two Language groups: Ancient and Modern. It seems likely that any further attempt to secure greater flexibility in the curriculum will take the form of enlarging the subject or subject groups, both for admission and for college requirement.

While almost all discussions of the curriculum bring forth sporadic proposals for a practically free elective system, there has been no serious movement in that direction. The changes, as this rapid survey shows, have rather taken the form of gradual adaptation to situations as these have arisen. On the whole, the curriculum system is giving satisfaction, but there are problems hinted at in this report which deserve further consideration. In the Spring Quarter of 1902 the Junior College Faculty decided to create a Commission to consider the whole question of the entrance requirements and the Junior College Curriculum. A careful study of the difficulties to be overcome will doubtless lead to still further modifications looking to a nicer adjustment of means to ends.

#### STUDENT ELIGIBILITY FOR PUBLIC APPEARANCE

From the beginning, the University insisted that students whose work was defective must not participate in athletic games, concerts, declamation contests, or other events technically known as "public appearances." The principle was clear, but the practical administration of it was beset with difficulties. Until the adoption of the present system in the spring of 1900, it was the custom for the Deans to send out to instructors lists of students who desired to take part in some impending event. Often it was not possible to make up those lists until almost the day of the game, concert, or play. If the instructors reported the work of anyone on the list "unsatisfactory" or below grade, he was notified that he was ineligible, and that he must refrain from participation until the adverse report should be withdrawn. This plan was unsatisfactory to the administration and irritating to the student body. The chief defects were: (1) unfairness to the students, the listing of whose names suggested to the instructors suspicion and possible severity of judgment; (2) the temptation to besiege the instructors with explanations and promises in order to have the report withdrawn; (3) hardship upon the managers of athletic musical, dramatic, and other affairs who never could reckon with certainty upon their teams and clubs.

In order to remedy this state of affairs the Faculty adopted in the Spring Quarter of 1900 a plan the essential features of which are:

1. At the end of the third, sixth, and ninth weeks of every Quarter special report cards are sent to each instructor with the request that he report at once the names of all students who are below a passing grade, *i. e.*, C.

2. To be effective these reports must be returned to the Dean's office within five days.

3. A report once made cannot be changed either by the instructor or by the Dean. When equity seems to demand a modification, the case must be submitted to the Board of Physical Culture and Athletics.

4. When a student at the end of one three-weeks' period is reported below grade, he is thereby made ineligible for the subsequent three weeks.

This system has worked admirably. It is definite, automatic, final. The instructor who fails to report students during the Quarter cannot, in justice, give a very low term mark. In two cases the Faculty has voted an arbitrary change of mark when, without any adverse report during the Quarter, an instructor has reported class work a failure. The system, therefore, makes it important for the instructor to report, and to report promptly, for if the card is late the report must be ignored. Again the members of the Faculty, since they are powerless to change marks once reported, are protected against student importunities. The students themselves know exactly where they stand and can count definitely upon specified periods either of eligibility or of enforced retirement. In the few cases in which the Board of Physical Culture and Athletics has permitted an instructor to change marks, excellent reasons have been shown for such equitable modifications. In general the plan has greatly improved the relations between the Faculty and the students. The Faculty is no longer regarded as arbitrarily and with slight warning interfering with student affairs. Censure falls rather upon those students who, knowing clearly all the conditions, fail to maintain their scholarship, and thus mar or endanger the success of teams and clubs.

The reports, however, are by no means exclusively, or even chiefly, for the purpose of determining eligibility. They are designed to aid the Deans in supervising the work of all students. Within a few hours after a report card is received from an instructor each student whose name appears upon it is notified that he is below grade in the course. He is requested either to see his Dean at once, or to send to him on an appended card any statement or explanation that is to be offered. In this way a close watch is kept upon the work of all students. It is in a sense a paternal system. It is too early to assert what effect it has upon the student body. *A priori* it might be expected to weaken the sense of responsibility and to foster habits of dependence. The experiment is certainly worth continuing until its effects can be more accurately estimated.

#### THE COURSE BOOK AND UNDERGRADUATE HANDBOOK

Obviously one of the chief administrative problems of a university is to record accurately the work of students, and to have its records easily accessible. It is also of prime importance that the regulations of the institution should be put in such form that students may clearly understand all essential requirements and rules. In a university where entrance and college studies are to so large an extent specified as in the University of Chicago, it is especially necessary that both Faculty and students should keep in mind a rather complex system. The Deans cannot register students, nor can advisors give useful counsel, without knowing both the exact entrance credits and the college requirements in individual cases. Under the old plan the master record cards of all students were, as now, kept in the Recorder's office. Duplicates of these cards, posted each Quarter, were sent to the various Deans, who made them the basis of registration and advice. Students had no access to their credit record except through the Deans, to whom they resorted constantly to learn how many Majors they had accomplished, and how many and which they must still complete. This involved a maximum of annoyance in the offices, and still left the majority of the students in a state of vague uncertainty. Furthermore, the requirements and regulations for undergraduates were published in a bulky form and scattered through a large number of pages in different parts of the *Register* and *Circular of*

*Information.* These conditions made ignorance of the law a rather plausible plea. To meet the demands of the situation the Dean of the Junior Colleges assumed the responsibility for preparing a compact manual of information to be published in two forms: (1) as an *Undergraduate Handbook*, and (2) with additional record pages as a *Course Book*. With the co-operation of the various offices concerned, the first edition was published in October, 1901. Every undergraduate was supplied with a *Course Book* in which both his admission and college credits, and the further requirements for graduation were specified. Matriculating students now receive *Course Books* from the Dean of Admissions, so that they have from the outset a record of their work and a clear, condensed statement of the University's requirements and rules. Each Quarter the books are returned to the office, posted by the Recorder, and returned to their owners. No student can register without producing his *Course Book*, which at once enables the Dean to point out the next work to be undertaken. If any special arrangement is made with a student, it is valid only when noted by the Dean on certain pages provided for the purpose in the *Course Book*. If the student desires to leave the University for another institution, his *Course Book*, posted to the date of his withdrawal and accompanied by a letter of dismissal, becomes his credential. The device has served its purpose admirably. The student, with definite information always in his possession, adjusts himself readily to the situation and ceases to be dependent upon his Dean, who, on the other hand, is relieved of an immense amount of irksome routine and escapes the dangers of giving orally information which too frequently is misinterpreted.

#### CHAPEL ASSEMBLY

The problem of religious exercises for undergraduates has been dealt with in various ways during the ten years of the University's history. At the outset the older academic traditions all demanded a religious exercise, and New England precedent, at least, suggested compulsory attendance. Conditions at Chicago presented difficulties. To require attendance of students living at a distance might break seriously into their plans and involve hardship. The principle of requiring attendance at a religious exercise also aroused opposition in some quarters. It was decided after a time to make attendance voluntary. Under this régime the attendance at chapel exercises was ordinarily small. It was artificially increased, however, when prominent visitors came to the University, or when musicians of note took part in the exercises. The system, on the whole, was unsatisfactory. A compromise was arranged when in November, 1896, the present plan was adopted, by which the Juniors meet on Monday, the Seniors on Tuesday, and other divisions of the University on their respective days. Attendance was made compulsory. The exercises were given a somewhat more religious tone, and members of the Faculty were relied upon for the addresses. Here again difficulties were encountered in securing speakers. With the introduction by the University of the new plan of regular University preachers, the problem of the Chapel Assembly has been successfully solved.

#### DIVISION LECTURES

The weekly exercises known as Division Lectures had their origin in 1895-96. The proposal to establish these lectures was discussed at several meetings of the Junior College Faculty. The chief reasons urged in favor of the plan were as follows:

1. It would afford a regular meeting of students, and foster a sense of solidarity.
2. It would provide a survey of the whole field of University study, and afford some basis for intelligent election of special work in the last two years of the course.
3. It would in some measure show the relationships existing between the various pursuits of the Junior College curriculum.

After much debate as to whether attendance upon this exercise should be required, and regular examinations set at the close of each course, it was finally voted to establish the lectures, require attendance, but not to insist on any test or grading of work.

A committee in charge of the plan worked out a scheme of lectures which was designed to accomplish the results indicated above. The schedule of lectures announced for the Winter Quarter, 1897, was as follows :

Division VI. Ten lectures on "The Plan of the Organization of the University," "The Ideals of University Life," etc.

Division V. "Mathematics as a Pursuit and as the Instrument of the Sciences" (two lectures); "The Inorganic Sciences" (four lectures); "The Organic Sciences" (four lectures).

Division IV. "The Science of Mind" (five lectures); "The Sciences of Association" (five lectures).

Division III. "The Economic Aspects of Society" (five lectures); "The Legal and Political Aspects of Society" (five lectures).

Division II. "The Historical View of Society" (two lectures); "Languages, Literature, and Arts as Products of Social Life" (five lectures); "A Synthetic View of Studies in Relation to the Problems of Life" (three lectures).

Division I. Ten Lectures on "The Principles Which Should Guide Students in the Selection of Courses."

An examination of this *a priori* scheme shows that a conspectus of the sciences was provided for, and that in the course of six Quarters each member of the Junior Colleges would have presented to him all the large fields of university work, and would, in addition, have his attention called to the fundamental relations existing between these different pursuits.

The success of such a plan was dependent (1) upon the hearty sympathy and co-operation of the members of the Faculty, (2) upon the willingness of certain members best fitted for the work to prepare special lectures adapted to the purpose. Unfortunately, these conditions did not exist. A few members were interested in the experiment, but the majority regarded it with apathy. Furthermore, no compensation for this extra service was provided, enthusiasm and loyalty being counted upon as sufficient stimulus. The inevitable result was that the schedule had to be modified according to the exigencies of the situation. The members of the Faculty who were willing to lecture at all had to be permitted to discuss the subjects which best suited their special interests and preparation. Little by little the original plan has been transformed until it is hardly recognizable at the present time. In spite of these difficulties, however, the lectures have served their purpose in bringing the students together regularly. Although the original plan has been almost wholly abandoned, many valuable addresses on a variety of important themes have been delivered before the students of the Junior Colleges.

The chief weakness in the system lies in the fact that members of the Faculty have been asked to render without additional compensation an important and by no means easy service. If the Division Lectures can be put upon another basis, there is no reason why they should not play an important part in the intellectual life of the undergraduates.

#### MEMBERSHIP AND ORGANIZATION OF THE JUNIOR COLLEGE FACULTY

In any year the Faculty of the Junior Colleges is made up of certain officers of the University *ex officio*, together with all members of the University staff who offer Junior College courses during four Quarters, beginning with the Summer. One of the conventional criticisms of undergraduate work in large universities is the assertion that teaching is almost wholly in the hands of inexperienced tutors, assistants, and instructors, while the attention of professors is bestowed upon Seniors and Graduate Students. Table XIII shows the composition of the Junior Faculty by academic rank for the ten years 1892-1902. The number of professors who

give Junior College instruction has increased from one to twelve. The significant facts, however, are those of percentages rather than of absolute numbers. The ratio of teachers of professorial rank to the whole Junior Faculty for each year is given in the last line of the table. It is noteworthy that the percentage (42) for the last year is practically the same as that for the first year. Furthermore, the comparatively narrow margin of variation (37 per cent. to 45 per cent.) for the whole period bears testimony to the steady policy of the University to maintain in the elementary courses a large representation from the professorial ranks.

TABLE XIII  
COMPOSITION OF JUNIOR COLLEGE FACULTY

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Professors .....	1	4	6	4	6	8	7	15	13	12
Associate Professors .....	3	1	7	4	8	8	7	5	8	8
Assistant Professors .....	9	11	10	10	14	20	20	17	13	15
Instructors .....	6	12	14	13	17	20	23	18	20	19
Others .....	10	11	23	18	28	24	22	30	37	29
Total .....	29	39	60	49	73	80	79	85	91	83
Percentage of those of profes- sorial rank .....	45-	41+	38+	37-	38+	45	43+	43+	37+	42+

While older members of the Faculty, as the table shows, have a considerable part in Junior College instruction, they are not, for various reasons, as active participants in Junior College Faculty meetings as might be desirable. Because of membership in other bodies, many of these professors feel unable to attend the meetings of the Junior College Faculty. In estimating, therefore, the size of the Faculty for administrative purposes, deductions must be made for such absence as well as for those who are out of residence in any given Quarter. The average attendance at Faculty meetings for the year 1899-1900 was twenty-three—about 40 per cent. of the active resident Faculty; in the year 1900-1901 the percentage fell to 30, while for the year closing July 1, 1902, the percentage rose to 50. When it is remembered that these averages include each Quarter at least one meeting called for the dispatch of merely routine business, these figures show a significant interest on the part of the Faculty.

In accordance with the general plan of University organization adopted by the Senate in the winter of 1902, the following committees on curriculum have been organized in the Junior College Faculty:

1. Ancient Languages and Literatures.
2. Modern Languages and Literatures.
3. Philosophy and the Social Sciences.
4. Mathematics and Physical Sciences.
5. The Organic Sciences.

The statute further provides that professional or technical Faculties may be represented by committees in the Junior Faculty. The Committee on Commerce and Administration is, so far, the only one organized under this provision. The chairman of these subcommittees, together with the Dean of the Junior Colleges, form a general curriculum committee to which is intrusted the consideration of proposals that affect the curriculum of the Junior Colleges as a whole. For administrative purposes the following standing committees are annually appointed:

- |                   |                    |             |
|-------------------|--------------------|-------------|
| Examinations.     | Scholarships.      | Discipline. |
| Public Exercises. | Advanced Standing. |             |

## ENTRANCE SCHOLARSHIPS

The following students have received (Entrance Scholarships):

1900-1901

## I. FROM CO-OPERATING SCHOOLS OUTSIDE OF CHICAGO

Sam. Severance, Louisville, Ky., Boys' high school	H. C. Hubbard, Fort Scott, Kan., high school
Alfred Kaar, Princeton high school	Martha Tarnow, Riverside high school
Harvey Trimble, Princeton high school	Louise Miller, Dayton, O., Steele high school
Florence Frysinger ( $\frac{1}{4}$ ), Rock Island	Lee W. Maxwell, Clyde Township high school
Mildred Dodge ( $\frac{1}{2}$ ), Rock Island	J. F. McFadden, Thornton Township high school
Frank L. Scott, St. Louis, Mo., high school	Bessie McClure, Pittsburg, Pa., high school
Luella Sloan, East Aurora high school	Cora Sands, Richmond, Ind., high school
Edith Gillett, West Aurora high school	Alice Matless, Keokuk, Ia., high school
Benj. Feniger, Cleveland, O., Central high school	Eleanor Culton, Bloomington high school
Pearl Foltz, St. Joseph, Mich., high school	Clara L. Primm, Springfield high school
Ruth Cohen, Quincy high school	Frieda Berens, Oak Park high school
Erma Ellis, Kansas City, Mo., Central high school	Frank F. Stephens, Topeka high school
Charles McCabe, Council Bluffs, Ia., high school	May Fenerty, Louisville, Ky., Girls' high school

## II. FROM CHICAGO HIGH SCHOOLS

Hannah Ryan, South Division high school	Isadore Wolfsohn, Medill high school
Myrtle Starbird, Englewood high school	Agnes MacNeish, Northwest Division high school
Bertha McCloud, South Chicago high school	Ethylle Andrus, Austin high school
Hermann I. Schlesinger, Lake View high school	Ethel Jaynes, West Division high school
Jessie Bradshaw, John Marshall high school	Frances Ashley, Calumet high school
Andrew F. McLeod, Jefferson high school	

1901-1902

## I. FROM CO-OPERATING SCHOOLS OUTSIDE OF CHICAGO

Sam. Salinger, Louisville, Ky., Boys' high school	Beulah Bass, Oak Park high school
Marie Kiedaisch, Keokuk, Ia., high school	Louise Bearse, La Grange high school
Edna Moore, Richmond, Ind., high school	Lily Buckendahl, West Aurora high school
Earl Wahlgren, Council Bluffs, Ia., high school	Anna Youngman, Louisville, Ky., Girls' high school
Julia Swadener, Dayton, O., Steele high school	Bessie H. Packard, Kansas City, Mo., Central h. s.
Robert Gibboney, Rockford high school	Rhoda Harlowe, Milwaukee, West Division
Charles J. Stowell, Bloomington high school	Lilian M. Lane, Leavenworth, Kan., high school
Clyde Amel Blair, Fort Scott, Kan., high school	James Brinsmaid, Topeka, Kan., high school
Emma M. Schuster, Elgin high school	Arthur P. Solberg, Sioux City, Ia., high school
Aileen Spaulding, Terre Haute, Ind., high school	Albert K. McCurdy, Moline high school
Charles Berta, Joliet high school	Charlotte White, Cedar Rapids, Ia., high school
Mabelle Payne, Rock Island high school	Florence Hamilton, Blue Island high school

## II. FROM CHICAGO HIGH SCHOOLS

Katherine J. Vaughan, Lake high school	Ernest E. Quantrell, Northwest Div. high school
Benj. Freud, Jefferson high school	Eleanor Murphy, South Division high school
Nanna Marx, Northwest Division high school	Leonard Hancock, John Marshall high school
Nellie Jackson, Calumet high school	Beulah E. Church, Austin high school
Lilian M. Belfield, Lake View high school	Clara H. Taylor, Englewood high school
Francis McGuane, South Chicago high school	Bertha Thompson, Hyde Park high school
Hattie May Palmer, Robert S. Waller high school	

## III. FROM AFFILIATED ACADEMIES

Dean P. Wickes,	Chicago Manual Training school	Walter B. Zeisler ( $\frac{1}{2}$ ),	
Clara Denham,	Dearborn Seminary	Arthur A. Keefer ( $\frac{1}{2}$ ),	Harvard school
Engene V. Beifeld,	Princeton-Yale school	Harry W. Getz,	South Side Academy

## SENIOR COLLEGE SCHOLARSHIPS

During the past three years Senior College Scholarships have been awarded to the following students :

## 1899-1900

Mary G. Borough	Germanic	South Division high school
Josephine May Burnham	English	North Division high school
Geo. A. Brayton	Geology	Englewood high school
Wm. S. Harman	History	Morgan Park Academy
W. W. Hart	Mathematics	South Chicago high school
John Mills	Physics	South Side Academy
Margaret Morgan	Latin	Morgan Park Academy
Anna McCaleb	Philosophy	Calumet high school
Bertha A. Pattengill	Greek	Wayland Academy, Beaver Dam, Wis.
John P. Ritchie	Chemistry	Englewood high school
Grace E. Sellon	Political Economy	South Side Academy
Clara M. Welch	Romance	Illinois Female school

## 1900-1901

Arthur F. Beifeld	Romance	Morgan Park Academy
Arthur E. Bestor	History	Wayland Academy, Beaver Dam, Wis.
Harold B. Challis	Philosophy	South Side Academy
Frances Donovan	Germanic	North Division high school
Matilda V. Gibson	Greek	Lake high school
Wm. L. Goble	Chemistry	Illinois State Normal
Edwin G. Kirk	Zoology	Lima, O., high school
David Robertson	Physics	John Marshall high school
Grace Lincoln	Geology	West Division high school
Benj. Robinson	Mathematics	Englewood high school
Florence Turney	English	Mount Carroll Seminary
Mabel Whiteside	Latin	Webb school

## 1901-1902

Wm. A. Averill	Geology	Austin high school
Margaret Davidson	English	Lake high school
Elsie Flersheim	Greek	Englewood high school
Oscar Hamilton	Chemistry	Morgan Park Academy
Evelyn Hayden	Physics	Armour Institute
Helen Hayner	French	John Marshall high school
Leon Lewis	Political Economy	Louisville, Ky., male high school
Harris MacNeish	Mathematics	Northwest Division high school
Nanna Ostergren	Philosophy	Armour Institute
John Redpath	Latin	Helena, Montana, high school
Josephine Stone	History	Englewood high school
Sam. Strauss	Germanic	Hyde Park high school



For the ensuing year the award has been made to the following students:

## 1902-1903

Edward Brown	Political Economy	Morrison high school
Frank DeWolf	Geology	South Chicago high school
George Fahr	Chemistry	Allegheny College
Anna Goldstein	Germanic	Lake high school
Agnes MacNeish	Mathematics	Northwest Division high school
Ralph Merriam	History	Atlanta high school
Cash Newkirk	English	Morgan Park Academy
Milton Sills	Philosophy	Hyde Park high school
Myrtle Starbird	Greek	Englewood high school
Berthold Ullman	Latin	Northwest Division high school
George Winchester	Physics	Elmore high school

## PUBLIC SPEAKING PRIZES

The following students have received University Prizes for excellence in declamation :

Summer, 1898	3. Antonie Krejsa	2. Chas. M. Barber (Luella Horn, alt.)
1. Anna McCaleb	4. Karle Wilson	3. Alfred Crawford
2. H. E. P. Thomas	5. Luverne Hall	4. Leon P. Lewis
3. Frances Burling	6. Eugene Watson	5. H. F. MacNeish
4. M. Mandeville	Autumn, 1899	6. Karle Wilson (Henry D. Reid, alt.)
5. (No contestant)	1. Donald G. Richberg (Rowland Rogers, alt.)	Autumn, 1900
6. H. W. Jones	2. Rowland H. Ritchie (Sidney Klein, alt.)	1. Florence Frysinger
Autumn, 1898	3. Henry W. Jones	2. G. H. Norton
1. C. S. Eaton	4. Maud L. Sperry (Clifton L. Paden, alt.)	3. H. E. Smith
2. R. C. McClure	5. Charles M. Barber	4. A. L. Jones
3. J. S. Patek	6. Charles W. McNear	5. C. A. Quackenbush
4. O. L. McCaskill	Winter, 1900	6. H. J. Lurie
5. Grace Switzer	1. S. G. Levy	7. M. R. Jacobs
6. C. J. Williamson	2. Mark R. Jacobs	Winter, 1901
Winter, 1899	3. Eugene G. Neubauer	Upper Juniors :
1. Mary Cain Lincoln	4. Joseph Priest	1. Leon P. Lewis
2. Alma Yondorf	5. Levi D. Russell	2. H. J. Lurie
3. O. L. McCaskill (Claribel Goodwin, alt.)	6. O. L. McCaskill	Scholarships to :
4. Millard Riley Myers	Spring, 1900	3. Anna M. Hardie
5. C. J. Williamson (Florence Straus, alt.)	Upper Juniors :	4. Marie Lamb
6. (No contestant)	1. D. A. Robertson	Lower Juniors :
Spring, 1899	2. B. W. Robinson	1. C. A. Quackenbush
1. J. W. Thomas	3. P. C. de Jong	2. Florence Frysinger
2. Ruth Vail	Lower Juniors :	Scholarships to :
3. Harold B. Challiss	1. P. Davis	3. Zerlina Hirsh
4. Nina McQuilken	2. J. Priest (E. L. Van Dellen, alt.)	4. C. C. Nuckols
5. Maude F. Sperry	3. W. G. McLaury	Spring, 1901
6. (No contestant)	Summer, 1900	1. Leon P. Lewis (W. C. Wilson, alt.)
Summer, 1899	1. Mary Roth	2. Zerlina Hirsh
1. Donald G. Richberg		3. F. A. Fischel
2. Bertram G. Nelson		

- 4. H. J. Lurie
- 5. Maurice Lipman
- 6. H. Wilkinson Ford  
(Abigail Cowley, alt.)  
(Aubrey P. Nelson, alt.)

Summer, 1901

- 1. F. A. Fischel
- 2. A. R. Vail
- 3. Ethel C. Randall  
(Ralph Merriam, alt.)
- 4. Henry Pomeroy Miller
- 5. Edson B. Cooke
- 6. Vida Sutton

Autumn, 1901

Upper Juniors :

- 1. Harry J. Lurie
- 2. Zerlina Hirsh

Scholarships to :

- 3. Ethel Jaynes
- 4. Joseph Beifus

Lower Juniors :

- 1. Walter Eggemeyer
- 2. Laura Watkins  
(George Fairweather, alt.)  
(Nellie Conroy, alt.)

Winter, 1902

- 1. Paul Atlee Walker
- 2. Leo Falk Wormser
- 3. Zerlina Hirsh  
(Eugene L. Hartigan, alt.)
- 4. Milton Sills

Spring, 1902

- 1. Fannie Benson
- 2. George O. Fairweather
- 3. Clarke S. Jennison
- 4. F. O. Tenney

Summer, 1902

No contest

Respectfully submitted,

GEORGE E. VINCENT,  
*Dean of the Junior Colleges.*

## THE WOMEN OF THE UNIVERSITY

*To the President of the University :*

SIR: As Dean of Women, I submit the following report for the years 1899-1900, 1900-1901, and 1901-2, together with summaries for the years 1892-1901.

### CHANGES IN THE FACULTY

The changes which took place among the women of the Faculty during the year 1899-1900 were as follows: Julia E. Bulkley, Ph.D., Associate Professor of Pedagogy, and Lisi C. Cipriani, Ph.D., Docent in Literature in English, resigned. The following new appointments were made: Ella Flagg Young, Associate Professorial Lecturer in Pedagogy; Maud Lavinia Radford, Ph.M., Assistant in English; Ida Furniss, Assistant in Physical Culture.

Promotions were made as follows: Elizabeth Wallace, S.B., from an Associateship to an Instructorship in Romance; Ella Adams Moore, Ph.B., from an Assistantship to an Associateship in English; Amy Eliza Tanner, Ph.D., from an Assistantship to an Associateship in Philosophy; Edith Burnham Foster, Ph.B., from an Assistantship to an Associateship in English. In the report of the previous year mention of the appointment of Porter Lander MacClintock, A.M., to an Instructorship in English, was inadvertently omitted. The officers of instruction and administration of the University included twenty-two women.

During the year 1900-1901 the following changes were made: Edith Burnham Foster, Ph.B., Associate in English, resigned; Ella Flagg Young, Ph.D., was promoted from an Associate Professorial Lectureship to an Associate Professorship, and Susan Helen Ballou, Ph.B., from an Assistantship to an Associateship in Latin; Isabelle Bronk, Ph.D., was appointed to an Assistantship in Romance Languages, and Frances Ada Knox, A.B., to an Assistantship in History. The officers of instruction and administration included twenty-one women.

During the year 1901-2 the following changes were made: Ella F. Young, Ph.D., was promoted from an Associate Professorship to a Professorship; Isabelle Bronk, Ph.D., Assistant in Romance Languages, resigned; Lisi C. Cipriani, Ph.D., was appointed to an Assistantship in Romance Languages; and twenty women were added to the staff through the union of the Chicago Institute with the University. This increased the total number of women officers of instruction and administration to forty-one.

The following table indicates the Fellowships held by women during the years covered by the report:

TABLE I  
LIST OF WOMEN FELLOWS, 1899-1900

Name	College	State	Department
Breckinridge, Sophonisba Preston	Wellesley College	Kentucky	Political Science
Bronk, Isabelle	Illinois Wesleyan University	New York	Romance
Crandall, Harriet Emeline	University of Wisconsin	Wisconsin	English
Davis, Katherine Bement	Vassar College	New York	Political Economy
Enteman, Minnie Marie	University of Wisconsin	Wisconsin	Zoology
Harris, Mary Belle	Bucknell University	Pennsylvania	Latin
Hefferan, Mary	Wellesley College	Michigan	Zoology
Moore, Anne	Vassar College	North Carolina	Physiology
Peabody, Susan Wade	Wellesley College	Ohio	Political Science
Penfield, Harriet Eva	Oberlin College	Ohio	Philosophy
Thompson, Helen Bradford	University of Chicago	Illinois	Philosophy
Thormeyer, Bertha	Butler College	Indiana	Germanic

TABLE I—Continued  
LIST OF WOMEN FELLOWS, 1900-1901

Name	College	State	Department
Breckinridge, Sophonisba Preston	Wellesley College	Kentucky	Political Science
Becker, Henrietta Katherine	University of Chicago	Illinois	Germanic
Corwin, Lutie Rebecca	Hartford Theol. Seminary	Ohio	Semitic
Crandall, Harriet Emeline	University of Wisconsin	Wisconsin	English
Enteman, Minnie Marie	University of Wisconsin	Wisconsin	Zoology
Hefferan, Mary	Wellesley College	Michigan	Zoology
Hewes, Amy	Woman's College of Baltimore	Maryland	Sociology
Misener, Geneva	Queen's University	Ontario	Greek
Moore, Anne	Vassar College	North Carolina	Physiology
Peabody, Susan Wade	Wellesley College	Ohio	Political Science
Penfield, Harriet Eva	Oberlin College	Ohio	Philosophy
Thormeyer, Bertha	Butler University	Indiana	Germanic
Wilcox, Alice Wilson	Vassar College	Rhode Island	Zoology

LIST OF WOMEN FELLOWS, 1901-1902

Becker, Henrietta Katherine	University of Chicago	Illinois	Germanic
Corwin, Lutie Rebecca	Hartford Theol. Seminary	Ohio	Semitic
Dey, Mary Helena	McGill University	Ontario	Romance
Gordon, Kate	University of Chicago	Wisconsin	Philosophy
Hatcher, Orié Latham	Vassar College	Virginia	English
Hefferan, Mary	Wellesley College	Michigan	Zoology
Hewes, Amy	Woman's College of Baltimore	Maryland	Sociology
Misener, Geneva	Queen's University	Ontario	Greek
Wilcox, Alice Wilson	Vassar College	Rhode Island	Zoology

The Club of Women Fellows, as the result of several discussions and conferences, adopted a questionnaire and planned an investigation concerning the conditions under which Fellowships are held in different institutions and the work accomplished, especially by women Fellows. The members of the Club have been favored with addresses by Professor A. C. Miller, on "Women as University Fellows;" Professor T. C. Chamberlin, on "Capabilities of Women for Scientific Work;" Professor Jacques Loeb, on "Aims of Women in Graduate Study;" Professor G. H. Mead, on "The Relation of Women to the New Education." The Club has been entertained socially by Dean Talbot, Mrs. H. P. Judson, Mrs. W. D. MacClintock, and Mrs. Paul Shorey.

Scholarships were awarded to women as follows:

1899-1900	History, Lucie Hammond	Greek, Matilda V. Gibson
In the Senior Colleges:	Greek, Helen K. Darrow	English, Florence Turney
Philosophy, Anna McCaleb	Latin, Clara L. Mooney	Latin, Mabel K. Whiteside
Political Economy, Grace E. Sellon	Germanic, Emma C. Jonas	In the Graduate Schools:
Greek, Bertha A. Pattengill	Physics, Marie K. Werkmeister	Philosophy, Matilde Castro
Latin, Margaret Morgan	Chemistry, Mary B. Pardee	Pedagogy, Kate Gordon
Romance, Clara M. Welch		Greek, Julia Lilian Peirce
Germanic, Mary G. Borough		Latin, Mary Bradford Peaks
English, Josephine M. Burnham		Romance, Eda D. Ohrenstein
In the Graduate Schools:	1900-1901	Chemistry, Mary B. Pardee
Pedagogy, Pearl L. Hunter	In the Senior Colleges:	The Zuinglius Grover Memorial Scholarship, Margaret Morgan
	Geology, Grace B. Lincoln	
	Germanic, Frances M. Donovan	

1901-1902	Romance, Helen G. Hayner	Latin, Nina Estelle Weston
In the Senior Colleges:	English, Margaret Davidson	Germanic, Frances M. Donovan
Philosophy, Nanna M. Ostergren	Physics, Evelyn S. Hayden	Botany, Mary E. Mathews
History, Josephine Stone	In the Graduate Schools:	Anatomy, Mary C. Lincoln
Greek, Elsie Flersheim	History, Laura A. Thompson	
	Sociology, Elsie P. Honn	

TABLE II

## DEGREES CONFERRED

Degrees have been conferred on women as follows:

	Doctor of Philosophy	Master of Arts	Master of Philosophy	Master of Science	Bachelor of Arts	Bachelor of Philosophy	Bachelor of Science
1899-1900.....	5	7	3	1	38	44	8
1900-1901.....	7	3	0	3	33	62	10
1901-1902.....	2	1	6	2	51	71	14
1892-1902.....	35	28	24	14	230	310	58

The certificate or title of Associate was conferred on sixty women members of the Junior Colleges in 1899-1900; on eighty-three in 1900-1901, and on seventy-six in 1901-1902.

TABLE III

## SUBJECTS OF THESES PRESENTED BY WOMEN CANDIDATES

For the Degree of Doctor of Philosophy :

## 1899-1900

Katherine Bement Davis.	"Causes Affecting the Standard of Living and Wages."
Annie Marion MacLean.	"The Acadian Element in the Population of Nova Scotia."
Elizabeth Laetitia Moon.	"Ideas of Future Life among the Algonquins."
Martha Edith Rickert.	"Emare: A Middle English Romance."
Ella Flagg Young.	"Isolation in School Systems."

## 1900-1901

Sophonisba Preston Breckinridge.	"Legal Tender: A Study in English and American Monetary History."
Isabelle Bronk.	"Antoine Furetière: A Study of his Life and Works."
Minnie Marie Enteman.	"Coloration of Polistes, the Common Paper Wasp."
Mary Belle Harris.	"The Lyric of Kalidasa: Its Form and Subject-Matter."
Clara Millerd.	"Aristotle's Conception of Pre-Socratic Philosophy."
Anne Moore.	"The Effect of Electrolytes on Rigor Mortis."
Helen Bradford Thompson.	"Psychological Norms."

## 1901-1902

Katherine Elizabeth Dopp.	"The Place of Industry in Elementary Education."
Florence May Lyon.	"Development of the Sporangium and Gametophyte of <i>Selaginella rupestris</i> ."

For the Degree of Master of Arts, Philosophy, or Science :

## 1899-1900

Frances Holmes Abbot.	"The Religious Conceptions of Wordsworth's 'Excursion.'"
Emma Kirkland Clark.	"The Use of the Dative Case in Sallust."
Eva Comstock Durbin.	"The Alsatian Question in the French Revolution."

- |                                 |   |
|---------------------------------|---|
| Charlotte Comstock Gray.        | "The Visions of Santa Teresa."  |
| Dora Johnson.                   | "Constructions of Specification in Plautus and Terence."  |
| Mattie Belle Matheny.           | "The Hexameter of Lucilius."  |
| Ruthella Bernard Mory.          | "The Growth of Toleration as Developed in the Foundation of Maryland."                                    |
| Caroline Louise Ransom.         | "A Partial Catalogue of the Collection of Greek Vases in the Art Institute of Chicago."                   |
| Elizabeth Marguerite Strauchon. | "The Sense of Color in Chaucer."  |
| Emily Churchill Thompson.       | "Unreal Conditions in Present Time from Homer to Herodotus."  |
| Anna Lavinia Van Benschoten.    | "Motion of a Particle Attracted by a Central Force Varying Inversely as the Fifth Power of the Distance." |

1900-1901

- |                        |  |
|------------------------|--|
| Nellie Mason Auten.    | "Some Phases of the Sweating System in Chicago."   |
| May Estelle Cook.      | "Browning's Dramas."   |
| Mary LeGrand Didlake.  | "The Structure of the Feathers of the Pigeon and the Modifications Underlying the 'Frilled Feathers.'" |
| Marjorie Lucile Fitch. | "Traces of Gallic Influence in the German of Chamisso."  |
| Helen Mary Taylor.     | "Division of the Lemniscato into Thirteen Equal Parts."  |
| Adella Nelson Todd.    | "The Pedagogy of Religious Teaching."  |

1901-1902

- |                         |   |
|-------------------------|---|
| Sarah Field Barrow.     | "Studies in the Language of Spenser."   |
| Grace Darling.          | "Stage-Setting from 1500 to 1575."  |
| Mary Helena Dey.        | "Commentary on the First <i>Epistre de l'Amant vert</i> of Jean Lemaire de Belges." |
| Mary Elizabeth Mathews. | "A Comparison of the Dimensions of Cells in Etiolated and Non-Etiolated Leaves."    |
| Elizabeth Moore.        | "Matthew Arnold and the Oxford Movement."   |
| Mary Law McClintock.    | "The Romantic Element in Mrs. Radcliffe's Work."                                    |
| Mary Annie Pace.        | No thesis required.   |
| Bertha Thormeyer.       | "The Treatment of Nature in Works of Representative German Romanticists."           |
| Georgia Louise Yocum.   | "An Anatomical Comparison of Some Winter and Summer Leaves."                        |

TABLE IV  
ATTENDANCE OF WOMEN STUDENTS 1899-1901

	1899-1900	1900-1901	1901-1902
Graduate Schools.....	354	334 (1) <sup>1</sup>	365 (8)
Senior Colleges.....	185 (3)	227 (13)	242 (30)
Junior Colleges.....	282 (28)	355 (59)	399 (25)
Divinity School, Graduate.....	11	7	9
Divinity School, Unclassified.....	27	14	14 (1)
University College.....	191 (8)	395 (2)	398 (7)
Unclassified.....	468 (5)	455 (36)	405 (22)
Medical students.....	.....	.....	15 (3)
School of Education.....	.....	.....	635 (58)
Total.....	1,518 (44)	1,787 (111)	2,482 (134)
Grand total of different students.....	1,474	1,676	2,348

<sup>1</sup> Figures in parentheses show repetitions.

TABLE V  
STATES AND COUNTRIES FROM WHICH WOMEN STUDENTS CAME, 1897-1902

	Graduate				Senior				Junior				Divinity				Unclassified				Total								
	1897-1898	1898-1899	1900-1901	1901-1902	1897-1898	1898-1899	1900-1901	1901-1902	1897-1898	1898-1899	1900-1901	1901-1902	1897-1898	1898-1899	1900-1901	1901-1902	1897-1898	1898-1899	1900-1901	1901-1902	1897-1898	1898-1899	1900-1901	1901-1902	1897-1898	1898-1899	1900-1901	1901-1902	
Alabama																													
Arizona																													
Arkansas																													
California																													
Colorado																													
Connecticut																													
Florida																													
Georgia																													
Illinois																													
Indiana																													
Indian Territory																													
Iowa																													
Kansas																													
Kentucky																													
Louisiana																													
Maine																													
Maryland																													
Massachusetts																													
Michigan																													
Minnesota																													
Mississippi																													
Missouri																													
Montana																													
Nebraska																													
Nevada																													
New Hampshire																													
New Jersey																													
New Mexico																													
New York																													
North Carolina																													
North Dakota																													
Ohio																													
Oklahoma																													
Oregon																													
Pennsylvania																													
Rhode Island																													
South Carolina																													
South Dakota																													
Tennessee																													
Texas																													
Utah																													
Vermont																													
Virginia																													
Washington																													
West Virginia																													
Wisconsin																													
Wyoming																													
District of Columbia																													
Canada																													
England																													
Hawaii																													
Ireland																													
Japan																													
Nova Scotia																													
Total	300	320	354	365	136	178	185	227	242	192	261	282	355	399	12	25	36	21	23	577	436	462	455	440	1,017	1,220	1,327	1,392	1,451





## PHYSICAL CULTURE

In the Autumn Quarter, 1899, the entire direction of the registration of women for Physical Culture was transferred to the Dean of Women. This arrangement has proved to be very satisfactory from several points of view. An opportunity was afforded to the Dean to meet regularly and officially every woman undergraduate, and the conference for registration in Physical Culture was frequently extended to consultation or confidence concerning academic, social, or personal interests, which it would have been difficult to discuss without the aid of some formal or impersonal point of departure. This experience has done much to remove the barrier of officialism which students often imagine exists between themselves and an administrative officer. An increasingly large number of women have sought counsel and sympathy in later, voluntary, interviews.

The following tables show what assignment was made of women students as to Physical Culture, every regular undergraduate being recorded. Under the rules of the University, ten Quarters of Physical Culture are included in the requirements for the Bachelor's degree. This rule implies that every regular undergraduate student shall have systematic Physical Training together with her class-room work during every Quarter but two. These two Quarters are usually in the year before graduation, but there are exceptions, as when a student, though enrolled as a regular Junior College student, is taking but one study. In such a case she is allowed, if she prefers, to meet the Physical Culture requirement at a later period in her course. The number of excuses granted on the advice of the University Physician or recommendation of the Instructor in Physical Culture—16 per cent. in the Winter Quarter and 17 per cent. in the Spring Quarter—may seem rather large, but, as the table shows, there are many legitimate reasons for exempting students from a requirement which is more severe in the University of Chicago than in any other institution of high rank. When all the circumstances are taken into account, the number may be fairly considered to be comparatively small. It will undoubtedly be smaller still when there are more adequate and comfortable accommodations for the training, and no occasion will be felt to relieve the pressure by interpreting the grounds for excuse rather freely.

It has been understood that, except in rare cases, no regular student may be excused on the ground of physical disability or pressure of other duties, if at the same time she takes more than the usual three courses of study. The wisdom of this rule has been amply proved, and it will be even more strictly administered in the future.

There is evidence from all sides of the benefits received from the training, and the advantages of the Gymnasium are frequently sought by students who are not required to take the work. It is nevertheless true that the general conditions are far from favorable for the best results, and in the judgment of the Dean it would be well to consider the advisability of lessening the number of periods of attendance in the Gymnasium for students living at a distance, at least until more capacious quarters are provided.

TABLE VII  
REGISTRATION OF WOMEN IN PHYSICAL CULTURE

	WINTER QUARTER, 1900					SPRING QUARTER, 1900				
	Grad'te	Senior	Junior	Unclass.	Total	Grad'te	Senior	Junior	Unclass.	Total
Instructed.....	7	67	168	13	235	3	47	140	16	206
Deferred.....	..	12	2	..	14	..	15	7	..	22
Completed.....	..	15	..	..	15	..	37	..	..	37
Excused.....	..	22	28	..	50	..	21	29	..	50

TABLE VII—Continued  
CLASSIFICATION OF EXCUSES ACCEPTED

	WINTER QR., 1900		SPRING QR., 1900	
	Senior	Junior	Senior	Junior
Physical disability.....	11	21	14	24
Equivalent exercise.....	..	3	1	3
Teaching.....	2	4	2	..
Transferred from Grad. Sch...	2	..	1	..
Miscellaneous.....	7	..	3	2
Total.....	22	28	21	29

	SUMMER QUARTER, 1900—FIRST TERM					SECOND TERM			
	Grad'te	Senior	Junior	Unclass.	Total	Senior	Junior	Unclass.	Total
Instructed.....	11	20	44	35	110	18	21	5	42
Deferred.....	..	23	11	..	34	2	10	..	12
Completed.....	..	17	..	..	17	4	..	..	4
Excused.....	..	20	8	..	28	3	5	..	8
Total.....	11	80	63	35	189	25	36	5	66

	AUTUMN QUARTER, 1900						WINTER QUARTER, 1901				
	Gr'd'te	Senior	Junior	Unclass.	Divin.	Total	Gr'd'te	Senior	Junior	Unclass.	Total
Instructed.....	9	84	244	32	1	370	10	71	209	23	313
Deferred.....	..	22	12	..	..	34	..	13	13	..	26
Completed.....	..	11	..	..	..	11	..	15	..	..	15
Excused.....	..	18	26	..	..	44	..	19	31	2	52
Total.....	9	135	282	32	1	459	10	118	253	25	406

	SPRING QUARTER, 1901					SUMMER QUARTER, 1901—FIRST TERM				
	Grad'te	Senior	Junior	Unclass.	Total	Grad'te	Senior	Junior	Unclass.	Total
Instructed.....	7	72	220	12	311	13	44	71	23	151
Deferred.....	..	4	7	..	11	..	18	6	..	24
Completed.....	..	35	..	..	35	..	14	..	..	14
Excused.....	..	22	25	..	47	2	6	8	..	16
Total.....	7	133	252	12	404	15	82	85	23	205

	SUMMER QUARTER, 1901—SECOND TERM				AUTUMN QUARTER, 1901				
	Senior	Junior	Unclass.	Total	Grad'te	Senior	Junior	Unclass.	Total
Instructed.....	7	26	9	42	9	76	283	46	414
Deferred.....	..	..	..	..	..	18	4	12	34
Completed.....	..	..	..	..	..	4	..	..	4
Excused.....	..	..	..	..	..	17	25	..	42
Total.....	7	26	9	42	9	115	312	58	494

TABLE VII—Continued

	WINTER QUARTER, 1902					SPRING QUARTER, 1902				
	Grad'te	Senior	Junior	Unclass.	Total	Grad'te	Senior	Junior	Unclass.	Total
Instructed.....	7	73	237	48	365	3	76	236	35	350
Deferred .....	..	16	9	10	35	..	6	17	10	23
Completed.....	..	26	..	..	26	..	34	..	..	34
Excused.....	..	17	34	3	54	..	22	25	6	53
Total.....	7	132	280	61	480	3	138	268	51	460

## WOMEN'S HOUSES

Very few changes have been made in the administrative force of the Women's Houses. Mr. A. C. Miller was elected Councilor of Nancy Foster House in place of Mr. W. D. MacClintock, resigned, and was succeeded by Mr. F. I. Carpenter. Mr. G. S. Goodspeed was elected Councilor of Kelly House, *vice* Mr. R. M. Lovett, resigned. On the resignation of Miss Edith Burnham Foster, Miss Luanna Robertson was appointed Head of Kelly House, and during her absence in Europe Miss Susan Wade Peabody served. Miss Isabelle Bronk was appointed Head of Beecher House, and was succeeded by Miss Florence May Lyon.

The following additions to the membership have been made:

## NAMES OF THOSE ADMITTED TO MEMBERSHIP IN BEECHER HOUSE

1899-1900	Cohen, Ruth	Coggeshall, Corinne
Abbot, Myrta	Combs, Elizabeth B.	Dey, Mary Helena
Barton, Charlotte	Cowley, Abigail	Evernham, Florence G.
Bodler, Anna	Crofoot, Marguerite	Free, Dora
Dobyns, Martha	Doherty, Eleanor	Ganser, Amelie B.
Donnehy, Ella	Frasch, Lillian M.	Gile, Eleanor
Dymond, Edith	Garretson, Etta B.	Harlowe, Rhoda
Fitch, Marjorie L.	Goodrich, Elizabeth	Hughes, Helen
Fritz, Florence	Hartley, Mabel M.	Kennedy, Mary
Harper, Sarah J.	Hood, Pearl	Kiedaisch, Marie M.
Hoblett, Margaret S.	Just, M. Lulu	Morris, Sarah
Kimball, Edna	Kellor, Frances A.	Packard, Bessie H.
Lachmund, Meta	Lacey, Amelia E.	Palmer, Cecil
Langellier, Roxane	Matless, Alice	Pierce, Lucia W.
Lloyd, Nellie M.	Moore, Elizabeth	Simpkin, Edith N.
McDonald, Jeannette	Norcross, Sarah E.	Sinclair, Mary E.
Perry, Frances M.	Parker, Marguerite V.	Spayd, Barbara
Whittlesey, Deo	Shirk, Harriet	Stephens, Frances H.
Yunker, Dorothy	Sisson, Genevieve	Stevens, Lucy C.
1900-1901	Trill, Gertrude G.	Tompson, Lena A.
Angus, Frances R.	Waters, Beulah	White, Bertha
Barney, Sara	Wessa, Ida	Whitney, Luella C.
Burg, Caroline C.	1901-1902	Wilcox, Alice W.
Burgess, Dora C.	Allyn, Irene L.	
Clawson, Edith W.	Brookhardt, Eleanor	

## NAMES OF THOSE ADMITTED TO MEMBERSHIP IN NANCY FOSTER HOUSE

1899-1900	Duncan, Dorothy	Freeman, Beatrice
Bacon, Georgia	Ellison, Phoebe	Grant, Amy Allisne
Baird, Grace W.	French, H. Mildred	Griffin, Ina
Barrow, Sarah F.	Cookin, Grace F.	Griffith, Glenna
Brandeis, Helen	Harriman, Maude E.	Griffith, Jeannette
Braun, Ada	Hank, Mabel G.	Hoffmann, Anna Frances
Bruere, E. Cornelia	Harvieson, Carrie	Jenks, Anna Belle
Cole, Florence C.	Hurlburt, Mary C.	Joehnke, Wilhelmine
Dehnst, Marie	Hunter, Emma M.	Keyes, Eva B.
Dolfinger, Emma	Kohlsaas, Helen F.	Kimball, Hope
Doniat, Josephine	Lyons, Marian C.	King, Lorena C. V.
Doyle, Eleanor M.	Masters, Helen D.	Kirchoff, Frieda
Edwards, Edith	Mathews, Mary E.	Kueffner, Lulu
Griffiths, Gwen	Meyer, L. Marie	Larsen, Ethel
Hall, Mary H.	Myers, Clara L.	Long, Mary Alves
Hobbs, Julia C.	Macrae, Euphon W.	Miller, Alice
Keay, Edith	Nourse, Mary A.	Miller, Florence D.
Kretzinger, Clara W.	Packer, Elizabeth A.	Miller, Kate B.
Merrill, Harriet A.	Paton, Winifred W.	Moore, Elizabeth
Moore, Anne	Perce, Elsie W.	Munger, Elizabeth
MacBride, Sarah E.	Robbins, Alice W.	MacClintock, Mary L.
McChesney, Mary P.	Rockwell, Mary W.	McVicker, Alberta
Pain, M. Mabel	Sachs, Cecile H.	Oldershaw, Janet
Parrette, Ella M.	Turner, Vera	Porter, Lucy
Radford, Maud L.	Waterbury, Lottie L.	Primm, Clara
Ridlon, Hester	West, Irene W.	Rawls, Fay
Seidenstucker, Lisette	Wright, Emelie B.	Sharpless, Ada
Shaffer, Edith R.		Small, Lavinia
Stevenson, Letitia	1901-1902	Sutton, Vida D.
Stillwell, Katherine	Aitchison, Ruth	Thorington, Willa
Swenson, Beatrice L.	Becker, Henrietta K.	Truesdale, Katherine
Tearse, Margaret	Benton, Ina	Twombly, Eva
1900-1901	Blackledge, Irene	Van Hoesen, Jeannette
Averill, Jessie M.	Blunt, Katherine	Van Hoesen, Margaret
Beckett, Mabel B.	Booth, Edith	Wade, Margaret
Crandall, Harriet E.	Cherry, Agatha	Woitishak, Mary
Darlington, Grace H.	Densmore, Ida	Young, Evelyn
	Forbes, Ruth	Youngman, Anna

## NAMES OF THOSE ADMITTED TO MEMBERSHIP IN GREEN HOUSE

1899-1900	Clarke, Emma K.	Gordon, Kate
Adams, Emma F.	Cole, Grace	Greyer, Elma H.
Atwood, Augusta	Corey, Alice Felicita	Hall, Luverne
Batchelder, Josephine H.	Crandall, Harriet E.	Hefferan, Mary
Bones, Katherine H.	Crandall, Regina K.	Hostetter, Adeline
Bronk, Isabelle	Combs, Elizabeth B.	Johnson, Ethel B.
Brotherton, May	Curtiss, Alice H.	King, Elizabeth M.
Buck, Lilian Hazle	Dewey, Ethel	Landers, Martha
Carter, Lilian	Dodge, Annie Louise	Lewis, Mary Elizabeth
Cheatham, E. Edith	Fish, Anna C.	Loeb, Hannah
Clark, Maud Lulu	German, Clara L.	Loeb, Hedwig

Manning, Grace E.  
 Marshall, Anna H.  
 Morse, M. Rowena  
 Munroe, Jane  
 Parker, Florence  
 Peck, Ethel W.  
 Radford, Alice E.  
 Railsback, Monica  
 Rosewater, Blanche  
 Scott, M. Pauline  
 Shaw, Clara H.  
 Stevens, Ellen Yale  
 Stitt, Grace E. M.  
 Stewart, Louise E.  
 Textor, Lucy E.  
 Thompson, Edith L.  
 Tunncliff, Ruth  
 Turney, Florence  
 Vail, Ruth

## 1900-1901

Babb, Bijou  
 Beckwith, Minnie A.  
 Berger, Sophie  
 Besley, Miriam  
 Bickell, Edith  
 Blair, Mary E.  
 Bradley, Lucia  
 Bryning, Pearl  
 Calloway, Katherine  
 DeCew, Louise  
 DeLagneau, Alice  
 Didlake, Mary LeG.

Dobson, Mabel E.  
 Donovan, Frances M.  
 Furniss, Ida  
 Goodwin, Claribel  
 Harroun, Katherine  
 Hunter, Eunice  
 Kinney, Harriet M.  
 Lacey, Amelia E.  
 Mead, Annie M.  
 McCloud, Bertha B.  
 McKinney, Isabel  
 Pratt, Anna B.  
 Stettler, Augusta V.  
 Straight, Bertha K.  
 Swift, Nellie  
 Vincent, Harriet  
 Warvelle, Effie  
 Young, Mariamne R. S.

## 1901-1902

Anderson, Mildred N.  
 Bearse, Louise F.  
 Beed, Grace  
 Behrhorst, Edith  
 Bray, Gladys M.  
 Brockway, M. Ruth  
 Brown, Ivy I.  
 Brown, Louise C.  
 Chadsey, Mildred  
 Colman, Laura L.  
 Conover, L. Lenore  
 Dodge, Mildred E.

Eastman, Eliza Maria  
 Everett (Mrs.) Naomi  
 Frazeur, Laurie R.  
 Galvin, Anna  
 Gardner, Emeline E.  
 Gibbons, Vernetta L.  
 Gibson, Myrtle  
 Hanson, Myra  
 Hequembourg, Agatha D.  
 Kellerman, Ivy  
 King, José B.  
 King, Kate M.  
 Kinney, Harriet M.  
 Lamont, Caroline C.  
 Marine, Merle  
 Meyer, Elise F.  
 Meyer, Frieda I.  
 Moore, Ruth  
 Munson, Eunice H.  
 Park, Elizabeth J.  
 Payne, Mabelle  
 Shields, Florence B.  
 Smith, Elizabeth F.  
 Smith, Sarah E.  
 Snyder, Rosa B.  
 Stafford, Grace W.  
 Stuart, Florence L.  
 Sweet, Margaret A.  
 Temple, Mrs. Frances C.  
 Turner, Abbie H.  
 Vaughn, Lillian E.  
 Weirick, Elizabeth S.

## NAMES OF THOSE ADMITTED TO MEMBERSHIP IN KELLY HOUSE

## 1899-1900

Auten, Nellie Mason  
 Boyd, Florence H.  
 Crowell, Winifred G.  
 Darlington, Genevieve  
 Ellison, Anna E.  
 Frisbie, Fannie C.  
 Hamilton, Grace  
 Hardinge, Madeleine  
 Harrigan, Alice J.  
 Hassall, Malvina A.  
 Kaufman, Kate E.  
 Kellogg, Josephine  
 Kimball, Ruth  
 Kingsbury, Sara  
 Johnson, Dora  
 MacBride, Sarah E.  
 Young, Olive M.

## 1900-1901

Arnold, Edith  
 Brown, Maude I.  
 Chapman, Grace  
 Dorchester, Mary W.  
 Dunn, Helen A.  
 Fox, Stella R.  
 Graham, Mary C.  
 Hutchinson, Ida  
 Loring, Julia E.  
 Miller, Louise  
 Miller, Rhue Myrtle  
 Moore, Stella  
 Morton, Mary G.  
 McGavock, Martha  
 Mittenthal, Harriet E.  
 Olcutt, Amelia  
 Roberts, Estelle

Russell, Eva M.  
 Smoot, Sarah E.  
 Tarnow, Martha W.  
 Truax, Ruth R.  
 Tuttle, Jessie R.  
 Walker, Jane B.  
 Walters, S. Annie  
 Walters, Florence L.  
 Warren, Grace  
 Warren, Bertha C.  
 Wells, Anna Payne  
 Wheeler, Jean F.  
 Willis, Gwendolen B.  
 Yocum, Georgia L.

## 1901-1902

Ahrens, Anna H.  
 Alspaugh, Lenore  
 Ashley, Winifred

Chambers, Helen	Houghton, Madge	McFarland, Elizabeth
Churchill, Laura	Kellor, Frances	Swadener, Julia
Churchill, Mabel	Lane, Lillian	Swinford, Geneva
Cobb, Mary Rena	Mills, Mary	Todd, Edith
Grupe, Mary	McCoy, Luella	Vondraček, Olga
Hopps, Carolyn	McDonnell, Katherine	Watts, Lucie C.

## NAMES OF THOSE ADMITTED TO MEMBERSHIP IN SPELMAN HOUSE

1899-1900	Salter, Esther	Moore, Anne
Bray, Gladys	Sherman, Jessie	Morrison, Mary
Burns, Eloise	Swezey, Anne D.	Spink, Josette
Chandler, Marie	Wakeman, Caroline	Thompson, Jennie
Going, Harriet	Ward, Laura	Williams, Alene
Graves, Mae L.	Wagh, Caroline	Williams, Nellie
Meserve, Louie		Wilson, Margaret
Misener, Geneva	1900-1901	1901-1902
McQuilkin, Nona	Biegler, Marion	Latimer, Faith
Rattray, Jennie	Hill, Leila	Murphy, Mary
Reese, Olga	Lilly, Faith	Thompson, Alice

## UNCLASSIFIED WOMEN STUDENTS

In the Autumn of 1899 the unclassified women students were put under the direction of the Dean of Women. This group of women includes some of the most able as well as some of the least satisfactory students in the University, and the administration of their interests presents problems of a serious and difficult character, as has been pointed out in previous reports and as is the experience in nearly every college and university.

The following facts are presented concerning the women who were in attendance during the Autumn, Winter, and Spring Quarters, 1899-1900:

TABLE VIII

ATTENDANCE AND REGISTRATION OF UNCLASSIFIED WOMEN, 1899-1900 (OMITTING SUMMER QUARTER)

	Total	Entered	1 Major	Per Cent.	2 Majors	Per Cent.	3 Majors	Per Cent.	4 Majors	Per Cent.
Autumn.....	120	120	32	26.6	23	19.2	60	50.0	5	4.2
Winter.....	97	26	30	30.9	14	14.4	50	51.6	3	3.1
Spring.....	67	10	19	28.3	15	22.4	31	46.3	2	3.0

Total number of women (less repetitions)	- - -	156
In attendance one Quarter	- - -	53
In attendance two Quarters	- - -	50
In attendance three Quarters	- - -	53
Classified	- - -	14

Eighty-three came from Illinois (including sixty-one from Chicago); the remaining seventy-three came from twenty-six different states and countries.

The following table shows the number of Quarters during which unclassified women students had attended the University previous to the Autumn Quarter, 1899:

TABLE IX

No. of Quarters..	0	¼	1	1½	2	2½	3	3½	4	4½	5	5½	6	7½	8	11½	12	12½
No. of students..	94	7	16	2	11	1	7	3	3	2	2	1	1	2	1	1	1	1

Twenty-eight of the ninety-four students who entered the University during the year for the first time remained three Quarters, thirty-two remained two Quarters, and thirty-four remained one Quarter. The ten students who entered in the spring should be deducted from the last number, though it is probable that some of them will never return.

Of the fifty-three who were in attendance throughout the regular college year (nine of whom had been in attendance previously), twelve became classified. Only nine of the remaining forty-one may be said to have done special work in one or at most two Departments. The others took general work. Twenty-seven students who were in attendance through the Autumn and Winter Quarters left at the opening of the Spring Quarter. The reasons recorded for their leaving the University are as follows: vacation, to return later, 8; to teach, 5; poor health, 3; poor work, 3; lack of money, 2; father's illness, 2; work completed, 1; unknown, 3.

TABLE X

REGISTRATION OF UNCLASSIFIED WOMEN FOR AUTUMN, WINTER, AND SPRING QUARTERS, 1899-1900, IN GRADUATE SCHOOL, SENIOR COLLEGE, AND JUNIOR COLLEGE COURSES

DEPARTMENT	GRADUATE		SENIOR		JUNIOR		TOTAL	
	No. of Registrations	Percentage Ratio	No. of Registrations	Percentage Ratio	No. of Registrations	Percentage Ratio	No. of Registrations	Percentage Ratio
Philosophy.....	3	0.46	2	0.31	22	3.40	27	4.17
Pedagogy.....	6	0.93	9	1.39	...	.....	15	2.32
Political Economy.....	..	....	..	....	9	1.39	9	1.39
Political Science.....	..	....	2	0.31	..	....	2	0.31
History.....	5	0.77	27	4.20	33	5.11	65	10.08
Archæology.....	..	....	..	....	..	....	..	....
Sociology.....	5	0.77	11	1.70	8	1.24	24	3.71
Comparative Religion..	..	....	..	....	..	....	..	....
Semitics.....	9	1.39	..	....	..	....	9	1.39
Biblical Greek.....	3	0.46	..	....	..	....	3	0.46
Sanskrit.....	..	....	..	....	..	....	..	....
Greek.....	1	0.15	2	0.31	3	0.46	6	0.92
Latin.....	1	0.15	3	0.46	30	4.62	34	5.23
Romance.....	..	....	4	0.62	65	10.03	69	10.65
Germanic.....	..	....	13	2.00	52	8.02	65	10.02
English.....	10	1.54	93	14.32	105	16.20	208	32.08
Literature in English..	..	....	6	0.93	..	....	6	0.93
Mathematics.....	..	....	2	0.31	28	4.32	30	4.63
Astronomy.....	..	....	..	....	2	0.31	2	0.31
Physics.....	..	....	..	....	4	0.62	4	0.62
Chemistry.....	..	....	2	0.31	13	2.00	15	2.31
Geology.....	1	0.15	..	....	11	1.70	12	1.85
Zoology.....	..	....	3	0.46	12	1.85	15	2.31
Anatomy.....	..	....	1	0.15	..	....	1	0.15
Physiology.....	..	....	..	....	4	0.62	4	0.62
Neurology.....	4	0.62	..	....	..	....	4	0.62
Botany.....	4	0.62	3	0.46	11	1.70	18	2.78
Public Speaking.....	..	....	..	....	1	0.15	1	0.15
Total.....	52	8.02	183	28.24	413	63.74	648	100.00

Thirty of the one hundred and twenty who were in attendance in the Autumn left at the end of the Quarter and did not return through the year. The reasons recorded are classified as follows: poor health, 6; work completed, 5; vacation, to return later, 5; to teach, 4; business engagements, 1; lack of money, 3; poor work, 1; to study at Stetson University, 1; change of residence, 1; family reasons, 1; unknown, 2.

It is to be noted specially that sixty-nine of the one hundred and fifty-six women did all their work in the Junior College; 24 took Elementary French, 16 Elementary German, 35 the first course in Rhetoric and Composition, and 36 the general course in English Literature. Over 60 per cent. of all the work was done in the Language Departments. Over 63 per cent. was done in the Junior Colleges, whereas in 1897-98 about 50 per cent. was done in Junior College courses.

TABLE XI  
AGES OF UNCLASSIFIED WOMEN STUDENTS, 1899-1900

Age	No.	Age	No.	Age	No.	Age	No.
20-25:		30-35:		40-45:		50-60:	
20.....	2	30.....	8	40.....	5	50.....	2
21.....	11	31.....	4	41.....	2	51.....	0
22.....	14	32.....	6	42.....	1	52.....	1
23.....	16	33.....	9	43.....	1	53.....	0
24.....	13	34.....	3	44.....	3	54.....	0
	56		30		12	55.....	1
25-30:		35-40:		45-50:		Total.....	4
25.....	10	35.....	2	45.....	2		156
26.....	7	36.....	5	46.....	3		
27.....	6	37.....	2	47.....	0		
28.....	4	38.....	2	48.....	1		
29.....	6	39.....	4	49.....	0		
	33		15		6		

The age for admission is fixed at twenty-one, and if a student is nearer twenty-one than twenty, it has been the custom to consider this requirement met, especially if the student seems well qualified in other respects. There were twenty-seven students under twenty-three years of age. Two of these were honorary students, or "hearers" only, and three, who were practically conditioned regular students, became classified during the year.

The following facts concerning the remaining twenty-two are worthy of notice: Six attended 1 Quarter, 7 attended 2 Quarters, 9 attended 3 Quarters; 4 attended in the Autumn only, 2 attended in the Spring only, 5 attended in the Autumn and Winter only. Fifteen counted Chicago as their home. Four of the 9 who attended throughout the year were doing work as conditioned regular students, while 5 were doing work for "general culture," to use their own favorite, but indefinite, phrase. None were working in any real sense as specialists. Six took Elementary German, 2 Elementary French, 9 the first course in English Rhetoric and Composition, and 7 the first course in general English Literature. The 22 students took 98 courses, for which the following marks were given: A, 4; B, 43; C, 80; D, 20; E, 8; and 10 courses were not completed. There were 8 whose grades averaged above C and 1 above B, while 65 per cent. of the marks were C or below.

The facts presented concerning the unclassified women students during the year 1899-1900 give added force to the statements, made by Deans MacClintock and Castle in previous years, as to the lack of continuity in attendance and the great diversity in preparation and purpose shown by this class of students. They indicate in addition the low grade of work done by the youngest of these students.



Dean MacClintock pointed out (PRESIDENT'S REPORT for 1897-98, p. 109) that the University has three duties to the unclassified student body: (1) to use every means to keep out drifting, unprepared persons who remain but a few months; (2) to encourage mature, well-trained students, who come for exact training in their work, and who will carry out from the University higher standards of scholarship; (3) to urge, and even compel, all who yet can to finish their preparation and take the full college course. Dean Castle has wisely laid stress on the importance of dealing with these students as individuals, and experience has shown more than once the injustice resulting from laying down too specific or detailed restrictions to which all must conform regardless of the individual element.

It was self-evident that the reputation of the University would shortly suffer, if it had not already suffered, from the connection with it of so large a number of transient and badly prepared students, who in many cases derive no benefit from their connection with the University commensurate with the injury done to it by their membership. It is a well-known fact that the conditions of such membership are not usually as clearly set forth by the students as are the claims for prestige which are based upon it. As a result of these studies and investigations, the rules governing the admission of unclassified women were more rigidly administered during the ensuing year, and admission to elementary courses only was denied, and prerequisites were strictly observed. Owing to these, and possibly other, causes, the attendance during the Autumn, Winter, and Spring quarters of 1900-1901 fell from 156 of the preceding year to 140. The following additional facts are given:

TABLE XII

Total number of unclassified women, 1900-1901	455
In attendance Summer (only)	321
In attendance Autumn	99
In attendance Winter	85
In attendance Spring	72
Attended four Quarters	5
Attended three Quarters	40
Attended two Quarters	37
Attended one Quarter	52
Entered in the Autumn Quarter	45
Remained three Quarters	24
Remained two Quarters	9
Remained one Quarter	12
Entered in the Winter Quarter	12
Remained two Quarters	6
Remained one Quarter	6
Entered in the Spring Quarter	17
Classified	15

One hundred and eleven, of whom fifty-one attended in the Summer only, resided in Chicago.

During the winter of 1900-1901 the Faculty discussed methods by which the number of unclassified students who properly belonged in the Junior Colleges might be so classed, and it was decided that this could best be accomplished by placing such students under all the rules of the Junior Colleges. Due recognition was given at the same time to the needs of the advanced special student. The following requirement was ultimately announced to be put in operation October 1, 1901: Unclassified students are subject to all the general regulations of the University pertaining to undergraduate students, including those prescribing attendance on Division Meetings and Lectures, Chapel-Assembly and Physical Culture, unless more than one-half of their work is in the Senior Colleges or in the Graduate Schools.

It is hoped that this measure will work advantageously in raising the standards of scholarship and earnestness among the less mature and less well-trained students, while not unnecessarily restricting the freedom of the smaller number who have profited to the utmost by the advantages of the University and whom the University has always been proud to count among its members.

#### THE WOMAN'S UNION

In October, 1901, the Board of Student Organizations authorized a Commission, under the chairmanship of the Dean of Women, to proceed to the organization of a woman's club. The Commission met for the first time on November 4, 1901, and on December 19 adopted the following constitution:

#### CONSTITUTION OF THE WOMAN'S UNION

##### NAME

The name of this organization shall be the Woman's Union of the University of Chicago.

##### OBJECT

The object of this organization shall be to unite the women of the University for the promotion of their common interests.

##### MEMBERSHIP

The members shall be of two classes, regular and honorary.

The privileges of regular membership shall be open to the following classes:

1. Women students registered in any Department of the University.
2. Women members of the Faculty, women officers, and women in the employ of the University.
3. Women members of the families of Trustees, Faculty, and officers of the University.
4. Wives of registered students.
5. Alumnae of the University.

Honorary membership may be conferred by unanimous vote of the Union upon recommendation of the Membership Committee. Honorary members shall have all the privileges of regular membership, and shall be exempt from the payment of fees.

##### OFFICERS

The business of the Union shall be conducted by a Council, consisting of a President, a Vice-President, a Secretary, a Treasurer, and a House Committee of seven members. The Council shall be elected by the Union at its annual meeting, and shall fill any vacancies occurring in its membership. The President, Treasurer, and chairman of the House Committee shall be considered the executive officers of the Union, with power to approve all bills, and to direct the affairs of the Union in the interim of the meetings of the Council. The members of the House Committee, other than the chairman, shall serve as chairmen of committees on membership, finance, entertainment, philanthropy, hospitality, and lunch-room. These committees shall be chosen by the Council on nomination by their respective chairmen.

##### DUTIES OF OFFICERS

1. The duties of the President shall be to preside at all meetings of the Union and of the Council.
2. In the absence of the President, the Vice-President shall perform her duties.
3. The duties of the Secretary shall be to keep the records of the meetings of the Union and of the Council, to send out notices, and to carry on such correspondence as shall be intrusted to her.
4. The duties of the Treasurer shall be to receive and to disburse all moneys belonging to the Union, to collect the dues, to keep a record of the accounts, and to make a quarterly report to the Council and an annual report to the Union.

##### DUES

The membership fee shall be fifty cents a quarter, or one dollar a year.

## MEETINGS

The annual meeting of the Union shall be held during the third week of the Winter Quarter. Special meetings of the Union may be called by the Secretary at the request of the President, the chairman of the House Committee, or three members of the Union.

## QUORUM

At any annual or special meeting of the Union twenty-five members shall constitute a quorum.

## AMENDMENTS

Amendments to this constitution may be adopted at any meeting of the Union, the proposed amendment having been included in the notice calling the meeting for its consideration.

The following officers were elected:

President, Miss Marion Talbot, Dean of Women; Vice-President, Mrs. Henry Rand Hatfield; Secretary, Miss Mildred Richardson (Senior College); Treasurer, Miss Ruth Hardy (Graduate School); Chairman of the House Committee, Miss Gertrude Dudley, Director of Physical Culture for Women. Members of House Committee: Chairman of Committee on Membership, Miss Elizabeth Baker (School of Education); Chairman of Committee on Finance, Mrs. Warner Fite; Chairman of Committee on Entertainment, Mrs. George C. Howland; Chairman of Committee on Philanthropy, Miss Mary C. Lincoln, (Graduate School); Chairman of Committee on Hospitality, Miss M. Ethel Freeman (Young Women's Christian Association); Chairman of Committee on Lunch Room, Miss Susan W. Peabody (Head of Kelly House). Members of Committees: Membership, Miss Agnes Wayman (Senior College), Miss Sophonisba P. Breckinridge; Finance, Mrs. Ella F. Young (Professor of Education), Miss Josephine Robertson; Entertainment, Miss Margaret G. Coulter (Young Women's Christian Association), Miss Elizabeth D. Clarke (Junior College); Philanthropy, Miss Myra Reynolds (Head of Nancy Foster House), Miss Laura Colman (School of Education); Lunch-Room, Mrs. Alice Peloubet Norton (School of Education), Mrs. Ralph C. H. Catterall; Hospitality, Mrs. Henry Gordon Gale, Miss F. M. Lyon (Head of Beecher House), Miss Eleanor Culton (Junior College).

The rooms of the Union in the Disciples' church, corner of Fifty-seventh street and Lexington avenue, were formally opened on Wednesday afternoon, January, 8, 1902. Since that time they have been in constant use through the daytime, except on Sundays. The special features have been a reading-room, a rest-room, and a lunch-room, and receptions and entertainments have been given regularly on Wednesday afternoons. A special committee has furnished music at the noon hour twice a week. Luncheons, under the direction of Miss Susan Wade Peabody, have been furnished to as many as seventy in a single day. By special arrangement the Secretary of the Young Women's Christian Association or Women Students' Christian League has held daily office hours at the rooms. Other organizations of students have occasionally had the use of the rooms for meetings and receptions.

During the Winter Quarter there were 180 annual and 66 quarterly members, and during the Spring Quarter 217 annual and 56 quarterly members.

The hope has been fully realized that the women of the University will find in the new organization a means of uniting them in a large and generous fellowship, and of meeting some of the social needs which many members of the University have felt in the past. The experience thus far won serves also to point out new paths of usefulness for the future.

## SCHOLARSHIP

Since the award of scholarships and honors has been announced in the Convocation programs, 929 students have received the Junior College certificate—496 men, or 53½ per cent., and 433 women, or 46½ per cent. Forty-three of these men received Senior College scholarships, or 54½ per cent. of all that were awarded, and 36 women, or 45½ per cent. Ninety-three men and 128 women received honors for scholarship based on class and examination grades. If

the women had received honors in the same proportion to their numbers as the men the number of women would have been 81 instead of 128. In the same period of time 1,164 students have received the Bachelor's degree—614 men, or 53 per cent., and 550 women, or 47 per cent. Fifty-three men received graduate Scholarships, or 62 per cent., and 33 women, or 38 per cent. One hundred and forty-five of the men and 199 of the women received honors for scholarship on graduation, and 44 men and 73 women received special honors. If the women had received honors and special honors in the same proportion to their numbers as the men, the number of women would have been 130 for honors and 39 for special honors, instead of 199 and 73, respectively.

The total number of persons who have received the Bachelor's degree is 1,294, including 698, or 54 per cent. men, and 596, or 46 per cent. women. The total number admitted to the Phi Beta Kappa Society solely on scholarship record is 135, including 59, or 43.7 per cent. men, and 76, or 56.3 per cent. women. A percentage of 8.5 of the men received this honor and 13 per cent. of the women.

The degree of Doctor of Philosophy has been awarded to 244 persons, including 209 men and 35 women. The grades have been as follows: men, *rite*, 48, or 23 per cent.; *cum laude*, 74, or 35.4 per cent.; *magna cum laude*, 74, or 35.4 per cent.; *summa cum laude*, 13, or 6.2 per cent.; the corresponding numbers for women are 3, or 8.5 per cent.; 19, or 54.3 per cent.; 12, or 34.3 per cent.; 1, or 2.9 per cent.

#### CHOICE OF STUDIES

The motives or influences which lead the student in making up a program of studies in college are by no means so few, so simple, or so universal as some educational theorists have recently assumed. However it may have been a generation ago, few young people today, either boys or girls, enter college with a clearly defined purpose or plan to guide them in their studies; and still fewer have decided upon a vocation for which they wish to fit themselves. Even of these few there are always some who, under the influence of a broader outlook or wider experience and knowledge, change their decision after entering college. As long as the college was the stepping-stone chiefly to the law or to the ministry, the curriculum remained fixed and the scholastic methods which were fitted to this end remained unchanged. With the broadening of the function of the college and the recognition of the value of mental discipline and cultivation, independently of the special vocation in life, the rigidity of mediævalism was gradually forced to give way, and under a great leadership the benefits of higher scholarship were shown to be the right of a larger class of young people.

The curricula of American colleges now represent two educational theories: it is held on the one hand, that all subjects of human knowledge, if equally well taught, are of equal value as instruments for human discipline and culture; and, on the other hand, that certain subjects of human knowledge are fundamental and essential, not only to all general culture, but to the understanding of other subjects.

There are naturally wide variations in the application of the second theory. The proportion of required studies may vary approximately from one-twelfth to eleven-twelfths of the whole course of study. With the widening of the scope and amount of elective work there come an opportunity and an obligation for both the student and the college whose full significance is unfortunately too frequently missed by one or the other, if not by both. Just so far as the required curriculum represents the progressive judgment of the faculty as to what is basic in collegiate training, there is no responsibility on the part of the student. It is always interesting to watch the expression of a young student when she is told that a certain course is to be taken. She may silently or openly rebel against "required work"—often just because it is required. Having felt the spirit of some of the modern pedagogy, she claims the right to "express herself

according to her nature." Quite as often, however, she shows an expression of relief that in this new experience, so confusing in its richness, she can feel the guiding wisdom of some other judgment than her own.

When a young woman is brought face to face with the problem of choosing her studies, there are certain influences at work in her mind which consciously or unconsciously guide her in her choice, even independently of any help which the college, through its appointed officer, may give her. Her expression of the reason for her choice may be very frank, or even naive. "I am going on with Latin because I always stood well in it in high school;" "French always came easy so I think I will keep it up;" "I am going to specialize in English, because my writing has always been praised and I have had a story published and was our class poet;" "I always thought I'd like Psychology; it sounds so interesting"—such are some forms of expression of the individual judgment.

Sometimes the advice or request of a parent or teacher is quoted and followed as final. "My father thinks I ought to take Mathematics; I am so careless;" "My mother thinks Chemistry would be helpful to me at home;" "My father liked Philosophy in college and wants me to take it;" "My teacher thinks I ought to keep up my Greek all through college"—in these and other ways the young student shows that she has had help and counsel in making out her course of study.

The preparatory training sometimes determines to a considerable extent the studies which may be taken later. A subject such as Greek may not be offered in the high school. Instruction, notably in the sciences, may be so defective as to furnish the young student with no proper preliminary training, and a large range of subjects may be a closed book to her. On the other hand, subjects that have been well taught in the high school often make the only foundation on which to build, and they are in many cases the only subjects of which the student thinks in planning her future work.

There are, as has been said, a few students who wish to prepare themselves for a special vocation; such as medicine, journalism, or librarianship. At first thought their problem seems an easy one, but on further consideration it is found to be not very widely differentiated from the problems of other students, unless the college so far sets aside its true function as to assume in part the rôle of a technical or professional school. In this case there is the temptation to take a short-cut to the profession—a temptation which is proving stronger with the seeming conflict between commercialism and scholarship, but which women are resisting quite as vigorously, to say the least, as men.

There are unquestionably many college women who look forward to teaching as a profession, but they are not so numerous as is popularly supposed, and their proportion is steadily growing less. It is natural that they should choose to study subjects which they expect to teach. In this choice they are frequently led by aptitude for a study, but it often happens that they choose a subject, such as History or English, which they do not particularly care for, because there are more positions open to them. A subject such as Physics or Zoölogy may be set aside, even though the student is eager to pursue it, because her principal or superintendent tells her that "there is almost no chance for a woman to get a position to teach it."

There is, moreover, a large and increasing number of girls who, while not definitely expecting to teach, are feeling the spirit of the age and, led by the counsel of prudent fathers, and even of mothers made wise by bitter experience, undertake to fit themselves by some special line of study "to support themselves in case they should have to." The fact that, if the emergency should arise, it might not come until their stock in trade of method and fact was too antiquated to be of avail, does not lessen the value which such an impetus lends to the process of training. At the present time teaching seems to be the easiest and most natural means of self-support to which a young woman can look forward and for which she can prepare herself.

And this will probably be the case for many years to come, or until teaching in secondary schools becomes a learned profession drawing to it men of the best caliber in at least equal proportion with women.

Certain influences which cannot be easily put into words or exactly formulated are known in every college to have weight in guiding students in their choice. The popularity of an instructor, due to a strong personality or to catchy cleverness, and accordingly of varying duration, is a factor which must be reckoned with in estimating the real significance of statistics showing the choice of studies. For example, a strong personality may explain a very large choice of Fine Arts in one institution, or the loss of a great teacher account for a great falling off in the number of students taking Political Economy in another. It is well known in every college community that the popularity of an instructor is a very uncertain quantity, fluctuating seemingly without adequate ground, and sometimes declining solely because of the substitution of a more for a less rigorous method of instruction; but it exists, and must be taken into account. "A girl from my school told me to be sure to take Mr. X," and "I want to wait until I can have Mr. Y," are remarks by students which are often heard. This expression of desire, while sometimes resting on gross injustice, may nevertheless be a proper basis for the choice of a subject, for everybody knows that a teacher may be greater than the greatest subject in influencing a student.

Every Faculty knows, too, how subjects have waves of popularity which are sometimes beyond explanation. One year students may rush to a subject like Psychology, for example; and the next year there may be a reaction and the classes in that subject be comparatively small.

The influence of "snap" courses is everywhere tacitly, or even openly, acknowledged. The fact that the college curriculum has been broadened so as to make it serve the needs of more types of young people also means that with its adjunct interests and activities it will attract some who are more or less intellectually indolent. Sometimes the mental awakening comes soon, sometimes it never comes, and a student passes through the college course and technically meets the requirements for graduation with an amount of work which would startle the shades of her theological or legal ancestors. The student rests on the judgment of her fellows when making out a program whose first characteristic is to be "easy." There are cases which can be ignored, while others need bold or skilful handling by the officer in charge of registration. The specially interesting cases are those in which the officer is frankly called upon to assist the student in finding "snap courses," and, while he may never admit it to himself officially, he may tacitly follow the lead of a student who says: "I am going to take such and such a course, because my other courses are so hard, or because my eyes are troubling me, or because I have been ill and must get back into work gradually."

From many points of view the most interesting motive in choice of studies is the love of a subject. This may lead a student into strange paths, judged from a utilitarian standpoint. She may be asked why she chooses Calculus, Archæology, Comparative Philology, or Constitutional Government; and when she replies that it is for very love of the subject, an intellectual indulgence, there seems to be some ground for believing that scholarship apart from bread-winning is among the ideals of American women. Every administrative officer will agree that such an experience uplifts him and illumines his whole work.

Considerations of sex are rarely taken into account by women any more than by men on making a choice of studies, in spite of the professedly final pronouncements of some educators that they are of paramount importance. It has been seen that the needs, real or fancied, of the individual are guiding factors, but it occasionally happens that a girl is at the same time so old-fashioned in her views as to choose womanly subjects, and so radical as to be led by the assumed fitness of a subject for her sex as a whole rather than for herself as a member of it.

The choice by sex may take one of two forms. A girl may say she will take Literature (usually pronounced "literatoor") and History of Art because they are proper subjects for the feminine mind, or she will take Physiology and Sociology because women have special interest in family and philanthropic life.

A distinguished educator has recently pleaded that "the college curriculum for a woman should contain subjects which she could recognize as having a practical bearing on her after-life," which for "the great majority of women will be in the home." If this argument has in mind courses such as cooking and sewing, it would be equally logical to require men to take courses in house construction and similar subjects, which will surely have "a practical bearing on their after-life," if they are to be householders, as the great majority of them will be. But just as it is true that the training given by Mathematics and Economics will be more useful to the householder as a citizen than the technical details of masonry or plumbing, so the subjects which can develop judgment and sense of proportion and keenness of observation in the woman will stand her in better stead as a home-maker than the knowledge of any number of elaborate recipes or complicated stitches.

The following tables present statistics in regard to the actual choice of studies by undergraduates of Chicago, Harvard, and Wellesley in two different years:

TABLE XIII  
PERCENTAGE DISTRIBUTION OF REGISTRATIONS OF REGULAR UNDERGRADUATES, 1897-98, 1899-1900  
THE UNIVERSITY OF CHICAGO

DEPARTMENT	MEN		WOMEN		DEPARTMENT	MEN		WOMEN	
	1897-8	1899-0	1897-8	1899-0		1897-8	1899-0	1897-8	1899-0
Philosophy .....	....	5.97	....	7.05	Germanics .....	8.14	7.38	9.71	8.98
Pedagogy .....	7.40	0.16	6.26	0.44	English .....	13.31	12.31	17.21	18.33
Political Economy....	2.54	5.21	1.12	1.49	Literature in English..	0.50	0.16	0.67	0.07
Political Science .....	6.58	4.68	0.67	0.58	Mathematics .....	7.51	9.11	6.72	7.89
History .....	9.35	10.05	13.09	12.36	Astronomy .....	0.31	0.25	0.17	0.18
Archæology .....	0.04	0.03	0.17	0.11	Physics .....	3.60	2.10	1.81	1.31
Sociology .....	3.95	4.18	4.45	4.69	Chemistry .....	5.32	4.62	2.54	1.31
Comparative Religion.	....	0.06	....	0.04	Geology .....	3.48	3.42	3.22	3.20
Semitics and Bib. Lit.	0.74	....	0.56	....	Zoology .....	0.78	2.01	0.56	1.05
Biblical Greek .....	0.35	....	....	....	Anatomy } .....	0.98	5.12	0.73	2.08
Comparative Philology	....	0.03	....	....	Physiology } .....				
Greek .....	5.44	3.93	6.55	4.69	Neurology } .....	0.82	0.88	1.58	0.85
Latin .....	9.62	6.97	12.53	12.76	Botany .....				
Romance .....	8.38	11.34	9.31	10.40	Public Speaking .....	0.82	0.06	0.34	0.04

HARVARD COLLEGE

Department	1897-1898	1899-1900	Department	1897-1898	1899-1900
Semitic .....	0.91	0.76	Fine Arts .....	5.38	4.11
Indo-Iranian .....	0.01	0.02	Architecture .....	0.15	0.13
Greek .....	1.97	2.12	Music .....	0.82	0.53
Latin .....	5.00	4.08	Mathematics .....	2.57	2.65
Classical Philology .....	0.10	0.07	Astronomy .....	0.48	0.32
English .....	20.45	16.76	Engineering .....	0.52	1.09
Germanic .....	7.83	7.28	Military Science.....	1.48	1.76
Romance .....	9.52	9.21	Physics .....	1.40	1.44
Comparative Literature.....	0.04	0.01	Chemistry .....	4.40	4.39
Slavic .....	0.03	....	Botany .....	0.84	0.68
History .....	12.35	13.84	Zoology .....	0.78	1.51
Government.....	3.00	5.79	Geology .....	3.43	3.02
Economics .....	8.37	10.92	American Archæology .....	0.07	0.21
Philosophy and Education....	7.75	6.78	Anat., Physiol., and Hygiene.	0.34	0.42

TABLE XIII—Continued

WELLESLEY COLLEGE

Department	1897-1898	1899-1900	Department	1897-1898	1899-1900
Greek	4.53	3.32	Applied Mathematics	0.43	0.52
Latin	4.43	5.18	Chemistry	3.48	2.78
German	9.23	9.67	Physics	1.32	3.69
French	6.56	7.75	Geology and Mineralogy	1.33	1.41
Italian	1.18	0.45	Botany	4.86	3.14
Rhetoric	5.72	8.06	Zoology and Physiology	3.67	4.46
Philology	0.09	0.06	Hygiene	2.01	2.03
Biblical History	6.74	6.61	Pedagogy	2.50	1.24
English Literature	12.25	11.05	Bibliography	0.69	0.66
Philosophy	7.74	6.46	Elocution	2.03	1.22
History and Political Science	6.08	6.29	Art	1.80	1.13
Economics	3.22	2.09	Music	0.24	0.53
Pure Mathematics	7.87	10.20			

SUMMARY

DEPARTMENT	UNIVERSITY OF CHICAGO				WELLESLEY COL.		HARVARD COL.	
	Men		Women		Women		Men	
	1897-1898	1899-1900	1897-1898	1899-1900	1897-1898	1899-1900	1897-1898	1899-1900
Philosophy and Pedagogy	7.40	6.13	6.26	7.48	10.24	7.70	7.75	6.78
Social and Historical Sciences	22.42	24.18	19.33	19.20	9.30	8.38	23.72	30.65
Biblical Literature and History	.....	.....	.....	.....	6.74	6.61	.....	.....
Classics	16.20	10.96	19.81	17.56	9.05	8.56	8.00	7.05
Modern Languages	31.15	31.25	37.24	37.77	34.94	36.98	37.87	33.26
Fine Arts	.....	.....	.....	.....	2.04	1.66	6.35	4.77
Physical Sciences and Mathematics	20.22	19.50	14.46	13.89	14.43	18.60	12.28	11.82
Biological Sciences	2.58	8.01	2.87	4.07	10.54	9.63	1.94	2.61
Engineering and Military Science	.....	.....	.....	.....	.....	.....	2.00	2.85
Bibliography and Elocution	.....	.....	.....	.....	2.72	1.88	.....	.....

The above tables need to be studied in the light of specific knowledge of the part played by required studies at the different colleges. The comparatively large amount of required work at Chicago accounts for some of the large percentages. The following summary shows the real electives taken by students who have graduated from Chicago. The details of choice are presented on the following page.

TABLE XIV

DISTRIBUTION OF ELECTIVES BY STUDENTS WHO GRADUATED FROM THE UNIVERSITY OF CHICAGO PRIOR TO JUNE, 1901—SUMMARY

	A.B.		PH.B.		S.B.	
	Men	Women	Men	Women	Men	Women
Philosophy and Pedagogy	3.29	4.49	3.19	5.21	2.34	2.99
Social and Historical Sciences	39.88	23.05	52.85	33.21	22.46	17.10
Classics	10.82	23.83	1.07	7.02	0.68	0.70
Modern Languages	25.13	36.13	28.33	44.16	12.38	22.01
Physical Sciences and Mathematics	14.98	9.11	10.54	7.13	43.28	36.95
Biological Sciences	5.91	3.40	4.00	3.27	18.89	20.25



TABLE IX  
PERCENTAGE OF BACHELORS TAKING ELECTIVE COURSES IN DIFFERENT DEPARTMENTS

	Philos.	Pedagogy	Pol. Econ.	History	Archaeol.	Sociology	Compar. Religion	Semites	Biblical Greek	Sanskrit	Greek	Latin	Romance	Germanic	English	Lit. in English	Math.	Astron.	Physies	Chem.	Geology	Zoology	Anatomy	Physiol.	Neurol.	Paleontol.	Botany	Public Speaking	
Total:	26.1	5.5	66.0	60.0	78.3	2.0	63.2	1.2	1.6	4.7	0.4	25.3	47.4	41.9	45.5	72.0	37.3	24.1	7.5	34.8	36.0	39.5	21.0	12.0	19.8	6.0	0.8	17.8	24.1
Men:	26.7	4.4	39.8	36.6	74.5	6.2	85.8	2.5	0.6	3.1	30.4	47.8	46.3	39.4	43.0	16.1	5.6	20.5	18.0	39.1	11.2	5.6	20.5	0.6	0.6	21.1	7.5		
Women:	25.9	6.6	63.8	62.6	80.0	3.4	63.0	2.5	8.4	8.6	0.9	51.7	28.5	40.0	42.2	72.4	33.6	19.0	5.1	45.7	28.5	40.0	12.0	16.4	5.1	17.2	23.7		
A.R.:	25.6	4.0	37.5	38.1	70.3	10.9	56.2	1.5	6.2	6.2	76.5	65.6	57.8	70.3	86.9	32.8	15.6	7.8	18.7	14.1	53.1	10.9	3.1	17.2	5.1	23.4	3.1		
Men:	25.0	2.4	80.7	80.7	84.3	1.2	79.5	2.4	2.4	3.6	9.6	50.6	59.0	79.5	20.5	21.7	2.4	10.8	26.5	31.3	16.9	4.8	13.3	3.6	9.6	30.1			
Women:	28.0	4.4	46.3	46.3	79.3	3.7	75.6	4.9	1.2	1.8	5.5	33.3	31.1	59.2	24.0	39.1	20.4	48.1	66.6	50.0	42.6	22.2	37.0	11.1	3.7	31.1	9.2		
S.R.:	20.0	13.3	13.3	20.0	66.6	53.3	38.9	38.9	38.9	13.3	66.6	46.6	46.6	73.3	25.6	46.6	13.3	46.6	60.0	66.6	46.6	33.3	33.3	40.0	6.6	6.6	53.3	3.3	
A.R. 116 men:	30	8	74	61	33	4	73	3	4	10	1	60	33	46	49	39	22	6	53	33	47	16	14	19	6	20	31		
No. of courses taken:	41%	12%	30	25%	153	10	69	1	6%	150	119	89	117	113	209	22	14	4	24	23	43%	12%	2	13%	2	14	1		
Maximum No. taken:	5	2	11	11	9	1	6	4	7	3	9	9	8	5	11	3	2	5	9	6	5	3	4	3	2	3	2		
Minimum No. taken:	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2		
Prc nt'ge distribution of electives:	2.82	0.47	7.66	12.37	13.30	0.23	6.38	0.25	0.54	0.75	5.57	3.58	5.24	5.06	11.51	1.73	2.84	0.31	4.52	4.45	2.86	1.75	1.25	1.45	0.43	1.03	1.59		
64 women:	17	9	24	18	45	7	36	1	4	4	49	42	37	45	62	21	10	5	12	9	34	7	2	11	2	15	2		
No. of courses taken:	41%	12%	30	25%	153	10	69	1	6%	150	119	89	117	113	209	22	14	4	24	23	43%	12%	2	13%	2	14	1		
Maximum No. taken:	8	4	3	5	8	3	4	1	3	8	8	8	8	8	11	3	1	3	9	6	3	2	1	2	1	1	1		
Minimum No. taken:	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2		
Prc nt'ge distribution of electives:	3.45	1.04	2.49	2.12	12.71	0.83	5.73	0.08	0.52	0.19	0.76	1.18	1.41	1.89	1.89	1.22	0.33	2.04	1.91	3.61	1.04	0.15	1.12	1.12	1.16	0.08	1.03	1.59	
82 men:	29	2	67	67	70	1	66	2	2	3	8	42	49	66	17	18	2	9	22	26	14	4	11	3	8	25			
No. of courses taken:	48	3	152	279	231	1	154	2	2	3	12	69	121	184	13	46	1	4	8	14	65	41%	24%	9	17	2%	11	38	
Maximum No. taken:	7	2	10	11	14	1	8	1	1	1	3	5	9	10	1	1	4	8	6	4	5	5	1	1	1	1	1		
Minimum No. taken:	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2		
Prc nt'ge distribution of electives:	3.00	0.19	11.36	17.45	14.41	0.69	6.64	0.12	0.12	0.19	0.76	1.18	1.41	1.89	1.22	0.33	2.04	1.91	3.61	1.04	0.15	1.12	1.12	1.16	0.08	1.03	1.59		
82 women:	23	12	38	38	65	3	62	4	1	1	33	55	49	79	23	9	2	12	10	22	6	2	16	1	11	10			
No. of courses taken:	69	12	56	54	257	3	144	4	1	1	105	147	129	366	28	24	2	14	34	35	9	3	22	3	12	15			
Maximum No. taken:	9	2	3	6	9	1	7	1	1	1	10	10	12	12	3	8	1	2	0	5	3	2	4	3	2	5			
Minimum No. taken:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Prc nt'ge distribution of electives:	4.44	0.71	3.63	3.47	16.50	0.19	9.27	0.28	0.07	0.21	0.41	3.72	3.50	4.37	3.56	1.81	1.57	0.15	0.40	2.22	2.25	0.61	0.23	1.45	0.19	0.79	0.96		
S.R. 34 men:	7	4	25	23	35	21	21	2	2	1	3	18	17	32	13	21	11	28	36	27	23	12	20	6	2	17	5		
No. of courses taken:	14	7	55	49	66	41	41	4	4	4	4	23	23	43	9	86	21	76	133	90	77	14	33	22	2	28	3		
Maximum No. taken:	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Minimum No. taken:	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2		
Prc nt'ge distribution of electives:	1.54	0.80	5.84	5.26	7.01	4.35	4.35	4.35	4.35	0.21	0.41	3.72	3.50	4.37	3.56	1.81	1.57	0.15	0.40	2.22	2.25	0.61	0.23	1.45	0.19	0.79	0.96		
15 women:	8	2	2	2	10	8	8	8	2	2	2	10	7	11	4	7	2	9	10	7	5	5	6	1	8	8			
No. of courses taken:	5	3	5	5	27	15	15	15	4	4	4	19	13	26	9	11	2	18	35	34	17	6	18	1	1	1			
Maximum No. taken:	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Minimum No. taken:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Prc nt'ge distribution of electives:	1.76	1.23	1.06	1.06	9.52	5.46	5.46	5.46	5.46	0.70	0.87	4.56	4.31	5.33	4.91	1.06	0.61	0.51	12.50	11.20	5.98	2.82	6.51	0.18	4.16	4.16			

The chief generalizations that can be safely drawn from these figures are:

1. Men are taking more work in the historical sciences than women are. A closer analysis indicates that there is about the same proportion of work chosen by the two sexes in Philosophy and History, and that the excess comes from the larger choice of Political Economy and Political Science by men; *e. g.*, 66 per cent. of the men and 40 per cent. of the women took courses in Political Economy. Here may be seen evidences of the new awakening of men to problems connected with citizenship.

2. Women are doing much more linguistic work than men, especially in the classics, though it may be stated also that 72 per cent. of the men graduates of the University of Chicago chose courses in English, as against 94.4 per cent. of the women. These results are what might be expected when it is known that women find less difficulty in procuring positions to teach languages than other subjects, though there are also indications that a certain conservatism or lack of spirit of adventure makes them cling to subjects with which they have some familiarity.

3. Men and women are doing more nearly the same amount of mathematical and natural science than is popularly supposed. At the University of Chicago 24 per cent. of the men graduates and 16 per cent. of the women graduates chose Mathematics after having completed their required Mathematics, but of the Bachelors of Science 47 per cent. of the women, as against 39 per cent. of the men, chose Mathematics—a fact which is in startling contrast to the current statement that women have no aptitude for Mathematics. Another rather striking fact is that the same proportion of women graduates as of men chose courses in Geology, *viz.*, 39 per cent. On the other hand, 36 per cent. of the men took Chemistry and only 18 per cent. of the women; 35 per cent. of the men and 21 per cent. of the women took Physics; 21 per cent. of the men and 11 per cent. of the women took Zoölogy. A somewhat larger number of women than of men took Physiology, *viz.*, 20.5 per cent., as against 19.8 per cent., while 21.1 per cent. of the women and 17.8 per cent. of the men took Botany

Many other interesting and suggestive conclusions might be drawn from the data which have been collected. Enough has been said, however, to show that, so far as cultural and disciplinary results are obtainable, women are profiting equally with men from the opportunities which the colleges are offering, and they will profit equally by improvements in methods which educators are working to secure, since at no time was there a keener discussion of or a livelier interest in the college curriculum for men. It is not too much to believe that, in so far as the college is also to give training for the practical demands of life, the curriculum will gradually offer courses which relate to the special interests of women; and just as soon as Home Economics or Domestic Science can be developed so as to have real educational as well as practical value, it will be given a place among the new social sciences as honorable as that which Political Economy or the Science of Government occupies.

Respectfully submitted,

MARION TALBOT, *Dean.*

## UNIVERSITY COLLEGE

*To the President of the University:*

SIR: I submit herewith an account of the history and condition of University College for your Decennial Report.

This account covers the history and operations of the College for the four years of its existence, 1898-1902. University College is a fully organized College of the University, for undergraduate work, conducted under such conditions of time and place as will accommodate especially a large body of the active teachers of Chicago and vicinity. It offers a few branches of preparatory study needful for the immediate prosecution of college work; and a few courses of graduate study have been found desirable for advanced students, chiefly teachers in the high schools.

It was not intended that the College should be in any sense a normal school, but that it should offer strictly academic subjects, conducted in the university method and spirit. Thus the institution was a part of the movement to supply teachers in elementary and secondary schools with more extensive and exact training in their special subjects. At the same time the Department of Education was called upon for special instruction in the History, Theory, and Practice of Education. The work has been an unquestioned success; in numbers first, and more pronouncedly in the demonstration that many teachers of the city desire to carry on their professional studies, that they will support such an enterprise, and that in this way the University has an immediate and large influence upon the schools of the community.

### ORIGIN IN THE UNIVERSITY EXTENSION DIVISION

From the beginning the University provided in the University Extension Division for conducting classes in college subjects at any point in its immediate vicinity where it was convenient for instructors and students to gather. The success of this arrangement is told in the reports of the Extension Division.

Here it is sufficient to point out that the Class-Study side of the work of the Division was so successful as to rise from an enrolment of 129 in 1892-93 to 1,049 in 1898-99, the largest number, 1,871, being enrolled in the college year 1896-97. These classes were scattered over the entire city and in a few suburban towns. It was generally found that the large majority of students taking advantage of the University Extension classes were teachers of the public schools of the city. It was also found that more than 90 per cent. of those who registered had received the preparation required by the University for admission to the Junior Colleges, and if they desired, all these might be regularly matriculated. Early in the work of the Extension classes a need became apparent for a meeting-place in the center of the city that would accommodate a large body of students. But such a center with adequate accommodations was so costly that the Extension Division was not able to provide and equip it.

From several sources suggestions came during the year 1897 for the organization of this work into a well-equipped college for the training of the teachers of the community. The first public statement of the matter was made in the President's Quarterly Convocation Statement of June, 1898, an abstract of which follows:

In a somewhat careful study of the public-school system of the city of Chicago, it has seemed to me that an important piece of work needed to be undertaken. Of the five thousand teachers in our public schools not more than 10 per cent. have received a college education. I have no word to utter except in praise of this great army of conscientious workers. The work they do is the best they can do. It has seemed to me, however, that there is something which could be done and should be done in behalf

of this body of teachers. Their expressed interest in advanced study and in the University suggests an attempt to meet their needs more adequately. There should be established for their benefit courses of study exactly equivalent to those now conducted at the University, and the satisfactory completion of these courses should count toward a degree. In view of these facts, I desire to make the following suggestions, and I beg for these suggestions the consideration of those who are interested in the educational work of this great city: (1) That there be established at a central point the full curriculum of the Freshman and Sophomore classes as taught in the University, the work to be organized upon the same standard and in accordance with the same general regulations. (2) That, as occasion may warrant or demand, courses more advanced and less advanced be offered in connection with those ordinarily termed Freshman and Sophomore. (3) That there be selected a separate and independent Faculty with its own Dean, the work of the Faculty to be recognized by the University in the same way as similar work at the University is recognized. (4) That courses of instruction be given in the afternoons and on Saturdays, each course consisting of four hours a week for twelve weeks, each class meeting twice a week, each session being a session of two hours. (5) That a Faculty be constituted which shall consist of twenty or more instructors, representing the Departments of Pedagogy, Psychology, History, Sociology, Greek, Latin, French, German, English, Mathematics, Physics, Chemistry, Geology, and Botany. (6) That teachers in the grammar- and high-school grades of the city schools be received without examination, and that others be received in accordance with the usage of the University. (7) That the smallest possible fee be charged for the instruction given. For the sum of six or eight thousand dollars a year a thousand or more of the teachers of Chicago could be enabled to do a work which would not only elevate the individual teacher, but also exert an influence upon the instruction of every child with whom the teacher comes in contact.

On the basis of this plea, in August, 1898, Mrs. Emmons Blaine generously contributed \$5,000 a year for five years for the purpose of making this experiment, under the name "The College for Teachers of the University of Chicago." Professor Edmund J. James was appointed Dean.

The history of the first year of the new institution is contained in the report of the Dean of the College for 1898-99, as follows:

#### THE COLLEGE FOR TEACHERS

The College for Teachers, which opened its doors for the first time during the present academic year, was a direct outgrowth of the work done by the University through the Class-Study Department during the years 1892 to 1898. This work had demonstrated the desirability of offering a greater variety of courses and of introducing more continuity and regularity into the system of instruction opened to those who were engaged in the active work of teaching in the public and private schools of the city of Chicago. To the practical interest of a public-spirited woman, Mrs. Emmons Blaine, is due the foundation upon which the University has been able to carry on this work.

It was decided to offer to the teachers as nearly as possible exactly the same work which is given to students in residence, and as large a variety of such courses as the funds at the disposal of the University should make possible. Quarters were taken at a convenient point in the heart of the city, in the Fine Arts Building, 203 Michigan avenue. It was decided to give instruction during the afternoons and evenings and on Saturdays. Instruction was given in two-hour periods, and twenty-four such periods were considered equal to the instruction given in one Major, or forty-eight hours, to resident students. The periods were set from 4:30 to 6:30 in the afternoon, from 7:30 to 9:30 in the evening on days of the week from Monday to Friday inclusive, and on Saturday from 8:30 A. M. to 9:30 P. M.

Full credit was given in the books of the University to properly qualified students who completed any course of instruction in the College. Similar conditions of admission were made as in the other Colleges. To persons who had completed a four-years' high-school course equivalent to that offered in the city high schools, and who had passed the city teachers' examination, and who were actually engaged in teaching in the public schools of Chicago, the privilege was accorded of entering the College as full students, with the privilege of having such work as they had done in the high schools count toward fulfilling the fifteen units required for admission.

During the year the Faculty granted a further concession to the effect that students who offered the full fifteen units required, but who did not include Latin among the requirements, should be permitted to pursue that subject in the College and have it counted toward a degree.

The work of the College has demonstrated that it performs a useful function in the educational system of the community.

During the first year of its work the number of different students matriculated in the College for Teachers was 305, of whom the number of new matriculants was 224, leaving a total of 81 who had previously matriculated at the University.

The number of graduate students was 28; namely: from the University of Chicago, 7; University of Michigan, 3; Harvard, 2; Wellesley, 2; Smith, 2; and from the following 1 each, viz., Richmond, Yale, Bryn Mawr, Nebraska, Mt. Holyoke, Leland Stanford Junior, Antioch, Northwestern College, Oberlin, Dartmouth, Denison, and Illinois Wesleyan.

TABLE I

Those in residence during the Autumn Quarter	271
Those in residence during the Winter Quarter	261
The number of courses taken during the Autumn Quarter	368
The number of courses taken during the Winter Quarter	358
Total	726
However, some of these were courses running through two Quarters, namely	264
This leaves a total of courses taken	472
(Additions for Winter Quarter to courses running through two Quarters, 4.)	
Total number of men, Autumn Quarter	57
Total number of men, Winter Quarter	60
Total number of women, Autumn Quarter	214
Total number of women, Winter Quarter	201
Matriculants taking work in Class-Study Department only, 8 }	
Matriculants in College taking no courses - - - - 8 }	16

In addition to the number doing work in the Class-Study Department who matriculated, but took none of the regular courses in the College for Teachers, a large number of matriculated students doing work in the College for Teachers took courses also in the Class-Study Department of the University Extension Division, especially those in preparatory Latin and Freshman English.

The following table indicates the number of Majors, with the title of the courses, the instructors, and the number of students enrolled in each course:

TABLE II  
AUTUMN QUARTER

Instructor	Title of Course.	Enrolment
MacClintock	English Literature <sup>1</sup>	65
Salisbury	Physiography <sup>1</sup>	56
Dewey	Philosophy <sup>1</sup>	41
Coulter	Botany <sup>1</sup>	32
Terry	History	32
McMurry	Pedagogy: Special Methods <sup>1</sup>	21
Howarth	Sociology <sup>1</sup>	15
Slanght	Trigonometry	14
McMurry	History of Education <sup>1</sup>	12
Judson	Political Science	12
Bulkley	Pedagogy	10
Blanchard	Public Speaking	10
Miller, F. J.	Ovid <sup>1</sup>	9
Miller, F. J.	Cicero	8
Howland	Spanish (beg.)	6
Neff	Modern French Novels	5
Pietsch	Spanish (beg.)	5
Kern	Modern German Prose	4
Seidenadel	Beginning Greek	4
Eyleshymer	Histology <sup>1</sup>	3
Seidenadel	Xenophon: <i>Memorabilia</i>	3
Seidenadel	Thucydides <sup>1</sup>	1
		368

In all twenty-two courses, of which twelve were full Majors, completed during the first Quarter.

<sup>1</sup> Given once a week; extending through both Quarters.

TABLE II—Continued  
WINTER QUARTER

Instructor	Title of Course	Enrolment
MacClintock	English Literature <sup>2</sup>	65 <sup>2</sup>
Salisbury	Physiography <sup>2</sup>	55
Dewey	Philosophy <sup>2</sup>	43
Coulter	Botany <sup>2</sup>	32
Terry	History	24
McMurry	Pedagogy: Special Methods <sup>2</sup>	21
Howarth	Sociology <sup>2</sup>	15
McMurry	History of Education <sup>2</sup>	14
Slaught	College Algebra	12
Miller, F. J.	Ovid <sup>2</sup>	10
Blanchard	Public Speaking	9
Bulkley	Pedagogy	8
Herrick	Rhetoric and Composition	7
Howarth	Sociology	7
Miller, F. J.	Terence and Tacitus	7
Slaught	Geometry	6
Angell	Philosophy	5
Seidenadel	Xenophon: <i>Anabasis</i>	4
Eycleshymer	Histology <sup>2</sup>	3
Neff	Modern French Comedies	3
Seidenadel	Greek Drama	3
Howland	Spanish	2
Kern	Schiller's <i>Wallenstein</i>	2
Seidenadel	Thucydides <sup>2</sup>	1 <sup>4</sup>
		358

In all twenty-four courses, of which fourteen were full Majors, completed during the Winter Quarter.

The following table shows the number of students taking one, two, three, four, and five courses:

AUTUMN QUARTER		WINTER QUARTER	
198 students taking one course	- - 198	190 students taking one course	- - 190
51 students taking two courses	- - 102	50 students taking two courses	- - 100
20 students taking three courses	- - 60	17 students taking three courses	- - 51
2 students taking four courses	- - 8	3 students taking four courses	- - 12
		1 student taking five courses	- - 5
<u>271</u>	<u>368</u>	<u>261</u>	<u>358</u>

TABLE IV

SHOWING THE REGISTRATION BY DEPARTMENTS FOR THE AUTUMN AND WINTER QUARTERS, 1906-07

Department	Majors	Minors	Total Registration
Philosophy	46	2	48
Pedagogy	51	2	53
Political Science	12	..	12
History	56	..	56
Sociology	22	..	22
Greek	16	..	16
Latin	24	1	25
Romance Languages	21	..	21
Germanic Languages	6	..	6
English	72	..	72
Mathematics	32	..	32
Geology	55	1	56
Anatomy and Histology	3	..	3
Botany	32	..	32
Public Speaking	19	..	19
	<u>467</u>	<u>6</u>	<u>472</u>

<sup>2</sup> Given once a week; continued from Autumn Quarter.

<sup>4</sup> Two additions.

<sup>3</sup> One addition; one transfer.

TABLE V  
SHOWING THE NUMBER OF MAJORS GIVEN BY DEPARTMENTS

<b>Philosophy and Pedagogy:</b>		<b>Germanic Languages:</b>	
Dewey . . . . .	1	Kern . . . . .	2
Angell . . . . .	1	<b>English:</b>	
McMurry . . . . .	2	MacClintock . . . . .	1
Bulkley . . . . .	2	Herrick . . . . .	1
<b>Political Science:</b>		<b>Mathematics:</b>	
Judson . . . . .	1	Slaught . . . . .	3
<b>History:</b>		<b>Geology:</b>	
Terry . . . . .	2	Salisbury . . . . .	1
<b>Sociology:</b>		<b>Anatomy:</b>	
Howarth . . . . .	2	Eycleshymer . . . . .	1
<b>Greek:</b>		<b>Botany:</b>	
Seidenadel . . . . .	5	Coulter . . . . .	1
<b>Latin:</b>		<b>Public Speaking</b>	
Miller . . . . .	3	Blanchard . . . . .	2
<b>Romance Languages:</b>		<b>Total</b> . . . . .	<u>36</u>
Howland . . . . .	2		
Pietsch . . . . .	1		
Neff . . . . .	2		

Respectfully submitted,  
EDMUND J. JAMES, *Dean*.

The operations of the College for the second year are seen in the following outline:

TABLE VI

Number of different students registered . . . . .	287
Men . . . . .	66
Women . . . . .	221
New matriculants . . . . .	116
Previously matriculated . . . . .	171
<b>Autumn Quarter:</b>	
Number of registrations . . . . .	251
Number of matriculants taking no work . . . . .	7
Number of matriculants taking work in Class-Study	
Department only . . . . .	7 14
<b>Total</b> . . . . .	<u>265</u>
<b>Winter Quarter:</b>	
Number of students continuing from Autumn Quarter . . . . .	170
Number of new registrations . . . . .	32
<b>Total</b> . . . . .	<u>202</u>
Number of students taking work in Class-Study Department . . . . .	7
<b>Total</b> . . . . .	<u>195</u>

From these figures it will be seen that the attendance did not increase during the year. This seems to be more than accounted for by the fact that Class-Study classes of the University Extension Division were held in the same building, and even at the same hours, and frequently with nearly the same subjects. More than half of all the courses of the Class-Study Department for that year were held in the rooms of the College for Teachers.

Some of the problems which arose during these two years may be summarized from the PRESIDENT'S REPORT of 1898-99 as follows:

During the year several new problems have arisen. It is a question, for example, whether the distinction now made between the College for Teachers and the Class-Study work should not be removed, and all work of this character be placed under one name and under a single management.

The essential distinction thus far made has been that in one case the students were matriculated in the University, while in the other such matriculation was not required. It has been shown to be true that at least 90 per cent. of those engaged in the Class-Study work were amply prepared for the regular college work. It is also a question whether the title College for Teachers is a good one. Many besides teachers desire to avail themselves of these opportunities, and it seems to be a matter of surprise to some that students who are not teachers may be admitted. Perhaps the most serious difficulty connected with the present title is due to the fact that it is constantly misunderstood. The College for Teachers is not a normal school, but an arrangement of instruction intended to give those teachers who have not had a full college training the benefit of such training. The name University College seems to be a more appropriate name than that which has been adopted. It is also a question whether the present plan of conducting the work under a separate Faculty is a wise one. The students in this College may easily be classified as Junior or Senior, Unclassified or Graduate. It would seem easier, therefore, to permit these students to become classified regularly with other students of the same grade and to have each class of students placed under the control of the appropriate Faculty. For a large amount of the instruction given in the Class-Study work the instructors are paid only a certain proportion of the students' fees. This plan has been attended with serious drawbacks, of which perhaps the most conspicuous has been the obligation resting upon the teachers to secure their own students. By a proper readjustment of the work this difficulty can be remedied, and only those need be employed who are given a regular salary. These and other problems of the College deserve immediate consideration. It is quite certain that no money thus far employed by the University has accomplished larger results than the \$5,000 a year furnished by Mrs. Emmons Blaine for the work of this College.

In January, 1900, Professor James resigned the Deanship, and Professor W. D. MacClin-<sup>1</sup>tock was transferred from the Deanship of the Junior Colleges to that of the College for Teachers.

#### DESIRABILITY OF CONSOLIDATION

Further considerations urging concentration in the University Extension classes and the transformation into a regular college were these:

1. The University found increasing difficulty in obtaining suitable rooms for the holding of its classes. Rents in the center of the city were so high as to be prohibitive, and elsewhere it was almost impossible to find rooms adapted to the needs of the classes. The division was forced to depend upon the free use of rooms in the public schools. Opposition to this was in many quarters constant and irritating. The University was subject to the accusation of demanding special favors.

2. It was found increasingly difficult to get and keep a worthy Faculty for this Class-Study work. Either the Extension Division could not afford to employ the older and better-known instructors, or they would refuse to go to classes to which they were obliged to travel far and under disagreeable circumstances. The younger instructors who were glad for an increase of income or experience soon left the University for other positions, and threw upon the Division the accusation of sending to the centers relatively inexperienced teachers.

3. The University was obliged to ask the instructors to organize their own classes and secure their students. This was at all times disagreeable and became in many instances humiliating. It compelled the University to seem to be begging for students, when it was attempting only to offer facilities for study.

4. The Division was obliged, on account of little endowment, to pay for the instruction given by a proportion of the students' fees. Many of the classes were naturally small, and it was impossible to obtain the most desirable instruction under such an arrangement.

5. Great difficulty was found in keeping the work of the Class-Study Department exactly up to the grade of the work in the Quadrangles. This was due to the fact that the classes were widely scattered, and the hours of beginning and closing necessarily irregular; many students,



while earnest teachers and mature listeners, were not in the classes for severe study, and there was no unconscious standardizing of the work by the proximity and conversation of many students and instructors in one place.

6. It was seen that after the College for Teachers was founded, it was appealing in its announcements to the same class of students as had been taking the University Extension classes. Since the College for Teachers had the advantages of a more compact organization, larger endowment, and better rooms, this competition with the classes over the city was unfair and suggested at once a change.

#### CONSOLIDATION EFFECTED

For these reasons in the spring of 1900 a union of the University Extension Class-Study Department and the College for Teachers took place according to the following announcement of the *Spring Bulletin* of 1900:

By action of the Board of Trustees of the University, the work hitherto done under the Class-Study Department of the University Extension Division has been merged into the work of the College for Teachers. This absorption will concentrate the work in the city conducted away from the University Quadrangles and raise it to unquestioned University rank. It will bring about a closer contact of students and instructors, and will help to create that *esprit de corps* which is essential to full University life. The entire teaching of the College for Teachers will be done by instructors who are regular members of the Faculties in the Quadrangles and actively engaged in teaching there. It is expected that no differences as to quality of work, instructors, or discipline accomplished will exist between the work done at this College in the city and in the Quadrangles. The former is intended to be simply a plan for conducting regular University courses at such times and at such a place as will accommodate a large body of the teachers of the city of Chicago.

In order to emphasize this ideal and to prevent misconceptions of the work, the name of the College has been changed from the "College for Teachers" to "University College of the University of Chicago."

All the facilities of the University College are offered to persons who are not teachers. The College is in no sense a normal school, although thus far the larger number of its students have been active teachers. It is hoped that young persons in business and students who live far from the University Quadrangles may find here conveniences and facilities for continuing their education.

The separate Faculty under which the work has been conducted for two years has been discontinued, and all students placed regularly under the care of the Faculties of the Junior Colleges, the Senior Colleges, and the Graduate Schools. By all these means the students of University College will feel that no distinctions whatever are drawn between them and other University students.

The Board of Trustees has granted a further reduction of fees for two years to active teachers of Chicago and vicinity. Hereafter the fees will be \$10 for a Major and \$5 for a Minor, except that for the first course taken by the student the fee shall be \$15 for a Major and \$10 for a Minor. It is understood, however, that students who are not active teachers shall pay the regular University fees.

The University College offers for next year twenty-five University College Scholarships. These Scholarships will be assigned to various schools in the city according to plans to be announced later. Inside the school they will be bestowed as recognition of merit in scholarship and teaching. They will cover the fees of a student in the College for a single year.

Special attention is to be given by the officers of University College during the coming year to placing students in regular standing, so that they may proceed, if they desire, to their degrees. The following principles are used for such classification:

1. Graduates of the high schools co-operating with the University will be admitted to the University on presentation of vouchers covering fifteen units of work, according to the schedules published in the *Circular of Information*.

2. Advanced standing for work in colleges and universities and state normal schools may be granted by the Faculties on presentation of certificates properly signed.

3. Probationary advanced standing may be granted by the Deans (on work for which students have no college statements) in courses for which a satisfactory claim is established, with the understanding that if the work is successfully carried, credit will be given for courses that are prerequisite. This principle will enable many teachers to make use of their studies privately done, and of their discipline obtained in teaching.

The normal type of course to be offered at University College has been fixed as one period a week of two hours' duration; this will make Major courses extend over two Quarters, from October 1, and Minor courses over one Quarter. It is understood, however, that students who have sufficient strength and time may take more courses at their pleasure.

The classes will be conducted at the Fine Arts Building, 203 Michigan avenue, except that the work in science will be given at the Science Laboratories in the University Quadrangles, chiefly on Saturdays. It is hoped that the great increase of educational facilities at the Fine Arts Building will more than compensate for the slight extra time required to reach it.

## UNIVERSITY COLLEGE, 1900-1901

The newly constituted University College began work October 1, 1900. It was expected that there would be a falling off from the total number of students in the College for Teachers and the Class-Study Department combined.

The following tables give the operations of the College for the year:

TABLE VII

Matriculation	-	-	-	-	-	234
Attendance	-	-	-	-	-	475 108 <sup>s</sup> = 582
Registration	-	-	-	-	-	747 108 <sup>s</sup> = 855
Number of courses offered	-	-	-	-	-	60
Number of different instructors	-	-	-	-	-	32

The registration was distributed among the Departments as follows:

TABLE VIII

AUTUMN QUARTER		WINTER QUARTER	
Philosophy	- - - - 56	Philosophy	- - - - 53
Pedagogy	- - - - 90	Pedagogy	- - - - 72
History	- - - - 64	History	- - - - 75
Sociology	- - - - 22	Sociology	- - - - 40
Greek	- - - - 5	Greek	- - - - 8
Latin	- - - - 45	Latin	- - - - 43
Romance	- - - - 17	Romance	- - - - 70
German	- - - - 29	German	- - - - 32
English	- - - - 134	English	- - - - 133
Mathematics	- - - - 23	Mathematics	- - - - 27
Physics	- - - - 8	Physics	- - - - 14
Chemistry	- - - - 7	Chemistry	- - - - 8
Geology	- - - - 20	Geology	- - - - 18
Physiology	- - - - 2	Physiology	- - - - 2
Botany	- - - - 17	Botany	- - - - 24
Public Speaking	- - - - 14	Public Speaking	- - - - 14
Library Science	- - - - 45	Library Science	- - - - 45

<sup>s</sup> In classes held away from the Fine Arts Building.

## UNIVERSITY COLLEGE, 1901-1902

The work of the College for the past year, which is the fourth of its history, is seen in the following tables:

TABLE IX

Matriculation . . . . .	199
Attendance . . . . .	515
Students in classes away from the Fine Arts Building additional . . . . .	135
Registrations . . . . .	810
Registrations in outside classes . . . . .	135
	— 945
Number of courses given . . . . .	60
Number of instructors . . . . .	38

The registration was distributed among the several University Departments as follows:

TABLE X

Department	Autumn	Winter
Philosophy . . . . .	57	56
Education . . . . .	43	42
Political Economy . . . . .	26	26
History . . . . .	88	100
Greek . . . . .	6	6
Latin . . . . .	53	66
Romance . . . . .	48	44
German . . . . .	41	60
English . . . . .	172	163
Mathematics . . . . .	23	20
Physics . . . . .	3	3
Chemistry . . . . .	9	15
Geology . . . . .	12	11
Zoology . . . . .	11	12
Botany . . . . .	13	3
Public Speaking . . . . .	32	29
Library Science . . . . .	57	58
<b>Total . . . . .</b>	<b>94</b>	<b>714</b>
Outside classes . . . . .	126	135
<b>Total . . . . .</b>	<b>820</b>	<b>849</b>

TABLE XI

## ANALYSIS OF ATTENDANCE, 1901-1902

	AUTUMN, 1901			WINTER, 1902			TOTAL (DIFFERENT) STUDENTS		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
The Graduate Schools . . . . .	25	31	56	25	35	60	30	39	69
The Senior Colleges . . . . .	6	16	22	6	15	21	7	16	23
The Junior Colleges . . . . .	26	87	113	27	84	111	27	89	116
Unclassified Students . . . . .	48	236	284	49	240	289	53	254	307
<b>Total . . . . .</b>	<b>105</b>	<b>370</b>	<b>475</b>	<b>107</b>	<b>374</b>	<b>481</b>	<b>117</b>	<b>398</b>	<b>515</b>

TABLE XII  
STATISTICAL SUMMARY, 1896-1902

	Matriculation	Attendance	Registration
1896-1899 .....	225	396	472
1899-1900 .....	116	254	283
1900-1901 .....	234	475	747
1901-1902 .....	199	515	810

TABLE XIII  
FINANCIAL SUMMARY, 1896-1902

## RECEIPTS

	1896-1899	1899-1900	1900-1901	1901-1902
Endowment .....	\$ 5,000.00	\$ 5,000.00	\$ 6,200.00	\$ 6,200.00
Tuition and laboratory fees .....	5,978.65	5,149.28	8,427.15	9,924.57
Rent .....	.....	.....	.....	727.50
Matriculation fees .....	1,125.00	580.00	1,125.00	995.00
Total .....	\$12,103.65	\$10,729.28	\$15,752.15	\$17,847.07

## EXPENDITURES

	1896-1899	1899-1900	1900-1901	1901-1902
Instruction .....	\$ 7,199.58	\$ 8,278.52	\$10,539.42	\$11,698.59
Administration .....	1,686.80	1,789.67	1,100.00	1,100.00
General expenses .....	3,710.34	2,593.85	3,787.16	3,878.78
Total .....	\$12,596.72	\$12,662.04	\$15,426.58	\$16,677.37

Respectfully submitted,  
W. D. MacCLINTOCK, *Dean.*

## THE DIVINITY SCHOOL

*To the President of the University :*

SIR: I submit herewith the decennial report of the Divinity School, covering the period from 1892-93 to 1901-2. The matter is grouped under nine heads, viz.:

- A. The Theological Seminary prior to 1892.
- B. The Education Society.
- C. The Graduate Divinity School.
- D. The English Theological Seminary.
- E. The Danish-Norwegian Theological Seminary.
- F. The Swedish Theological Seminary.
- G. The Disciples' Divinity House.
- H. The Cumberland Presbyterian Divinity House.
- I. Statistics.

### A. THE SEMINARY PRIOR TO 1892

#### ORIGIN

In 1860, at a meeting of Baptists in Chicago, a society was formed called "The Theological Society of the Northwest." On August 13, 1863, "The Baptist Theological Union located at Chicago" was organized, and on August 27 the said Union was incorporated under a general law. On February 16, 1865, the Illinois legislature granted the Union a charter for "the founding, endowment, support, and direction of an institution for theological instruction." In 1865 Rev. N. Colver, D.D., began, in his study, the giving of instruction to a few students. In 1866 Dr. Colver and Professor J. C. C. Clarke began regular instruction to about a dozen students in theological classes in the (old) University of Chicago.

#### PERMANENT ORGANIZATION

All this, however, was provisional, and the Trustees were constantly planning and working for something more adequate and enduring. At last, at a meeting on September 11, 1866, action was taken which was destined to determine the whole future of the institution. It is recorded in these words: "Voted, That Rev. G. W. Northrup, D.D., Professor of Ecclesiastical History in the Rochester Theological Seminary, be invited to the professorship of Systematic Theology." A month later Rev. J. B. Jackson, pastor at Albion, N. Y., was invited to the chair of Ecclesiastical History. These brethren accepted the calls extended, and, after some preliminary financial work in the spring and summer of 1867, began their work of instruction in October, Professor G. W. Warren being associated with them in the Department of Biblical Literature and Exegesis.

With these three professors and nineteen students the Seminary began the twenty-five years of history which are here summarized. There was then not much but professors and students—a few old books, a few thousand dollars of endowment, some pledges for current expenses, a building lot near the university, and, best of all, some generous and devoted friends; but practically no library, absolutely no building, almost no endowment, and no adequate assurance of means to meet current expenses. Provision for securing funds was made by the appointment of Dr. G. S. Bailey as Financial Secretary. Thus the permanent organization was completed and a genuine beginning made, and from that time until now there has been no break.

## THE FIRST BUILDING

The first marked step in advance was the erection of a building to become a home for the new institution. On June 24, 1868, just as the first class of three was ready to graduate, the building committee was instructed to proceed immediately to the erection of the proposed structure. On August 18, 1868, its corner-stone was laid, and on July 1, 1869, it was dedicated. Its location was on Rhodes avenue, corner of Thirty-fourth street. It contained four residences and accommodations for sixty students, besides rooms for recitations and lectures, and cost about \$60,000. In this building, which still has on its front the words, "Baptist Union Theological Seminary," the school opened in the fall of 1869 and was "at home." This year there were forty students, twelve of whom were in the graduating class; and with Dr. A. N. Arnold in the chair of Biblical Literature and Exegesis, in place of Professor Warren, resigned, and Dr. Wm. Hague as Professor of Homiletics and Pastoral Duties, in addition to Dr. Northrup and Professor Jackson, the young institution was well organized for effective work. During this year also the Hengstenberg Library was placed within reach of the students. The fourth year of the school brought important changes. Three years of overwork had ruined Professor Jackson's health, making necessary his resignation. Dr. Hague, also, on account of the illness of his wife, was compelled to resign. But Dr. E. C. Mitchell and Dr. R. E. Pattison were added to the Faculty, and the work moved on. Efforts were made to increase the endowment, but with little success. A proposition was likewise made to unite in one organization the various societies for securing beneficiary funds. The close of this year completed a period of five years since the permanent organization. During this time there had been ninety-seven students in attendance. Thirty-seven of these had graduated, and not one had died.

## THE SECOND FIVE YEARS

During the second five years of its existence the institution, with the one exception soon to be named, experienced no striking changes, but enjoyed a steady growth and a constantly widening and deepening influence. The one ever-present, harassing experience of these years was a distressing lack of funds. The great fire of 1871, in which many friends of the Seminary lost their all; the second great fire in 1874, more disastrous to the interests of the Seminary than the first; the general business depression, the shrinkage of values, the frequent financial failures and general discouragement—all conspired together in threatening utter wreck to the financial hopes and prospects of the institution. Nevertheless, says the report of the Board at the ninth anniversary in 1877: "We take pride in the *internal management* of the Seminary under our indefatigable and able president and his assistants." At the beginning of the last year of this period, 1876-77, Dr. T. J. Morgan was elected Professor of Homiletics and Rev. W. W. Everts, Jr., acting Professor of Church History. A very important addition was made to the library during the year 1873-74 by the purchase of the collection of the late Dr. George B. Ide, of Springfield, Mass. It consisted of about three thousand volumes, embracing select works in every department of Theology, together with a wide range of classical and English literature. Toward the close of this period also there had been a change in the office of Financial Secretary. In May, 1875, after seven and a half years of very efficient service, Dr. G. S. Bailey resigned, and near the close of the same year, Dr. T. W. Goodspeed assumed the position.

## THE SCANDINAVIAN DEPARTMENTS

Among the students who came to the Seminary in the earlier years were a few Scandinavians. The country north and west was filling up with immigrants from Sweden, Denmark, and Norway, and among them were not a few Baptists. To gather these into churches and to lead them in missionary work among their countrymen, trained pastors were needed. For the train-

ing of such young men as felt that they were called to the Baptist ministry there was no other school available than our Seminary. They were accordingly welcomed to its classes. But it soon became manifest that, on account of their limited education and their want of familiarity with the English language, they were unable to avail themselves fully of the advantages of the prescribed courses of study. Moreover, they needed to get at least their homiletical training in the language in which they were to preach. A strong pressure was therefore brought to bear upon the Seminary to organize a Scandinavian department, which was opened during the school year of 1872-73, with John A. Edgren, B.D., as instructor, and three Swedes and two Danes as students. The next year there were in this department five Swedes and two Danes; the next, nine students. And thus the department continued to grow until, during the year 1883-84, there were 32 students and two instructors, Professor N. P. Jensen having been called to assist Professor Edgren in his increasing work. At the close of that year, Professor Edgren withdrew from the institution, taking with him the Swedish students, with a view of establishing an independent Swedish institution for general and ministerial training. The department was then continued for the benefit of the Danes and Norwegians in this country and from the mother-countries, and Professor Jensen was made the head of the department, and the lamented Edward Olson appointed to assist him. In 1888 the Swedish brethren, not succeeding as they had anticipated with their independent school, negotiated for a return to the Seminary. They were cordially welcomed back, and a distinctively Swedish department was organized, which has enjoyed since then a great and growing prosperity.

#### REMOVAL TO MORGAN PARK

The second decade of this history begins with the removal to Morgan Park. For reasons alluded to above, the Seminary was threatened with utter financial shipwreck, in that same tempestuous era which did disable, and finally destroy, its sister-institution, the University. From this threatened disaster there seemed to be no escape but by removal from the city to some convenient suburb which should offer a considerable amount of property as a gift, and furnish opportunity for more economical living. For more than a year, at different times, the Board had the matter under consideration, and at last on September 12, 1876, after it had become evident that the Centennial Educational movement was not going to bring relief, a vote was passed to accept the offer made by the Blue Island Land and Building Company and remove to Morgan Park. This offer included the gift of a large brick building, which was at first used for all purposes, the five acres of ground on which it stood, and other gifts of lots and lands amounting in all to about fifty acres. In this new location the school opened in the fall of 1877.

Further changes in the Faculty also attended the removal to Morgan Park and the beginning of the second decade of Seminary history. Dr. J. R. Boise then became Professor of New Testament Interpretation, bringing with him a wide reputation as an able and accurate Greek scholar. On the other hand, Dr. Mitchell urged acceptance of his resignation, and his request was granted. At the close of the year, June 17, 1878, we find in the record this statement: "Dr. Northrup presented the name of W. R. Harper as a suitable person to fill the vacancy in the Seminary in the department of Hebrew." Three years later, upon the resignation of Dr. T. J. Morgan, another record tells of the election, June 8, 1881, of Eri B. Hulbert, D.D., to the chair of Ecclesiastical History.

#### ENDOWMENT

The school now had a building and grounds, a Faculty and students, but almost no endowment. Hitherto all efforts in this direction had resulted in comparative failure. Still the most strenuous exertions were required every year to secure means to meet current expenses, and

constantly the Board was struggling with problems of current debt. This state of things could not long continue. Alike the wisdom and the strength of the Financial Secretary were well-nigh exhausted; the patience of the churches which were annually called upon to pay expenses and make up deficiencies, was nearly exhausted; the hopes and anticipations of the poorly paid Faculty were also dying of exhaustion. It was evident that a change of some kind was imminent. The school must either be endowed or buried. But the Seminary was *alive* and could not be buried, and therefore *must* be endowed. Then came that gift of \$30,000 by Mr. E. Nelson Blake, of Chicago, to which, after almost infinite toil and struggle on the part of Secretary Goodspeed and President Northrup and other friends, \$70,000 was at last added, gathered in from all parts of the country west of Ohio. The success of this movement was the signal for the beginning of another movement to raise another \$100,000. Of this amount \$40,000 was contributed by Mr. John D. Rockefeller, of New York. To this \$11,000 more was speedily added. But here the inflow ceased, and it seemed for a long time as if failure must follow. But victory came at last, and the endowment of \$200,000, which for nearly a decade had been sought, had been attained.

The year 1884-85 was marked by the election to the chair of Homiletics of Dr. A. J. Sage, then pastor of the First Baptist Church of Hartford, Conn., and the following year by the presentation to the Seminary, through the liberality of Dr. T. M. Colwell, of Lowell, Mass., of the very valuable collection of 5,000 volumes, known as the American Bible Union Library.

#### ADDITIONAL BUILDINGS

But the wants of the Seminary were still by no means all supplied. The year 1886 marks the beginning of an important movement to secure much-needed additional buildings. Up to this time everything had been crowded together into one structure. It was dormitory, dining-hall, library, chapel, and recitation building, all in one. Scarcely more than half the students could be accommodated with rooms. One of the recitation rooms, overcrowded, served as a chapel. A part of the 25,000 volumes of valuable books lined the walls of a room used as a lecture-hall, and the rest were stowed away in boxes, wholly inaccessible for practical use, and all were daily exposed to destruction from the forty fires that were kept up in a building by no means fireproof. The recitation rooms, such as they were, were needed for other purposes. Under these circumstances, and with the prospect of a continued increase of students which could not possibly find accommodation in the one building, an appeal was put forth by the Secretary, under the authority of the Board, asking for \$50,000 to erect a library building and a recitation hall, and to cover the deficit in current expenses on account of the inadequacy of endowment. The movement was encouraged and stimulated by a second evidence of the generosity and good-will of Mr. Rockefeller, who offered to give \$10,000 outright, and \$10,000 more on condition that \$30,000 in addition should be secured by May 1, 1887.

Through the efforts of Secretary Goodspeed the amount was secured, and at the next anniversary, in 1887, Dr. D. B. Cheney, the President of the Board, turned the first sod preparatory to the erection of Blake Hall, which was at once erected at a cost of about \$30,000, and was named in honor of Mr. E. Nelson Blake, who had contributed one-third of its cost. Record must here be made of the fact that through all these years of financial struggle, Mr. Edward Goodman, who was chosen treasurer at the very first meeting of the Union in 1863, performed most efficiently and gratuitously the onerous duties belonging to that office.

It was at the beginning of this period, May 12, 1886, that Ira M. Price, Ph.D., then a student in the University of Leipzig, was engaged as Instructor in Hebrew. A year later he was made Associate Professor of Hebrew and the Cognate Languages, and the next year Professor in the same department.



## THE LATEST YEARS

During all these years the internal development had kept pace with the financial growth and material improvement. The Faculty had been from time to time enlarged and strengthened, and there had been a steady increase of students until, in 1891-92, nearly two hundred were enrolled. The Faculty also had been strengthened by the addition of Dr. Galusha Anderson, who left the presidency of Denison University to take the chair of Homiletics. The Library also had been systematically catalogued, classified, and arranged under the direction of Mrs. Zella A. Dixon, so as to make both the books and their contents easily and immediately available by the Faculty and the students.

Meanwhile the alumni and former students of the institution have been proving to the world the value of the training they have received. They have gone out into all the United States and unto the uttermost parts of the earth—a surprisingly large band of men who have already attained to eminence in position and influence in the denomination and in the Christian world.

## UNION WITH THE UNIVERSITY

When Mr. Rockefeller made his first subscription of \$1,000,000 to the University, he made it a condition of the gift that the Seminary should become the Divinity School of the University. In order to realize this condition he further stipulated that \$100,000 of his subscription should be used for the erection of a building for the Seminary on the University campus, and that \$100,000 of it should be set apart for the further endowment of the Seminary. In keeping with these requirements, Articles of Agreement were entered into between the Boards of the two institutions by which the Theological Seminary became the Divinity School of the University of Chicago.

## ARTICLES OF AGREEMENT

The Articles of Agreement are as follows:

In consideration of the mutual covenants and agreements herein expressed, The Baptist Theological Union, located at Chicago, hereinafter styled the Union, for convenience, and the University of Chicago, hereinafter styled the University, do hereby agree as follows:

1. The Union agrees to lease to the University for the term of Nine Hundred and Ninety-nine years (999) its Seminary grounds and buildings at Morgan Park, at a rental of (\$1) per year, the University to pay all assessments which shall be levied or assessed against said premises during the life of said lease, to keep insured and in repair all buildings now standing thereon, and to use the same for the purpose of an Academy or Higher School.

2. The University agrees to erect upon its grounds in the county of Cook a dormitory building to cost not less than one hundred thousand dollars (\$100,000), to be used as a dormitory for the Seminary of the Union, to be cared for, kept insured and in repair by the Union; also to provide grounds on its campus, at the cost of said University, for additional buildings for the School of the Union when and as the same shall be reasonably required. The said University also agrees to furnish, at its own cost and charges, and maintain adequate lecture-rooms for the use of instructors in said School. A lease shall be drawn which shall contain such provisions as counsel may reasonably devise for the purpose of carrying into effect the provisions of this agreement hereinbefore mentioned.

3. The library of said Seminary shall be located in a building of the University, and shall be cared for and managed by said University in substantially the same manner as the remainder of the library of said University shall be managed; it being understood that the said Seminary or School shall have reasonable access to the same.

4. The Seminary of the Union shall be taken and considered to be the sole Divinity School of the University, and shall have accommodations upon the University campus as hereinbefore and hereinafter provided.

5. The Treasurer of the Union shall pay over to the Treasurer of the University on the last day of each month the net income of the Union for the current month, to be used by the Treasurer of said University in the payment of the salaries of the professors and ordinary expenses of the Seminary or Divinity School, all of said expenses being a charge upon the funds of the Union.

6. The Treasurer of the University shall likewise be entitled to receive the incidental fees of the Seminary students and the rentals arising from rooms in the Divinity dormitory unoccupied by professors or students of the Divinity School; provided, that the same shall be credited and applied toward the incidental expenses of the Divinity School.

7. The first one hundred thousand dollars received from Mr. Rockefeller upon his pledge of one million dollars shall be set apart for the erection of the building hereinbefore provided for by Article 2, to be used by said Divinity School; it being understood that any income which may accrue from the same before the date of payment of the contracts for the erection of said building shall be applied to liquidate debts which the seminary may have contracted before the final location upon the campus of the University of the Union, and that of the remaining payments to be made by Mr. Rockefeller, the income of one-ninth ( $\frac{1}{9}$ ) shall be applied for the purposes of said Divinity School.

8. The President of the University shall be the President of the Divinity School and sustain the same relation to the Faculty thereof as to the other Faculties of the University; provided that nothing shall be required by this clause inconsistent with the charter of the Union.

9. In the supervision and direction of matters pertaining to instruction in the Divinity School the Union shall act in accordance with the general regulations of the University.

10. The Union will not hereafter confer degrees.

11. The Union shall cease to conduct the Department of Old Testament and Semitic studies; but this article shall not be understood as debarring the establishment by the Union in the Divinity School of a chair of Biblical Theology of the Old and New Testaments.

12. The Union shall cease to confer annual memberships, and shall fix the fee of life memberships at not less than one hundred dollars (\$100).

13. The income of moneys contributed to the University for theological instruction shall be applied to the support and maintenance of the Divinity School.

14. All the students of the Divinity School shall have free tuition in all studies pertaining to the course of the Divinity School and free room rent so far as the dormitory of the Divinity School will suffice, while engaged in such studies.

15. The University will confer degrees upon graduates of the Divinity School in accordance with the regulations of the University.

16. The instruction in the Old Testament and Semitic Department shall be provided by the University; that is, the instructors of this Department shall be members of the Faculty of the Graduate School and shall receive their salaries from said University; but this provision shall not be considered to prevent any change in said Department which may hereafter be made in accordance with the mutual action of the University and the Union.

17. The University shall confirm the election of all professors and instructors in the Divinity School, when and to the extent that the funds available for the Divinity School shall admit.

18. All resignations and removals of the Faculty of the Divinity School shall be presented to and acted upon by the Board of the Theological Union, and they shall have the supervision and direction of matters pertaining to instruction in the Divinity School.

It is mutually understood and agreed that co-operative action contemplated by this contract shall be deemed to have become initiate as soon as this agreement shall have been executed, and that this agreement shall go into actual effect by the first day of July, A. D. 1892.

The Theological Union adopted the resolution to unite with the University September 19, 1890. Dr. Northrup's resignation as President of the Seminary and Dr. Hulbert's election as Dean of the Divinity School bear the date of April 25, 1892. By the terms of the Articles of Agreement, the compact between the Union and the University went into actual effect July 1, 1892. The Divinity School was transferred to the city and began its work of instruction in connection with the University October 1, 1892.

**B. THE EDUCATION SOCIETY****REPORT OF DR. C. E. HEWITT, SECRETARY**

On the establishment of the Baptist Union Theological Seminary in 1867, many students for the ministry desired to enjoy its advantages who could not do so without pecuniary assistance. The Board of the Theological Union first attempted to provide the aid needed. It soon found, however, that it was impossible to meet the growing expenses of the institution and also to make adequate provision for its increasing number of students. The Northwestern Baptist Education Society was therefore organized in September, 1871, and the entire work of aiding students was committed to it. For many years it was greatly embarrassed, notwithstanding its best endeavors, for want of means to meet the large demands which were annually made upon it. It met almost from the beginning very great difficulty, on account of discouraging providential events. Within a month after the Society was formed the great Chicago fire occurred. In 1872 the second Chicago fire destroyed the First Baptist Church, one of the principal supporters of the Society, making its large annual contributions impossible through a series of years. The financial panic of 1873 also greatly hindered the collection of funds.

Under such disheartening circumstances, the Society undertook to meet only the most urgent necessities, but even so fell into debt. Effort after effort was made to raise funds by personal agency, but with little success. The debt continued to increase year after year, until the amount reached \$6,000. At last the work of the Society utterly broke down. It could not pay the appropriations it had voted to the students depending on it; these students could not pay their bills to the Seminary Boarding Club; the Club was therefore obliged to disband; and the Seminary itself was compelled to close its year one month earlier than usual to avoid a general breaking up of the classes. In view of these discouragements, it was determined to give no assurance of aid to ministerial students for the next year, 1878-79. As a consequence of this policy, the number of students in the Seminary was cut down from seventy-six in the previous year to fifty, involving a loss of more than one-third of the number present in 1877-78. This decrease is the more noteworthy because it is the only case in twenty-five years where there was a decrease of numbers from the previous year. At this stage the work of the Society was carefully reviewed. It was seen that its responsibility could not be laid aside. It must somehow continue to carry on the work it had undertaken. The discouragements were overwhelming, but the service must not be abandoned. Dr. T. W. Goodspeed, already Financial Secretary of the Theological Union, was now induced to undertake the financial management of this Society also. Under his leadership a new, persistent, and more systematic effort was made to reach the churches and Sunday schools for regular annual collections.

Since that time, March, 1879, the Society has had a somewhat more encouraging history. The work has always been difficult—often disheartening; and the provision which the Society has been able to make has ever been inadequate. But its work has gone steadily on, and has been of unspeakable value to the school itself and to the hundreds of students to whom it has given necessary assistance. Dr. Goodspeed continued in charge of the work until 1889, when he relinquished it to undertake the larger service of raising from churches and individuals of the denomination \$400,000 to supplement the \$600,000 promised by Mr. John D. Rockefeller as the fund for the establishment of a new institution of learning, which was finally incorporated as The University of Chicago. He had succeeded during this time in reducing the indebtedness from thousands to hundreds, and had laid the foundations for a moderate, but somewhat regular, income through the annual contributions of many churches and a few individuals.

In the fall of 1889 the present Secretary, Dr. C. E. Hewitt, accepted the call of the Society to conduct its affairs under the direction of its Executive Board. During this administra-

tion this indebtedness has been entirely removed and the work of the Society has gone steadily on, accomplishing year by year the work for which it was organized. Some modifications, however, have from time to time been introduced, and some improvements made. It was seen that the collections in the churches, made up for the most part of gifts of small change dropped into the passing collection box once a year, would not furnish means sufficient to meet the demand. An effort was accordingly made to secure regular personal contributions of larger amounts—\$2, or \$5, or more, annually. Search was also made for individuals who would endow Scholarships or Fellowships. In this latter endeavor only occasional success has been reached. But to the one Scholarship previously existing four more have been added, with one Fellowship. A general fund of \$10,000 has also been received and invested, the income of which is used at the discretion of the Society. These funds, however, are held and invested by the Theological Union and the University.

In 1892 a change of policy was adopted in the use of the Society's funds. It was then determined that all funds not distinctly designated should be bestowed only for a consideration; that is, that the money should be received by the student as a loan without interest, to be returned soon after graduation, or as compensation for such services as should be found for the recipient to perform. This plan has worked admirably, and has given general satisfaction. The service required does not seriously interfere with the student's studies, and the loans are limited to a sum which the borrower is likely to be able to pay within five years after leaving school. The student has the manly satisfaction of feeling that he is making some return for that which he receives, and the Society's income is increased by the repayment of several hundred dollars annually. The Society has also rendered to a large number of students very valuable assistance in securing for men of experience—many of them men of families who could not otherwise obtain a theological education—an opportunity to support themselves by practical religious work, for which they receive directly from the fields in which they labor a much larger amount than could be granted from the funds of the Society. Increasing opportunity for occasional preaching with compensation has also been found. In these ways, under the direction of the Society, the students now earn more than twice as much as is paid to them directly from the Society's treasury, while at the same time rendering practical service to many churches and missions, and gaining for themselves valuable experience preparatory to future labor as permanent pastors.

The service of the Society rendered in these several years is found to be absolutely indispensable to the welfare of the students and to the prosperity of the Divinity School. Few men graduate who have not received in some form and at some time during their course of study more or less practical assistance from the Society, without which they could not have completed the course at all.

### C. THE GRADUATE DIVINITY SCHOOL

#### DEPARTMENTS OF INSTRUCTION

The School opened with instruction offered in Old Testament Literature and Interpretation, New Testament Literature and Interpretation, Biblical Theology, Systematic Theology, Church History, Homiletics, Church Polity, Pastoral Duties, and Sociology. During the first four years Divinity Students were dependent on the University for exercises in Public Speaking and Physical Culture, but for the last six years classes in these branches have been taught in the Divinity School. All Departments of the University are open to Divinity Students, the selections of courses being subject to the approval of the proper authorities. The statistics show that there have been 2,886 registrations in non-Divinity Courses.

## THE FACULTY

W. R. Harper, Old Testament; E. B. Hulbert, Church History; E. D. Burton, New Testament; G. Anderson, Homiletics; F. Johnson, Homiletics and Church History; and C. R. Henderson, Sociology, were present at the opening and are still members of the teaching staff. P. A. Norden, New Testament, and J. W. Conley, Church History, resigned at the end of the first year. B. F. Simpson, Systematic Theology, taught through the first two years, and G. W. Northrup, Systematic Theology, finished his work in the middle of the eighth year. J. W. Moncrief, Church History, G. B. Foster, Systematic Theology, and S. Mathews, New Testament, began their work the third year; G. B. Smith, Systematic Theology, the ninth year, and A. K. Parker, Church History, the tenth year. The following professorial lecturers have given regular courses of instruction: G. A. Smith, S. Burnham, and C. R. Brown, in the Old Testament; C. R. Gregory, R. Rhees, J. S. Riggs, I. H. Root, C. E. Woodruff, and H. T. De Wolfe, in the New Testament; A. B. Bruce, in Systematic Theology; A. C. McGiffert, in Church History; W. H. P. Faunce, in Homiletics; and W. B. Chamberlain, in Public Speaking. Professors from America, England, Scotland, Germany, and France have given courses of lectures.

In the course of the decade three members of the Faculty have passed to the other life.

James Robinson Boise, Ph.D., D.D., LL.D., prepared for college in Hamilton Academy (New York), and Suffield Academy (Connecticut). He was graduated from Brown University in 1840. He was Professor of Greek for ten years in Brown University, for sixteen years in the University of Michigan, and for nine years in the (old) University of Chicago. In 1877 he became Professor of New Testament Literature and Interpretation in the Baptist Union Theological Seminary. In 1891, when the Seminary and the University were united, he was made Professor Emeritus in the Divinity School. Tübingen University, Germany, conferred upon him Ph.D. in 1868; the University of Michigan, LL.D. in 1870; Brown University, D.D. in 1880. Dr. Boise gave his life to the study and teaching of the Greek language. At one time his textbooks were in general use in American colleges. His scholarship gave him rank among the foremost educators of this country. He was a man of simple tastes, who devoted himself with unaffected piety to the service of God and man in the cultivation of Greek letters. He died February 9, 1895.

Benjamin Franklin Simpson, A.B., D.B., was graduated from Acadia College in 1880, and from the Baptist Union Theological Seminary in 1882. In his pastorates at Morgan Park, Ill., Jacksonville, Ill., Duluth, Minn., and South Berwick, Me., he developed and exhibited rare gifts as a preacher. For two years he was Principal of the Union Baptist Seminary, New Brunswick. When the University opened he was called to be Assistant Professor of Systematic Theology in the Divinity School. He served with signal ability and success for two years, when he was called to his reward on high, June 28, 1894. Could his life have been spared, he would doubtless have attained eminence as a theologian, for his mind was singularly clear and profound, and his experience of the eternal verities full and rich.

George Washington Northrup,<sup>1</sup> D.D., LL.D., was graduated from Williams College in 1854 and from Rochester Theological Seminary in 1857. Upon graduation he was immediately made Professor of Church History in the Seminary, which position he held for ten years. In 1867 he was made President of the Baptist Union Theological Seminary and Professor of Systematic Theology. He received the degree of D.D. from the University of Rochester in 1864, and that

<sup>1</sup>The *University Record* for November 2, 1901, is a "Northrup Memorial Number." In that number will be found a biographical sketch; the funeral addresses by Drs. T. W. Goodspeed, E. B. Hulbert, and W. R. Harper; the address by Rev. F. L. Anderson on the presentation of the bust of Dr. Northrup to the University; resolutions passed by the Chicago Baptist Social Union, the Senate of the

University, the Trustees of the Divinity School, the Faculty of Newton Theological Institution, and the Baptist Ministers' Conference of Chicago; memorial tributes and appreciations by Professor C. R. Henderson, Dr. H. C. Mabie, Professor M. S. Terry, and Presidents A. H. Strong, Herrick Johnson, and Alvah Hovey.

of LL.D. from Kalamazoo College in 1879. For twenty-five years he was President of the Seminary, and for eight years Head Professor of Theology in the Divinity School. He departed this life December 30, 1900. Through the forty-eight years of his service in the cause of sacred learning his immediate associates and the people at large recognized his pre-eminence.

#### THE CURRICULUM

The problem of the clerical discipline suited to the requirements of modern times has engaged the earnest attention of the Faculty. After a good deal of experimentation looking to the proper distribution and true balance of required and elective courses, a curriculum was adopted (in effect July 1, 1899) which in some of its features is a radical departure from the old order of things. The study of Hebrew is made elective. The work of the first year consists of twelve prescribed outline courses—three each in the Departments of Old Testament, New Testament, Systematic Theology, and Church History. At the beginning of the second year the student selects, with the approval of the Faculty, (1) the field of Christian service in which he proposes to do his life work, (2) the Department under whose guidance he will continue his studies, and (3) the degree for which he desires to be a candidate. If he indicates pastoral or missionary work as the field of his future labor, he is required to take three courses in the Department of Homiletics.

The Department under whose special direction the student has elected to continue his clerical training is at liberty to send him to pursue studies in any Department of the University, whether in the Divinity School or in the Graduate Schools, the design being to give to each student precisely that course of study which will best fit him for the largest usefulness in the ministry. The curriculum thus arranged has been in operation three years, and has proved highly satisfactory to both professors and students.

#### THE LENGTH OF THE SCHOOL YEAR

In the first two years the sessions of the Divinity School extended through two and one-half Quarters, opening with the Autumn Quarter and closing at the middle of the Spring Quarter. For the past eight years the University rule has been followed, the sessions continuing through the entire year, three Quarters, or thirty-six weeks, constituting an academic year.

#### THE REMOVAL OF THE SCANDINAVIAN SEMINARIES TO MORGAN PARK

In the first and second years the work of the Swedish and Dano-Norwegian Seminaries was done on the University campus. Since the beginning of the third year these Seminaries have occupied Walker Hall in Morgan Park. Studies are pursued in these Seminaries in the Scandinavian languages, and in the new location the students enjoy special advantages through proximity to the University Academy, in which they are taught English. They can likewise cultivate among themselves a community of life which at the University it was difficult to secure in the midst of a large concourse of American students.

#### THE AMERICAN JOURNAL OF THEOLOGY

The first number of the *Journal*, edited by the Divinity Faculty, was issued January, 1897. It announced its purpose to occupy the entire field of theological study, and to open its columns to every variety of theological discussion. It was to contain scientific articles which should be in some measure real contributions to theological knowledge, documents hitherto unedited or at present inaccessible, notes upon special topics in theology, reviews of recent theological books, abstracts of current periodical literature, and a classified bibliography. From the beginning the quality of the *Journal* has steadily improved. Representative theologians

in the great universities of America, England, Scotland, Germany, and France have contributed leading articles. The latest results of biblical and theological investigation have been published in its pages. Its book reviews have described and critically estimated all the important publications issuing from the American, English, and continental press. Its standard of excellence is so high that from the beginning it has taken a leading place among periodicals of its class. Among its subscribers are found the specialists in the various fields of religious inquiry and the representative scholars in the American and European seminaries and universities. It is to be regretted that it has not found a wider circulation among educated pastors and laymen.

#### GROWTH OF THE GRADUATE DIVINITY SCHOOL

In the twenty-five years of its history the Theological Seminary increased from 3 instructors and 19 students to 12 instructors and 190 students. In the ten years of its history the Divinity School has increased from 16 instructors and 204 students to 22 instructors and 332 students. This gain is in the face of the fact that in theological seminaries throughout the country the number of students, during this period, has been gradually decreasing. In the last year of the decade the Divinity School shows an enrolment (on a three-Quarter basis) of 134 more students than the average enrolment of eleven leading seminaries in the United States. The growth which these figures indicate has occurred almost wholly in the Graduate Divinity School. There has been a decrease in the number of unclassified students and in the English Theological Seminary. Both Scandinavian Seminaries have gained, but the Graduate Divinity School has made the phenomenal advance from 89 to 251.

#### D. THE ENGLISH THEOLOGICAL SEMINARY

The Seminary is designed to meet the needs of students who have not enjoyed the advantages of a collegiate education. In the earlier years these students were admitted to the classes of the Graduate Divinity School, but later it was arranged that they should be in residence in the Summer Quarter only, taking non-resident correspondence courses in the Autumn, Winter, and Spring Quarters. The non-resident courses are so arranged as to supplement the resident work. A Certificate of Graduation in English is granted when the student has completed twenty-four Majors, presented an approved thesis, and passed a satisfactory final examination.

The statistics show that the Divinity School has not been successful in drawing large numbers of students of this grade into the resident courses, and that it has had even less success with correspondence courses. Men who have had the best training in the best colleges are attracted by the elective work and advanced courses which are marked features of our school, but men whose educational opportunities have been meager and who, therefore, seem most to need clerical training have not been so easily reached. This is greatly to be deplored, since so many are already in the ministry, and so many are entering it, whose preparation is wholly inadequate. To aid in remedying this evil the founding of a special training school for men of this class is now under advisement.

#### E. THE DANISH-NORWEGIAN THEOLOGICAL SEMINARY

REPORT OF PROFESSOR HENRIK H. GUNDERSEN, DEAN

##### THE PURPOSE AND FIELD OF THE SEMINARY

The purpose of the Seminary is to fit young men to preach the gospel to the Danes and Norwegians in this country and in the homelands. According to the census of 1900 there were in the United States 308,297 Danes and 787,610 Norwegians, together 1,095,907. This number makes no allowance for the immigration since 1900. They have been one of the important

factors in building up the great Northwest, where they have chiefly settled. They are robust, industrious, intelligent, and progressive, and are readily and rapidly Americanized. The missionary work among them is very important. No part of the work done by the Home Mission Society is more fruitful or promising. But there must be trained Danish and Norwegian ministers, who can preach in their native language. The Seminary at Morgan Park is the only Baptist Theological School for Danes and Norwegians in this country, and there is no other for Norwegians in the world. In the *Home Mission Monthly* of November, 1897, the late Dr. W. M. Haigh says: "From this Seminary there has come a stream of blessing to Danish and Norwegian Baptist churches."

In 1884 the Baptists of Denmark and Norway decided to have their candidates for the ministry educated at the Baptist Union Theological Seminary. The field of the Danish-Norwegian Seminary consisted, therefore, from 1884 to 1895 of the population of these two countries, as well as the above-named Danish and Norwegian population of this country, aggregating 6,000,000 souls. There are now in the United States 5,500 Danish and Norwegian Baptists, in Denmark 3,928, in Norway 2,710. In 1895 the Baptists in Denmark severed their connection with this Seminary, organizing their own theological school in Copenhagen, Denmark. The teachers in this new school are men who were educated in Morgan Park, and the influence from our Seminary will, therefore, continue through generations.

#### THE ORGANIZATION OF THE SEMINARY

The origin of the Seminary is traced back to 1872. It was in the beginning a part of the so-called "Scandinavian Department" of the Baptist Union Theological Seminary at Morgan Park. This Department was opened in 1872 with Rev. John A. Edgren as instructor. In 1881 Rev. N. P. Jensen, a Danish minister, was appointed to assist him. But the attendance of Danish students was quite small up to the time of the independent formation of the Danish-Norwegian Department in 1884. Only six Danes and Norwegians who studied in the Scandinavian Department are now ministers. In 1884 Professor Edgren withdrew from the Baptist Union Theological Seminary, taking with him the Swedish students, and the Danish-Norwegian Department was organized. This was a turning-point in the mission among the Danes and Norwegians both in the United States and in the homelands. The time since then has been one of more prosperity and especial encouragement.

#### THE TEACHING STAFF

At the organization of the Danish-Norwegian Department in 1884, Professor N. P. Jensen was made the Head of the Department, and Professor Edward Olson was appointed to assist him. From 1888 Professor H. Gundersen and Professor H. C. A. Samson were associated with Professor Jensen. In 1892 Professor Samson resigned. When the Baptist Union Theological Seminary in 1892 became a part of the University of Chicago, the Danish-Norwegian Department, under the able leadership of Professor Jensen, became a part of the Divinity School. The same year Rev. T. O. Wold was appointed as instructor in preparatory subjects. At the opening of the school in the fall of 1893 Professor Jensen was compelled, on account of sickness, to be absent, and during the two following years (1893-95) he was not able to stay here more than two months. His poor health made it necessary for him to live in California. Professor Jensen died May 14, 1895. The same year Professor H. Gundersen, who had been Acting Dean during Professor Jensen's absence, became the Dean of the Seminary, and Rev. C. J. Olsen and Rev. N. S. Lawdahl his assistants. Professor T. O. Wold had resigned in the spring of the same year. The teaching staff still consists of the same men.



## THE STUDENTS

Since the organization of the Seminary in 1884, 149 students have either fully or partly received their education here. Five of these men came before the Scandinavian Department was divided, and 144 have been matriculated as new students. The students are as a rule picked and devoted young men, and they have been a blessing to God's cause among their countrymen. The field of the Seminary has been, as stated above, somewhat diminished since 1895, when the Baptists in Denmark organized their own school.

## THE CURRICULUM

Up to the time of the connection with the University in 1892 there was a three-years' course. The principal studies were Exegesis, Church History, Systematic Theology, Homiletics, and Pastoral Theology. Since then the requirements for graduation have been raised and the course has been extended to four years. The curriculum now consists of two years of preparatory studies and two years of strictly divinity studies. The curriculum is as follows:

TABLE I

Preparatory Studies	No. of Majors	Theological Studies	No. of Majors
English Grammar.....	3½	Systematic Theology.....	4
Danish-Norwegian.....	5	Exegesis.....	1½
Greek.....	2½	Hermeneutics.....	1
History and Geography.....	2½	Introduction.....	1
Logic and Psychology, or studies in the American Academy.....	1½	Antiquities or New Testament Greek..	1
Total.....	15	Church History.....	3
		Church Polity.....	1
		Homiletics.....	1½
		Pastoral Theology.....	1
		Total.....	15

## THE LIBRARY

Each student is charged a library fee of \$2.50 a Quarter. The money so acquired is used in the purchase of English and of Danish-Norwegian books. There are 468 English books and 241 Danish-Norwegian; together 709. This library contains standard works in Biblical Literature, Church History, Homiletics, and Systematic Theology

## THE LECTURES

During the past years lectures have been given by prominent scholars and men of practical experience in missionary and evangelistic work. Among those who have lectured have been Professors from the Divinity School, missionaries in foreign countries, secretaries of the Home and Foreign Societies, pastors, etc. These lectures have had a stimulating and inspiring effect.

## STATISTICS

In Norway there are now settled as pastors and missionaries 11 men and in Denmark 9, who have attended the Seminary. Two died as missionaries to the Congo, Africa, having done a most excellent work.

TABLE II  
NUMBER OF STUDENTS AND GRADUATES DURING EACH SCHOOL YEAR FROM THE ORGANIZATION OF THE SEMINARY

YEAR	TOTAL NUMBER <sup>1</sup>		NEW STUDENTS	GRADUATES	LENGTH OF THE COURSE	YEAR	TOTAL NUMBER		NEW STUDENTS	GRADUATES	LENGTH OF THE COURSE
	Men	Women					Men	Women			
1884-85.....	11 <sup>3</sup>	..	7	..	3 years	1884-85.....	24	2	10	..	4 years
1885-86.....	18	..	10	..	"	1885-86.....	24	2	6	10	"
1886-87.....	20	..	6	5	"	1886-87.....	21	1	7	3	"
1887-88.....	23 <sup>4</sup>	..	10	8	"	1887-88.....	24	..	6	3	"
1888-89.....	20	..	6	5	"	1888-89.....	20	..	3	4	"
1889-90.....	19	..	6	6	"	1889-1900..	23	..	9	5	"
1890-91.....	20	1	10	4	"	1900-1901..	28	1	10	6	"
1891-92.....	23	1	10	5	"	1901-1902..	24	..	6	3	"
1892-93.....	21	2	8	2 <sup>5</sup>	"	1902-1903..	27	..	8	..	"
1893-94.....	24	1	7	4	4 years						

F. THE SWEDISH THEOLOGICAL SEMINARY  
REPORT OF PROFESSOR C. G. LAGERGREN, DEAN  
SWEDISH BAPTISTS IN AMERICA

In 1852 the first Swedish Baptist church in America was organized in Rock Island, Ill., by a few who had escaped the religious persecutions at that time raging in Sweden. In 1870, or eighteen years later, the number of churches had increased to twenty-four, with eight ministers. Including the later period of thirty-two years (1870-1902) there are at present in the United States 318 Swedish Baptist churches, organized into 17 State Conferences; 245 church buildings, 21,767 church members, and 293 pastors and preachers. Of the latter 156 have attended our school.

FOUNDING AND DEVELOPMENT OF THE SEMINARY

Professor J. A. Edgren, D.D., after his service in the navy during the Civil War, in 1866, in company with Rev. A. Wiberg, D.D., and Colonel K. O. Broady, D.D., went to Sweden to establish the Bethel Seminary in Stockholm. In 1870 Dr. Edgren returned to the United States, and while pastor of the First Swedish Baptist Church in Chicago started the first Swedish Baptist paper in this country, *Zions Wakt*. In the fall of 1871 Dr. Edgren founded our Seminary with but one student, Rev. C. Silene, now state missionary in Texas. In this connection we wish to quote a passage written by Dr. Edgren himself, which appeared in the *Standard* of November 25, 1875. It reads:

Then [1870] I received a call from the First Swedish Baptist Church of Chicago, and soon found my hands full, yea, overfull, of precious labor for the Master. I had not been long here, when I saw the great need of theological training for our Scandinavian preachers. We had some, though uneducated, yet very excellent brethren on the field; but nevertheless errors were in some places gaining a

<sup>3</sup> Of these students came directly to the school: from Denmark, 13; from Norway, 33; from the United States and Canada, 103; total, 149.

<sup>4</sup> Four of the total number were students in the Scandinavian Department;

<sup>4</sup> One of the total number was a student in the Scandinavian Department.

<sup>5</sup> The four-years' course dates its beginning from the connection with the University (1892). But the graduates of 1893 graduated according to the old rules.

strong hold upon the churches. In one district the preachers themselves had concluded it would be best to appoint some kind of a bishop, whom the churches would obey. Elsewhere the errors of soul-sleeping, annihilation, and Judaizing teaching were gaining ground.

Seeing all this, and feeling how great an advantage it would be for our missionaries and pastors to have more theological knowledge for their general work, and knowing, also, the great need of preachers for our extensive fields, whitening for harvest, I became burning with a desire to impart to others what I had myself learned of theology, and more, too, provided I could get it. So I entered the Theological Seminary of Chicago, and graduated, beginning, at the same time, upon invitation of the Faculty, instruction for Scandinavian students.

The first year, 1871-72, we had one student; the second year, four. I was then appointed instructor by the Board of the Seminary. The third year we had seven students; the fourth, nine; and now we have twelve.

As we find from the above, the Seminary has from its early beginning been united with the Baptist Union Theological Seminary of Chicago, of which it has since formed a part, excepting the period from 1884 to 1888, when, with the name of "Bible Seminary," it was first located at St. Paul, Minn., and afterward at Stromsburg, Neb. Until 1880 the work of the Seminary was conducted on the Old University grounds, and from 1880 to 1892, with the exception of 1884-88, at Morgan Park, Ill. In 1892, when the Baptist Union Theological Seminary was connected with the University of Chicago as its Divinity School, our Seminary, as an organic part of the same, also entered into connection with the University. Hence it becomes clear that the history of our Seminary may properly be divided into three periods: the first, the Chicago-Morgan Park period (1871-1884); the second, the St. Paul-Stromsburg period (1884-88); and the third, the Morgan Park-Chicago period (1888-1902). During the first period the Danes and Norwegians studied together with the Swedes. The total number of Danish and Norwegian students during that time (1871-84) amounted to twenty-four, of whom five graduated. They are not included in the figures given below.

#### STUDENTS

During the whole period of thirty-one years (1871-1902) 295 have been admitted to the school, 121 during the last decade (1892-1902). The first graduate was the late Rev. N. Hayland. In all 131 have graduated; 78, or more than one-half, in the last ten years.

The students are today scattered over the mission field as follows: China, 1; India, 3; Finland, 1; Sweden, 4; Canada, 2; New York, 3; Pennsylvania, 1; Delaware, 1; Connecticut, 3; Maine, 1; Massachusetts, 5; New Hampshire, 1; Illinois, 23; Michigan, 10; Wisconsin, 6; Minnesota, 32; South Dakota, 4; Iowa, 8; Nebraska, 7; Kansas, 6; Texas, 2; California, 3; Oregon, 1; Washington, 7; Montana, 1; and North Dakota, 5.

Many of our graduates have, as general and state missionaries, accomplished a very successful work, as is the case with N. Hayland, C. Silene, A. P. Ekman, A. P. Hanson, L. J. Ahlström, Aug. Johnson, O. Ellison, C. Asplund, L. M. Stolberg, C. J. Almquist, G. A. Osbrink, A. W. Backlund, C. A. Boberg, G. A. Hagström, E. J. Nordlander, M. Berglund, Chas. Palm, C. E. Oberg, Ragn. Arlander, John Ericson.

#### TEACHERS

The regular teachers have been: J. A. Edgren, sixteen years (1871-87); N. P. Jensen, three years (1881-84); N. N. Morten, eleven years (1884-95); E. Sandell, eight years (1887-95); C. G. Lagergren, thirteen years (1889-1902); W. A. Peterson, seven years (1895-1902); and O. Hedeén, six years (1896-1902). Assistants have been: C. Silene (1874-76), N. P. Jensen (1874-76), A. P. Ekman (1877-78), E. Wingren (1880-81), J. M. Sjöln (1882-84), Frank Peterson, and John Ongman (1884-85).

CURRICULUM

The following subjects have been studied: Swedish, English, Greek, Hebrew, General History and Geography, Logic, Anthropology, Moral Philosophy, Physiology, Astronomy, Geology, Mathematics, Physics, Biblical Geography and Antiquities, Biblical Introduction, Hermeneutics, Exegesis, Systematic Theology, Church History, Homiletics, Pastoral Theology, Church Polity.

At present the courses given are as follows:

TABLE III

Preparatory Subjects	No. of Majors	Theological Subjects	No. of Majors
Swedish Language.....	5	Biblical Geography and Antiquities...	1/2
English Language.....	3 1/2	Biblical Introduction.....	2
General History and Geography.....	2 1/2	Hermeneutics.....	1/2
Elementary Greek.....	2 1/2	New Testament Greek.....	1
Logic.....	1 1/2	New Testament Exegesis.....	1 1/2
Anthropology.....	1 1/2	Church History.....	3
History of Philosophy.....	1 1/2	Systematic Theology.....	4
		Christian Ethics.....	1/2
<b>Total.....</b>	<b>15</b>	Church Polity.....	1 1/2
		Pastoral Theology.....	1 1/2
		Homiletics.....	1
		<b>Total.....</b>	<b>15</b>

TABLE IV  
STATISTICS

Year	Incoming Students	Graduates	Total Number	Teachers	Classes	Year	Incoming Students	Graduates	Total Number	Teachers	Classes
1871-72.....	1	..	1	1	1	1888-89.....	10	7	19	2	3
1872-73.....	3	..	4	1	1	1889-90.....	18	4	27	3	3
1873-74.....	3	1	7	1	2	1890-91.....	14	4	28	3	3
1874-75.....	2	3	8	2	3	1891-92.....	18	12	43	3	3
1875-76.....	3	1	7	3	3	1892-93.....	12	14	43	3	4
1876-77.....	6	1	8	1	3	1893-94.....	18	5	38	3	4
1877-78.....	3	1	6	2	3	1894-95.....	9	9	36	3	4
1878-79.....	2	1	5	1	2	1895-96.....	13	3	28	3	4
1879-80.....	8	2	10	1	3	1896-97.....	12	8	33	3	4
1880-81.....	3	..	8	2	3	1897-98.....	9	3	30	3	4
1881-82.....	7	2	13	2	3	1898-99.....	4	7	25	3	4
1882-83.....	14	2	24	3	4	1899-1900.....	12	9	32	3	4
1883-84.....	10	8	26	3	4	1900-1901.....	10	3	26	3	4
						1901-1902.....	12	5	36	3	4
<b>Total.....</b>	<b>65</b>	<b>22</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>Total.....</b>	<b>171</b>	<b>93</b>	<b>..</b>	<b>..</b>	<b>..</b>
1884-85.....	26	6	39	4	3	<b>Grand total.</b>	<b>295</b>	<b>131</b>	<b>..</b>	<b>..</b>	<b>..</b>
1885-86.....	19	..	30	2	3						
1886-87.....	8	10	24	2	3						
1887-88.....	6	..	13	2	2						
<b>Total.....</b>	<b>59</b>	<b>16</b>	<b>..</b>	<b>..</b>	<b>..</b>						

## LIBRARY

There are three separate divisions in the library — the English, the Swedish, and the Danon-Norwegian. The Swedish department, besides the yearly appropriations by the University, has been specially fortunate in receiving valuable additions from private donors, among them Dr. J. A. Edgren. The English books are secured for the mutual benefit of the two Scandinavian schools. At present the books in the library number 468 English and 725 Swedish volumes.

## HALF-CENTENNIAL JUBILEE

The Swedish Baptists of America have recently celebrated the event of their fifty years' existence and labors. The jubilee was held in the Immanuel Baptist Church of Chicago, September 25-8, 1902. Besides visitors from all parts of this country, we had the privilege of welcoming delegates from Sweden, Finland, and Norway. The capacious church was well filled at every session. At the communion, held Sunday, September 28, between three and four thousand Swedish Baptists met around the Lord's table. Never before had the seating capacity of the church been so taxed, both auditorium, galleries, and Sunday-school rooms below being filled to the utmost. It was a memorable hour.

A mixed choir of 250 voices and a male choir of 100 members rendered splendid services during the jubilee. Excellent and inspiring addresses were delivered by representatives from the University of Chicago, the American Baptist Missionary Union, the American Baptist Home Mission Society, and the American Baptist Publication Society.

Our Seminary received its full share of esteem and appreciation. Of the Swedes participating none was shown greater affection and respect than the honored founder, and for many years the Head, of our school, Dr. J. A. Edgren. Above all a high degree of gratitude made itself manifest among our people for the many sacrifices, the splendid support and encouragement given by the Baptist Theological Union and the University of Chicago.

Once more turning our attention to the Seminary, it becomes clear that it has been the chief instrument in the hands of God to establish and extend the Swedish Baptist denomination in America. It has been organized for the purpose of furnishing our churches with good, faithful pastors; our fields with earnest, devout missionaries, preachers, and leaders. As one result of its successful efforts, let us, in closing, look upon our own great city of Chicago—this stronghold of the Swedish Baptists of this country. With a Swedish population of 140,000, there are in Chicago today 2,400 Swedish Baptists, belonging to twelve different churches, all of which, with one exception—the First Swedish Baptist Church—may truly be said to owe their origin to the zeal and efforts of the professors and students of our school.

## G. THE DISCIPLES' DIVINITY HOUSE

## REPORT OF DR. EBBRETT GATES, SECRETARY

The first step toward the organization of a Divinity House for the Disciples in connection with the University of Chicago was taken in the spring of 1894 by the Acting Board of the General Christian Missionary Society of the Disciples of Christ, meeting in Cincinnati, in naming the following persons as a temporary Board of Trustees: J. W. Allen, F. D. Power, J. H. Garrison, A. J. Marvin, W. F. Black, S. M. Cooper, W. D. MacClintock, N. S. Haynes, R. T. Matthews, F. M. Kirkham, A. McLean, John Gunzenhauser, G. W. Muckley, W. J. Ford, J. H. Hardin. At a meeting held in Chicago, May 26, 1894, and attended by A. McLean, J. H. Hardin, F. M. Kirkham, N. S. Haynes, J. W. Allen, and H. L. Willett, the temporary Board of Trustees constituted itself a permanent Board of Trustees for the purpose of negotiating with the University of Chicago terms of agreement for the organization and incorporation of the proposed

House. At this meeting H. L. Willett was appointed Dean. The Disciples' Divinity House was incorporated July 2, 1894. Articles of Agreement with the University were drawn up and officially adopted by the Board of Trustees at a meeting held in Richmond, Va., October 20, 1894.

#### ARTICLES OF AGREEMENT

The following is the Agreement into which the University enters with its several Divinity Houses:

*First:* The Divinity House (in each case) of the University of Chicago hereby agrees to build one or more halls at some point in proximity to the grounds of the University of Chicago, to be called by name or names hereafter to be agreed upon by the parties to this contract, it being understood that the hall or halls shall be used as a home for students of these denominations attending the University of Chicago; it being further understood that the grounds and halls shall be the sole and exclusive property of said Divinity House of the University of Chicago.

*Second:* The University of Chicago hereby agrees to furnish to the students of said House all the privileges of the University on the same terms as to the students living in the Houses of the University itself; it being further understood that students pursuing courses of theological studies shall be admitted in accordance with the regulations governing the Divinity School, and that said students, after having completed the courses of study laid down by the University, shall receive the proper recognition of such work in the form of appropriate degrees.

*Third:* It is mutually agreed that the Divinity House of the University of Chicago shall have the privilege of nominating one or more instructors or officers, who shall be given general charge of their said hall or halls and of students residing therein; provided said instructors or officers shall be elected by the Board of Trustees of the University of Chicago; it being understood:

1. That the officers of the House shall be recognized as members of the University of Chicago; shall be invited to confer with the Divinity Faculty of the University on questions which relate exclusively to the interests of the House or its members, and upon such questions only; and that the House shall be represented in the University Council by its principal officer, who shall be called Dean.

2. That the officers of the House shall give instructions in connection with the Department or Departments of the University designated at the time of their election, which instruction shall be accepted of students in lieu of other similar instruction offered by the University in accordance with the regulations of the Divinity School.

3. That the support and maintenance of such officers and instructors shall be provided by the Divinity House of the University of Chicago; it being understood that the University of Chicago shall have no financial responsibility in connection with said House, its officers, or teachers.

#### THE DISCIPLES' CHAPEL AND HALL

At the first annual meeting, April 4, 1895, measures were taken to obtain property for the location of a building for the House. An option was secured on a lot at the corner of Lexington avenue and Fifty-seventh street, just opposite the University Quadrangles, 100 × 170 in dimensions. The work of raising the funds necessary to the purchase of the lot was undertaken by Mr. Ames, with such success that by March 1, 1896, nearly the whole amount (\$13,000) had been raised. The transfer of the property to the Disciples' Divinity House was at once executed.

The end in view in the purchase of the lot was the erection of a hall with accommodations for students, classes, library, and offices. The need for such a hall was strongly urged upon the friends of the enterprise from the beginning, with the result that provision was made for it by the late John L. Davis, in his will, and was made known to the Trustees at his death in 1899. The will provides that at the death of his surviving widow one-half of the estate shall be devoted to the erection of a hall on the Divinity House lot, to be known as the "Davis Memorial Hall."

It is estimated that the bequest will yield \$50,000. Heirs of the estate instituted proceedings to break the will, but after lying in court for two years the case was thrown out.

In 1898 a request came from the Hyde Park Church of Christ to be allowed to build a chapel on one corner of the lot. Articles of Agreement were drawn up, and the chapel was erected in the fall of 1899 at a cost of about \$7,000. The relations between the Divinity House and the church have been, from the beginning, close, cordial, and mutually helpful.

#### INSTRUCTORS

H. L. Willett, served as Dean and Instructor, 1894-; E. S. Ames, served as Head and Instructor, 1894-97; W. E. Garrison, served as Head and Instructor, 1897-98; Hiram VanKirk, served as Head and Instructor, 1898-1900; Errett Gates, served as Instructor 1898- and Secretary 1900-.

The courses of instruction given in the House are shown in detail in connection with the statistics which follow.

#### STUDENTS

Any Disciple who matriculates in the University and takes his Major work in the Divinity School is a member of the House. The following table shows the number of students who have been members of the House, classified according to the year in which they entered:

1892-93	-	-	-	-	-	-	-	1
1893-94	-	-	-	-	-	-	-	3
1894-95	-	-	-	-	-	-	-	10
1895-96	-	-	-	-	-	-	-	13
1896-97	-	-	-	-	-	-	-	13
1897-98	-	-	-	-	-	-	-	22
1898-99	-	-	-	-	-	-	-	13
1899-1900	-	-	-	-	-	-	-	29
1900-1901	-	-	-	-	-	-	-	29
1901-1902	-	-	-	-	-	-	-	20
Total	-	-	-	-	-	-	-	153

Twenty-two different members of the House have taken twenty-five degrees from the University, as follows: Ph.B., 1; A.B., 2; D.B., 15; A.M., 1; Ph.D., 6.

#### ORGANIZATION

The present organization of the House is as follows: Dean, Herbert L. Willett; Secretary, Errett Gates. Trustees: W. D. MacClintock, Chicago, President; A. B. Wilson, Chicago, Treasurer; Errett Gates, Chicago, Secretary. Term expires 1903: J. H. Garrison, St. Louis; H. L. Willett, Chicago; W. D. MacClintock, Chicago; E. M. Bowman, Chicago; A. B. Wilson, Chicago. Term expires 1904: Errett Gates, Chicago; E. S. Ames, Chicago; G. W. Muckley, Kansas City; A. McLean, Cincinnati; F. D. Power, Washington. Term expires 1905: W. S. Brannum, Chicago; D. M. Hillis, Chicago; C. S. Roberts, Chicago; P. C. Frick, Cedar Rapids, Ia.; S. M. Cooper, Cincinnati.

#### H. THE CUMBERLAND PRESBYTERIAN DIVINITY HOUSE

At the meeting of the Synod of Illinois in Chicago, October 9-11, 1894, action was taken creating the Cumberland Presbyterian Divinity House of the University of Chicago. The Board of Trustees appointed by that body consisted of the following gentlemen: Rev. A. H.

Stephens, Chicago, President; Rev. W. C. Logan, Chicago, Secretary; A. Garrett, Genoa Junction, Wis., Treasurer; R. M. Antram, Grand Ridge; Samuel Anderson, Taylorville; Rev. A. G. Burgen, Mattoon; J. M. Cowan, Chicago; Charles Chubbuck, Chicago; Rev. J. E. Garvin, Taylorville; I. W. Howerth, Chicago; F. H. Perrin, Alton; F. E. Powell, Chicago; Rev. J. E. Roach, Auburn; A. R. Scott, Bethany; A. E. Turner, Lincoln.

The Articles of Agreement between the University and the Cumberland Presbyterian House are in the same form as those between the University and the Disciples' House. Some subscriptions for the lot and building were secured, but the arrangements were never completed.

The House opened formally October 1, 1895, with Rev. W. C. Logan as resident Secretary and officer of instruction. The instruction given is shown in connection with the statistics. The membership of the House numbered twelve students.

I. STATISTICS

TABLE VI

ATTENDANCE BY QUARTERS AND YEARS, 1892-1902

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
Summer.....	...	...	60	148	156	184	170	229	221	219
Autumn.....	182	161	209	199	204	191	182	207	201	189
Winter.....	181	168	212	177	185	183	172	201	184	188
Spring.....	170	128	207	170	159	187	171	199	181	170
Year.....	204	179	281	321	337	371	336	394	372	382

TABLE VII

THE GRADUATE DIVINITY SCHOOL. ATTENDANCE BY QUARTERS AND YEARS

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
Summer.....	...	...	43	105	131	130	129	165	177	164
Autumn.....	84	96	108	128	133	114	112	125	128	112
Winter.....	82	102	115	121	114	111	110	124	111	106
Spring.....	73	87	118	121	104	126	105	122	104	94
Year.....	89	111	165	205	234	238	224	241	253	251

TABLE VIII

UNCLASSIFIED DIVINITY STUDENTS. ATTENDANCE BY QUARTERS AND YEARS

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
Summer.....	..	..	17	43	25	54	41	64	44	55
Autumn.....	62	46	40	20	17	22	26	28	21	20
Winter.....	65	45	35	25	15	24	23	25	20	20
Spring.....	66	24	27	20	16	15	23	25	30	17
Year.....	79	47	54	62	46	78	67	98	66	71



TABLE IX  
DANO-NORWEGIAN THEOLOGICAL SEMINARY. ATTENDANCE BY QUARTERS AND YEARS

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
Summer.....	..	..	..	..	..	..	..	..	..	..
Autumn.....	13	7	25	23	20	25	19	23	27	23
Winter.....	11	8	26	13	22	22	19	22	27	24
Spring.....	8	4	26	12	9	20	19	22	27	23
Year.....	13	8	26	26	22	25	20	23	27	24

TABLE X  
SWEDISH THEOLOGICAL SEMINARY. ATTENDANCE BY QUARTERS AND YEARS

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-1901	1901-1902
Summer.....	..	..	..	..	..	..	..	..	..	..
Autumn.....	23	12	36	28	34	30	25	31	25	34
Winter.....	23	13	36	18	34	26	20	30	26	36
Spring.....	23	13	36	17	30	26	24	30	26	36
Year.....	23	13	36	28	35	30	25	32	26	36

TABLE XI  
PERCENTAGE OF ATTENDANCE EACH QUARTER AND YEAR, AS COMPARED WITH THE FIRST CORRESPONDING PERIOD

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Summer.....	...	...	100	247	260	306	283	332	368	365
Autumn.....	100	88	115	109	112	105	100	113	110	104
Winter.....	100	93	117	98	102	101	85	111	102	104
Spring.....	100	75	122	100	94	110	101	117	106	100
Year.....	100	88	138	157	165	182	165	193	182	187

TABLE XII  
PROPORTIONAL DISTRIBUTION OF ATTENDANCE IN THE THREE DIVISIONS OF THE DIVINITY SCHOOL

Division	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Graduate Divinity School.....	44	62	59	64	69	64	67	61	68	66
Unclassified Divinity Students....	39	26	19	19	14	21	20	25	18	18
Scandinavian Theolog. Seminaries	17	12	22	17	17	15	13	14	14	16
Total Divinity Attendance....	100	100	100	100	100	100	100	100	100	100

TABLE XIII  
PERCENTAGE OF WOMEN

Quarter	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Summer.....	..	..	5	..	5	9	9	8	3	7
Autumn.....	2	3	3	3	4	8	4	6	5	4
Winter.....	4	4	4	5	6	9	8	8	6	4
Spring.....	3	16	2	11	3	2	5	7	6	1
Year.....	4	3	3	3	5	9	7	10	6	6

TABLE XIV  
THE GEOGRAPHICAL DISTRIBUTION OF DIVINITY STUDENTS

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	Total Differ-ent Students for 10 Years
Alabama.....	..	..	..	..	..	1	1	2	1	3	6
Arkansas.....	..	..	2	2	2	1	4	3	6	1	12
Arizona.....	..	..	..	..	..	..	..	..	..	..	..
California.....	4	1	6	7	3	2	1	2	..	4	20
Colorado.....	..	2	2	3	2	3	3	2	2	3	10
Connecticut.....	2	1	2	2	4	4	2	2	..	1	10
Florida.....	..	..	..	..	..	1	..	1	..	3	5
Georgia.....	..	..	..	1	..	1	3	3	3	3	9
Idaho.....	..	..	..	..	..	..	..	..	..	..	..
Illinois.....	66	55	78	81	93	110	89	92	87	92	387
Indiana.....	6	7	13	14	11	12	16	26	18	19	75
Indian Territory.....	..	..	..	1	1	..	..	..	..	..	1
Iowa.....	8	12	17	21	21	32	28	36	28	25	119
Kansas.....	9	6	10	9	8	10	5	10	10	12	46
Kentucky.....	..	1	1	2	4	4	4	3	7	7	23
Louisiana.....	..	..	..	..	1	..	1	1	2	1	5
Maine.....	1	2	3	4	1	1	1	1	1	1	7
Maryland.....	..	..	1	1	1	3	2	2	..	..	5
Massachusetts.....	3	2	4	10	6	9	8	3	8	8	29
Michigan.....	13	6	8	15	15	12	13	21	23	18	75
Minnesota.....	12	9	18	12	16	12	13	18	16	24	67
Mississippi.....	1	..	3	2	2	1	1	4	4	3	15
Missouri.....	7	9	7	13	10	18	9	17	10	15	66
Montana.....	..	..	1	..	1	..	1	1	..	..	3
Nebraska.....	5	5	6	8	14	13	12	11	9	8	39
New Hampshire.....	..	1	2	2	4	5	4	2	1	..	9
New Jersey.....	..	1	4	4	2	2	2	1	1	..	6
New York.....	10	11	14	10	11	12	11	8	12	7	48
North Carolina.....	2	1	3	2	3	1	4	4	3	4	14
North Dakota.....	2	1	3	4	2	5	4	4	1	1	9
Ohio.....	9	7	7	16	15	20	15	21	27	21	84
Oklahoma.....	1	..	..	..	..	..	1	1	..	..	2
Oregon.....	..	..	1	1	1	..	..	..	..	..	2
Pennsylvania.....	6	7	10	11	13	11	13	13	13	19	66
Rhode Island.....	1	1	..	..	..	..	..	..	..	1	2
South Carolina.....	1	2	1	1	1	3	1	4	1	4	12
South Dakota.....	..	1	7	10	7	9	6	7	7	2	22
Tennessee.....	..	..	5	3	7	6	3	6	10	5	24
Texas.....	..	..	..	3	2	5	4	3	3	5	18
Utah.....	..	..	..	..	..	..	..	..	..	1	1
Vermont.....	..	1	..	..	..	1	1	..	..	..	2
Virginia.....	1	3	4	1	1	2	6	9	6	6	21
Washington.....	1	1	1	1	1	..	..	..	1	1	4
West Virginia.....	1	1	5	2	2	..	..	..	1	1	10
Wisconsin.....	10	1	7	12	21	11	15	21	16	15	69
District of Columbia.....	..	..	..	1	1	2	1	2	1	3	6
Totals from U. S.....	182	158	256	292	310	345	308	366	334	351	1,465
Burma.....	1	..	..	..	..	1	..	1	..	..	3
Canada.....	10	8	9	7	11	14	11	12	14	13	56
China.....	..	..	..	..	..	..	..	1	..	..	1
Denmark.....	2	2	1	1	1	..	..	..	..	..	3
England.....	2	2	2	2	2	2	..	1	2	..	8
Hawaii.....	..	..	..	1	1	..	..	..	1	1	2
Hungary.....	..	1	..	..	1	1	1	..	..	..	1
Ireland.....	..	..	..	2	..	..	1	2	..	..	2
Japan.....	..	..	..	2	2	1	3	4	9	5	16
Mexico.....	..	1	1	1	..	..	..	..	1	..	2
Norway.....	5	3	5	6	3	4	4	4	9	10	22
Paraguay.....	..	..	..	1	..	..	..	..	..	..	1
Persia.....	..	1	1	..	..	..	..	..	..	..	1
Roumania.....	..	1	..	2	..	..	..	..	..	..	1
Russia.....	..	..	1	2	2	1	1	..	..	..	2
Scotland.....	1	1	1	..	..	..	..	..	1	..	3
Siam.....	..	..	..	..	..	..	..	..	..	1	1
Sweden.....	1	1	1	1	1	1	1	2	1	1	2
Syria.....	..	..	..	..	..	..	..	1	..	..	1
Turkey.....	..	..	1	..	..	..	..	..	..	..	1
Totals from foreign countries.....	22	21	23	24	24	25	22	28	38	31	129
Not stated.....	..	..	2	4	3	1	6	..	..	..	.....
Grand total.....	204	179	281	321	337	371	336	394	372	382	1,594

TABLE XV

THE INSTITUTIONS FROM WHICH THE LARGEST NUMBER OF STUDENTS HAVE COME EACH YEAR

1892-93—1. Morgan Park Theological Seminary. 2. Denison University. 3. Bucknell University. 4. University of Michigan. 5. Acadia College.	1897-98—1. University of Chicago. 2. Morgan Park Scandinavian Academy. 3. Des Moines College. 4. Bucknell University. 5. Yale University.
1893-94—1. Morgan Park Scandinavian Academy. 2. Morgan Park Theological Seminary. 3. Denison University. 4. Colgate University. 5. Bucknell University.	1898-99—1. University of Chicago. 2. Morgan Park Theological Seminary. 3. Bucknell University. 4. Chicago Theological Seminary. 5. Yale University.
1894-95—1. Morgan Park Scandinavian Academy. 2. Bucknell University. 3. Colgate University. 4. Denison University. 5. University of Chicago.	1899-00—1. Morgan Park Scandinavian Academy. 2. Hiram College. 3. University of Chicago. 4. Bucknell University. 5. Vanderbilt University.
1895-96—1. Denison University. 2. Colgate University. 3. Morgan Park Theological Seminary. 4. University of Chicago. 5. Chicago Theological Seminary.	1900-01—1. Morgan Park Scandinavian Academy. 2. University of Chicago. 3. Garrett Biblical Institute. 4. Drake University. 5. Vanderbilt University.
1896-97—1. University of Chicago. 2. Denison University. 3. Des Moines College. 4. Chicago Theological Seminary. 5. Bucknell University.	1901-02—1. Morgan Park Scandinavian Academy. 2. University of Chicago. 3. Bucknell University. 4. Vanderbilt University. 5. Southern Baptist Theological Sem.

TABLE XVI

AVERAGE AGES OF STUDENTS ON ENTERING AND ON LEAVING THE VARIOUS DIVISIONS OF THE DIVINITY SCHOOL, FOR THE TEN YEARS 1892-1902

Ages (Average)	1892-98	1898-99	1899-1900	1900-1901	1901-1902	1892-1902
I. On entering—						
The Graduate Divinity School.....	29	31	31	32	33.6	30
The Unclassified Divinity Division....	30	29	35	30	32.8	31
The Dano-Norwegian Theological Sem....	25	22	24	25	25.6	25
The Swedish Theological Seminary ...	26	29	29	30	25.8	27
II. On graduating with the degree of—						
Bachelor of Theology.....	30	..	..	..	38.5	31
Bachelor of Divinity .....	31	31	31	30	29.5	31
Master of Arts .....	23	35	46	30	28.7	33+
Doctor of Philosophy.....	29	34-	34-	30	31.	32
III. On receiving the—						
Dano-Norwegian Certificate .....	28	31	30	29	24	28+
Swedish Certificate .....	28	31-	28	32	29	29-
English Certificate.....	32	..	..	39	32	32





TABLE XX

INSTRUCTORS IN THE DIVINITY SCHOOL, 1892-1902, BY YEARS AND DEPARTMENTS

Department	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	Total Diff. Instr.
Old Testament .....	7	7	9	8	9	8	7	7	8	8	14
New Testament .....	4	4	4	5	4	3	4	4	5	5	12
Systematic Theology .....	2	2	3	3	2	2	2	2	3	2	6
Church History .....	3	2	3	3	3	3	3	3	4	4	6
Homiletics .....	2	2	3	2	3	3	2	2	2	2	4
Sociology .....	1	1	1	1	1	1	1	1	1	1	1
Public Speaking .....	..	..	..	..	2	2	1	2	2	2	3
Disciples' .....	..	..	..	2	1	2	4	2	1	1	5
Cumberland Presbyterian ..	..	..	..	1	..	..	..	..	..	..	1
Total (after deducting repetitions) .....	18	17	20	24	24	22	22	21	25	24	48

TABLE XXI

INSTRUCTION (IN MAJORS) IN THE DIVINITY SCHOOL, 1892-1902, BY YEARS AND DEPARTMENTS

Department	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	Total
Old Testament .....	27.50	25.25	41.50	46.00	42.00	39.00	39.00	38.50	35.25	37.50	371.5
New Testament .....	15.00	14.50	20.50	18.00	18.00	23.00	23.00	25.00	25.00	25.00	207.0
Systematic Theology .....	8.00	10.00	6.50	10.00	9.00	9.00	8.00	7.00	11.00	13.50	92.0
Church History .....	10.50	8.50	15.00	17.00	19.00	13.00	16.00	17.00	16.50	15.50	147.5
Homiletics .....	6.50	6.00	8.00	8.00	8.50	8.50	8.00	7.50	8.50	9.50	79.5
Sociology .....	4.00	6.00	6.00	9.00	10.50	9.00	10.00	6.00	10.00	6.00	76.5
Public Speaking .....	..	..	..	..	1.50	3.50	2.00	3.50	3.00	4.00	17.5
Disciples' .....	..	..	..	2.00	1.00	2.50	3.00	2.50	0.50	0.50	12.0
Cumberland Presbyterian ..	..	..	..	2.00	..	..	..	..	..	..	02.0
Total .....	71.50	70.25	97.50	112.00	109.50	107.50	109.00	107.00	109.75	111.50	1005.5

TABLE XXII

REGISTRATIONS (ON MAJOR-COURSE BASIS)<sup>1</sup> IN THE DIVINITY SCHOOL, 1892-1902, BY YEARS AND DEPARTMENT

Department	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	Total
Old Testament .....	285	269	389	389	376	311	337	491	479	451	3774
New Testament .....	194	138	307	307	288	406	336	464	545	440	3421
Systematic Theology .....	138	242	92	206	218	213	123	158	213	171	1772
Church History .....	274	201	272	281	272	293	214	316	269	274	2664
Homiletics .....	110	137	178	101	112	158	106	90	91	138	1219
Sociology .....	116	99	68	85	103	101	164	63	129	76	1002
Public Speaking .....	..	..	..	..	25	51	54	50	95	92	367
Disciples' .....	..	..	..	4	4	17	9	13	4	4	54
Cumberland Presbyterian ..	..	..	..	3	..	..	..	..	..	..	3
Total .....	1116	1064	1303	1375	1398	1549	1341	1643	1824	1645	14274

<sup>1</sup> That is, counting a registration for a Major course as one, for a double Major as two, for a Minor as one-half, etc. In cases where fractions enter in this way, the next highest whole number is taken. This accounts for the apparent discrepancies in the totals.

TABLE XXIII

AVERAGE NUMBER OF MAJORS PER INSTRUCTOR, 1892-1902, BY YEARS AND DEPARTMENTS

Department	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1892-1902
Old Testament .....	3.83	3.61	4.61	5.75	4.66	4.88	5.71	5.50	4.41	4.69	26.54
New Testament .....	3.75	3.63	5.13	3.60	4.50	7.67	5.75	6.25	5.00	5.00	17.25
Systematic Theology .....	4.00	5.00	2.17	3.33	4.50	4.50	4.00	3.50	3.67	6.75	15.33
Church History .....	3.50	4.00	5.00	5.67	6.33	4.33	5.33	5.67	4.13	3.88	24.58
Homiletics .....	3.25	3.25	2.67	4.00	2.83	2.83	4.00	3.75	4.25	4.75	19.88
Sociology .....	4.00	6.00	6.00	9.00	10.50	9.00	10.00	6.00	10.00	6.00	76.50
Public Speaking .....	.....	.....	.....	.....	0.75	1.75	2.00	1.75	1.50	2.00	5.83
Disciples' .....	.....	.....	.....	1.00	1.00	1.25	0.75	1.25	0.50	0.50	2.40
Cumberland Presbyterian ..	.....	.....	.....	2.00	.....	.....	.....	.....	.....	.....	2.00
Total .....	3.97	4.13	4.88	4.66	4.56	4.81	4.95	5.09	4.39	4.65	20.95

TABLE XXIV

AVERAGE NUMBER OF REGISTRATIONS (ON MAJOR-COURSE BASIS) PER INSTRUCTOR, 1892-1902, BY YEARS AND DEPARTMENTS

Departments	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1892-1902
Old Testament .....	40.64	38.39	43.14	48.63	41.75	38.81	48.07	70.71	59.88	56.38	269.55
New Testament .....	48.50	34.38	76.63	61.30	41.88	135.33	83.88	115.88	108.85	87.90	285.06
Systematic Theology .....	68.75	120.75	30.50	68.50	109.00	106.50	61.50	79.00	71.00	85.25	295.25
Church History .....	91.17	100.25	90.50	93.67	90.67	97.50	71.33	105.17	67.13	68.50	443.92
Homiletics .....	55.00	68.25	59.17	50.50	37.33	52.67	53.00	44.75	45.25	69.00	304.75
Sociology .....	116.00	98.50	67.50	84.50	103.00	101.00	163.50	63.00	128.50	76.00	1001.50
Public Speaking .....	.....	.....	.....	.....	12.50	25.50	54.00	25.00	47.50	46.00	122.33
Disciples' .....	.....	.....	.....	2.00	4.00	8.50	2.13	6.25	4.00	4.00	10.80
Cumberland Presbyterian ..	.....	.....	.....	3.00	.....	.....	.....	.....	.....	.....	3.00
Total .....	61.97	63.72	65.14	57.27	58.22	70.41	60.96	78.21	72.93	68.54	297.38

TABLE XXV

AVERAGE NUMBER OF REGISTRATIONS PER COURSE, 1892-1902, BY YEARS AND DEPARTMENTS

Department	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1892-1902
Old Testament .....	10.35	10.64	9.36	8.46	8.95	7.96	8.63	12.74	13.59	12.03	10.16
New Testament .....	12.93	9.48	14.95	17.03	15.97	17.65	14.59	18.54	21.77	17.58	16.53
Systematic Theology .....	17.19	24.15	14.08	20.55	24.22	23.67	15.38	22.57	19.36	12.63	19.26
Church History .....	26.05	25.06	18.10	16.53	14.32	22.50	13.38	18.56	16.30	17.68	18.06
Homiletics .....	16.92	21.00	22.19	12.63	13.18	18.59	13.25	11.93	10.65	14.53	15.33
Sociology .....	29.00	16.42	11.25	9.39	9.81	11.22	16.35	10.50	12.85	12.67	13.09
Public Speaking .....	.....	.....	.....	.....	16.67	14.57	27.00	14.29	31.67	23.00	20.97
Disciples' .....	.....	.....	.....	2.00	4.00	6.80	2.83	5.00	8.00	8.00	4.50
Cumberland Presbyterian ..	.....	.....	.....	1.50	.....	.....	.....	.....	.....	.....	1.50
Total .....	15.60	15.42	13.36	12.27	12.76	14.41	12.30	15.35	16.62	14.75	14.20

TABLE XXVI  
INSTRUCTION IN THE DIVINITY SCHOOL, 1892-1902, BY YEARS AND INSTRUCTORS

INSTRUCTOR	1892-93		1893-94		1894-95		1895-96		1896-97		1897-98		1898-99		1899-00		1900-01		1901-02		1892-1902		
	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	No. of Majors Instruction on Major Basis	Registration on Major Basis	
<i>Old Testament:</i>																							
W. R. Harper	7	105	5%	63	9%	113	9	163	8	129	6	132	6%	127	10%	327	14	365	11	264	87	1786	
S. Burnham					1%	16															1%	16	
E. G. Hirsch	3%	17	5	12	3	11	9%	20	4	4			1	1			2%	6	4	27	32%	97	
George Adam Smith															7%	22	5	34	8	68	66%	631	
I. M. Price	6	89	4%	73	9	85	8	68	5%	62	6%	40	7	77	7	37	5	34	8	68	19%	211	
G. S. Goodspeed	2	16	1%	24	4	57	2	19	4%	46	4%	3	3	28	1	1	1	4	1	9	64%	231	
R. F. Harper	5%	31	3%	8	7%	30	8	47	7	18	8%	26	5%	20	11	29	4	10	4	11	32%	120	
J. H. Breasted					1	4	4%	14	4	22	7	41	11	25	1	3	3	13	4	33	13%	127	
H. L. Willett									1/2	23	1/2	19	3%	24	4%	19	3	4			7	59	
C. F. Kent	2%	19	2%	31	2	9	2%	31	5%	38	6%	25	5%	36			4				2%	180	
C. E. Crandall	1	9	1%	22	2	17	2%	31			1	8					1/2	10	1/2	4	2	14	
C. R. Brown																					1	8	
J. M. P. Smith																					2	14	
G. R. Berry							1	2	1%	8											2%	10	
W. R. Harper and Breasted							2	27													2	27	
W. R. Harper and Willett															1	11					1	11	
W. R. Harper and Crandall			1	37	2	47			1	19											4	103	
Price and Breasted									1	9											1	9	
Price, Willett, and Crandall																	2	24			2	24	
Breasted and Willett															1	12					1	12	
Breasted and Crandall													2	42							2	42	
Willett and Smith																			2	22	2	22	
Crandall and Brown											1	17									1	17	
<i>New Testament:</i>																							
E. D. Burton	7	97	6%	83	6%	93	6	126	8	190	8	149	6	90	8	139	8%	241	4	89	68%	1236	
Shailer Mathews					7	160	6	136	3	31	8%	176	8%	158	9%	231	6%	148	8%	190	57%	1230	
C. R. Gregory							1	14					1	10					1	10	3	34	
J. S. Riggs																	1	30			1	30	
Rush Rhees									1	18											1	18	
P. A. Nordell	4	58																			4	58	
W. M. Arnolt			3	11	4%	12	2	4													9%	27	
C. W. Votaw	1/2	2	4%	31	2%	42	3	28	6	49	6%	81	6%	71	7%	87	2	40	6	71	44%	500	
T. H. Root	3%	38																			3%	38	
E. J. Goodspeed																	6	55	5	74	11	129	
H. T. De Wolfe															1/2	8					1/2	8	
C. E. Woodruff			1/2	14													1/2	31			1/2	14	
Burton and Mathews																					1/2	31	
Mathews and Votaw													1	7					1/2	6	1%	13	
<i>Systematic Theology:</i>																							
G. W. Northrup	4%	94	5	147	4%	47	3%	56	3	96	3	107	2	35	1	28					25%	611	
G. B. Foster			1	30	6	138	6	120	6	120	6	106	6	88	6	130	7	148	6	105	44%	865	
A. B. Bruce							1/2	12													1/2	12	
F. Johnson			1	15																	1	15	
B. F. Simpson	3%	44	5	95																	8%	139	
G. B. Smith																	3	37	7%	66	10%	103	
Northrup and Foster															1	23					1	23	
<i>Church History:</i>																							
E. B. Hulbert	5%	159	4%	120	5	93	6	129	7	140	5	140	7	116	6%	144	5	96	7	124	58%	1258	
F. Johnson	3%	79	3%	81	4	99	4	65	4	46	4	49	4	49	4%	48	4%	52	1%	31	37%	596	
A. C. McGiffert																	1	44			1	44	
A. K. Parker																					1	5	
J. W. Conley	1%	36																			1	5	
J. W. Moncrief					6	80	7	88	8	86	4	104	5	49	6	124	6	78	6	115	1%	36	
<i>Homiletics, Ch. Polity, and Pastoral Duties:</i>																							
G. Anderson	5	81	5%	123	7	156	6	86	6	77	6	106	6	86	5	72	6	72	8	116	60%	976	
F. Johnson	1%	29	1	14	1/2	14	2	15	2	18	2	30	2	20	2%	18	2%	19	1%	22	17%	198	
W. H. P. Faunce									1/2	17	1/2	20									1	37	
C. R. Henderson					1/2	8															1/2	8	
<i>Sociology:</i>																							
C. R. Henderson	4	116	6	99	6	68	9	85	10%	103	9	101	10	164	6	63	10	129	6	76	76%	1002	
<i>Public Speaking:</i>																							
S. H. Clark									1	11	3	26			2	31	1	23	1	10	8	101	
W. B. Chamberlain									1/2	14	1/2	25									1	39	
F. M. Blanchard													2	54	1%	19	1	53	1	10	5%	136	
Clark and Blanchard																	1	19	2	72	3	91	
<i>Disciples' Div. House:</i>																							
H. L. Willett							1	1			1%	11	1/2	2	1/2	3					3%	17	
E. S. Ames							1	3	1	4											2	7	
W. L. Garrison											1	6	1/2	2							1%	8	
E. Gates													1	2							2	10	
H. Van Kirk													1	3							3	13	
<i>Cum. Pres. Div. House:</i>																							
W. C. Logan							2	3													2	3	

<sup>1</sup>That is, counting two registrations for a Minor course as equivalent to one registration for a Major course and one for a Double Major as equivalent to two for a Major, etc.



TABLE XXVII

REGISTRATION IN THE DIVINITY SCHOOL, 1892-1902, BY COURSES

(Showing the number of times each course was given, its value in Majors, the total registration, and the registration on Major-course basis)

Semitic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registrations	Total Value in Majors	Registration on Major Basis
Professor W. R. Harper:					
Beginning Hebrew.....	1	4	51	4	51
The Book of Kings.....	1	1	6	1	6
Books of Samuel and Hebrew Grammar.....	1	1	28	1	28
Advanced Hebrew Grammar.....	$\frac{1}{2}$	2	35	1	18-
Advanced Hebrew Grammar: Etymology.....	$\frac{1}{2}$	4	40	2	20
Advanced Hebrew Grammar: Syntax.....	$\frac{1}{2}$	5	56	2 $\frac{1}{2}$	28
General Survey of O. T. Literature and History...	1	8	369	8	369
Development of Old Testament Literature.....	1	1	19	1	19
Old Testament Institutions and Laws.....	1	3	101	3	101
Old Testament Legal Literature.....	1	1	14	1	14
Old Testament Legal Literature.....	$\frac{1}{2}$	1	22	$\frac{1}{2}$	11
Early Old Testament Traditions.....	1	4	49	4	49
Prophecy and the History of Prophecy.....	1	6	181	6	181
The Minor Prophets of the Assyrian Period.....	1	1	22	1	22
The Minor Prophets of the Post-Exilic Period.....	$\frac{1}{2}$	2	50	1	25
The Minor Prophets of the Babylonian Period....	$\frac{1}{2}$	2	57	1	29-
The Book of Hosea.....	$\frac{1}{2}$	1	8	$\frac{1}{2}$	4
Old Testament Wisdom Literature (= Old Testament Philosophy and Ethics).....	1	5	156	5	156
The Book of Job.....	1	1	19	1	19
Hebrew Poetic Literature.....	1	2	18	2	18
Exegetical Study of Selected Psalms.....	1	1	5	1	5
Hexateuchal Analysis.....	1	1	13	1	13
The Atonement.....	$\frac{1}{2}$	1	29	$\frac{1}{2}$	15-
Arabic Language.....	1	4	24	4	24
Arabic Language.....	$\frac{1}{2}$	1	4	$\frac{1}{2}$	2
Advanced Arabic.....	$\frac{1}{2}$	1	2	$\frac{1}{2}$	1
Arabic Geography, History, and Commentary.....	1	1	11	1	11
Arabic Geography, History, and Commentary.....	$\frac{1}{2}$	1	9	$\frac{1}{2}$	5-
Arabic Poetry and Inscriptions.....	1	1	7	1	7
Earlier Suras of the Kuran.....	1	3	22	3	22
Earlier Suras of the Kuran.....	$\frac{1}{2}$	1	7	$\frac{1}{2}$	4-
Later Suras of the Kuran.....	1	1	3	1	3
The Thousand and One Nights.....	1	1	6	1	6
Ethiopic.....	$\frac{1}{2}$	1	7	$\frac{1}{2}$	4-
<i>Seminars:</i>					
The Psalms.....	1	1	6	1	6
Amos.....	1	1	13	1	13
Hosea.....	1	1	14	1	14
Micah I.....	1	1	9	1	9
Micah II.....	1	1	8	1	8
Micah and Nahum.....	1	1	4	1	4
Zechariah.....	1	1	14	1	14
Arabic Seminar.....	1	1	9	1	9
Earlier Suras of the Kuran.....	1	1	2	1	2
Comparative Semitic Grammar.....	1	1	9	1	9
Comparative Semitic Etymology I.....	1	1	5	1	5
Comparative Semitic Etymology II.....	1	1	2	1	2
Comparative Semitic Etymology III.....	1	1	1	1	1
Comparative Semitic Syntax I.....	1	1	8	1	8
Comparative Semitic Syntax II.....	1	1	5	1	5
Comparative Semitic Syntax III.....	1	1	3	1	3
Comparative Semitic Phonology.....	1	2	11	2	11

TABLE XXVII—Continued

Semitic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registrations	Total Value in Majors	Registration on Major Basis
<b>Professor W. R. Harper:</b>					
<i>Sunday Morning Bible Courses:</i>					
Hebrew Laws: Priest Codes.....	1/2	1	22	1/2	11
Early Old Testament Traditions.....	1/2	1	58	1/2	29
Prophecy and the History of Prophecy.....	1/2	1	64	1/2	32
Isaiah I-XII.....	1/2	1	33	1/2	17-
Isaiah XL-LXVI.....	1/2	1	56	1/2	28
The Work of Isaiah.....	1/2	1	41	1/2	21-
Jeremiah.....	1/2	1	55	1/2	28-
Hebrew Philosophy and Ethics.....	1/2	2	121	1	61-
The Book of Job.....	1/2	2	124	1	62
Early Hebrew Psalms.....	1/2	1	99	1/2	50-
Later Hebrew Psalms.....	1/2	1	79	1/2	40-
<b>Professor W. R. Harper and Associate Professor Breasted:</b>					
Hebrew Language.....	1	2	27	2	27
<b>Professor W. R. Harper and Assistant Professor Willett:</b>					
Hebrew Language.....	1	1	11	1	11
<b>Professor W. R. Harper and Dr. Crandall:</b>					
Hebrew Language.....	1	3	83	3	83
Historical Hebrew: Books of Samuel.....	1	1	20	1	20
<b>Professor Burnham:</b>					
Advanced Hebrew Grammar.....	1/2	1	3	1/2	2-
The Psalter (Hebrew).....	1/2	1	16	1/2	8
The Book of Psalms (English).....	1/2	1	13	1/2	7-
<b>Professor Hirsch:</b>					
Hebrew Sight-Reading.....	1/2	1	1	1/2	1-
The Book of Job.....	1/2	2	4	1	2
Introduction to the Textual Criticism of the O. T.....	1/2	2	5	2	5
Introduction to the Textual Criticism of the O. T.....	1/2	1	2	1/2	1
Palestinian Archæology.....	1	1	3	1	3
Life in Old Testament Times.....	1	1	18	1	18
General Introduction to Rabbinical Literature and Life.....	1	2	6	2	6
General Introduction to Rabbinical Literature and Life.....	1/2	1	1	1/2	1-
Rabbinica.....	1/2	1	4	1/2	2
Rabbinical Commentaries on Genesis or Other Books of the Old Testament.....	1/2	1	2	1/2	1
History of the Jewish Sects.....	1/2	1	2	1/2	1
Mishnah.....	1	1	1	1	1
Selected Portions of the Mishnah and Abodahzarah.....	1	1	1	1	1
Introduction to Talmudic Literature.....	1/2	1	5	1/2	3-
The Talmud.....	1	2	3	2	3
Targumic Aramaic.....	1	1	5	1	5
Selected Portions of the Babylonian Talmud.....	1/2	1	4	1/2	2
Legislation of the Talmud.....	1	1	3	1	3
Civil and Criminal Legislation of the Talmud.....	1/2	1	2	1/2	1
Talmudical Analogies to the New Testament.....	1/2	3	5	1 1/2	3-
The Thousand and One Nights.....	1	1	7	1	7
The Thousand and One Nights.....	1/2	2	3	1	2-
Philosophical Literature of the Arabians.....	1/2	1	1	1/2	1-
Hebrew Arabic Philosophy.....	1	1	4	1	8
Assyrian Languages.....	1/2	2	16	1	4
Coptic.....	1/2	1	1	1/2	1-
Ethiopic.....	1/2	2	3	1	2-
Mandaic.....	1/2	2	3	1	2-
Advanced Syriac.....	1	3	7	3	7
Advanced Syriac.....	1/2	1	3	1/2	2-

TABLE XXVII—Continued

Semitic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
Professor Hirsch:					
<i>Seminars:</i>					
Rabbinical Philosophy.....	1	1	1	1	1
The Talmud.....	1	2	2	2	2
Professor George Adam Smith:					
The Hebrew Psalter.....	$\frac{1}{2}$	1	43	$\frac{1}{2}$	22—
Professor Price:					
Hebrew Language, I.....	1	8	108	8	108
Hebrew Language, II.....	1	4	58	4	58
Hebrew Language, II.....	$\frac{1}{2}$	1	21	$\frac{1}{2}$	11—
Historical Hebrew.....	$\frac{1}{2}$	1	21	$\frac{1}{2}$	11—
Historical Hebrew: Books of Kings.....	1	1	2	1	2
The Books of Samuel.....	$\frac{1}{2}$	1	15	$\frac{1}{2}$	8—
Sight-Reading in Kings.....	$\frac{1}{4}$	1	4	$\frac{1}{4}$	1
Advanced Hebrew Grammar: Etymology.....	$\frac{1}{2}$	2	22	$\frac{1}{2}$	11
Advanced Hebrew Grammar: Syntax.....	$\frac{1}{2}$	3	10	$1\frac{1}{2}$	5
Old Testament History.....	1	1	2	1	2
Old Testament History.....	$\frac{1}{2}$	1	8	$\frac{1}{2}$	4
Biblical Chronology.....	$\frac{1}{2}$	1	29	$\frac{1}{2}$	15—
General Survey of O. T. Literature and History...	1	1	31	1	31
General Introduction to the Old Testament.....	1	1	9	1	9
Special Introduction.....	1	1	8	1	8
Special Introduction.....	$\frac{1}{2}$	1	14	$\frac{1}{2}$	7
History of the Canon and Text of the O. T.....	1	3	10	3	10
History, Principles, and Methods of Old Testament Interpretation.....	1	2	9	2	9
Special Introduction to the Prophetic Books.....	1	1	4	1	4
Origin, Growth, and Character of the Prophetic Books.....	1	1	1	1	1
Origin, Growth, and Character of the Prophetic Books.....	$\frac{1}{2}$	1	10	$\frac{1}{2}$	5
Hebrew Prophets.....	1	1	27	1	27
Messianic Prophecy.....	1	2	23	2	23
Samuel and Kings in English.....	1	1	31	1	31
Ezekiel in English.....	$\frac{1}{2}$	1	7	$\frac{1}{2}$	4—
Jeremiah in English.....	$\frac{1}{2}$	1	12	$\frac{1}{2}$	6
The Minor Prophets in English.....	1	1	20	1	20
The Psalter in English.....	$\frac{1}{2}$	1	10	$\frac{1}{2}$	5
Isaiah I—XXXIX in English.....	1	1	3	1	3
Isaiah.....	$\frac{1}{2}$	1	8	$\frac{1}{2}$	4
Isaiah I—XXXIX.....	1	2	15	2	15
Isaiah I—XXXIX.....	$\frac{1}{2}$	1	15	$\frac{1}{2}$	8—
Isaiah XL—LXVI.....	1	1	5	1	5
Isaiah XL—LXVI.....	$\frac{1}{2}$	1	11	$\frac{1}{2}$	6—
Jeremiah.....	1	2	17	2	17
Jeremiah.....	$\frac{1}{2}$	2	22	1	11
Deuteronomy.....	1	1	9	1	9
Deuteronomy.....	$\frac{1}{2}$	1	6	$\frac{1}{2}$	3
Deuteronomy and Selections from the Prophets.....	1	1	6	1	6
Ezekiel.....	1	2	12	2	12
Ezekiel.....	$\frac{1}{2}$	1	13	$\frac{1}{2}$	7—
The Book of Job.....	1	1	5	1	5
The Hebrew Psalter.....	1	3	15	3	15
The Psalms.....	$\frac{1}{2}$	1	10	$\frac{1}{2}$	5
Modern Discoveries and the Old Testament.....	1	1	2	1	2
Modern Discoveries and the Old Testament.....	$\frac{1}{2}$	3	54	$1\frac{1}{2}$	27
Books of Kings and Their Parallel Assyrian Records.....	1	2	17	2	17
"Special" Work in the Old Testament.....	$\frac{1}{2}$	1	4	$\frac{1}{2}$	2
Biblical Aramaic and the Book of Daniel.....	1	1	3	1	3

TABLE XXVII—Continued

Semitic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Price:</b>					
Biblical Aramaic.....	1/2	3	11	1 1/2	6—
Assyrian.....	1/2	1	6	1/2	3
Early Babylonian Inscriptions.....	1	1	5	1	5
<b>Seminars:</b>					
Isaiah I—XII.....	1	1	3	1	3
Babylonian Bilingual Psalm Literature, I.....	1	1	1	1	1
Babylonian Bilingual Psalm Literature, II.....	1	1	1	1	1
<b>Professor Price and Associate Professor Breasted:</b>					
Hebrew Language, I.....	1	1	9	1	9
<b>Professor Price, Assistant Professor Willett, and Dr. Crandall:</b>					
Hebrew Language, I and II.....	2	1	12	2	24
<b>Professor Goodspeed:</b>					
History of Antiquity to the Fall of the Persian Empire <sup>1</sup> .....	1	8	101	8	101
<b>Contemporary History of the Old Testament:</b>					
Egypt, Babylonia, and Assyria.....	1	2	16	2	16
Oriental Antiquity under Assyrian Domination.....	1/2	1	4	1/2	2
History of Babylonia and Assyria.....	1/2	1	17	1/2	9—
History of Egypt.....	1/2	1	12	1/2	6
Egyptian Historical Documents.....	1/2	1	3	1/2	2—
Studies in Assyro-Babylonian Historical Docum'ts.....	1/2	1	10	1/2	5
Introduction to the History of Hebrew Monarchy.....	1	1	12	1	12
Biblical History.....	1	1	33	1	33
Biblical History.....	1/2	2	18	1	9
History of Israel.....	1	3	35	3	35
Beginnings of Hebrew History.....	1	3	24	3	24
History of the Hebrew Monarchy.....	1	2	19	2	19
History of the Hebrews from Solomon to the Maccabees.....	1	1	9	1	9
Post-Exilic Biblical History.....	1/2	1	19	1/2	10—
Exilic and Post-Exilic History.....	1	2	18	2	18
Beginnings of Judaism.....	1/2	1	6	1/2	3
Ancient Semitic Religions <sup>2</sup> .....	1	1	3	1	3
Religions of the Semites: Egyptians <sup>2</sup> .....	1	1	4	1	4
Religions of the Semites: Babylonians and Assyrians <sup>2</sup> .....	1	1	5	1	5
Religions of the Semites: Hebrews and Phoenicians <sup>2</sup> .....	1	1	3	1	3
<b>Professor R. F. Harper:</b>					
Historical Hebrew.....	1/2	1	17	1/2	9—
Historical Hebrew: Books of Kings.....	1	1	1	1	1
Historical Hebrew: Books of Samuel.....	1/2	3	36	1 1/2	18
Sight-Reading in Samuel.....	1/4	1	3	1/4	1—+
Samuel: Critical Work.....	1/2	1	9	1/2	5—
Deuteronomy.....	1/2	1	8	1/2	4
Micah.....	1/2	2	7	1	4—
Semitic Archaeology.....	1/2	1	5	1/2	3—
Palestinian Life.....	1/2	1	4	1/2	2
Mishnah.....	1/2	1	12	1/2	6
Sumerian Texts.....	1	1	3	1	3
Books of Kings and the Cuneiform Inscriptions.....	1	1	2	1	2
The Cuneiform Inscriptions and the Old Testament.....	1/2	1	9	1/2	5—
Biblical Aramaic.....	1		10	2	10
Arabic Language.....	1/2	2	6	1/2	3

<sup>1</sup> This course properly belongs in the department of History. The figures are not counted in the totals under Semitics.

<sup>2</sup> The courses in Semitic Religions are counted in the department of Comparative Religion, and the figures are not counted in the totals in the Department of Semitics.

TABLE XXVII—Continued

Semitic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor F. R. Harper:</b>					
The Kuran.....	1	1	6	1	6
Syriac for Beginners.....	1	7	28	7	28
Advanced Syriac.....	1	1	2	1	2
Assyrian Language.....	1	10	30	10	30
Intermediate Assyrian.....	1	1	2	1	2
Advanced Assyrian.....	1	1	1	1	1
Advanced Assyrian.....	½	1	2	½	1
Assyrian and Babylonian Inscriptions.....	1	1	3	1	3
Assyrian Historical Inscriptions.....	1	4	13	4	13
Assyrian Historical Inscriptions.....	½	1	7	½	4-
Early Assyrian Historical Inscriptions.....	1	6	18	6	18
Later Assyrian Historical Inscriptions.....	1	4	9	4	9
Assyrian Mythological Inscriptions.....	1	1	2	1	2
Assyrian Syllabaries and Mythological Inscriptions.....	1	2	7	2	7
Assyrian Religious Texts.....	1	1	2	1	2
Assyrian Letters.....	1	1	2	1	2
Assyrian Letters and Babylonian Contracts.....	1	1	2	1	2
Babylonian Historical Inscriptions.....	1	3	11	3	11
Early Babylonian Inscriptions.....	1	1	3	1	3
Babylonian Religious Texts.....	1	1	2	1	2
Babylonian Psalms and Hymns.....	1	1	1	1	1
Babylonian Psalms and Addresses.....	1	2	4	2	4
Babylonian Contracts.....	1	1	4	1	4
<i>Seminar:</i>					
Comparative Semitic Etymology, II.....	1	1	3	1	3
<b>Associate Professor Breasted:</b>					
Hebrew Language, II.....	1	1	5	1	5
Hebrew Sight-Reading in Kings.....	½	1	5	½	2--
Critical Reading in Deuteronomy.....	½	2	16	1	8
Samuel: Critical Work.....	½	1	10	½	5
Selected Assyrian Historical Inscriptions (x).....	1	1	4	1	4
Arabic Language.....	1	1	2	1	2
Arabic Language.....	½	1	3	½	2-
Arabic Syntax.....	½	1	2	½	1
Arabic Prose.....	½	1	2	½	1
Arabic Prose and Composition.....	1	1	3	1	3
Arabian Nights.....	½	2	6	1	3
Arabian Nights: Sight-Reading.....	½	2	5	1	3-
Early Suras of the Kuran.....	1	1	3	1	3
Arabic History.....	1	3	6	3	6
Arabic Geography.....	1	3	5	3	5
Arabic Poetry and Inscriptions.....	1	1	3	1	3
Maqrizi (Prose Reading).....	1	1	1	1	1
Hieroglyphics for Beginners.....	1	2	8	2	8
Hieroglyphics for Beginners.....	½	2	5	1	3-
Egyptian Texts.....	1	3	7	3	7
Late Egyptian.....	1	2	3	2	3
Coptic Language.....	1	1	4	1	4
Coptic Language.....	½	1	2	½	1
History of Egypt.....	1	1	7	1	7
History of Egypt.....	½	2	6	1	3
Egyptian Archaeology.....	1	1	2	1	2
Egyptian Life and Antiquities.....	1	1	5	1	5
<i>Sunday Course:</i>					
Egypt and Israel.....	½	1	44	½	22
<b>Associate Professor Breasted and Assistant Professor Willett:</b>					
Hebrew Language, I.....	1	1	12	1	12

TABLE XXVII—Continued

Semitic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Associate Professor Breasted and Dr. Crandall:</b>					
Hebrew Language, I and II .....	2	1	21	2	42
<b>Assistant Professor Willett:</b>					
Historical Hebrew: Books of Samuel.....	1/8	1	8	1/8	4
Historical Hebrew: Books of Kings .....	1/8	2	12	1	6
Hebrew Sight-Reading, I .....	1/4	1	4	1/4	1
Hebrew Sight-Reading, II .....	1/4	1	1	1/4	1--
Hebrew Sight-Reading: Chronicles, Ezra, Nehemiah, and Esther.....	1/4	1	6	1/4	2-
Deuteronomy.....	1	1	2	1	2
Deuteronomy.....	1/8	1	6	1/8	3
Jeremiah.....	1/8	1	6	1/8	3
The Psalter in English.....	1/8	2	30	1	15
Biblical Apocalyptic.....	1	1	1	1	1
Palestinian Geography.....	1	1	1	1	1
Outline of Hebrew History.....	1	3	40	3	40
Outline of Hebrew History.....	1/8	2	38	1	19
Palestinian Life and Government .....	1	2	7	2	7
<b>Sunday Course:</b>					
Prophecy and the History of Prophecy.....	1/8	1	45	1/8	23-
<b>Assistant Professor Willett and Dr. J. M. P. Smith:</b>					
Hebrew Language, I and II.....	2	1	11	2	22
<b>Dr. Kent:</b>					
Outline of Hebrew History.....	1	2	15	2	15
Messianic Prophecy.....	1/8	1	24	1/8	12
The Minor Prophets.....	1/8	1	22	1/8	11
Minor Prophets of the Babylonian Period .....	1/8	2	6	1	3
Isaiah I-XXXIX in English.....	1/8	1	1	1/8	1-
The Minor Prophets of the Assyrian Period in English .....	1/8	1	1	1/8	1-
Old Testament Wisdom Literature .....	1	1	12	1	12
Title not given .....	1/8	1	2	1/8	1
Title not given .....	1/8	1	7	1/8	4-
<b>Dr. Crandall:</b>					
Historical Hebrew.....	1	2	13	2	13
Historical Hebrew.....	1/8	1	9	1/8	5-
Historical Hebrew and Syntax.....	1	2	24	2	24
Books of Samuel.....	1/8	1	20	1/8	10
Samuel: Critical Work.....	1	3	22	3	22
Kings: Critical Work.....	1	2	11	2	11
Genesis: Critical Work.....	1	2	14	2	14
The Book of Judges.....	1	1	18	1	18
The Book of Chronicles.....	1/8	1	8	1/8	4
Books of Kings.....	1/8	1	11	1/8	6-
Hebrew Sight-Reading.....	1	1	6	1	6
Hebrew Sight-Reading.....	1/4	1	21	1/4	6--
Sight-Reading: Historical Hebrew.....	1/8	1	1	1/8	1-
Sight-Reading: Samuel and Kings.....	1/4	1	4	1/4	1
Sight-Reading: Samuel.....	1/8	2	15	1/8	4+
Sight-Reading: Deuteronomy.....	1/8	1	10	1/8	5
Sight-Reading: Deuteronomy.....	1/4	2	6	1/4	2-
Sight-Reading: Jeremiah.....	1/4	1	5	1/4	2--
Advanced Hebrew Grammar.....	1/8	2	7	1	4-
Advanced Hebrew Grammar: Etymology.....	1/8	2	8	1	4
Advanced Hebrew Grammar: Syntax.....	1/8	1	3	1/8	2-
Old Testament: "Special".....	1	1	10	1	10
Biblical Aramaic.....	1/8	4	14	2	7
The Targum.....	1/8	3	6	1/8	3

TABLE XXVII—Continued

Systematic Languages and Literatures	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Dr. Crandall and Dr. Brown:</b>					
Hebrew Language, I.....	1	1	17	1	17
<b>Dr. Berry:</b>					
Sight-Reading: Kings.....	$\frac{1}{4}$	1	5	$\frac{1}{4}$	2--
Assyrian for Beginners.....	1	1	6	1	6
Early Assyrian Historical Inscriptions.....	1	1	2	1	2
<b>Dr. Brown:</b>					
Jeremiah: Critical Study.....	$\frac{1}{2}$	1	3	$\frac{1}{2}$	2-
Jeremiah (in English).....	$\frac{1}{2}$	1	12	$\frac{1}{2}$	6
<b>Dr. J. M. P. Smith:</b>					
Sight-Reading: The Prophetic Books.....	$\frac{1}{2}$	1	6	$\frac{1}{2}$	3
Deuteronomy.....	1	1	7	1	7
The Minor Prophets.....	$\frac{1}{2}$	1	8	$\frac{1}{2}$	4

The New Testament Literature and Interpretation	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Burton:</b>					
New Testament Greek.....	1	3	90	3	90
Greek Grammar.....	$\frac{1}{2}$	1	33	$\frac{1}{2}$	17-
New Testament Syntax.....	1	1	7	1	7
New Testament Syntax.....	$\frac{1}{2}$	1	4	$\frac{1}{2}$	2
Textual Criticism of the New Testament.....	$\frac{1}{2}$	1	7	$\frac{1}{2}$	4-
Syntax of the Article and the Noun in the N. T....	1	1	5	1	5
General Survey of New Testament Literature.....	1	3	168	3	168
Introduction to the Gospels.....	$\frac{1}{2}$	1	14	$\frac{1}{2}$	7
Introduction to the Synoptic Gospels.....	1	4	38	4	38
Historical Study of the Life of Christ.....	1	1	16	1	16
Historical Study of the Life of Christ.....	$\frac{1}{2}$	1	43	$\frac{1}{2}$	22-
Special Research in the Life of Christ.....	$\frac{1}{2}$	1	9	$\frac{1}{2}$	5-
Life of the Apostle Paul, and Introduction to the Pauline Epistles.....	1	1	28	1	28
Rapid Interpretation.....	$\frac{1}{2}$	1	10	$\frac{1}{2}$	5
The Gospel of Matthew.....	1	8	190	8	190
The Gospel of Matthew in English.....	$\frac{1}{2}$	1	33	$\frac{1}{2}$	17-
The Gospel of Mark in English.....	$\frac{1}{2}$	1	35	$\frac{1}{2}$	18-
The Gospel of John.....	1	4	87	4	87
Theology of the Gospel and the First Epistle of John.....	1	1	13	1	13
Theology of the Synoptic Gospels.....	1	2	13	2	13
Theology of the Synoptic Gospels.....	$\frac{1}{2}$	1	23	$\frac{1}{2}$	12-
The Epistle to the Romans.....	1	5	98	5	98
The Epistle to the Romans.....	$\frac{1}{2}$	1	27	$\frac{1}{2}$	14-
Theology of Romans.....	1	1	19	1	19
The Epistle to the Galatians.....	1	2	19	2	19
The Epistle to the Galatians.....	$\frac{1}{2}$	1	21	$\frac{1}{2}$	11-
The Epistle to the Colossians.....	$\frac{1}{2}$	1	18	$\frac{1}{2}$	9
I. Thessalonians.....	$\frac{1}{2}$	1	24	$\frac{1}{2}$	12
The Second Group of the Letters of the Apostle Paul.....	$\frac{1}{2}$	1	8	$\frac{1}{2}$	4
Theology of the Second Group of the Epistles of Paul.....	1	1	14	1	14
The Third Group of the Letters of the Apostle Paul.....	$\frac{1}{2}$	1	30	$\frac{1}{2}$	15
New Testament Quotations from the Old Testament: The Gospels.....	1	3	17	3	17

TABLE XXVII—Continued

The New Testament Literature and Interpretation	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Burton:</b>					
New Testament Quotations from the Old Testament: The Gospels.....	1/8	1	7	1/8	4—
New Testament Quotations from the Old Testament: The Epistles.....	1	1	2	1	2
New Testament Quotations from the Old Testament: The Epistles.....	1/8	1	12	1/8	6
The Teaching of Jesus in its Relation to the Thought of his Day.....	1/8	1	10	1/8	5
The Doctrine of the Atonement in the N. T.....	1	1	13	1	13
The Doctrine of the Atonement in the N. T.....	1/8	1	27	1/8	14—
Studies in the Apostolic Fathers.....	1/8	1	3	1/8	2—
Research.....	1	1	1	1	1
Special.....	1	1	1	1	1
Special.....	1/8	1	1	1/8	1—
<b>Seminars:</b>					
Lexicographical Seminar: Historical Study of Important New Testament Words.....	1	1	2	1	2
Lexicographical Seminar, I.....	1	1	2	1	2
Lexicographical Seminar, II.....	1	1	2	1	2
Theology of the Synoptic Gospels.....	1	2	35	2	35
Theology of John.....	1	1	9	1	9
Theology of the Gospel of John.....	1	1	16	1	16
The Gospel of John.....	1	1	14	1	14
Theology of Romans.....	1	1	16	1	16
Theology of Romans.....	1/8	1	5	1/8	3—
<b>Sunday Courses:</b>					
Historical Study of the Life of Christ, II.....	1/8	1	73	1/8	37—
Historical Study of the Life of Christ, from the Birth to the End of the Galilean Ministry.....	1/8	1	70	1/8	35
Historical Study of the Life of Christ, from the Departure from Galilee to the Ascension.....	1/8	1	57	1/8	29—
Life of Paul, I.....	1/8	1	41	1/8	21—
Life of Paul, II.....	1/8	2	65	1	33—
Ethical Teachings of Jesus.....	1/8	1	21	1/8	6—
<b>Professor Burton and Professor Mathews:</b>					
Historical Study of the Life of Christ, III.....	1/8	1	61	1/8	31—
<b>Professor Gregory:</b>					
Greek Paleography.....	1/8	3	23	1 1/8	12—
Documents and Criticism of the N. T. Text.....	1/8	3	44	1 1/8	22
<b>Professor Mathews:</b>					
New Testament Greek.....	1	2	59	2	59
The Gospel of Matthew in English.....	1	1	23	1	23
The Gospel of Mark in English.....	1/8	1	19	1/8	10—
The Gospel of Luke.....	1	2	15	2	15
The Gospel of Luke.....	1/8	1	6	1/8	3
The Gospel of Luke in English.....	1	1	11	1	11
The Gospel of Luke in English.....	1/8	1	29	1/8	15—
The Teaching of Jesus.....	1	1	41	1	41
The Religious Teachings of Jesus.....	1/8	1	53	1/8	27—
The Ethical Teachings of Jesus.....	1/8	1	54	1/8	27
The Social Teachings of Jesus.....	1	1	7	1	7
The Parables of Jesus.....	1/8	3	91	1 1/8	46—
Paul and the Pauline Epistles.....	1	1	13	1	13
The Second Group of the Epistles of the Apostle Paul.....	1/8	1	12	1/8	6
The Epistle to the Galatians.....	1/8	3	52	1 1/8	26
The Epistle to the Ephesians.....	1	1	17	1	17
The Epistle to the Ephesians.....	1/8	1	21	1/8	11—



TABLE XXVII—Continued

The New Testament Literature and Interpretation	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Mathews:</b>					
Teachings of the Apostle Paul.....	1/8	1	32	1/8	16
History of New Testament Times in Palestine.....	1	9	358	9	358
Political History of the Jews in N. T. Times.....	1/8	2	43	1	22—
Social and Religious History of Palestine in New Testament Times.....	1	2	31	2	31
Social and Religious History of Palestine in New Testament Times.....	1/8	3	63	1 1/8	32—
History of New Testament Times in the Graeco-Roman World.....	1	3	23	3	23
History of the Apostolic Age.....	1	3	37	3	37
History of the Apostolic Age.....	1/8	1	12	1/8	6
The Life of Christ, I.....	1	1	35	1	35
The Life of Christ, II.....	1/8	1	19	1/8	10—
The Life of Christ.....	1	4	93	4	93
Sources of the Life of Jesus.....	1	2	12	2	12
The Apostolic Fathers.....	1	1	2	1	2
The Life of Christ (in Palestine).....	1	1	7	1	7
The Historical Geography of Palestine (in Palestine).....	1	1	7	1	7
History of the Canon of the New Testament.....	1	1	17	1	17
Sociological Ideas of the Gospels.....	1	1	18	1	18
<b>Seminars:</b>					
Sources of the Life of Christ.....	1	1	6	1	6
The New Testament Canon.....	1	1	6	1	6
The Book of Acts.....	1	2	15	2	15
The Gospel of Luke.....	1	1	6	1	6
<b>Sunday Courses:</b>					
Institutions of Early Christianity.....	1/8	1	12	1/8	3
The Life of Christ, I.....	1/8	1	51	1/8	26—
The Teachings of Jesus.....	1/8	1	39	1/8	20—
The Parables of Jesus.....	1/8	1	31	1/8	16—
Religious Teachings of Jesus.....	1/4	1	38	1/4	10—
Life of Paul, II.....	1/8	1	44	1/8	22
Life of Paul, III.....	1/8	1	38	1/8	19
The Teachings of the Apostle Paul as to Social Problems.....	1/4	1	14	1/4	4—
<b>Professor Mathews and Assistant Professor Votaw:</b>					
Paul's Corinthian Epistles.....	1	1	7	1	7
<b>Sunday Course:</b>					
Bible-Class Teaching.....	1/2	1	12	1/2	6
<b>Professor Rhees:</b>					
Gospel of John in English.....	1/2	1	12	1/2	6
Special Phases of the Life of Jesus.....	1/8	1	23	1/8	12—
<b>Professor Riggs:</b>					
The Epistle to the Hebrews.....	1/8	1	16	1/8	8
The Teachings of the Apostle Paul.....	1/8	1	44	1/8	22
<b>Assistant Professor Nordell:</b>					
History of the Maccabean Age and N. T. Times....	1	1	9	1	9
Introduction to New Testament Books.....	1/8	1	19	1/8	10—
Rapid Interpretation of the Gospels.....	1/8	1	16	1/8	8
Historical Study of the Life of Christ.....	1	1	5	1	5
Outline of the Life of the Apostle Paul.....	1/8	1	16	1/8	8
Outline History of the Apostolic Age.....	1/8	1	36	1/8	18
<b>Assistant Professor Votaw:</b>					
New Testament Greek.....	1	8	170	8	170
Rapid Translation and Interpretation.....	1	5	49	5	49
Textual Criticism of the New Testament.....	1	4	14	4	14
History of New Testament Times.....	1	1	3	1	3
General Survey of the New Testament Literature.....	1	2	23	2	23

TABLE XXVII—Continued

The New Testament Literature and Interpretation	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Assistant Professor Votaw:</b>					
Life of Christ (for the Colleges only) .....	1	1	2	1	2
The Life of Christ .....	1	2	9	2	9
The Book of Acts .....	1	1	4	1	4
The Founding of the Christian Church .....	1	1	24	1	24
The History of the Apostolic Age .....	1	3	29	3	29
The History of the Apostolic Age .....	½	1	4	½	2
The Teaching of Jesus .....	1	4	52	4	52
The Gospel of John (in English) .....	½	1	14	½	7
Rapid Reading and Interpretation of Certain Pauline Epistles .....	1	1	8	1	8
Paul's Corinthian Epistles .....	1	3	40	3	40
Paul's Corinthian Epistles .....	½	1	1	½	1—
Writings of the Apostle Peter (in English) .....	½	1	4	½	2
Selected Readings in Jewish and Patristic Greek .....	1	1	3	1	3
The Septuagint .....	1	3	11	3	11
Jewish Literature of New Testament Times .....	1	1	11	1	11
<b>Sunday Courses:</b>					
The Institutions of Judaism .....	¼	1	10	¼	3—
The Miracles of Jesus .....	¼	1	30	¼	8—
The Life of Paul, I .....	¼	1	9	¼	5—
The Life of Paul, II .....	¼	1	44	¼	22
<b>Dr. Arnolt:</b>					
Paul's Epistle to the Thessalonians .....	½	1	4	½	2
Introduction to the Epistle to the Hebrews, the General Epistles, and the Revelation .....	1	1	4	1	4
New Testament Quotations from the O. T. ....	½	1	6	½	3
Textual Criticism of the New Testament .....	1	1	1	1	1
History of the Problem of the Synoptic Gospels and of the Historical Criticism of the Fourth Gospel .....	1	1	4	1	4
Origin of the Septuagint .....	1	1	2	1	2
Origin and History of the Septuagint and Other Greek Versions of the Old Testament .....	1	1	2	1	2
Rapid Reading of Portions of the Septuagint .....	1	1	1	1	1
The Writings of Josephus .....	½	1	1	½	1—
Christian Literature to Eusebius .....	1	1	2	1	2
"Special" .....	1	1	5	1	5
<b>Dr. E. J. Goodspeed:</b>					
New Testament Greek .....	1	3	78	3	78
Rapid Translation and Interpretation of the N. T. ....	1	3	26	3	26
Textual Criticism of the New Testament .....	1	1	7	1	7
Rapid Reading in the Septuagint .....	1	1	6	1	6
The Apostolic Fathers .....	1	2	7	2	7
Christian Literature to Eusebius .....	1	1	5	1	5
<b>Mr. Root:</b>					
Maccabean Age and New Testament Times .....	1	1	5	1	5
Apocrypha .....	½	1	3	½	2—
Rapid Translation of the New Testament .....	½	1	3	½	2—
Studies in the Epistles of Paul (in English) .....	1	1	26	1	26
Studies in the Apostolic History .....	½	1	7	½	4—
<b>Mr. De Wolfe:</b>					
Gospel of John .....	½	1	15	½	8—
<b>Mr. Woodruff:</b>					
The Gospel of Luke (in English) .....	½	1	27	½	14—

TABLE XXVII—Continued

Department of Systematic Theology	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Northrup:</b>					
Biblical Theology	$\frac{1}{2}$	1	2	$\frac{1}{2}$	1
Theology as Taught by Paul	1	1	38	1	38
Theology as Taught by Paul	$\frac{1}{2}$	3	67	$1\frac{1}{2}$	34—
Introduction and Theology Proper	1	2	61	2	61
Theology Proper	$\frac{1}{2}$	1	23	$\frac{1}{2}$	12—
Prolegomena	$\frac{1}{2}$	1	29	$\frac{1}{2}$	15—
The Doctrine of God	1	3	120	3	120
The Doctrine of God	$\frac{1}{2}$	1	29	$\frac{1}{2}$	15—
Anthropology	$\frac{1}{2}$	3	74	$1\frac{1}{2}$	37
The Doctrine of Redemption	1	1	42	1	42
Soteriology	1	1	22	1	22
Soteriology	$\frac{1}{2}$	4	93	2	47—
Christology	1	2	87	2	87
Constructive Christology	1	1	17	1	17
Eschatology	$\frac{1}{2}$	1	14	$\frac{1}{2}$	7
<b>Seminars:</b>					
Christology, I	2	1	10	2	20
Christology, II	2	1	5	2	10
Christology	1	2	19	2	19
New England Theology	1	2	9	2	9
<b>Professor Foster:</b>					
Outline of Systematic Theology	1	5	147	5	147
Outline of Systematic Theology	$\frac{1}{2}$	1	24	$\frac{1}{2}$	12
Introduction and Theology Proper	1	1	30	1	30
The Doctrine of God	$\frac{1}{2}$	1	23	$\frac{1}{2}$	12—
Anthropology	1	3	60	3	60
Anthropology: The Doctrine of Sin	1	1	50	1	50
Christology	$\frac{1}{2}$	1	18	$\frac{1}{2}$	9
Eschatology	1	4	65	4	65
Patristic Theology	1	2	19	2	19
Scholastic Theology	1	2	16	2	16
The Theology of the Reformation	1	1	14	1	14
Development of Protestant Theology since Kant..	1	1	10	1	10
Theological Methodology	1	1	6	1	6
Theological Encyclopædia and Methodology	1	1	25	1	25
Theological Encyclopædia and Methodology	$\frac{1}{2}$	1	14	$\frac{1}{2}$	7
Christian Ethics	1	6	130	6	130
<b>Apologetics: The Essential Nature of the Christian Religion</b>					
Apologetics, I: History of Apologetics	1	1	52	1	52
Apologetics, II: History of Apologetics	1	2	12	2	12
Philosophical Apologetics	1	3	96	3	96
Kaftan's <i>Dogmatik</i>	1	2	17	2	17
<b>Seminars:</b>					
Development of Protestant Theology since Kant..	1	3	37	3	37
The Theology of Ritschl and the Ritschlians	1	3	39	3	39
<b>Professor Northrup and Professor Foster:</b>					
Christology	1	1	28	1	28
<b>Assistant Professor Simpson:</b>					
Christian Evidences	1	1	22	1	22
Christian Evidences	$\frac{1}{2}$	1	14	$\frac{1}{2}$	7
Inspiration and Theology Proper	1	1	23	1	23
Doctrine of Inspiration	1	1	17	1	17
Doctrine of Inspiration	$\frac{1}{2}$	1	4	$\frac{1}{2}$	2
Inspiration Theology and Anthropology	$\frac{1}{2}$	1	17	$\frac{1}{2}$	9—
Anthropology	$\frac{1}{2}$	2	24	1	12
Soteriology	$\frac{1}{2}$	2	30	1	15
Soteriology and Eschatology	$\frac{1}{2}$	2	19	1	10—
Ethics	1	1	23	1	23

TABLE XXVII—Continued

Department of Systematic Theology	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
Professor Johnson :					
Soteriology .....	1	1	15	1	15
Mr. G. B. Smith :					
Outline Course in Theology .....	1	1	24	1	24
Patristic Theology .....	1	1	5	1	5
Theology of the Greek Church .....	1	1	5	1	5
Theology of the Latin Church .....	1	1	3	1	3
Christian Ethics .....	1	1	21	1	21
Anthropology .....	1	1	10	1	10
The Doctrine of Grace .....	1	1	5	1	5
The Doctrines of the Holy Spirit and of Grace .....	1	1	22	1	22
The Theological Significance of Leading Movements of Thought in the Nineteenth Century .....	1	1	1	1	1
Herrmann's <i>Ethik</i> .....	1	1	3	1	3
Herrmann's <i>Ethik</i> .....	½	1	8	½	4
Professor Bruce :					
Agnosticism and the Historical Foundations of the Christian Church .....	½	1	23	½	12—

Department of Church History	Value Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
Professor Hulbert :					
Ancient Church History (A. D. 30-800) .....	½	2	43	1	22—
Prior to Constantine .....	1	6	177	6	177
Prior to Constantine .....	½	1	2	½	1
The Church in the Age of Constantine .....	½	2	30	1	15
From Constantine to Theodosius .....	1	10	277	10	277
From Theodosius to Charles the Great .....	½	2	36	1	18
The Conversion of Northern and Western Europe .....	1	3	38	3	38
History of the Church in the Middle Ages .....	½	2	68	1	34
History of the Church from the Invasions of the Barbarians to the Reformation .....	1	1	32	1	32
In Celtic and in Anglo-Saxon Britain .....	½	3	36	1½	18
The Scotch Reformation .....	1	2	23	2	23
The Scotch Reformation .....	½	3	44	1½	22
Under the Tudors .....	½	1	24	½	12
The English Reformation and Puritanism, I .....	1	3	84	3	84
The English Reformation and Puritanism, II .....	1	3	78	3	78
English Church History since the Reformation .....	1	1	19	1	19
The Pilgrim Fathers and Plymouth Colony .....	1	3	66	3	66
The Puritan Fathers and the New England Theocracy .....	1	3	73	3	73
The Struggle for Religious Liberty in Virginia .....	1	1	16	1	16
The Struggle for Religious Liberty in Virginia .....	½	2	25	1	13—
Christian Missions in the 16th, 17th, and 18th Centuries .....	1	3	60	3	60
Christian Missions in the 19th Century .....	1	2	36	2	36
Modern Missions .....	1	2	58	2	58
Modern Missions .....	½	1	40	½	20
<i>Seminars:</i>					
Second Century Problems in Church Polity .....	1	1	6	1	6
From the Norman Conquest to the Age of Wiclif .....	1	1	11	1	11
English Church History since the Reformation .....	1	1	15	1	15

TABLE XXVII—Continued

Department of Church History	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Hulbert:</b>					
Religious Liberty since the Reformation.....	1	1	9	1	9
American Baptists.....	1	1	4	1	4
History of Christian Doctrine.....	1	1	2	1	2
<b>Professor Johnson:</b>					
Prior to Constantine.....	1	5	168	5	168
Prior to Constantine.....	$\frac{1}{2}$	3	65	$1\frac{1}{2}$	33—
The Columbian Period.....	$\frac{1}{2}$	1	30	$\frac{1}{2}$	15
The German Reformation.....	1	9	127	9	127
The German Reformation.....	$\frac{1}{2}$	2	21	1	11—
The Swiss Reformation.....	1	3	28	3	28
The Swiss Reformation.....	$\frac{1}{2}$	2	38	1	19
The Counter Reformation.....	1	6	43	6	43
The German Church since the Reformation.....	1	2	27	2	27
The German Church in Recent Times.....	1	1	10	1	10
History of Doctrines.....	1	1	10	1	10
Christian Art.....	1	3	34	3	34
Christian Art: Architecture, Sculpture, and Painting.....	1	1	15	1	15
Christian Art: Painting.....	1	1	25	1	25
Christian Art: Painting.....	$\frac{1}{2}$	1	31	$\frac{1}{2}$	16—
Title not stated.....	1	1	18	1	18
<b>Professor McGiffert:</b>					
History of the Primitive Church.....	$\frac{1}{2}$	1	37	$\frac{1}{2}$	19—
History of Christian Doctrine.....	$\frac{1}{2}$	1	50	$\frac{1}{2}$	25
<b>Dr. J. W. Conley:</b>					
American Missions.....	$\frac{1}{2}$	2	56	1	28
Missionary Societies.....	$\frac{1}{2}$	1	16	$\frac{1}{2}$	8
<b>Dr. A. K. Parker:</b>					
Christian Missions in the 19th Century.....	1	1	5	1	5
<b>Associate Professor Moncrief:</b>					
Outlines of Church History.....	1	9	264	9	264
Outlines of Church History.....	$\frac{1}{2}$	1	11	$\frac{1}{2}$	6—
Sources of Church History from Constantine to Charles the Great.....	1	1	3	1	3
From Charles the Great to Boniface VIII.....	1	2	13	2	13
Mediæval Ideas and Institutions.....	1	2	17	2	17
Forerunners of the Reformation in Italy.....	1	9	141	9	141
Preparation in England and Bohemia for the Reformation.....	1	2	29	2	29
Preparation in England and Bohemia for the Reformation.....	$\frac{1}{2}$	1	13	$\frac{1}{2}$	7—
Preparation in England, Bohemia, and Germany for the Reformation.....	1	4	38	4	38
History of the Reformation Period.....	1	2	32	2	32
History of the Reformation Period.....	$\frac{1}{2}$	1	22	$\frac{1}{2}$	11
The Dutch Reformation.....	1	5	54	5	54
The French Reformation.....	1	4	36	4	36
The French Reformation.....	$\frac{1}{2}$	1	19	$\frac{1}{2}$	10—
The Philosophy of History.....	1	2	20	2	20
The Philosophy of History.....	$\frac{1}{2}$	2	28	1	14
<b>Seminars:</b>					
Augustine.....	1	1	7	1	7
Introduction to the History of Opinion, Christian and Philosophical.....	1	1	9	1	9
Special Investigations in the 14th and 15th Centuries.....	1	1	14	1	14

TABLE XXVII—Continued

Department of Homiletics, Church Polity, and Pastoral Duties	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Anderson :</b>					
Homiletics.....	1	10	197	10	197
Plans and Sermons.....	1	10	168	10	168
Plans and Sermons.....	½	8	178	4	89
History of Preaching.....	1	7	60	7	60
History of Preaching.....	½	1	11	½	6—
History of American Preaching.....	½	1	6	½	3
Masterpieces of Pulpit Eloquence.....	1	9	130	9	130
Hymnology.....	1	4	24	4	24
Church Polity.....	½	3	60	1½	30
Pastoral Duties.....	½	2	39	1	20—
Church Polity and Pastoral Duties.....	1	12	242	12	242
Church Polity and Pastoral Duties.....	½	1	6	½	3
Title not stated.....	½	1	10	½	5
<b>Professor Johnson :</b>					
Homiletics.....	1	7	66	7	66
Homiletics.....	½	7	94	3½	47
Plans and Sermons.....	1	6	63	6	63
Plans and Sermons.....	½	2	44	1	22
<b>Professor Henderson :</b>					
Pastoral Duties.....	½	1	16	½	8
<b>Dr. Faunce :</b>					
The Art of Preaching.....	½	2	74	1	37

The Department of Sociology	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Professor Henderson :</b>					
The Family.....	1	7	110	7	110
The Family.....	½	2	55	1	28—
House Sanitation.....	1	1	14	1	14
Rural Communities.....	½	4	53	2	27—
Urban Communities.....	1	5	81	5	81
Urban Communities.....	½	2	38	1	19
The Group of Industrials.....	1	3	61	3	61
Social Institutions of Organized Christianity.....	1	5	60	5	60
Social Institutions of Organized Christianity.....	½	4	78	2	39
Contemporary Charities.....	1	7	113	7	113
Contemporary Charities.....	½	3	51	1½	26—
Social Treatment of Crime.....	1	2	34	2	34
Social Treatment of Crime.....	½	3	76	1½	38
Criminal Anthropology.....	1	1	42	1	42
Economic and Governmental Agencies for Welfare.....	1	1	10	1	10
Economic and Governmental Agencies for Welfare.....	½	3	47	½	24—
Voluntary Associations.....	1	1	7	1	7
Voluntary Associations.....	½	2	7	1	4—
Non-Political and Non-Economic Associations.....	1	1	35	1	35
Non-Political and Non-Economic Associations.....	½	1	29	½	15—
Culture and Moral Statistics: Methods and Results.....	1	1	7	1	7
Biblical and Ecclesiastical Sociology.....	½	1	9	½	5—
Philanthropy.....	1	4	37	4	37
Philanthropy.....	½	1	10	½	5
Field Work in Chicago's Charities and Corrections.....	½	1	13	½	7—
Special Field Work.....	1	1	1	1	1
Field Work.....	½	1	5	½	3—
<b>Seminars:</b>					
Social Technology.....	1	1	4	1	4
Methods of Social Amelioration, I.....	1	7	45	7	45
Methods of Social Amelioration, I.....	½	1	12	½	6
Methods of Social Amelioration, II.....	1	7	47	7	47
Methods of Social Amelioration, III.....	1	7	52	7	52

TABLE XXVII—Continued

Department of Public Speaking	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Associate Professor Clark:</b>					
Principles of Vocal Expression.....	1	2	25	2	25
Bible and Hymn Reading.....	1	3	37	3	37
Bible and Hymn Reading and Delivery of Sermons	1	1	23	1	23
Bible and Hymn Reading and Delivery of Sermons	$\frac{1}{2}$	1	13	$\frac{1}{2}$	7—
The Delivery of Sermons.....	1	1	5	1	5
Delivery of Sermons and Oratorical Analysis.....	$\frac{1}{2}$	1	9	$\frac{1}{2}$	5—
<b>Associate Professor Clark and Assistant Professor Blanchard:</b>					
Principles of Vocal Expression.....	1	1	19	1	19
Vocal Expression in Public Worship and Preaching	1	1	38	1	38
Oratorical Analysis and Pulpit Oratory.....	1	1	34	1	34
<b>Professor Chamberlain:</b>					
Vocal Expression in Public Worship and Preaching	$\frac{1}{2}$	1	50	$\frac{1}{2}$	25
Bible and Hymn Reading and Delivery of Sermons	$\frac{1}{2}$	1	28	$\frac{1}{2}$	14
<b>Assistant Professor Blanchard:</b>					
Principles of Vocal Expression.....	1	2	29	2	29
Practical Public Speaking.....	1	1	10	1	10
Vocal Expression in Public Worship and Preaching	1	2	86	2	86
Vocal Expression in Public Worship and Preaching	$\frac{1}{2}$	1	22	$\frac{1}{2}$	11

The Disciples' Divinity Courses	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Assistant Professor Willett:</b>					
History of the Idea of Christian Union.....	1	1	1	1	1
History of Church Worship.....	$\frac{1}{2}$	1	9	$\frac{1}{2}$	5—
Place of Alexander Campbell in Modern Theological Thought.....	$\frac{1}{2}$	1	10	$\frac{1}{2}$	5
The Place of the Disciples of Christ among the Religious Forces of Today.....	$\frac{1}{2}$	2	9	1	5—
Problems of Today in the Work of the Disciples of Christ.....	$\frac{1}{2}$	1	3	$\frac{1}{2}$	2—
<b>Dr. Van Kirk:</b>					
First Principles.....	1	1	3	1	3
First Principles.....	$\frac{1}{2}$	1	3	$\frac{1}{2}$	2—
The Sources of Alexander Campbell's Theology... and his Associates.....	$\frac{1}{2}$	1	11	$\frac{1}{2}$	6—
<b>Dr. Ames:</b>					
History of the Disciples.....	1	1	3	1	3
History of Doctrine among the Disciples.....	1	1	4	1	4
<b>Dr. Garrison:</b>					
Religious Movements of the 18th Century.....	$\frac{1}{2}$	1	3	$\frac{1}{2}$	2—
History of the Disciples.....	1	1	6	1	6
<b>Dr. Gates:</b>					
History of the Disciples.....	1	1	2	1	2
History of the Disciples.....	$\frac{1}{2}$	2	16	1	8

The Cumberland Presbyterian Divinity Courses	Value of Course in Majors	No. of Times Given	Total Registration	Total Value in Majors	Registration on Major Basis
<b>Mr. Logan:</b>					
Origin and Growth of the Cumberland Presbyterian Church.....	1	1	2	1	2
Doctrine and Polity of the Cumberland Presbyterian Church.....	1	1	1	1	1

TABLE XXVIII:  
REGISTRATIONS IN THE DIVINITY SCHOOL, 1892-1902, BY DEPARTMENTS

	Total No. of Registrations	No. of Registrations on Major Course Basis	Decrease by Reduction to Major Course Basis	Decrease by the Reduction to Major Course Basis
Old Testament.....	4,789	3,774 - +	1,015 + -	0.21
New Testament.....	4,456	3,421 - +	1,035 - -	0.23
Systematic Theology.....	2,031	1,772 -	259 +	0.13
Church History.....	3,056	2,664 -	392 +	0.13
Homiletics.....	1,498	1,219	269	0.19
Sociology.....	1,243	1,002 -	241 +	0.20
Public Speaking.....	428	367	61	0.14
Disciples'.....	84	54	30	0.36
Cumberland Presbyterian.....	3	3	0	....
Total.....	17,578	14,274	3,304	0.19

TABLE XXIX  
GRADUATIONS IN THE DIVINITY SCHOOL, 1892-1902, BY YEARS AND DEGREES

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	Total
D.B.....	11	7	2	2	29	25	15	17	16	15	139
D.B. from Theological Union	3	2	2	..	..	..	..	..	1	1	9
Th.B.....	6	6	..	1	2	..	..	..	..	2	17
A.M.....	..	..	..	..	1	..	3	2	3	2	11
Ph.D.....	..	..	..	1	1	3	4	9	3	3	24
Dano-Norwegian Certificate	2	4	..	10	3	3	4	5	6	3	40
Swedish Certificate.....	14	3	6	1	8	3	7	9	3	5	59
English Certificate.....	1	3	10	4	2	..	..	..	1	4	25
Total.....	37	25	20	19	46	34	33	42	33	35	324

TABLE XXX  
PRIMARY AND SECONDARY DEPARTMENTS OF STUDENTS GRADUATING WITH THE DEGREE OF D.B., 1896-1902

YEAR	OLD TESTAMENT		NEW TESTAMENT		BIBLICAL THEOLOGY		SYSTEMATIC THEOLOGY		CHURCH HISTORY		HOMILETICS, CHURCH POLITY, AND PASTORAL DUTIES		SOCIOLOGY		TOTALS		NO. HAVING ONLY ONE DEPT.	NO. HAVING THREE DEPTS.	NO. GRADUATES
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary			
1896-97.....	6	3 <sup>2</sup>	2	9	..	..	7	6	14	2	..	4	..	4	29	29 <sup>3</sup>	1 <sup>6</sup>	1	29
1897-98.....	2	1 <sup>4</sup>	6	4	1	..	5	13	11	2	..	6	..	..	25	28 <sup>6</sup>	..	1	25
1898-99.....	2	..	2	3	..	..	3	7	8	2	..	2	..	1	15	15	..	..	15
1899-1900.....	1	4 <sup>5</sup>	6	4	..	..	2	6	8	1	..	2	..	1	17	18	..	1 <sup>7</sup>	17
1900-1901.....	1	2	10	3	..	..	..	3	4	3	..	3	1	2	16	16	..	..	16
1901-1902.....	..	1	10	3	..	..	2	8	1	2	1	..	1	1	15	15	..	..	15
Total.....	12	11	36	26	1	..	19	43	46	12	1	17	2	9	117	119 <sup>3</sup>	1	3	117
Total different men..	19		62		1		62		58		18		11		117				

<sup>1</sup>In comparing the statistics here given, where the unit uniformly is the registration for a Major course, with those where no such reduction has been made, allowance should be made for the increase of numbers in the latter case due to the counting of registrations in Minor courses as equal in value to those in Major or double-Minor courses. As shown in the table, the difference between the results obtained by the two methods varies in the several

Departments from nothing to more than one-third of the larger, and is on the average about one-fifth.

<sup>2</sup>Including one in Assyriology.

<sup>3</sup>Including one in Philoecopy. <sup>4</sup>In Egyptology.

<sup>5</sup>Including one in Assyrian and one in Aramaic.

<sup>6</sup>One other with both subjects in Semitics.

<sup>7</sup>One with all three subjects in Semitics.



TABLE XXXI

PRIMARY AND SECONDARY DEPARTMENTS OF STUDENTS GRADUATING WITH THE DEGREE OF PH.D., 1895-1902

YEAR	OLD TESTAMENT			NEW TESTAMENT			BIBLICAL THEOLOGY			SYSTEMATIC THEOLOGY			CHURCH HISTORY		
	Primary	Secondary	Total Different Students	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total
1895-96.....	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
1896-97.....	1 <sup>8</sup>	1	1	..	..	..	..	..	..	..	..	..	..	..	..
1897-98.....	1	2 <sup>9</sup>	2	1	..	1	..	..	..	..	..	..	1	..	1
1898-99.....	2 <sup>9</sup>	2 <sup>9</sup>	2	..	..	..	..	..	..	..	..	..	..	..	1
1899-1900.....	1	2 <sup>10</sup>	2	2	4	6	..	1	1	5	..	5	1	..	1
1900-1901.....	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..
1901-1902.....	2 <sup>11</sup>	2	2	..	1	1	..	..	..	..	..	..	1	..	1
Total.....	7	9	9	4	5	9	..	1	1	7	..	7	4	..	4

YEAR	HOMILETICS			SOCIOLOGY			PHILOSOPHY			TOTALS			ONLY ONE DEPT.	THREE DEPTS.
	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total		
1895-96.....	..	..	..	..	1	1	..	..	..	1	1	1	..	..
1896-97.....	..	..	..	..	..	..	..	..	..	1	1	1	..	..
1897-98.....	..	..	..	..	..	..	..	1	1	3	3	3	..	..
1898-99.....	..	..	..	1	1	2	..	..	..	4	3	4	1 <sup>12</sup>	..
1899-1900.....	..	..	..	..	3	3	..	..	..	9	10	9	..	1
1900-1901.....	..	..	..	1	1	2	..	2	2	3	3	3	..	..
1901-1902.....	..	..	..	..	..	..	..	..	..	3	3	3	..	..
Total.....	..	..	..	2	6	8	..	3	3	24	24	24	1	1

TABLE XXXII

GRADUATES OF THE SWEDISH SEMINARY

Aldén, Carl Alfred, 1897.	"Det kristliga dopets ursprung och förutsättning."
Anderson, Anton August, 1897.	"Det eviga straffet enligt Nya Testamentets lära."
Anderson, Carl Vilhelm, 1893.	"Pauli lif."
Anderson, Gustaf Robert, 1893.	"Moseböckernas äkthet och trovärdighet."
Arlander, Ragnar Andreas, 1900.	"Judarna under Mattatias och hans söners regering."
Backlund, Jonas Oscar, 1902.	"Det adertonde århundradets fria tankeströmningar."
Bergman, Herman, 1893.	"Syndafoden."
Calmér, Theodór Herman, 1900.	"Pauli lif."
Carlson, Eric, 1900.	"Judarnas fångenskap i Babylon."
Carlson, Martin, 1895.	"Tecknen för Kristi andra tillkommelse."
Clint, Rudolph Anton, 15.	"Donatisterna."

<sup>8</sup> Assyrian and Babylonian.<sup>9</sup> One in Assyrian.<sup>10</sup> One in Arabic.<sup>11</sup> Old Testament, Egyptology; Assyrian, Old Testament,<sup>12</sup> In this case there were two subjects (Social Institutions and Social Philosophy), both in one department (Sociology).

- Ekblad, Carl Henrik, 1899.  
 Erikson, Bennet, 1897.  
 Erikson, Johan Alfrid, 1900.
- Esselström, Mats, 1900.  
 Friborg, Emil Amandus, 1900.  
 Friborg, Johan, 1899.  
 Hallin, Paul, 1901.  
 Hasselblad, Carl, 1893.  
 Hedén, John, 1893.  
 Hedberg, Viktor E., 1899.  
 Hult, Salomon Alfrid, 1899.  
 Johnson, Bengt Magnus, 1901.  
 Johnson, Gustaf Adolf, 1897.  
 Johnson, John Daniel, 1895.  
 Johnson, Nils Edvard, 1899.  
 Jonson, Magnus, 1893.  
 Klingberg, Johan Eric, 1898.  
 Larson, Robert, 1900.  
 Lawrence, Antone Oliver, 1894.  
 Lindahl, Carl August, 1902.
- Lindén, Fredrik, 1893.  
 Lindgren, Carl Johan Axel, 1900.  
 Lindholm, Olof, 1893.  
 Lovena, Peter, 1896.  
 Nelson, Sven August, 1894.
- Nelson, Swaney August, 1895.  
 Nilson, Carl Anton, 1894.  
 Nylin, Carl Emil, 1895.  
 Nylin, Johan David, 1897.  
 Nyquist, Gustaf, 1900.  
 Parsons, Nils Clarence, 1902.  
 Paulson, Adolf, 1897.  
 Rocén, Johan, 1893.  
 Rosenlund, Martin Anderson, 1897.  
 Rosendahl, Johan August Hjalmar, 1901.  
 Sandell, Victor, 1895.  
 Salquist, Carl Axel, 1893.  
 Scherström, Eric, 1902.  
 Shugren, Eric Olof, 1902.  
 Sten, Carl Gustaf, 1893.  
 Sundmark, Carl Wilhelm, 1893.  
 Taffin, Olof, 1893.  
 Törnquist, Oskar F., 1899.
- Valerius, Nels Erik, 1898.  
 Wallman, Carl Linus, 1897.  
 Wedholm, Carl Edvard, 1899.  
 Widén, Oscar Carl, 1898.  
 Wiking, Carl Fridolf, 1893.
- "Syndafallet."  
 "Nattvarden betraktad från Nya Testamentets synpunkt."  
 "Hvari består den hufvudsakliga olikheten mellan Johannes' Evangelium och de tre så kallade synoptiska evangelierna?"  
 "Omvändelsen."  
 "Hedendomens gudsbegrepp."  
 "Tillståndet i romerska riket vid Kristi födelse."  
 "Försoningsläran."  
 "Föreningen mellan kyrka och stat."  
 "Bibelsens lära om syndafallet och dess följder."  
 "Dopsättet."  
 "Lagen i Gamla och Nya Testamentat."  
 "Ursyndens följder."  
 "Återlösningen."  
 "Voro Petrobrusianerna villfarande?"  
 "Det bibliska inspirationsbegreppets historiska utveckling."  
 "Nådavalet eller utkorelsen af nåd."  
 "Det judiska sektväsendet."  
 "Staden Babel."  
 "Himmelriket från Nya Testamentets synpunkt."  
 "De arkeologiska upptäckterna och bibelsens historiska skildringar."  
 "Gudsbelätet hos människan."  
 "Nya Testamentets lära om helgelsen."  
 "Dopet."  
 "Det Tridentinska mötet."  
 "En församlingmedlems plikt, eller de olika gåfvornas samverkan i församlingen."  
 "Jerusalems förstöring."  
 "Hvad synd är betraktad från biblisk synpunkt."  
 "Waldenserna."  
 "Människan."  
 "Naturen af själens förening med Kristus."  
 "Människans ursprung och ertillstånd."  
 "Kristi gudom."  
 "Johan Calvin, hans lif och läror."  
 "Vårt lif och dess mål."  
 "Maccabeerna."  
 "Själens odödlighet."  
 "Jämförelse mellan Augustini och Pelagii läror."  
 "Kristus vår öfverstepräst."  
 "Det kristliga dopet."  
 "Mose."  
 "Kristi gudom."  
 "Gnosticisemen."  
 "Förberedelser bland Guds gamla förbundsfolk för Kristi ankomst."  
 "Karakteristik af aposteln Paulus."  
 "Jordens daningshistoria, eller naturens epoker."  
 "Helgelsen."  
 "Den kristna församlingen."  
 "Förberedande orsaker till påfvedömet."

## TABLE XXXIII

## GRADUATES OF THE DANO-NORWEGIAN SEMINARY

Andersen, Andrew S., 1900.	"Menighedens Grundlæggelse."
Andersen, Hans Peter, 1896.	"Kristi andet Komme."
Arensbach, Christian Nielson, 1897.	"Det guddommelige Kald til at prædike Evangeliet."
Borsheim, Sjur Olsen, 1896.	"Johannesdaaben og dens Forhold til den kristelige Daab."
Brandsmark, Anders Larsen, 1894.	"Helligaandens Person og Værk."
Christensen, John, 1901.	"Forsoningen."
Christensen, Rasmus, 1896.	"Bibelens Inspiration."
Christiansen, Christian George, 1898.	"Pavedømmets Opkomst."
Gotaas, Johannes Olsen, 1901.	"Forudbeslutningen."
Grarup, Christ Peterson, 1894.	"Helligaandens Person og Gjerning."
Grogaard, Elias Christian, 1901.	"Gjænfødselen."
Høien, Ove Laurits, 1893.	"Skriftens Lære om Forsoningen."
Holm, Frederik Theodor, 1897.	"Forudbestemmelsen."
Jakobsen, Bertinius, 1900.	"Retfærdiggjørelsen."
Jakobsen, Hans Jakob, 1898.	"Den religiøse Tilstand blandt Jøderne paa Kristi Tid."
Jensen, Fritz Stephanus, 1901.	"Hvorfor bør vi som Baptister holde fast ved lukket eller begrænset Nadver?"
Johnson, Edward Peter, 1897.	No Thesis.
Kihl, Olaf Martin, 1899.	"Det Nye Testaments Lære angaaende Menighedsforfatning."
Knudsen, Elias, 1900.	"Indledning til Romerbrevet."
Kristoffersen, Søren, 1896.	"Læren om evig Straf."
Larsen, Andor Matias, 1899.	"Bibelens Mirakler."
Larsen, Christian, 1900.	"Martin Luther."
Larsen, Jakob, 1896.	"De tidlige Kristenforfølgelser."
Larsen, Nels R., 1894.	"Det nytestamentlige Lovbegreb og de Kristnes Forhold dertil."
Larsen, Nils Christian, 1896.	"Den kristne Hyrde eller Pastor."
Lawdahl, Nels Sorenson, 1894.	"Det Gamle Testaments Forhold til det Nye."
Nelson, Martin, 1896.	"Helliggjørelsen."
Nielsen, James Peter, 1896.	"Hvorfor hylder vi som Baptister den kongregationale Menighedsstyrelse?"
Nilson, Oskar Emil, 1899.	"Den skriftmæssige Betydning af Baptisternes særkilte Principer."
Olberg, Ingebret, 1892.	"Roger Williams og Massachusetts Kolonierne."
Overgaard, Peder Pedersen 1896.	"Lukket Kommunion."
Pedersen, Chris, 1899.	"Det Gamle og Nye Testaments Troværdighed."
Pedersen, Tellef Christian, 1893.	"Loven og den Kristnes Forhold til den."
Rasmussen, Lars, 1896.	"Gnosticisismen i de første Aarhundreder."
Rejnholdtsen, Severin, 1900.	"Konstantin den Store og hans Forhold til Kristendommen."
Skotheim, Olav Halvorsen, 1898.	"De nytestamentlige Bøgers historiske Ægthed og Troværdighed."
Stiansen, Peder, 1902.	"Bibelens Lære angaaende Inkarnationen."
Taranger, Anton, 1901.	"Verdens Forberedelse for Kristus."
Vang, Enok Tønder, 1902.	"Betingelser for at vinde Sjæle og Midler for Udøvelsen af et saadant Værk."
Wesgaard, Martin Anderson, 1901.	"Apostelen Paulus som fremgangsfuld evangelisk Arbejder."

TABLE XXXIV

## CANDIDATES FOR THE ENGLISH CERTIFICATES

Allen, Hiram Howard, 1895.	No Thesis.
Andrews, John Stanley, 1902.	"Savonarola, Preacher and Prophet of the Renaissance."
Berry, Henry Havelock, 1895.	"City Missions."
Betts, Charles Richard, 1902.	No Thesis.
Blake, James, 1894.	"The Influences which Formed Nero's Character."
Carroll, Robert, 1895.	"The Law of Sacrifices."
Case, Frank Almerian, 1896.	"John Clark."
Dent, Joseph Croft, 1895.	"Athenagoras on the Resurrection of the Dead."
Evans, Thomas Silas, 1894.	"Life of Dr. Chalmers."
Fradenburg, John Victor, 1895.	"The Battle of Naseby."
Giblette, Thomas John, 1895.	"The Life of Marcus Aurelius."
Grablachoff, Wiliko, 1894.	"The Eastern Church."
Gray, Robert, 1896.	"Charles G. Finney as a Preacher."
Hatch, Elmer Ellsworth, 1897.	"The Mythological Element in the Old Testament."
Hayworth, Solomon Alonzo, 1902.	"The Barbarian Invasions: A Study in the Philosophy of History."
Ketman, Tony Louis, 1897.	"The Ethics of Self-Expression."
Lockwood, Clarence Herman, 1895.	"The Trinity."
Mason, George Claude, 1895.	"Savonarola."
Pearce, William, 1893.	"Constantine and his Vision of the Cross."
Robinson, Charles Wirt, 1895.	"The Causes of Christian Asceticism."
Schlamann, Ernest Alfred, 1896.	"The New England Puritans and Religious Liberty."
Speicher, John Gabriel, 1895.	"John Wiclif and his Gift to his Countrymen."
Swift, Franklin Waugh, 1902.	"The Origin of Sunday as a Christian Festival."
Vreeland, Charles Frank, 1896.	"The Problem of Civil and Religious Liberty in the Early Connecticut Colony."
Wakeham, Nicholas, 1901.	"Denominational Co-operation."

TABLE XXXV

THESIS SUBJECTS OF BACHELORS OF THEOLOGY (FROM THE *Theological Union*)

Berry, Fred, 1893.	"Home Life in the American City."
Bixon, Frank Prince, 1894.	"Lessons from the Life of Henry Ward Beecher."
Bower, Leslie, 1893.	"Desecration of the Sabbath in our Cities."
Davies, Frederick George, 1894.	"Conversion of the Goths."
Dexter, Stephen Byron, 1902.	No Thesis.
Elliot, John Waterman, 1894.	"Charles Haddon Spurgeon as a Preacher."
Martin, Benjamin F., 1894.	No Thesis.
McGillivray, Donald Hugh, 1893.	"The Symbolism of the Lord's Supper."
McGinnis, George, 1902.	No Thesis.
Post, Ansel Howard, 1893.	"The Preparation of the Sermon."
Samuelson, John, 1897.	"Henry Barrowe."
Stewart, John Henry, 1894.	"The Protectorate of Oliver Cromwell."
Stoner, Mary Kimbrough, 1893.	"Penny Banks."
Stucker, Edwin Stanton, 1897.	"The Christian's Life."
Theobald, Walter William, 1893.	"Hindrances to the Progress of Christianity in American Cities."
Thompson, Thora Maria, 1896.	"Petrarch, the First Modern Man."
Wheeler, Horace Jonathan, 1894.	"The Historical Development of the Doctrine of the Atonement, from the Time of Anselm."

## TABLE XXXVI

THESIS SUBJECTS OF BACHELORS OF DIVINITY (FROM THE *Theological Union*)

Ashby, James William, 1894.	"Results in England of the Evangelical Revival of the Eighteenth Century."
Eldridge, Charles D., 1902.	"Knox in England."
Falls, James Washington, 1893.	"The Theory of a Second Probation."
Ford, John Elijah, 1895.	"Jonathan Edwards as a Preacher."
Girdwood, Joseph Haddon, 1893.	"Some of the Present Obstacles in the Way of Evangelical Religion, and How to Meet them."
Lord, George, 1895.	"Was Constantine a Regenerate Man?"
McEwan, Allan, 1893.	"The Christian Conception of God."
Nordlander, Eric Johan, 1894.	"The Theory of a Second Probation."
Rocén, John, 1901.	"The Persecution of the Pioneer Baptists in Sweden."

## TABLE XXXVII

## THESIS SUBJECTS OF BACHELORS OF DIVINITY

Allison, Matthew Gay, 1894.	"The English Poor Law."
Anderson, Frank Leonard, 1900.	"The Fatherhood of God."
Anderson, Jacob Nelson, 1901.	"An Exegetical Study of Romans 3:21-26."
Atkinson, Henry Lawrence, 1901.	"The Feasts of Passion Week."
Bateson, Frederick William, 1898.	"An Historical Treatment of the Doctrine of Chiliasm."
Bailey, John William, 1902.	"ΔΙΚΑΙΟΣΤΗΝ ΘΕΟΤ: A Study in Interpretation."
Behan, Warren Palmer, 1897.	"The Oxford Movement."
Beyl, Frederick Almon, 1901.	"The Influence of Savonarola upon Art."
Beyl, John Lewis, 1900.	"Hebrew Prophets and Prophecy."
Binder, Rudolph Michael, 1897.	"Kant and Protestant Theology."
Blanchard, William Louis, 1893.	"The Kingdom of God."
Bode, William, 1901.	"Isaiah's Picture of the Social Conditions of His Day."
Boeye, John Franklin, 1902.	"The Homiletic Value of Whittier."
Borden, Edwin Howard, 1897.	"Galilee in the Time of Christ."
Braker, George, 1896.	"The Jewish Lack of Unity as a Preparation for the Messiah."
Brelos, Carl George, 1900.	"Condition of the World at the Advent of Christ."
Briggs, John Gallup, 1899.	"Christ's Attitude Toward His Own Death."
Brinstad, Charles William, 1893.	"The Probationary Theory of Salvation after Death."
Brown, Jay Schuyler, 1902.	"The Church in the Country Districts."
Burdick, William De Lure, 1893.	"Elements of Power in Preaching."
Burlingame, George Elston, 1899.	"Sacredotal Celibacy; Its Origin and Early Development."
Cabeen, James Wallace, 1893.	"Labor, Capital, and Christ."
Calvin, John Emmett, 1902.	"The Teaching of Jesus concerning Prayer."
Calvin, Perry Sylvester, 1899.	"Wiclif and his Place in the Reform Movement."
Campbell, George Alexander, 1898.	"The Modern Aspects of Church Union."
Carlson, Walter Gustavus, 1897.	"Ansgar, his Life and Labors in Denmark and Sweden."
Case, Carl Delos, 1898.	"The Christology of the Synoptists."
Chalmers, William Everett, 1897.	"The Influence of Thomas Cranmer on the English Reformation."
Chandler, John, 1900.	"Humanism and its Influence on the Development of Luther."
Clough, Clarence Edmund, 1898.	"The Purpose of Jesus' Miracles."
Coleman, Christopher Bush, 1900.	"Christian Movements in American Colleges."
Colestock, Henry Thomas, 1899.	"Substitution: A Stage in Theological Thought."
Coon, Daniel Israel, 1897.	"The Person of Christ in the Fourth Gospel."
Coon, David Burdett, 1894.	

- Corbett, Isaac Allen, 1901.  
Crawford, Jerry Tinder, 1898.  
Cressey, Frank Graves, 1898.  
Culbertson, Henry Coe, 1901.  
Davidson, Robert Bailey, 1897.  
Dye, Friend Taylor, 1900.  
Dykstra, Lawrence, 1897.  
Elmer, Franklin Davenport, 1898.  
Fisk, Henry Alfred, 1895.  
Foreman, Louis Thomas, 1901.  
Fuller, William Harvey, 1901.  
Gallup, Clarence Mason, 1900.  
Garrison, Winfred Ernest, 1897.  
Gates, Errett, 1900.  
Gessler, Theodore Arthur, 1897.  
Givens, John Paris, 1902.  
Goodman, Alfred Ebenezer, 1897.  
Goodspeed, Edgar Johnson, 1897.  
Gray, Charlotte Comstock, 1898.  
Gray, Clifton Daggett, 1900.  
Griffin, Edwin Milton, 1893.  
Hageman, Simon Sylvester, 1899.  
Hazen, Joseph Chalmers, 1902.  
Heald, Prescott Silas, 1901.  
Hemenway, Charles Asa, 1893.  
Herrick, Jullien Avery, 1897.  
Hobbs, Ralph Waller, 1897.  
Holcomb, George Perry, 1893.  
Hoover, Henry Ward, 1899.  
Horne, George, 1894.  
Hunter, Austin, 1902.  
Hunter, John, 1899.  
Hurley, Hugh Henry, 1898.  
Jackson, Francis Chester Rockwell, 1897.  
Jenkins, Joseph, 1898.  
Jewett, Frank Leonard, 1902.  
Johnson, Philip Matthew, 1899.  
Kinney, Edwin Bruce, 1897.  
Kunkle, Edward Charles, 1901.  
Kurtz, Frank, 1893.  
Lake, Elisha Moore, 1897.  
Lemon, Charles Augustus, 1897.  
Marsh, Arba John, 1897.  
"A Study in New Testament Christology."  
"The Contribution of the Synoptic Gospels to Dogmatic Anthropology."  
"Christ's Conception of the Kingdom of God, with regard to its Time, Nature, and Membership."  
"The Sect of the Pharisees."  
"Social Life in England from 1066-1320."  
"Religious Liberty in the Netherlands."  
"The Synod of Dort."  
"The Teaching of Jesus in the Synoptic Gospels Regarding his Death."  
"The Vatican Council and the Dogma of Papal Infallibility."  
"The Poverty of Luther."  
"The New Testament Usage of *Καταλαγή*, *Ἀπολύτρωσις*, and *Ἰλαστήριον*: A Study of the Doctrine of the Atonement."  
"The Principal Social Aspects of the Teaching of Paul in the Galatian, Corinthian, and Roman Letters."  
"The English Precursors of John Wyclif."  
"The Contest for Religious Liberty in Massachusetts."  
"The Influence of Babylonian Poetry upon Hebrew Poetry."  
"Ritschl's Conception of Revelation and Sacred Scripture."  
"Melancthon, or the Spirit of Compromise."  
"On an Unedited Syriac Manuscript of the New Testament."  
"Michael Angelo and his Place in the Reformatory Movement."  
"Translations from Babylonian Religious Texts."  
"Study of Paul's Doctrine of Justification."  
"God's Sovereignty in Relation to Man's Salvation."  
"The Teaching of Jesus in the Synoptic Gospels concerning Wealth."  
"The Social Progress of the Karens under Christianity."  
"The Thought of Redemption."  
"The English Bible from William Tyndale to King James I."  
"Effects of the Suppression of the Monasteries in the Reign of Henry VIII."  
"The Elements of Power in the Preaching of Christ."  
"George Fox and the Early Quakers."  
"The Relation of Paul to the Corinthian Church."  
"The Great Awakening under Edwards and Whitefield."  
"The Founder of British India."  
"The Causes of the Act of Toleration of 1689."  
"The Genuine and the Spurious in the Great Awakening."  
"Ritschl's Conception of the Kingdom of God: Is it that of Jesus, or is it Kant's?"  
"The Fundamental Ideas of Protestantism and its Historical Development."  
"St. Francis of Assisi, His Life and Times."  
"The Relation of Faith in the Gospels and in John."  
"Virginia Baptists and Religious Liberty."  
"The Moravian Movement Prior to Herrnhut."  
"The Wesleyan Movement."  
"The Influence of the Historical Study of the Life of Christ on Modern Theology."

- Marshall, Richard Beauchamp, 1900.  
Martinson, Emil Martin, 1898.
- Mebane, William Nelson, 1896.
- Mecum, Edwin Welton, 1898.  
Meigs, Robert Van, 1898.  
Merrifield, Fred, 1901.  
Miller, Henry Clay, 1901.
- Mills, John Freeman, 1893.  
Mortimer, Theron Winfield, 1900.  
Murray, Charles Henry, 1897.  
MacNaul, Willard Carey, 1893.  
Oeschger, William, 1898.  
Oram, William George, 1897.  
Osgood, William Pleasants, 1898.
- Parsons, Everett Joseph, 1902.  
Parsons, Frederick Francis, 1902.  
Patrick, Bower Reynolds, 1897.
- Phillips, David, 1898.  
Place, Alfred William, 1902.
- Price, Orlo Josiah, 1898.
- Proctor, John Thomas, 1897.  
Purinton, Harry Edward, 1897.  
Reed, William Wallace, 1900.  
Reeve, James Josiah, 1898.  
Rhodes, Jesse Cassander, 1899.
- Robinson, Samuel Rowland, 1898.  
Russell, Luther Parker, 1900.  
Sanders, James Franklin, 1895.  
Sanderson, Eugene Claremont, 1894.  
Schmidt, Emanuel, 1898.  
Schoemaker, William Ross, 1899.  
Shatto, Charles Rollin, 1894.  
Sherman, Franklyn Cole, 1899.  
Shouse, Henry Messick, 1899.  
Slater, John Rothwell, 1898.  
Snow, Ralph Rensselaer, 1897.
- Soares, Theodore Geraldo, 1897.
- Spaulding, Clarence Sydney, 1900.  
Stevens, Elmer Tilson, 1898.
- Stevenson, George Edmund Traver, 1899.
- St. John, Wallace, 1898.  
Stoughton, Harry Augustus, 1901.  
Valentine, Louis Peter, 1900.
- "The Philosophy of History as Developed by Augustine."  
"The Element of Mysticism in New England Theological Thought."  
"A Comparison of the Cuneiform and Biblical Accounts of the Deluge."  
"New Plymouth Colony, 1629-1691."  
"Whitefield as a Revivalist."  
"Paul's Conception of the Significance of Baptism."  
"The Humanism of Petrarch as Seen in his Letters and Sonnets."  
"Authority of Christian Consciousness."  
"The English Stage in the Time of Charles II."  
"The Court of High Commission."  
"The Atoning Significance of the Death of Christ."  
"The Life and Work of Barton W. Stone."  
"The Old Testament Conception of Sin."  
"The Nature and Grounds of Justification in the Epistle to the Romans."  
"Jesus' Doctrine of God, in the Synoptics."  
"The Basis of Redemptive Certainty."  
"Schleiermacher's System of Thought, and its Influence on Modern Theology."  
"Paul's Collection for the Poor Saints at Jerusalem."  
"The Teaching of Jesus in the Synoptic Gospels concerning Faith."  
"The Ethics of the New Life, According to the Fourth Gospel."  
"Methods of Mission Work in China."  
"Interpretation of Romans 3:21-26."  
"A Critical Estimate of Augustine's 'De Trinitate.'"  
"The Mission of Christ, According to John's Gospel."  
"The Trend of the Church on the Doctrine of the Regenerate Life."  
"The Philosophy of the New England Witchcraft Delusion."  
"Auricular Confession."  
"John Calvin and the French Reformation."  
"Characteristics of Buddha and Christ Compared."  
"Exodus 15:1b-18, 21."  
"The Central Principles in Christ's Ethical Teaching."  
"The Kingdom of God."  
"Fra Angelico: The St. John of Art."  
"The Missionary Career of Thomas Coke."  
"The Inspiration of the Old Testament."  
"The Versions of the English Scriptures in the Sixteenth Century."  
"The Epistle to the Philippians: Introduction and Interpretation of 3:2-16."  
"Il Morgante Maggiore of Luigi Pulci as a Source."  
"The Social Condition of England in the Fourteenth Century."  
"The Place of the Earl of Shaftesbury in the Labor Movement."  
"The Drink Habits of the New England Colonies."  
"Preventive Work for Imperiled Children."  
"The Relation of Art to the Church."

Van Horne, Theodore Julian, 1893.	"The Influence of Puritan Religious Legislation upon Subsequent Christianity."
Vaughan, Richard Miner, 1898.	"Dante's Conception of Punishment."
Waite, Claire Luther, 1902.	"The Sabbath of the Primitive Hebrews."
Waldo, William Albigense, 1899.	"Resurrection of Jesus Christ as a Fact."
Ward, John Albert, 1894.	"The Significance of Sacrifice."
Wight, Wallace Edward, 1894.	"Analysis and Key to the Symbols of the Book of Revelation."
Williams, Clarence Russell, 1901.	"Strophic Structure and Exposition of Micah 3."
Wilson, Albert Sherwood, 1902.	"The Preparation for the Reformation."
Wood, Joel Franklin, 1897.	"The Influence of the Crusades upon European Civilization."
Woods, Frank William, 1898.	"Paul's Conception of the New Life."
Woolston, Howard Brown, 1901.	"The Teaching Office of the Church."
Wright, George Clarence, 1897.	"The Resurrection of Christ."
Wright, Howard Foster, 1902.	"The Place of Women in the Early Church."
Wright, Peter Clark, 1902.	"History of the Glebe Lands in Virginia."
Wright, Richard Robert, Jr., 1901.	"The Industrial Condition of Negroes in Chicago."
Wyant, Andrew Robert Elmer, 1897.	"Jonathan Edwards and the Great Awakening in New England."
Yates, Julian Emmet, 1900.	"The Inductive Method of Leonardo da Vinci."
Young, Emanuel Sprankle, 1899.	"The Life of Jesus."
Zahniser, Charles Reed, 1900.	"The Transcendental Element in the Kingdom of God."

## TABLE XXXVIII

## THESIS SUBJECTS OF MASTERS OF ARTS

Barta, Alois, 1897. <i>Semitics.</i>	"The Poetic Element in the Book of Micah."
Deinard, Samuel Nathaniel, 1901. <i>Semitics.</i>	"The Doctrine of Revelation in the Quran."
Gray, Charlotte Comstock, 1900. <i>Church History.</i>	"The Visions of Santa Teresa."
Harris, William, 1899. <i>Church History, Comparative Religion.</i>	"The Philosophy of Religious Reformation and Revival."
Nelson, Josef Fredrik, 1901. <i>Semitics.</i>	"The History of Hebrew Sacrifice from the Exodus to the Exile."
Sanders, James Franklin, 1899. <i>Homiletics.</i>	"Frederick W. Robertson as a Preacher."
Smith, Arthur Maxson, 1899. <i>Systematic Theology.</i>	"The Origin of American Unitarianism."
Swift, George Hiram, 1902.	No Thesis.
Thompson, Carl Dean, 1902. <i>Sociology, Political Economy.</i>	"The Need of Co-operation of the Rochdale Type."
Waid, George Henry, 1900. <i>Church History, Philosophy.</i>	"The Religious Condition of America, 1745-1820."
Yoshizaki, Enos Hikoichi, 1901. <i>New Testament.</i>	"St. Paul's Attitude toward Ethnic Religions."

## TABLE XXXIX

## THESIS SUBJECTS OF DOCTORS OF PHILOSOPHY

Baird, Philip Caster, 1898. <i>Hebrew, Assyrian.</i>	"The Method of the Prophets."
Barta, Alois, 1900. <i>Old Testament, Arabic.</i>	"The Syntax of the Sentence in Isaiah 40-66."



- Behan, Warren Palmer, 1899.  
*Church History, Sociology.*
- Case, Carl Delos, 1900.  
*Systematic Theology, Church History.*
- Cross, George, 1900.  
*Systematic Theology, New Testament.*
- Garrison, Winfred Ernest, 1898.  
*Church History, Philosophy.*
- Gates, Errett, 1902.  
*Church History, New Testament.*
- Gillette, John Morris, 1901.  
*Sociology, Philosophy.*
- Goodspeed, Edgar Johnson, 1898.  
*New Testament, Old Testament.*
- Gordon, William Clark, 1899.  
*Social Institutions, Social Philosophy.*
- Gray, Clifton Daggett, 1902.  
*Assyrian, Old Testament.*
- Herrick, Henry Martyn, 1900.  
*New Testament, Old Testament, Sociology.*
- Herrick, Jullien Avery, 1900.  
*Systematic Theology, New Testament.*
- Heuver, Gerald Dick, 1900.  
*New Testament, Sociology.*
- Hoben, Thomas Allan, 1901.  
*New Testament, Sociology.*
- Mebane, William Nelson, 1899.  
*Assyrian, Hebrew.*
- Osborn, Loran David, 1900.  
*Systematic Theology, Sociology.*
- Read, Eliphalet Allison, 1898.  
*Systematic Theology, Sociology.*
- Schmidt, Emanuel, 1902.  
*Hebrew, Egyptology.*
- Smith, Arthur Maxson, 1901.  
*Systematic Theology, Philosophy.*
- Smith, John M. P., 1899.  
*Old Testament, Assyrian.*
- Stevenson, James Henry, 1897.  
*Assyrian and Babylonian, Hebrew Language and Literature.*
- St. John, Wallace, 1900.  
*Church History, New Testament.*
- Van Kirk, Hiram, 1900.  
*Systematic Theology, New Testament.*
- "Social Work of the Church of Plymouth Colony, 1620-1691."
- "The Incarnation and Modern Thought."
- "The Theology of Schleiermacher."
- "The Sources of Alexander Campbell's Theology."
- "The Early Relation and Separation of Baptists and Disciples."
- "The Culture Agencies of a Typical Manufacturing Group, South Chicago."
- "The Newberry Manuscript of the Gospels."
- "The Social Ideals of Alfred Tennyson, as Related to his Time."
- "The Shamash Religious Texts."
- "The Kingdom of God in the Writings of the Church Fathers."
- "The Development and Significance of the Leben Jesu Movement."
- "The Teaching of Jesus Concerning Wealth in relation to the Economic Conditions of his Time and the Teachings of his Contemporaries."
- "A Study of the Virgin Birth in the Ante-Nicene Literature."
- "Assyrian Letters."
- "The Recovery and Restatement of the Gospel."
- "The Christian Idea of God in its Relation to Theology."
- "The Temple of Solomon in the Light of other Oriental Temples."
- "The Contribution of Thomas Aquinas to Modern Individualism."
- "History of the Idea of the Day of Yahweh."
- "Assyrian and Babylonian Contracts, with Phoenician Dockets."
- "The Contest for Liberty of Conscience in England."
- "The Sources of the Theology of Alexander Campbell."

#### DENOMINATIONS IN THE DIVINITY SCHOOL

In 1899-1900 there were represented twenty-five denominations; in 1900-1901, twenty-five and in 1901-1902, twenty-six. The percentage of (regular) Baptists in the three years was respectively: summer, 43, 35, 39; autumn, 63, 54, 55; entire year, 46, 42, 43. During the three years four other denominations have had the next largest representation, and have kept the same relative rank: Disciples (49, 51, 50); Methodists (40, 46, 46); Presbyterians (30, 27, 31); Congregationalists, (27, 23, 22).

TABLE XL  
DENOMINATIONS IN THE DIVINITY SCHOOL,<sup>1</sup> 1899-1900

DENOMINATION	SUMMER, 1899				AUTUMN, 1899			WINTER, 1900			SPRING, 1900			YEAR 1899-1900			
	Grad.	Uncl.	E. T. S.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	E. T. S.	Total
Baptists.....	75	7	17	99	82	14	96	78	15	93	77	14	91	119	20	17	156
Free Baptists.....	..	..	..	..	1	..	1	1	..	1	1	..	1	1	..	..	1
Brethren.....	2	..	1	3	1	2	3	1	2	3	1	..	1	3	2	1	6
Congregationalists.....	12	..	7	19	6	1	7	7	1	8	9	2	11	18	2	7	27
Disciples.....	28	1	6	33	13	4	17	17	2	19	14	1	15	37	6	6	49
German Evangelical.....	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1
Jews.....	2	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..	2
Lutheran.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
African M. E.....	1	..	..	1	1	..	1	1	..	1	1	..	1	1	..	..	1
Free Methodist.....	1	..	..	1	1	..	1	1	..	1	1	..	1	1	..	..	1
Methodist Episcopal.....	15	1	5	21	5	3	8	4	3	7	4	2	6	19	6	5	30
M. E. South.....	5	..	3	8	2	..	2	1	..	1	1	..	1	5	..	..	8
Presbyterian.....	11	..	6	17	6	..	6	6	..	6	5	1	6	14	1	3	21
Cumberland Presby'tri'n	3	..	3	6	2	..	2	2	..	2	2	1	3	4	1	3	8
United Presbyterian.....	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1
Protestant Episcopal.....	2	1	4	7	..	1	1	..	..	..	..	..	..	2	1	4	7
Reformed Church.....	2	..	..	2	1	1	2	1	1	2	1	1	2	3	1	..	4
Seventh-Day Baptist.....	..	..	..	..	1	1	2	1	1	2	1	1	2	1	1	..	2
Unitarian.....	1	..	..	1	1	..	1	1	..	1	1	2	3	2	2	..	4
Universalist.....	1	..	..	1	2	..	2	2	..	2	2	..	2	2	..	..	2
Not stated.....	5	..	1	6	..	1	1	..	..	..	..	..	..	5	1	1	7
Total.....	165	10	54	229	125	28	153	124	25	149	122	25	147	241	44	54	339

DENOMINATION	SUMMER, 1900				AUTUMN, 1900			WINTER, 1901			SPRING, 1901			YEAR 1900-1901			
	Grad.	Uncl.	E. T. S.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	E. T. S.	Total
Baptists.....	62	4	13	79	70	10	80	58	11	69	53	12	65	104	15	13	132
Missionary Baptists.....	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1
Free Baptists.....	2	..	..	2	1	..	1	1	..	1	1	..	1	2	..	..	2
Brethren.....	1	..	..	1	1	..	1	1	..	1	1	..	1	1	..	..	1
Congregationalists.....	19	..	1	20	5	1	6	4	1	5	4	1	5	21	1	1	23
Disciples.....	33	1	4	38	16	2	18	11	1	12	14	5	19	42	5	4	51
Friends.....	2	..	..	2	1	..	1	1	..	1	2	..	2	4	..	..	4
Jews.....	3	..	1	4	2	..	2	2	..	2	..	..	..	4	..	1	5
Mennonites.....	1	..	..	1	..	..	..	..	..	..	1	..	1	1	..	..	1
Lutheran.....	1	..	..	1	1	..	1	1	..	1	1	..	1	2	..	..	2
African M. E.....	1	..	..	1	1	..	1	1	..	1	1	..	1	1	..	..	1
Methodist Protestant.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
M. E. of Canada.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
Methodist Episcopal.....	16	2	6	24	7	4	11	6	3	9	5	1	6	20	4	6	30
M. E. South.....	8	1	2	11	4	1	5	5	1	6	5	1	6	9	2	2	13
Presbyterian.....	13	1	2	16	8	1	9	7	1	8	4	2	6	16	2	2	20
Cumberland Presby'tri'n	3	1	..	4	3	1	4	3	..	3	2	1	3	4	1	..	5
United Presbyterian.....	2	..	..	2	..	..	..	2	..	2	1	..	1	2	..	..	2
Protestant Episcopal.....	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	3	3
Reformed Church.....	4	..	..	4	3	..	3	3	..	3	3	..	3	7	..	..	7
Roman Catholic.....	2	..	..	2	..	..	..	1	..	1	1	..	1	3	..	..	3
Seventh-Day Adventist.....	..	..	..	..	1	..	1	1	..	1	1	..	1	1	..	..	1
Seventh-Day Baptist.....	..	..	..	..	1	..	1	1	1	2	1	1	2	1	1	..	2
Unitarian.....	1	..	1	2	1	..	1	2	..	2	2	..	2	3	..	1	4
Universalist.....	1	..	..	1	1	1	2	1	1	2	1	..	1	2	1	..	3
Total.....	177	10	34	221	127	21	148	111	20	131	104	24	128	252	32	34	318

<sup>1</sup> Not including the Scandinavian Seminaries.

TABLE XL—Continued

DENOMINATION	SUMMER, 1901				AUTUMN, 1901			WINTER, 1902			SPRING, 1902			YEAR, 1901-1902			
	Grad.	Uncl.	E. T. S.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	Total	Grad.	Uncl.	E. T. S.	Total
Baptists.....	58	8	19	85	62	10	72	59	8	67	47	9	56	105	15	19	139
Free Baptists.....	2	..	..	2	2	..	2	3	..	3	3	..	3	3	..	..	3
Brethren (Progressive)...	..	..	..	..	..	..	..	1	..	1	1	..	1	1	..	..	1
Congregationalists.....	8	1	2	11	3	2	5	6	5	11	5	3	8	15	5	2	22
Disciples.....	33	1	7	41	18	2	20	15	3	18	14	2	16	40	3	7	50
Friends.....	3	..	..	3	3	..	3	3	..	3	3	..	3	5	..	..	5
German Baptist Breth'n	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
Jews.....	..	..	1	1	..	..	..	..	..	..	2	..	2	2	..	1	3
Lutheran.....	1	..	..	1	1	..	1	..	..	..	1	..	1	2	..	..	2
Mennonites.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
Methodist Episcopal.....	15	2	3	20	7	2	9	6	..	6	4	1	5	22	2	3	27
M. E. South.....	13	..	2	15	3	..	3	2	..	2	2	..	2	14	..	2	16
African M. E.....	1	..	1	2	..	..	..	..	..	..	1	..	1	2	..	1	3
Mormon.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
Presbyterian.....	11	1	1	13	7	1	8	6	2	8	5	1	6	18	2	1	21
Cumberland Presbyt'ri'n	2	1	..	3	3	2	5	4	1	5	3	..	3	4	2	..	6
Southern Presbyterian..	1	..	..	1	1	..	1	1	..	1	1	..	1	1	..	..	1
United Presbyterian.....	2	..	..	2	1	..	1	..	..	..	1	..	1	3	..	..	3
Protestant Episcopal....	2	..	1	3	..	..	..	..	..	..	..	..	..	2	..	1	3
Reformed Church.....	5	..	..	5	1	..	1	1	..	1	..	..	..	5	..	..	5
Roman Catholic.....	1	..	..	1	..	..	..	1	..	1	1	..	1	1	..	..	1
Seventh-Day Adventist..	..	..	2	2	..	1	1	..	1	1	..	1	1	..	1	2	3
Seventh-Day Baptist....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
Unitarian.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
United Brethren.....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
United Evangelical.....	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	2	2
<b>Total.....</b>	<b>164</b>	<b>14</b>	<b>41</b>	<b>219</b>	<b>112</b>	<b>20</b>	<b>132</b>	<b>108</b>	<b>20</b>	<b>128</b>	<b>94</b>	<b>17</b>	<b>111</b>	<b>251</b>	<b>30</b>	<b>41</b>	<b>322</b>

TABLE XLI

DEGREES HELD BY DIVINITY STUDENTS ATTENDING THE UNIVERSITY—1899-1902

Degree	1899-1900	1900-1901	1901-1902	Degree	1899-1900	1900-1901	1901-1902
Doctor of Laws.....	..	..	1	Bachelor of Laws.....	4	1	3
Doctor of Divinity.....	..	1	5	Bachelor of Science.....	19	15	13
Doctor of Philosophy.....	5	8	6	Bachelor of Literature.....	9	6	6
Doctor of Pharmacy.....	1	..	..	Bachelor of Sacred Literature	..	4	1
Doctor of Literature.....	..	1	..	Bachelor of Pedagogy.....	..	..	1
Master of Theology.....	2	1	1	Bachelor of Hebrew Literature	..	..	2
Master of Arts.....	49	71	63	Licentiate of Instruction....	1	1	..
Master of Philosophy.....	1	1	2	Graduate of Theol. Seminary.	9	..	..
Master of Science.....	2	1	..	Graduate of Gymnasium.....	1	..	..
Master of Literature.....	1	1	..	Graduate of Latin School....	1	..	..
Bachelor of Divinity.....	63	56	66	Certificate in Arts.....	1	..	..
Bachelor of Sacred Theology..	1	..	1	Licentiate in Sacred Theology	..	1	..
Bachelor of Theology.....	5	2	3				
Bachelor of Arts.....	196	211	206	<b>Total.....</b>	<b>383</b>	<b>402</b>	<b>397</b>
Bachelor of Philosophy.....	12	20	17				

Respectfully submitted,

ERI B. HULBERT, *Dean.*

## THE UNIVERSITY AFFILIATIONS

*To the President of the University :*

SIR: I submit herewith my report of the Affiliated Work of the University for the period ending July 1, 1902.

The work of the Office of Affiliations covers, in general, the administration of the relations of the University with all secondary schools which prepare and offer students for admission to its undergraduate courses. The extensive and increasingly intensive relations which now, at the end of the first decade of the University's life, exist between it and the secondary schools of its natural territory is a fit cause for congratulation. This result has come about through the persistent efforts of the University to know the schools, and in all proper and practicable ways to be known by them.

The most immediate and pressing problem which at the beginning had to be met was the problem of the proper test of candidates for admission to the University. But a more important question has been to the front from the first, and has had much to do with all activities of the University in its relations with secondary schools: how can the University be most helpful to the schools in the advancement of sound education in their common fields? This spirit of hand-in-hand helpfulness has found expression in the two terms by which the official relation of University and school has been named: "affiliation" and "co-operation."

The sources of the knowledge of the schools that the University has striven to gain, so far as the effective administration of the admission of students is concerned, are as follows: (1) the report of the principal upon the faculty, curriculum, and equipment of his school made at the time of application for admission to co-operation; (2) the reports of the different officers of the University, based upon personal visits to the school and observation of its work; (3) the character of the work of the students accredited to the University from the schools upon the personal vouchers of the principal and teacher concerned in the report.

It is by this third means that the work of the schools and individual teachers has best been known. A record of the schools from which the students are received is kept, and the work of these students in the first year at the University is carefully observed. The results of these observations at the end of each year are transmitted to the respective schools, and are at the same time used as a basis of judgment as to the character of the work of the school.

The University has entered into relations, more or less intimate, with secondary schools covering a wide range of territory, including, generally, the whole Mississippi valley and the Pacific slope. These schools may be divided into three classes according to the intimacy of their relations:

I. Schools organically connected with the University body. These are (1) the Academy for Boys, which from the beginning has been a part of the University co-operative life; (2) the South Side Academy, and (3) the Chicago Manual Training School, both of which have long been in close affiliation with the University and which have now been incorporated with the University as the secondary Division or Department of the School of Education.

II. Academies which, while they retain their own independent business management, have voluntarily placed themselves under the advisory direction of the University, so far as faculties, curricula, and educational methods are concerned. These schools, denominated Affiliated Schools, are as follows: Culver Military Academy (Culver, Ind.), Dearborn Seminary (Chicago), Elgin Academy (Elgin), Harvard School (Chicago), Francis Shimer Academy (Mt. Carroll), Kenwood

Institute (Chicago), Princeton-Yale School (Chicago; recently incorporated with the Harvard School), Rugby School (Kenilworth), University School for Girls (Chicago), and Wayland Academy (Beaver Dam, Wis.).

III. High schools and academies, which, upon investigation, as described above, the University has found to be of a high grade of excellence, able to prepare students for a first-class college. This looser relation, which alone, in the nature of the case, can be maintained with public schools, is described and designated by the term "co-operation." Following is the list of the schools of this class. The schools are public high schools, unless otherwise specified:

Akron, O.	Council Bluffs, Ia.	Logansport, Ind.
Atlanta, Ga.	Davenport, Ia.	Louisville, Ky.:
Auburn, Ind.	Dayton, Steele, O.	Boys'
Aurora:	DeKalb	Girls'
East Side	Denver, Col.:	Macon, Mo., Bless Military
West Side	North Side	Academy
Battle Creek, Mich.	District No. 1	Michigan City, Ind.
Bay City, Mich.	District No. 2	Milwaukee, Wis.:
Benton Harbor, Mich.	DesMoines, West Side, Ia.	East Division
Bloomington	Dixon, South Side	South Division
Blue Island	Dubuque, Ia.	West Division
Buffalo, Masten Park (N. Y.)	Duluth, Minn.	Milwaukee Downer College
Canton, O.	Elgin	Minneapolis, Minn.:
Cedar Rapids, Ia.	Elkhart, Ind.	Central
Chicago:	Evanston	East Side
Austin	Faribault, Minn.:	Moline
Calumet	St. Mary's Hall	Morrison
Englewood	The Shattuck School	Oak Park
English High and Manual	Findlay, O.	Omaha, Neb.:
Training School	Fort Scott, Kan.	High School
Jefferson	Fort Wayne, Ind.	Brownell Hall
John Marshall	Freeport	Orchard Lake, Mich., Military
Lake	Goshen, Ind.	Academy
Lake View	Grand Rapids, Mich.	Ottawa
Medill	Harvey	Ottumwa, Ia.
Northwest Division	Helena, Mont.	Peoria
Robert A. Waller	Hillside Home School, Wis.	Pittsburg, Pa.
South Chicago	Hinsdale	Princeton
South Division	Indianapolis, Ind.:	Pueblo, Col.:
William McKinley	Manual Training	Centennial
The University School for	Shortridge	Central
Boys	Girls' Classical School	Quincy
Cleveland, O.:	Joliet	Racine, Wis.
Central	Kansas City, Mo.:	Richmond, Ind.
East Side	Central	Riverside
Lincoln	Manual Training	Rockford
South Side	Westport	Rock Island
Clinton, Ia.	Keokuk, Ia.	Saginaw, Mich.
Clyde	Lake Forest, Ferry Hall Semi-	Sandusky, O.
Colorado Springs, Col.	nary	San Francisco, Calif.:
Columbus, O.:	Lyons Township, LaGrange	Girls'
Central	LaPorte, Ind.	Lowell
East Side	LaSalle	Sioux City, Ia.
North Side	Leavenworth, Kan.	South Bend, Ind.

Springfield	Hosmer Hall	Waukesha, Wis.:
Sterling	Sycamore	High School
St. Joseph, Mich.	Terre Haute, Ind.	Carroll College
St. Joseph, Mo.	Toledo, O.	Westtown Boarding School, Pa.
St. Louis, Mo.:	Topeka, Kan.	Wheaton
High School	Waukegan	Youngstown, O.

From all the schools in the three classes above mentioned, graduates are now accepted into the University without examination, upon the official record of work done in the school, in so far as this work specifically meets the requirements for admission. For students from other schools, and for those who are lacking in certain requirements, the examination system is maintained under the supervision of this office. The Office of Affiliations is therefore charged with all admission from secondary schools to the Junior Colleges of the University.

From the standpoint of activities other than those mentioned above, in which the primary object was to ascertain the status of the schools with reference to the admission of their graduates to the University, the most important work of the Department of Affiliations has been in connection with the Annual Conferences, a historical statement with reference to which is here presented.

When, in the fall of 1892, the University of Chicago opened its doors to students, the University and its natural constituency, the secondary schools of Chicago, northern Illinois, and the states lying adjacent to this territory, were practically strangers to one another. On the one hand, the attitude of the University toward the schools, its admission requirements, its methods of administering these, and its policy with regard to the numerous problems which must of necessity arise in the adjustment of the relations that were to exist between school and college—all these the University, in its new field, had yet to work out, and the schools had yet to learn. On the other hand, the schools themselves, with their curricula, their equipments, their faculties, their spirit, were comparatively unknown to the University.

Recognizing the immense importance of the secondary schools to its own success, as well as its own duty to all educational institutions, the University at once took the initiative in entering into vital and helpful relations with the secondary schools. It realized that it could not decide all the questions which arose in connection with secondary education purely from its own point of view, but must confer freely and on equal footing with the leaders and teachers in the schools from which its Junior students must come.

Accordingly, on November 5, 1892, in the second month of the University's public career, was held "The First Autumn Conference of University and Preparatory-School Teachers," as it was at that time called. At this Conference, to the invitation to which there was a generous response from principals and teachers, there were two public sessions, morning and afternoon, at which discussion, necessarily informal, was had of topics relating largely to the requirements for admission to the University. This subject has engaged the best thoughts and most careful and patient studies of the Faculties of the University ever since; but in any account of the solution of this important problem the generous co-operation and assistance that have come from the secondary schools should not pass unmentioned.

So successful was the first Conference that, at the request of the schools, a second Conference was appointed for the following April; and from this time on, these Conferences have been an important feature of the spring and fall, ever growing in interest and value to all who have partaken in them. At the sixth Conference, in November, 1895, two important innovations were introduced: (1) a Friday afternoon and evening session, whereas before the sessions had been confined to Saturday; (2) a series of departmental conferences on Saturday afternoon, which supplemented the general session formerly held at that time. The value of these more technical

departmental conferences was at once apparent, and they have been a prominent feature ever since. Most helpful discussions of many vital and practical topics, arising out of actual classroom experience, have been had by those especially interested in the several departments.

Following are some of the more important questions which have been discussed in the general sessions of the Conferences:

- "The Aim and Scope of Elementary Biology in the Preparatory School," 1894.
- "Some Exaggerations of the New Education," 1894.
- "The Higher Training of Teachers in England, France, and Germany," 1894.
- "The Future of the High School," 1895.
- Addresses on the subject of Pedagogy, 1895.
- "The True Object of an Educational System from an Economic Point of View," 1896.
- "The Aim and Claims of History in the Secondary Schools," 1896.
- "Twenty Years of Educational Agitation: Its Effect upon the Public High School," 1897.
- "The Relation of the Secondary School to the Student's Choice of an Occupation," 1897.
- "The Fitness of Economics to Meet the Conditions of Adolescence," 1898.
- "Preparation for Citizenship; or, The School and the Citizen," 1898.
- "The Relation of Higher Education to Success in Business Life," 1899.
- "The Elective System in High School and Academy Work," 1900.
- "Current Problems in Secondary Education," 1901.

The spring General Conferences were discontinued in 1899, and an Executive Session of Deans and Principals with the University Board of Affiliations was substituted as an annual event. Another innovation was established in the fall of 1898, when, in connection with the Conference, the first Annual Contest in Declamation between representatives of the Senior classes of the secondary schools was held. This aroused so much interest that the contest has been made an annual feature of the fall Conference. The full proceedings of the last two Conferences were published respectively in the December, 1900, edition of the *University Record* and in the January, 1901, number of the *School Review*.

Respectfully submitted,

FRANK J. MILLER,  
*Dean of Affiliations.*

## THE MORGAN PARK ACADEMY

*To the President of the University:*

SIR: I submit herewith my report as Dean of the Academy for Boys, at Morgan Park.

In assuming the responsibility of training boys and girls, the Academy entered into the labors as well as the premises of schools of three sorts, whose grounds and buildings the University had acquired by gift and by lease, and this fact of local educational history gave special significance to the establishment at Morgan Park of the work of the University's secondary school. Since 1877 the Union Theological Seminary had been engaged in its special line of educational effort, and its grounds and three buildings became the nucleus of the Academy's equipment when, in the summer of 1892, the Seminary became the Divinity School of the University of Chicago and entered its quarters on the University Quadrangles. Almost adjacent to this property were the buildings and grounds of the Illinois Military Academy, which was the direct successor of the Morgan Park Military Academy, established in 1873. These were acquired by lease and added two buildings to the three of the other group. Removed by a short distance from the Military Academy was the single building of Dr. Thayer's Young Ladies' Seminary. By gift of Mr. George C. Walker, this building, with the ground about it, was added to the Academy's equipment. In this union of such educational elements it was not unfitting that a co-educational policy should have prevailed, and to both boys and girls the invitation to enter the Academy was extended.

### THE BUILDINGS

Thus the Academy's complement of buildings in 1892 was Blake Hall, which continued to serve as the recitation building and chapel, as in the days of the Theological Seminary; the dormitory of the Theological Seminary, used as the girls' hall and called for the first time Morgan Hall; the Military Academy's barracks and recitation building, used as a boys' hall and called Park Hall; the drill hall of the military school, used as a gymnasium for the boys; the library building of the Theological Seminary, transformed into the science laboratory; and the building of Dr. Thayer's Female Seminary, newly designated as Walker Hall, and used as a dormitory for boys. In the fall of 1893 Morgan Hall, as it was larger than Park Hall, was used for the boys, since many more boys than girls were in attendance, and Park Hall became the girls' hall. Walker Hall ceased in 1894 to be a part of the Academy, having been turned over to the Scandinavian Seminaries of the University. In 1894 a valuable addition to the Academy's equipment was made by Mr. George C. Walker, who gave to the University the stone library building and library lot adjacent to the Academy's grounds. At this time an arrangement was entered into with the Morgan Park Library Association by which the library of 3,500 volumes was given to the Academy. The consideration accompanying this gift was that the Academy should give five scholarships defraying each a full year's tuition and ten scholarships of half that value, to be awarded each year to children of residents of Morgan Park only. This library, consisting of books selected very largely by the late Dr. Justin A. Smith, greatly strengthened the Academy's equipment, increasing its library to 5,000 volumes and providing a beautiful building to contain them.

In the winter of 1895, through an explosion of a kerosene lamp, Park Hall was destroyed by fire, and from this time until the fall of 1897 to provide accommodations for the girls residences in the village were rented and furnished for cottage dormitories. In 1896, together with other purchases of land adjacent to the Academy grounds, the University bought that which



had been used already for several years under lease from the owners of the Military School property, and from a part of this property an athletic oval was prepared.

In the spring of 1896 work was begun on a new dormitory of forty-eight rooms for boys. This, called West Hall, was first used in the fall of 1897, and this year Morgan Hall was divided by partitions, and half of it was equipped for the accommodation of girls. In the winter of 1898 the gymnasium was destroyed by fire and as temporary substitute for it the basement of Morgan Hall was equipped for the girls and a hall in the village was rented and furnished for the boys. In 1898 East Hall was constructed as a boys' dormitory, its equipment including kitchen and dining-room sufficient in capacity for all the boys of the school. Divided really into two halls by a cross-partition of brick, this building was planned for sixty rooms and suites. The upper floor of the north division was used until the fall of 1900 for the purpose of a gymnasium. In this year the new brick Gymnasium was erected, containing four large divisions, of which one, with earth floor of dimensions 70 by 100 feet, is the ball court, devoted to all forms of indoor athletic sports. Adjacent to this is the group of rooms given up to baths and lockers. Over this is the apparatus-room, 60 by 42 feet, equipped with all forms of gymnasium apparatus. Opening from this are the boxing and fencing rooms, the trophy-room, and the offices of the Physical Director. The fourth division consists of the bowling-alley room, adjacent to the ball court, and contains a pair of regulation alleys. The Gymnasium thus completes the Academy's equipment of seven buildings.

#### THE FACULTY

The following is a list of present and former members of the Faculty:

- Wayland J. Chase, A.M.: Associate in Introductory Year, 1892-94; Instructor in History, 1894-98; Recorder, 1897-98; Acting Dean and Assistant Professor of History, 1898-1900; Dean, 1900—.
- Isaac B. Burgess, A.M.: Acting Dean and Associate Professor of Latin, 1892-93; Associate Professor of Latin 1892-95; Professor of Latin, 1895—.
- Frank M. Bronson, A.M.: Instructor in Greek, 1892-94; Assistant Professor of Greek, 1894—.
- Ernest L. Caldwell, A.B.: Associate in Mathematics and Physical Culture, 1892-94; Instructor in Mathematics, 1894—.
- Alfred R. Wightman, A.M.: Assistant in Latin, 1895-1900; Associate in Latin, 1900-1902.
- Harry D. Abells, S.B.: Assistant in Introductory Year, 1898-1901; Associate in Physics and Chemistry, 1901-02; Instructor in Physics and Chemistry, 1902—.
- Haydn E. Jones, Ph.D.: Assistant in History and Director of Physical Culture, 1900—.
- Arthur W. Leonard, A.M.: Assistant in English, 1900-1902; Associate in English, 1902—.
- Charles S. Fox, A.B., LL.B.: Assistant in German and French, 1900-1902.
- Reuben M. Strong, Ph. D.: Assistant in Botany and Physiography, 1901-02.
- Charles W. Lerner: Assistant in Manual Training, 1901—.
- Sarah E. Mills: Librarian, 1895—.
- Robert H. Cornish, A.M.: Instructor in Physics and Mathematics and Academy Recorder, 1892-94; Assistant Professor in Natural Science, 1894-97, and summer, 1899.
- Luanna Robertson, Ph.D.: Associate in German and English, 1892-94; Instructor in German, 1894-1900.
- Elizabeth C. Cooley, A.B.: Associate in Latin and History, 1892-93.
- George N. Carman, A.B.: Dean and Associate Professor of English, 1893-95.
- Charles H. Thurber, Ph.D.: Dean, 1895-99.
- Clara P. Anderson, S.B.: Assistant in English, 1895-96.
- Edwin P. Brown, A.D.: Assistant in charge of Introductory Year, 1896-97.
- William H. Runyon, A.M.: Instructor in Natural Science, 1897-1900.
- Frederick D. Nichols, A.B.: Assistant in English, 1897-1900.
- Frederick D. Eby, A.B.: Assistant in charge of Introductory Year, 1897-98.
- Joseph G. Brobeck, S.B., M.D.: Assistant in Science and Director of the Gymnasium, 1897-1900.
- Alice N. Simpson, A.B.: Assistant in Introductory Year, summer, 1896; Reader in Latin, 1897-98.
- George L. Marsh, A.M.: Assistant in English, spring, 1900.

John E. Webb, A.M.: Assistant in Biology and Physiology, 1900-1901.  
 Fritz Reichmann, Ph.D.: Assistant in Manual Training, 1900-1901.  
 Moses C. Gile, A.M.: Assistant Professor of Greek, summer, 1893.  
 S. Frances Pellett, A.M.: Assistant in Latin, summer, 1893.  
 Lea R. DeLagneau, Assistant in French, summer, 1893-94-95.  
 Edwin H. Lewis, Ph.D.: Assistant in English, summer, 1893-94.  
 Francis W. Shepardson, Ph.D.: Assistant in History, summer, 1893.  
 Herbert E. Slaught, Ph.D.: Assistant in Mathematics, summer, 1893-94.  
 William D. Owen, Ph.D.: Assistant in Latin, summer, 1893.  
 Paul O. Kern, Ph.D.: Assistant in German, summer, 1893-94.  
 Alfred M. Wilson, Ph.D.: Assistant in Latin, summer, 1895.  
 William H. Butts, A.M.: Assistant in Mathematics, summer, 1896.  
 Johannes B. E. Jonas, A.M.: Assistant in German, summer, 1896.  
 Leon Liebard, S.B.: Assistant in French, summer, 1896.  
 William F. Tibbetts, A.M.: Assistant in Latin, summer, 1896.  
 Addison W. Moore, A.M.: Assistant Professor in Educational Psychology, summer, 1896.  
 Edith Earle, A.B.: Assistant in Mathematics, summer, 1897.  
 Frederick W. Howard, A.M.: Assistant in Latin, summer, 1898.  
 Adna W. Risley, A.B.: Assistant in Latin, summer, 1898.

#### COURSES OF STUDY

Though the Academy has always prepared students for other colleges and technical schools, the courses have been arranged with a view particularly to the entrance requirements of the University, and have therefore undergone, during the past ten years, the changes that modifications in these requirements made necessary. At first the Science course consisted of only one year, in Physics. In 1893 a year of Chemistry was added and a half-year of both Physiography and Botany, so that the course covered three years. In 1901 a full year was given to both Physiography and Botany, and since then the course has been of four full years. In that year, too, Manual Training was introduced, and now two years are offered in that subject, covering shop-work in wood and the elementary principles and practice of mechanical drawing. A third course in History has also been added, covering the mediæval and modern periods. The course in Mathematics, originally three years, has been increased to four by the addition of Trigonometry, College Algebra, and Analytical Geometry; and a fifth year of College Latin has been offered for the last four years. These college courses have been introduced, not so much with a view to extending the scope of the Academy's work by one year as to afford opportunity for a full year's work to students whose preparation for college lacked less than a year of completeness. It has resulted, however, that there have been enough college subjects thus offered, Modern Language, third-year Greek, and Mediæval and Modern History being reckoned with the others in this category, so that the Freshman year's work at college has been done here by not a few students. In 1900 required Bible Study was introduced, especially with a view to supplying the lack of needed familiarity with the Bible as literature. In this work four courses have been offered each year, consisting of one recitation per week, throughout the year. From the first Physical Training has been an increasingly important part of the Academy's program of work, and has always been a requirement in the course of each pupil.

#### THE SUMMER QUARTER

As shown by the tabular statement of the attendance, during the first seven years of the Academy's history the Summer Quarter was regularly a part of the school year.

The courses offered during the Summer were in many respects the same as those of the other Quarters. As the attendance was made up more largely of students attending for the

Summer only than of regular students, there was a considerable demand for review courses, and consequently classes were formed for this purpose in all departments. Since many teachers were in attendance, courses were arranged with a view to the teaching of methods also. Because of the smaller attendance, the cost of maintaining the Academy work during the Summer was always relatively much larger than during the other Quarters of the year, and, moreover, in other departments of the University many of the same courses as those of the Academy were being offered during this Quarter. Furthermore, a large proportion of the Summer students were women. When, therefore, the change was made by which the Academy became a school for boys only, it seemed best to discontinue for a time the session of the Summer Quarter, and since 1899 courses have been offered in the Fall, Winter, and Spring Quarters only.

## STATISTICS OF ATTENDANCE

The following is a tabular statement of the attendance by Quarters:

	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1892-1893.....	65	40	105	72	27	99	71	21	92	56	17	73
1893-1894.....	50	20	70	78	30	108	74	31	105	67	35	102
1894-1895.....	63	27	90	95	47	142	92	48	140	83	45	128
1895-1896.....	63	39	102	125	46	171	116	44	160	105	37	142
1896-1897.....	43	24	67	106	41	147	93	41	134	84	38	122
1897-1898.....	30	27	57	85	42	127	83	42	125	74	40	114
1898-1899.....	30	26	56	85	44	129	83	44	127	72	42	114
1899-1900.....	33	29	62	112	53	165	105	50	155	97	46	143
1900-1901.....	..	..	...	124	..	...	123	..	...	113	..	...
1901-1902.....	..	..	...	158	..	...	150	..	...	137	..	...

## THE ACADEMY BECOMES A SCHOOL FOR BOYS ONLY

The Academy's policy, as already indicated, originally was co-educational, and for eight years girls and boys had equal educational opportunity. During these years, however, the attendance did not increase as the excellence of the advantages offered justified the Trustees in expecting. Especially was this the case in the attendance of the girls who roomed in the Academy's dormitory; and since the Academy was and is a boarding-school rather than a day school, the attendance of pupils not resident in the village was judged to be the index of its real numerical strength. In the fall of 1899 the number of girls in attendance not living with relatives was twenty-six—exactly the same as it had been six years before, in the second year of the school. Moreover, this was the largest number during all these years, while the attendance of the boys had been increasing each year and was now about three times that number. The conclusions drawn from these facts, covering the experience of eight years, and based also on the experience of other schools, were that most parents in this part of our country were unwilling to have their daughters from fourteen to eighteen years of age away from home at a boarding-school for both boys and girls. It was believed, moreover, that among both parents of boys and the boys themselves the great majority preferred a boys' school to a co-educational school. In 1899 the Academy had three dormitories, two of which, used by the boys, were practically filled; the other, for girls, less than half filled, and containing no more than there had been six years before, no increase in the attendance of girls in the dormitories having occurred in all that time. It was not expected that there would be as many girls as there were boys; and yet it was thought essential to the success of co-education that the number

of either be not very greatly in excess of that of the other. Since the girls were not increasing in numbers, and the boys were, this desired attendance ratio could be obtained only by reducing and limiting the number of boys, a consequence of which would be a small school and the restricting of the educational opportunity. The policy of the University was, on the contrary, to enlarge and extend the educational opportunity that the Academy offered. Believing, therefore, that this could be done only by ceasing to receive girls and admitting boys alone, the Trustees in the summer of 1899 declared that after July 1, 1900, the Academy of the University of Chicago should be for boys.

#### SYSTEM OF DISCIPLINE

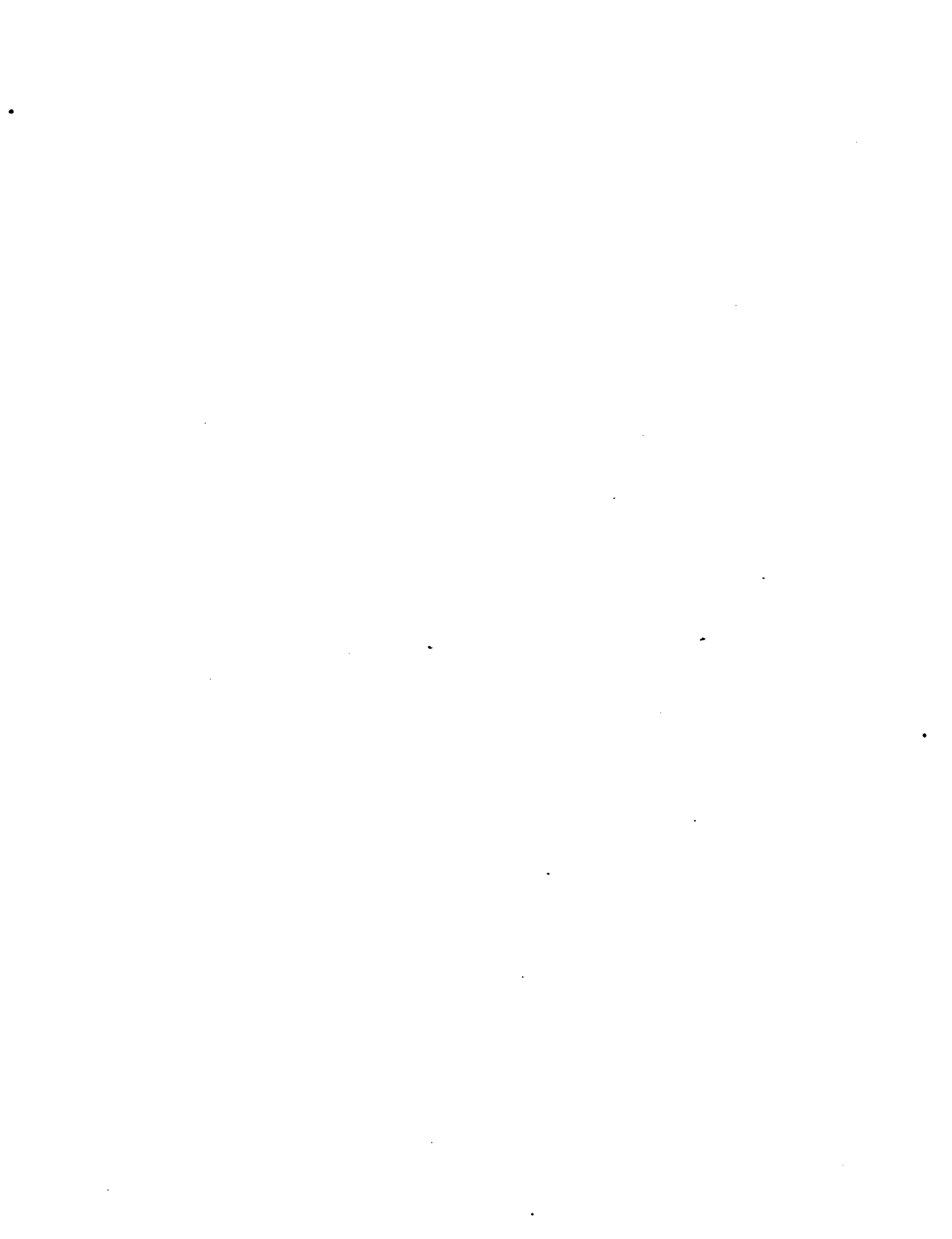
The school's theory and scheme of discipline have been to give to each student as large a measure of liberty under law as possible. This has come to mean in practice that the boys study in their own rooms, have no "limits" or "bounds" in the village, and are left to their own sense of responsibility and obligation in the conduct of many of the details of their daily life. On the other hand, the day is divided up into recitations and study periods, which they are required to observe carefully; absences from the village may be only by express permission; chapel and church attendance are required, and a certain neatness in care of room and personal appearance is enjoined. To the younger boys a more special supervision is given, and of course from boys whose record becomes unsatisfactory some of the personal privileges are taken away. To the few each year whose status, because of advanced studies, has been that of students in the Junior College, there has been given a larger liberty in exemption from some of the requirements, and each year for the last two years "Senior privileges" have been enjoyed by the graduating class in the Spring Quarter. These privileges have consisted principally in exemption from the requirements of study at the hours especially designated for that work and from required church attendance.

Respectfully submitted,

WAYLAND J. CHASE, *Dean.*



## **REPORTS OF THE DIRECTORS**



## THE UNIVERSITY LIBRARY

### I. RÉSUMÉ OF THE FIRST EIGHT YEARS, 1892-99

*To the President of the University:*

SIR: I submit herewith my report on the condition of the University Library, dividing it into two parts, one covering the years 1892-99, being a résumé of the first eight years of the decade, as a preliminary statement, and the other a somewhat fuller form, including the usual detailed statements, covering the last three years.

In May of 1892 the agreement was made between the University and the present Librarian, in accordance with which the charge of the organization of the University Library and Librarian was placed in her hands.

On September 1 the University Library was formally organized. The initial collections forming the nuclei about which subsequent additions have been grouped were the libraries of the Baptist Union Theological Seminary at Morgan Park, the old University of Chicago, the American Bible Union, the Cottonian Collection, and the Berlin Collection. The month was devoted to superintending the removal of these collections to the University quadrangles.

On October 1 the University Library formally began its work in connection with the other activities of the institution. Room 8 B in Cobb Hall was placed at the disposal of the Librarian to be used as the headquarters and executive office.

During the first quarter the work of the Library consisted largely in ordering new books, checking orders received during the summer, and establishing a series of reference libraries in connection with the departments of instruction. During this period the reference work of the main library was limited to the use of general reference books placed on file in Room B, and such books as could be borrowed from other libraries, the lack of space available preventing the unpacking of the books from Morgan Park. The Librarian wishes to acknowledge in this connection, with grateful appreciation, the courtesy of many libraries, noticeably the Boston Public, Harvard, Columbia, Johns Hopkins, Princeton, and the State Historical Society of Wisconsin, which lent from their shelves the tools with which this Library did its early work.

On January 3, 1893, the Library Department was moved from Room 8 B, Cobb Hall, into the temporary building situated on the corner of Lexington avenue and Fifty-seventh street, which building it occupied as a temporary home until 1902.

The months of January, February, and March were spent in unpacking and shelving the books from Morgan Park and from the Fifty-fifth street storeroom. Wherever there were books from any of the collections suitable for the use of departmental research they were transferred from the General Library to the Departmental Libraries, the selection in each case being made by the professor in charge of the Department interested.

The staff has included the following persons:

**ZELLA ALLEN DIXSON, A.M., Associate Librarian.**

Graduate, Mt. Holyoke College, 1880; Assistant Librarian, Columbia College, 1885-86; Library Expert, 1887-88; Librarian, Denison University, 1888-90; Special Student in British Museum, 1891; Librarian, Baptist Union Theological Seminary, 1890-92; A.M., Shepardson College, 1892; Assistant Librarian, the University of Chicago, 1892-95; Associate Librarian, *ibid.*, 1895-; Special Student in British Museum, 1899.

**WILLIAM ISAAC THOMAS, PH.D., Assistant Professor of Sociology and Superintendent of Departmental Libraries.**

A.B., University of Tennessee, 1884; A.M., *ibid.*, 1885; Instructor in English and Modern Languages, *ibid.*, 1886-87; Adjunct Professor of English and Modern Languages, *ibid.*, 1887-88; Student in Berlin and Göttingen, 1888-89; Professor of English, Oberlin College,



- 1889-94; Fellow in Sociology, the University of Chicago, 1893-94; Professor of Sociology, Oberlin College, 1894-95; Fellow and Assistant in Sociology, the University of Chicago, 1894-95; Instructor in Sociology, *ibid.*, 1895-96; Ph.D., *ibid.*, 1896; Superintendent of Departmental Libraries, *ibid.*, 1893-.
- \*JEAN ELIZABETH COLVILLE, A.M., Head Cataloguer.  
A.B., Wooster University, 1886; A.M., *ibid.*, 1889; Instructor in Greek and German, Franklin College, 1888-87; Librarian, Mt. Vernon (Ohio) Public Library, 1888-90; Librarian, Northfield Seminary, 1891; Cataloguer, Baptist Union Theological Seminary, 1891-92; Head Cataloguer, the University of Chicago, 1892-94.
- JOSEPHINE CHESTER ROBERTSON, A.B., Head Cataloguer.  
A.B., Wellesley College, 1891; Teacher in Public Schools, Albion, N. Y., 1883-85; Instructor in Shepardson College, 1888-89; Librarian, Northfield Seminary, 1892; Librarian, State Normal School, Trenton, N. J., 1893-94; Graduate Student, the University of the City of New York, 1896; Head Cataloguer, the University of Chicago, 1894-.
- CORA BELLE FERRINE, A.B., Head of Accession Department.  
A.B., Wellesley College, 1891; Student Assistant in the University of Chicago, 1892-93; Head of Accession Department, *ibid.*, 1893-.
- CLARENCE ALMON TORREY, Ph.B., Inspector of Departmental Libraries.  
Ph.B., Cornell College, 1890; Principal of Schools, Mt. Vernon, Ia., 1890-92; Graduate Student in the University of Chicago, 1892-93; Assistant Cataloguer, *ibid.*, 1893-94; Inspector, Departmental Libraries, *ibid.*, 1894-.
- \*MINNIE JONES, A.B., Loan-Desk Assistant.  
A.B., Northwestern University, 1889; Instructor in Kewanee (Wisconsin) High School, 1890-91; Assistant in Baptist Union Theological Seminary, 1891-92; Loan-Desk Assistant in the University of Chicago, 1892-95.
- \*GEORGE WASHINGTON PASCHAL, A.B., Loan-Desk Assistant.  
A.B., Wake Forest College, 1892; Principal, Dalcho Academy, 1893; Graduate Student in the University of Chicago, 1894-96; Loan-Desk Assistant, *ibid.*, 1894-96.
- \*WILLIAM FREDERICK YUST, A.M., Loan-Desk Assistant.  
A.B., Central Wesleyan College, 1893; Instructor in Public Schools, Canton, Ill., 1893-94; Graduate Student in the University of Chicago, 1895-96; Loan-Desk Assistant, *ibid.*, 1896-99.
- FRANK LELAND TOLMAN, Ph.B., Loan-Desk Assistant.  
Ph.B., the University of Chicago, 1899; Graduate Student, *ibid.*, 1899-.
- \*JULIA ANGELL, Assistant.  
Assistant in the University of Chicago Library, 1892-93.
- \*HESTER CODDINGTON, Assistant.  
Assistant in the University of Chicago Library, 1892-93.
- \*CHARLOTTE FLORENCE COE, Accession Assistant.  
Graduate of Lake Erie College, 1890; Assistant in the University of Chicago Library, 1892-93; Accession Assistant, *ibid.*, 1894-98.
- ANNA SOPHIA PACKER, A.B., Accession Assistant.  
A.B., the University of Chicago, 1895; Instructor, Montclair, N. J., Public School, 1895-98.
- \*FULTON JOHNSON COFFIN, A.M., Assistant in Haskell Library.  
A.B., Dalhousie College, 1887; A.M., Princeton University, 1899; Assistant in Haskell Library, 1896-97.
- JULIA LOUISE DICKINSON, Assistant Cataloguer.  
Graduate, Dearborn Seminary, 1870; Assistant Cataloguer in the University of Chicago, 1895-.
- MARGARET ANNE HARDINGE, in charge Traveling Libraries.  
Graduate, Normal Department, Chicago High School, 1869; Teacher in Chicago Public Schools, 1869; Assistant Clerk, Chicago Board of Education, 1870-73; Graduate, Library Science Department, Armour Institute of Technology, 1894; in charge Traveling Libraries, the University of Chicago, 1895-.
- CHARLES HARRIS HASTINGS, A.B., Assistant in Historical Group Library.  
A.B., Bowdoin College, 1891; Assistant in Historical Group Library, the University of Chicago, 1896-1900.
- \*WILLIAM H. HERRICK, Assistant.  
Assistant in the University of Chicago Library, 1892-93.
- ESTELLE LUTRELL, A.B., Assistant in Biological Library.  
A.B., the University of Chicago, 1896; Assistant, *ibid.*, 1894-95; Accession Assistant, *ibid.*, 1895-96; Assistant in Biological Library, 1897-.
- SARAH E. MILLS, Assistant in Morgan Park Academy Library.  
Assistant in Morgan Park Academy Library, 1892-.
- RUTH EDNA MORGAN, Assistant Cataloguer.  
Assistant Cataloguer, the University of Chicago, 1897-.
- \*EDGAR DOW VARNEY, A.M., Assistant in Haskell Library.  
A.B., Bates College, 1896; A.M., *ibid.*, 1893; Assistant in Haskell Library, 1897-99.
- \*PRESTON PISHON BRUCE, A.B., Assistant in Haskell Library.  
A.B., Cornell College, 1893; Graduate Student, the University of Chicago, 1896-; Assistant in Haskell Library, 1898-99.
- FERDINAND ELLERMAN, Assistant in the Astronomical Library.  
Assistant in the Astronomical Library, the University of Chicago, 1899-.

#### EPITOMIZED STATEMENT OF THE FORMAL ACTIONS OF THE ADMINISTRATIVE BOARD OF LIBRARIES, LABORATORIES, AND MUSEUMS

In September, 1894, the Administrative Board of Libraries, Laboratories, and Museums was organized to have charge of the Libraries, Laboratories, and Museums of the University. This Board has included the following members:

##### THE PRESIDENT, *Chairman*

THE RECORDER, *ex officio*

Professor LEWELLYS F. BARKER, *ex officio*

Professor THOMAS CHROWDER CHAMBERLIN, *ex officio*

Professor JOHN MERLE COULTER, *ex officio*

\* Resigned.

Professor HENRY HERBERT DONALDSON, *ex officio*

Professor GEORGE ELLERY HALE, *ex officio*

Professor HARRY PRATT JUDSON, *ex officio*

Professor ALBERT A. MICHELSON, *ex officio*

Professor JOHN ULBIC NEF, *ex officio*

Professor CHARLES O. WHITMAN, <i>ex officio</i>	Associate Professor JACQUES LOEB, <i>ex officio</i>
*Associate Professor GEORGE BAUR, <i>ex officio</i>	Associate Professor FREDERICK STARR, <i>ex officio</i>
Associate Professor CLARENCE FASSETT CASTLE, <i>ex officio</i>	Assistant Professor WILLIAM ISAAC THOMAS, <i>ex officio</i>
Associate Librarian ZELLA ALLEN DIXON, <i>ex officio</i>	Assistant Professor JAMES ROWLAND ANGELL, <i>ex officio</i>
Professor ERNEST DEWITT BURTON	Associate Professor STARR WILLARD CUTTING
*Professor EMIL G. HIRSCH	*Assistant Professor MARTHA FOOTE CROW
Professor JOHN MATTHEWS MANLY	Assistant Professor KARL PIETSCH
Professor ADOLPH C. MILLER	Assistant Professor THORSTEIN B. VEBLEN
Professor FRANK BIGELOW TARBELL	Instructor FREDERICK IVES CARPENTER

The following rules and regulations for the administration of the Library have been formally approved by the Board:

1. The Library of the University includes the General Library, the Departmental Libraries, the Group Libraries, the Branch Libraries, and the Traveling Libraries of the University Extension Division. They are all under the direction of the Librarian and subject to the control of the Administrative Board of Libraries, Laboratories, and Museums.

2. The rules governing the Library in all its activities are contained in the *Library Manual*. No violation of them will be excused on plea of ignorance.

3. Every member of the University will be given upon application a library card, which will entitle him to draw regularly from the Library not more than three volumes at any one time. In cases where more books are needed, special permission must be obtained from the Librarian.

Individuals who are not members of the University may have all the privileges of the Library upon the payment of the library fee.

4. Complimentary library cards, for a term of four weeks or less, will be issued by the Librarian to properly accredited scholars visiting Chicago.

5. Books may be retained two weeks, and may be once renewed for the same period. When a library book has become four days overdue, a notice will be sent to the borrower, and the book must be returned at once.

6. A fine of five cents a day shall be paid on each volume not returned according to the terms of the preceding rule, and no other book will be delivered to the person incurring the fine until it is paid. When a book has been retained beyond the prescribed time, and a notice of the fact from the Librarian has been disregarded, a messenger will be sent to secure the book, and an additional fine of twenty-five cents will be charged.

7. Books may be renewed by mail, by addressing the Librarian and sending the number of the book. The receipt of such notice by the Librarian, before the expiration of the time limit, shall be the only evidence accepted of such application having been made. No books bearing a fine will be renewed until the account is settled.

8. All books are subject at all times to a recall by the Librarian for special purposes, and must be returned at once on receipt of the notice.

9. Any person applying for a book belonging to the Library, taken out at the time of such application, will be entitled to have it reserved, and on leaving with the Loan-Desk Assistant an addressed postal card will receive notice by mail of the return of the book, but said book will not be held for such applicant more than two days after the mailing of the notice. Applicants will be notified in the order of their applications.

10. Encyclopædias, dictionaries, and other books of reference, elaborately illustrated works, and such other books as the Librarian shall deem necessary to withdraw from general circulation shall be used in the reference room only.

\*Changed.

11. All books lost or damaged must be replaced, or proper damages paid, the amount being determined by the Librarian.
12. Notes and marks of any kind on books belonging to the Library are strictly forbidden.
13. Overcoats, hats, and umbrellas must be placed in the racks provided for them, and not brought to the Library tables.
14. Silence and decorum must be strictly observed in all departments of the Library.
15. Any person abusing the privileges of the Library or violating the regulations shall be suspended by the Librarian from the privilege of using the Library. All students owing fines must settle the same before presenting themselves for any examination. No student will receive honorable dismissal from the University whose fines are unpaid.
16. No persons except members of the Library staff and the janitors shall have keys to the Library and no key shall be lent for any purpose whatsoever.
17. All rules and regulations apply to all members of the University, officers and students.

#### THE DEPARTMENTAL, GROUP, AND BRANCH LIBRARIES

The Board of Libraries, Laboratories, and Museums has recommended, and the Trustees of the University have adopted, the following principles as a basis for the administration of these Libraries:

1. They shall be regarded as an organic part of the University Library, and therefore under the direction of the University Librarian.
2. They shall be regarded as reference libraries, and books may be withdrawn from them only under special conditions.
3. There shall be the same general plan for their administration and the use of their books.
4. Branch Libraries differ only from Departmental and Group Libraries by being at a distance from the University.

#### GENERAL REGULATIONS

1. One person from the teaching force of each Department shall be selected by the Head or acting Head of that Department and by the President, who shall serve as Departmental Adviser in all matters pertaining to the management of the Library in that Department.
2. Each Departmental Library shall have two attendants, who shall be selected from the Graduate Scholars and Fellows of the Department, each of whom shall serve the Library two hours a day in arranging and cataloguing old and new books, and in doing other necessary work under the direction of the University Librarian.
3. An Inspector from the Library staff shall be chosen, whose duty it shall be to inspect each Departmental Library and make regular written reports upon the needs of the Departmental Libraries.
4. The Library Inspector shall notify the Library Adviser of any Departmental Library from which he shall remove any book, giving reasons for the removal, and stating to what Department the book has been assigned.
5. A Superintendent of Departmental Libraries shall be appointed, who shall have general oversight of the administration of Departmental Libraries, and shall recommend to the Board of Libraries, Laboratories, and Museums measures whereby these libraries may be made more serviceable.
6. He shall examine all lists of books and periodicals proposed for purchase by Departmental Libraries, and when books or periodicals are not obviously appropriate to the Department making the proposal, he shall bring the matter to the attention of the Head of the Department concerned, and may then refer the proposal to the Board of Libraries, Laboratories, and Museums.

7. When a Departmental Library presents an order for books or periodicals already in another Departmental Library, or in the General Library, he shall arrange a transfer of the books or periodicals in question between the libraries concerned, approve the order, or refer it to the Board of Libraries, Laboratories, and Museums.

8. He shall, acting with the Librarian, confer with the editors in charge of University publications in reference to securing, by exchange, periodicals proposed for purchase by Departmental Libraries or by the General Library.

#### SPECIAL REGULATIONS

The following special regulations have also been established :

1. Departmental Libraries shall be closed at six o'clock P. M., and shall not be open during the evening, except to those to whom special permission has been granted by the Departmental Adviser.

2. All officers of instruction may, with the approval of the appropriate Departmental Adviser, withdraw books from the library of their own Department and retain them for limited periods, to be agreed upon by the borrower and the Departmental Adviser. (a) The records of withdrawal of books are to be kept in each Departmental Library in an instructor's loan book, provided for that purpose, and the borrower shall record his name, title of book, accession number, and the date of withdrawal. (b) The Departmental Adviser, in connection with the Head of the Department, shall determine the conditions under which books may be drawn from a Departmental Library, and inform the General Library of these conditions. (c) The Departmental Adviser may, through the General Library, call in a book at any time. A fine of fifteen cents a day will be imposed for each failure to return books at the hour designated.

3. These regulations shall govern officers in the University as well as students.

4. Officers of instruction are requested to make their suggestions and desires with reference to the Library through the Departmental Adviser.

#### RELATION BETWEEN THE GENERAL LIBRARY, DEPARTMENTAL, GROUP, AND BRANCH LIBRARIES

In October, 1895, the Board of Libraries, Laboratories, and Museums recommended, and the Trustees of the University adopted, the following statement of the relation existing between the General Library and all Departmental, Group, and Branch Libraries :

The relation between the General Library and the Departmental, Group, and Branch Libraries shall be identical with that existing between these several libraries.

In accordance with this principle the following regulations have been made :

##### A. OWNERSHIP OF BOOKS

1. All books now in possession of the General Library are recognized as belonging to that Library. But it is understood that the books of the Berlin and the Morgan Park collections *not yet distributed* are held in trust for the advantage of all divisions of the Library, without individual preference of one over another. All other books in the General Library are regarded as belonging to it for the purpose of a general reference or circulating library.

2. All books now in possession of the several Departmental, Group, and Branch Libraries are recognized as belonging to these several libraries, except such books as have been loaned to any of these libraries by the General Library, either from the collection of the old University of Chicago or from books purchased by funds specially appropriated for the General Library.

##### B. LOAN OF BOOKS

3. Books belonging to the General Library shall be loaned to any of these libraries on the request of the Departmental Adviser, when, in the judgment of the University Librarian, they are not needed for the purposes of the General Library.

4. Books thus loaned shall be returned on demand of the University Librarian.

5. Any of these libraries may deposit with the General Library books temporarily not in use in these libraries, to be held there in trust for them. Such books will be put into circulation just as other books in the General Library, unless the Library Adviser shall request to the contrary.

6. Books thus held in trust shall be returned to the Library from which they came on demand of the Library Adviser.

#### C. EXCHANGE AND TRANSFER OF BOOKS

7. Books belonging to the Berlin collection or to the Morgan Park collection, as far as they have not yet been distributed, shall be permanently assigned to any library on application by the Library Adviser and approval by the Administrative Board of Libraries, Laboratories, and Museums.

8. The Board of Libraries, Laboratories, and Museums shall have the right to recall to the General Library any books thus granted.

9. Exchange of other books between two Departmental, Group, or Branch Libraries, or between the General Library and any one of these, or transfer of books from one library to another, may be arranged between the representatives of the libraries concerned on such terms as may be agreed upon, the General Library being duly informed and recording the transfer.

10. When any library presents an order for a large collection of books already owned by another library, or by the General Library, it shall be the duty of the Librarian to submit the order to the Administrative Board of Libraries, Laboratories, and Museums for approval.

#### REGULATIONS FOR THE PURCHASE OF BOOKS FOR THE LIBRARIES

The Trustees of the University, upon the recommendation of the Administrative Board of Libraries, Laboratories, and Museums, have also established the following regulations, in accordance with which books are purchased for the libraries :

1. Proposals for the purchase of books must be approved first of all by the Head or acting Head of the Department for whose use the books are desired. Persons, other than Heads or acting Heads of Departments, desiring to propose books for purchase should transmit their proposals to the Head or acting Head of the Department in which the book belongs. If an additional copy of any book already owned by the Library is desired, this should be indicated by the words "additional copy desired," placed after the title. If the succeeding volume of a work in course of publication is desired, the fact should be indicated on the proposal.

2. All proposals for books shall be made on the order cards provided by the Library, one card for each work, and each card must be separately signed by the Head or acting Head of the Department proposing the book.

3. The Librarian shall collate the list of books proposed for purchase with the catalogue of the Library. If any book in the list is already owned by the Library in any Department, and is not marked on the list as an additional copy desired, this fact, with particulars respecting the Department to which the copy belongs, shall be reported to the professor by whom the proposal was approved. Of the remainder of the list the Librarian shall secure an estimate of cost. The original proposals bearing the signature of the Head or acting Head of the Department shall be filed in the Library.

4. If the estimated cost of the books proposed at any one time is within the sum appropriated and available to the Department proposing the books, the Librarian shall send a list of such books to the University Press for purchase. Such lists shall be signed by the Librarian and shall bear date on which it is sent to the Press. The signature of the Librarian to the words "approved for purchase" on each card or sheet of any list of books shall be the only authorization for the purchase of such books. The Librarian shall preserve a memorandum, in

a book to be kept for that purpose, of all orders approved for purchase. If the estimated cost of any order exceeds the amount appropriated and available for the Department in question, the order shall be returned to the Head or acting Head of the Department, with information concerning the amount by which the estimate exceeds the money available.

5. With every consignment of books delivered by the University Press to the Librarian there shall be sent to the Librarian regular bills on University Press bill-heads, the books for each Department of the University being on a separate bill, and no book shall be accepted by the Librarian unless accompanied by such bills.

6. The Librarian shall also sign and date any ready-reference receipt which the University Press may present with books delivered and accompanied by regular bills. This ready-reference receipt, being signed on delivery of the books without delay for collation of the orders, shall be construed only as a provisional acceptance of the books, and shall contain language so provided, not as waiving or surrendering any right of return otherwise belonging to the Library. For books returned to the Press, after being thus receipted for, the Librarian shall take a return receipt from the Press.

7. The bills named in sec. 5, when audited by the Librarian, shall be returned to the University Press with the signature of the Librarian, indicating what books have been received. The signature of the Librarian upon any bill, or opposite any item of a bill, shall be to the University Press the only voucher of the delivery of the book and its acceptance by the Library. The Librarian shall use such means as are accessible to detect errors in the bills and to secure their correction.

8. These identical bills bearing the signature of the Librarian for each item of the bill, or for the bill as a whole, shall be presented for payment to the Secretary of the University, and no bills not so audited and signed shall be accepted by him for payment.

DELIVERY STATION OF THE PUBLIC LIBRARY

In March, 1894, there was established at the General Library of the University a station of the Chicago Public Library, known as Station 11, South, by means of which daily consignments of books needed by members of the University are brought to the General Library for distribution. At first only one box a day was delivered, so that a book ordered one day could not be received until the following day. Now there is a collection in the morning and a delivery in the afternoon, making it possible for books to be ordered before 9 A. M. and delivered by 2 P. M. of the same day. This delivery station has greatly aided the Library in its work by relieving it of the necessity of buying popular books which would be needed only in the circulating department, thus enabling it to spend the money at its disposal for reference books and expensive sets of transactions.

In 1894 there were issued from this station 121 cards; in 1895, 205; in 1896, 290; in 1897, 227; in 1898, 298; in 1899, 303. Many more cards issued at other stations are used by University students who find this more convenient than the home station.

The following table represents the use the University has made of this station:

TABLE I  
CHICAGO PUBLIC LIBRARY STATION STATISTICS

Year	Orders	Vols. Delivered	Renewals
1894 .....	1,722	1,150	64
1895 .....	4,276	3,180	436
1896 .....	5,278	3,670	498
1897 .....	5,550	3,924	530
1898 .....	7,692	5,515	630
1899 .....	9,367	7,039	680



**REPORTS OF THE DIRECTORS**



TABLE VI—Continued

Departments	1892-95	1896	1897	1898	1899	Totals by Departments
Romance.....	9	5	17	5	11	47
German.....	1	3	4	7	8	23
English.....	25	19	47	38	41	170
Mathematics.....	3	6	8	6	10	33
Astronomy.....	1	1	1	2	0	5
Physics.....	3	4	1	7	11	26
Chemistry.....	2	1	1	1	4	9
Geology.....	3	5	6	0	18	32
Biology.....	2	6	27	17	23	75
Physical Culture.....	2	4	2	6	12	26
Music.....	0	0	1	0	0	1
Public Speaking.....	0	1	0	2	0	3
Totals by years.....	240	211	303	242	326	1,322

## TRAVELING LIBRARIES

The Extension Division has formed an active part of the organization of the University from the beginning, and the traveling libraries have been part of the necessary equipment of the Division from October, 1892, when the first lectures were given, up to the present time.

These libraries are sent out in connection with the lecture courses given by the University Extension Faculty, and supply to educational centers away from the University the books necessary to secure the best results from the lectures. These libraries are made up of books relating to the subject of the lecture series being given at the time. Duplicate copies are furnished, and in some cases entire duplicate libraries, when the centers are large, or extra copies needed.

The Board of Trustees provides the funds for the purchase of these books by an annual appropriation. No charge is made for the use of the traveling library, but each center is required to pay for its transportation and to replace any lost or injured volumes.

The first traveling library was sent out for the season of 1892-93. It was sent to Freeport, Ill., to a center studying the labor question, and contained 19 volumes. The present libraries number from 25 to 75 volumes, representing from 5 to 20 titles.

The period of use extends from the Autumn to the Summer Quarter, inclusive. This period allows each center to offer two or three courses of lectures. The library accompanying a lecture course is selected by the lecturer, purchased by University Extension funds, and placed in the charge of the local secretary of the center through whom the library business of the center is transacted.

Whenever a lecture course is discontinued, the books used in this course are marked at greatly reduced prices and placed on sale in some convenient place. The books in the

TABLE VII  
TRAVELING LIBRARY STATISTICS

	1892-93	1894	1895	1896	1897	1898	1899
Number of volumes.....	1,100	1,834	1,935	2,460	3,467	3,663	3,550
Volumes sent out.....	1,754	2,001	2,010	1,782	3,536	3,562	2,848
Number of libraries sent.....	64	64	89	59	94	83	67
Number of states.....	4	5	9	7	8	8	8
Number of cities or towns.....	30	44	56	45	36	48	46
New libraries purchased.....	....	....	27	20	30	20	12
Number of volumes purchased..	....	....	828	523	1,398	536	642
Number of volumes sold.....	....	....	242	116	274	478	896

traveling libraries are at all times for sale to the students of the centers at wholesale prices. The library administration is glad to carry the extra work thus involved for the sake of the opportunity afforded in this way to students to secure for themselves private libraries on subjects in which they have become interested.

The preceding table shows a summary statement of the accessions, sales, and use of the books from 1892-99.

BOOKS ADDED BY EXCHANGE

From July 1, 1893, till July 1, 1899, there have been added to the Library of the University of Chicago, by exchange for University publications, 2,687 volumes, distributed as follows:

TABLE VIII

Departments	No. Vols.	Departments	No. Vols.
General Library	992	English	2
Pedagogy	9	Astronomy	12
Political Economy	422	Physics	1
Political Science	18	Geology	143
History	9	Botany	69
Sociology	156	Public Speaking	1
Sociology (Divinity)	29	Church History	77
Anthropology	15	Systematic Theology	41
Comparative Religion	70	Homiletics	44
Semitic	207	Divinity	25
New Testament	212	Egyptology	1
Sanskrit and Comparative Philology	5	Morgan Park Academy	127
Greek	1		
Romance	1	Total	2,687

NUMBER OF VOLUMES IN DEPARTMENTS JULY 1, 1899

Departments	No. Vols.	Departments	No. Vols.
General Library	248,443	Romance	2,771
Philosophy	2,846	German	4,839
Pedagogy	1,700	English	5,158
Political Economy	6,067	Mathematics	2,399
Political Science	2,545	Astronomy (Ryerson)	568
History	5,104	Astronomy (Yerkes)	
Archæology	464	Physics	1,194
Sociology	3,523	Chemistry	1,716
Sociology (Folk- Psychology)	838	Geology	4,218
Anthropology		Biology	7,442
Haskell	9,027	Music	146
Comparative Philology	1,417	Public Speaking	135
Greek	1,971	Physical Culture	183
Latin	4,415		
Latin and Greek	549	Total	319,678

EXCHANGES FOR UNIVERSITY THESES

At the beginning of the year 1897 the Board of Libraries, Laboratories, and Museums authorized the Librarian to exchange the accumulated Doctors' theses with like publications of other institutions. A committee was appointed by the Board to prepare a list of institutions with which the exchanges should be made. In accordance with this ruling, the Librarian has sent to the following institutions a complete file up to date of the Doctors' theses of the University of Chicago, receiving in exchange corresponding files. Both in amount and in value

the exchanges differ greatly from each other, and some of the files received are longer than those offered by the University of Chicago. In one case, for example, the Strassburg University sent 3,000 theses, and placed the University on its permanent list for future exchanges, in return for 52 theses and similar registration for the future publications of the University of Chicago.

TABLE IX  
LIST OF EXCHANGES FOR UNIVERSITY THESES FROM JULY 1, 1897, TO JULY 1, 1899

Name of Institution	Theses Sent	Theses Received	Name of Institution	Theses Sent	Theses Received
<b>American :</b>			<b>Foreign :</b>		
Brown.....	50	1	Berlin.....	55	0
Bryn Mawr.....	50	0	Christiania.....	55	0
California.....	51	1	Giessen.....	55	125
Clark.....	50	28	Göttingen.....	52	0
Columbia.....	29	19	Halle.....	55	0
Cornell.....	50	31	Heidelberg.....	52	0
Harvard.....	50	0	Kiel.....	52	0
Johns Hopkins.....	50	142	Leiden.....	52	41
Leland Stanford Junior	50	2	Leipzig.....	55	0
N. Y. State Library.....	54	0	Strassburg.....	52	3,000
Pennsylvania.....	29	11	Toulouse.....	49	32
Princeton.....	50	0	Tübingen.....	51	45
Wisconsin.....	49	1			
Yale.....	50	3			
<b>Total American.....</b>	<b>662</b>	<b>237</b>	<b>Total foreign.....</b>	<b>635</b>	<b>3,243</b>
			<b>Total American.....</b>	<b>662</b>	<b>237</b>
			<b>Grand total.....</b>	<b>1,297</b>	<b>3,480</b>

#### NEWBERRY LIBRARY PRIVILEGES

In February, 1899, a communication was sent to the trustees of the Newberry Library requesting them to take some action permitting the members of the University of Chicago to borrow books from the Newberry Library. February 11, the trustees of the Newberry Library voted to establish loans between the University of Chicago Library and the Newberry Library under the following regulations :

"The Newberry Library will loan books during the year 1899 on the following conditions :

"1. The request for the loan must come from the Librarian of either the University of Chicago, the Northwestern University, Lake Forest University, the John Crerar Library, or the Chicago Public Library.

"2. It must be in behalf of a scholar needing the volumes requested in the prosecution of his professional work.

"3. The institution represented by the Librarian asking the loan must agree to reciprocate in the loaning of books, must guarantee against loss of, or damage to, the book or books loaned, according to the terms of the loan, and must pay all expenses incurred by boxing and shipping. The books are to be at the risk of the borrower from the time they leave the business office of the Newberry Library until they are returned to that office. In case of loss of a volume taken from a set, the institution to which the volume is loaned is to replace the volume or pay the price of a new set.

"4. The books must be used in the library building and under the supervision of the Librarian to whom they are addressed.

"5. Books loaned are to be returned not later than the date fixed by the Librarian of the Newberry Library, said date being transmitted with the books ; provided, however, that they must be returned immediately on demand.

"6. Prompt notice must be given of the receipt of the volumes loaned, and of the date of shipment when they are returned.

"7. Excepted books:

"a) All books, periodicals, and pamphlets in the medical department, unless for brief use by a court of law in session in the city, or in some other case of emergency when, in the discretion of the Librarian, the book may be safely loaned.

"b) Books recently published.

"c) Books to be obtained by reasonable search elsewhere.

"d) Unbound periodicals.

"e) Books that in the judgment of the Librarian cannot be replaced, or may be replaced only with great difficulty and at a large expense.

"f) Books in special demand by the patrons of this library.

"g) Any book or pamphlet that in the judgment of the Librarian should remain in the building."

#### BAUR LIBRARY

March 15, 1899, the University of Chicago purchased from Mrs. Baur, through Dr. H. H. Donaldson, administrator of the estate of the late Associate Professor George Baur, of the University of Chicago, the private collection of books and pamphlets on Paleontology constituting the private library of her husband.

The University agreed to pay \$400 for the collection, and agreed to the following conditions of sale:

1. All books found to be duplicates to be returned to Mrs. Baur as her private property.

2. A certain collection of books (about fifty) to be purchased by the members of the University of Chicago Faculty of Mrs. Baur as a private purchase. Mrs. Dixson, the Associate Librarian, and Associate Professor Jordan, the Library Adviser of the Biological Library, to approve the selection.

3. The collection to be distributed by subject, with no mention required by book-plate or otherwise of the source of the purchase of the library.

The library is in fair condition as to books, but contains a large number of pamphlets and unbound books, which should be bound immediately. There are also several book rarities of unusual interest and of great value, which should be removed from the collection and placed with books of a similar character in the Librarian's office. The library has been shelved in the Zoology Building.

## II. DETAILED STATEMENT FOR 1899-1900 AND 1900-1901

Following is the report on the condition of the University Library, up to the present time, covering the years 1899-1900, 1900-1901, and 1901-1902.

During this period the personnel of the Library Board has been as follows:

### THE UNIVERSITY LIBRARIES, LABORATORIES, AND MUSEUMS

#### THE ADMINISTRATIVE BOARD

##### THE PRESIDENT, *Chairman*

THE RECORDER, *ex officio*

Dean HARRY PRATT JUDSON, *ex officio*

Professor THOMAS CHROWDER CHAMBERLIN, *ex officio*

Professor CHARLES O. WHITMAN, *ex officio*

Professor JOHN MEELE COULTER, *ex officio*

Professor ALBERT A. MICHELSON, *ex officio*

Professor HENRY HERBERT DONALDSON, *ex officio*

Professor JACQUES LOEB, *ex officio*

Professor JOHN ULBIC NEF, *ex officio*

Professor GEORGE LINCOLN HENDRICKSON, *ex officio*

Professor GEORGE ELLERY HALE, *ex officio*  
 Professor LEWELLYS F. BARKER, *ex officio*  
 Professor IRA MAURICE PRICE, *ex officio*  
 Associate Librarian ZELLA ALLEN DIXSON, *ex officio*  
 Associate Professor FREDERICK STARR, *ex officio*

Associate Professor WILLIAM ISAAC THOMAS, *ex officio*  
 Associate Professor CLARENCE FASSETT CASTLE, *ex officio*  
 Assistant Professor JAMES ROWLAND ANGELL, *ex officio*

Professor FRANK BIGELOW TARBELL  
 Professor ERNEST DEWITT BURTON

Professor JOHN MATTHEWS MANLY  
 Associate Professor KARL PIETSOH

Dr. FREDERIC IVES CARPENTER

#### EPITOMIZED SUMMARY OF ACTIONS

The following recent actions have been formally approved by the Administrative Board of Libraries, Laboratories, and Museums:

##### GROUP LIBRARIES

On November 25, 1899, the Administrative Board formally accepted the report of the committee in regard to the arranging of certain Departmental Libraries into Group Libraries, each Group to be in charge of a Library Assistant, and that the Library Advisers of all Group Libraries be *ex officio* members of the Library Board.

##### BINDING OF BOOKS

On the same date the Board established the following rules and regulations for the binding of University books:

"1. That the duty of preparing the original orders for binding be assigned to the General Library, instead of to the Departments as now. Suggestions for the binding may originate either with the Department or the General Library. It shall be the duty of the General Library to prepare such orders for all unbound books, and completed volumes of periodicals, as well as for all other books needing re-binding.

"2. That these orders be approved by the Head of the Department for which the binding is to be done; or by the Library Adviser acting on the authorization of the Head of the Department.

"3. That the binding orders be made on library cards, one card for each title, after the form presented; this form to take the place of the order sheets hitherto employed.

"4. That the cost of binding be charged to the book fund of the Department which orders the binding, as at present.

"5. That the substance of the above action be printed in the *University Record*, together with an abridged form of the accompanying statement concerning material and styles of binding, and be sent to the Heads of Departments and to the Library Advisers for their information."

##### PURCHASE OF PERIODICALS

The Board also recommended to the Board of Trustees the appropriation of a sum sufficient to purchase a list of publications of common interest to several Departments, with the understanding that this sum be not deducted from present appropriations.

##### BOOKS BY MAIL

On February 24, 1900, the Administrative Board instructed the Librarian to bring to the attention of Heads of Departments the fact that a book ordered "in haste" would be ordered by mail.

## BOOK ORDERS

On October 27 the Director of the University Press reported that, in accordance with the request of the Library Board dated March 19, 1900, the following regulations governing the purchase of books had been established:

"A limit has been put on the time allowed to dealers in which to fill orders, they having been notified that on January 1, 1901, all orders of more than a year's standing would be canceled, and that after that time no longer than one year would be given in which to fill any order."

The Board voted that the University Press be requested to observe strictly the limit of time and price placed by Departments on rare and out-of-print books, under penalty of being held responsible for exceeding the price fixed by Departments.

## DEPARTMENTAL SUBJECT CATALOGUES

On November 24 the Board voted that it was undesirable to require Departmental Libraries to employ the same system of subject catalogues.

## THE LIBRARY STAFF

ZELLA ALLEN DIXSON, *Associate Librarian*  
 WILLIAM ISAAC THOMAS, *Superintendent of Departmental Libraries*  
 JOSEPHINE CHESTER ROBERTSON, *Head Cataloguer*  
 CORA BELLE FERRINE, *Head of Accession Department*  
 CLARENOR ALMON TORREY, *Inspector of Departmental Libraries*  
 FRANK LELAND TOLMAN, *Loan-Desk Assistant*  
 ANNA SOPHIA PACKER, *Accession Assistant*  
 JULIA LOUISE DICKINSON, *Assistant Cataloguer*  
 MARGARET ANNE HARDINGE, *in Charge of Traveling Libraries*

RUTH EDNA MORGAN, *Second Assistant Cataloguer*  
 AMY HEWES, *Assistant in Historical Library Group*  
 ESTELLE LUTRELL, *Assistant in Biological Library*  
 ALBERT E. PATCH, *Assistant in Haskell Library*  
 JOHN DORSEY WOLCOTT, *Assistant in Classical Library*  
 STORRS B. BARRETT, *Assistant in Yerkes Observatory Library*  
 IRENE WARREN, *Assistant in School of Education*

## CHANGES ON THE STAFF

July 1, 1900, Charles Harris Hastings, Assistant in Historical Library Group, resigned; Amy Hewes appointed to take his place.

July 1, 1900, Ferdinand Ellerman, Assistant in Astronomical Library, resigned; Storrs B. Barrett appointed to take his place.

October 1, 1900, Edgar Dow Varney, Assistant in Haskell Library, resigned; Preston P. Bruce appointed to take his place.

October 1, 1900, William Frederick Yust, resigned; Frank Leland Tolman appointed to take his place.

## STUDENT ASSISTANTS, JULY 1, 1900-JULY 1, 1902

Mary Elizabeth Abernethy  
 Ambrose Wesley Armitage  
 Frank Perkins Barker  
 Edith Bickell  
 Margaret Jeanette Calvin  
 Jacob Frank Casebeer  
 Lucy Eleanor Chambers  
 Lillian Clark  
 Mary Meroe Conlan  
 Georgia Toto First

Helen Gardner  
 Carl Henry Grabo  
 Herman Gustavus Heil  
 Raymond Ransom Kelly  
 Irving King  
 Aurelia Koch  
 Beatrice Lessey  
 Marie Lucy Lewis  
 Edna Lisle Martin  
 Ella R. Metaker

Millard Riley Myers  
 Charles Homer Norton  
 Sarah Luella Patterson  
 Eliza Margaretta Sloan  
 Albertus Victor Smith  
 Henry Cowles Smith  
 Myra Virginia Smith  
 Alvin Brinker Snider  
 Georgia Mae Wheeler

## LIBRARY ADVISERS AND ATTENDANTS

## PHILOSOPHICAL-HISTORICAL GROUP

Associate Professor William I. Thomas, Adviser

George C. Sellery

Edgar H. McNeal

Arthur E. Bestor

Charles B. Williams

Charles A. Huston

Arthur G. Thomas

Garland Q. Whitfield

Paul F. Peck

William B. Guthrie

Sydney A. Campbell

Winifred G. Crowell

William E. Miller

Henry W. Brewster

Howard B. Woolston

William C. Gore

Kate Gordon

Harriet E. Penfield

Evelyn S. Hayden

Orville E. Atwood

Forest G. Smith

## ANTHROPOLOGY

Associate Professor Frederick Starr, Adviser

## HASKELL

Associate Professor John W. Moncrief, Adviser

Isaac A. Corbett

Joseph E. Hicks

William J. McDowell

Elijah A. Hanley

James H. Brace

John C. Granbery

Albert S. Wilson

William R. Schoemaker

Wynne N. Garlick

Roy W. Merrifield

## CLASSICAL GROUP

Professor George L. Hendrickson, Adviser

Nina E. Weston

La Rue Van Hook

Mason D. Gray

Geneva Misener

David M. Robinson

Matilda Gibson

Thomas L. Comparette

Edna C. Dunlap

Joseph S. Williams

Julia L. Peirce

Mabel K. Whiteside

Edgar H. Sturtevant

## MODERN LANGUAGE GROUP

Instructor Frederic I. Carpenter, Adviser

Frances M. Donovan

David L. Maulsby

G. B. Hallett

Francis M. Motter

Fannie Fisch

Laura W. Darnell

Florence Turney

Alexander P. Thoms

Edna C. Dunlap

May E. Wilcoxson

Maud A. Link

Mae B. Provines

Henrietta Becker

Josephine Doniat

## MATHEMATICS-ASTRONOMY

Professor Eliakim H. Moore, Adviser

Instructor Charles R. Mann, Adviser

## PHYSICS

William O. Beal

Ralph H. Rice

## GEOLOGY

Professor Rollin D. Salisbury, Adviser Fred H. H. Calhoun

John L. Nelson

## CHEMISTRY

Assistant Professor Julius Stieglitz, Adviser

Mary Lincoln

## BIOLOGY

Associate Professor Edwin O. Jordan, Adviser

Mary Hefferan

John M. Prather

Charles C. Adams

## PUBLIC SPEAKING

Assistant Professor Solomon H. Clark, Adviser

## MUSIC

Lester B. Jones, Adviser

## PHYSICAL CULTURE

Professor A. Alonzo Stagg, Adviser

## SERIALS, 1899-1902

During the past three years continued effort has been made to reduce the expense of the annual subscription list for serials by exchanging University publications for serials for which regular orders had been received.

The following tabulation shows the number of publications which have been coming to the University Library during the past three years, the Departments to which they have been sent and the sources from which they have been obtained :

TABLE X  
TABULATED STATEMENT OF SERIALS

DEPARTMENTS	SOURCE				ISSUE							
	Gift	Exchange	Purchase	Total	Weekly	Semi-monthly	Monthly	Bi-monthly	Quarterly	Semi-annually	Yearly	Irregular
Anatomy.....	1	..	30	31	8	..	6	2	2	..	..	13
Anthropology.....	..	3	25	28	..	2	8	3	4	2	..	9
Astronomy (Byerson).....	..	1	8	9	..	..	2	..	..	..	2	5
Astronomy (Yerkes).....	..	15	5	20	2	..	11	..	..	..	..	7
Bacteriology.....	..	..	7	7	..	1	1	1	1	..	..	3
Botany.....	6	32	15	53	3	1	20	3	7	1	..	18
Botany and Zoology.....	..	7	..	7	..	..	2	1	..	1	..	3
Chemistry.....	..	1	21	22	3	3	6	1	..	..	..	9
Church History.....	..	..	1	1	..	..	..	1	2	..	..	..
Classical Archaeology.....	..	..	8	8	..	..	..	1	2	2	..	4
Commerce and Administration.....	2	..	5	7	2	..	1	..	..	..	..	3
Comparative Religion.....	2	..	3	5	..	..	2	1	1	..	..	1
Scandinavian Seminaries.....	..	..	7	7	1	..	5	..	1	..	..	..
English.....	..	1	7	8	1	1	2	2	1	..	..	1
English and German.....	..	..	1	1	..	..	..	1	1	..	..	..
English, German, and Romance.....	..	..	6	6	2	..	1	..	1	..	..	2
General Library.....	51	39	70	160	31	6	51	5	20	1	..	46
Geology.....	6	44	3	53	5	..	16	3	3	..	..	26
German.....	..	1	23	24	2	1	5	..	5	1	..	10
Haskell.....	53	83	2	138	55	3	40	10	19	2	..	9
History.....	1	2	25	28	..	..	4	2	15	..	..	7
Latin.....	1	..	..	1	..	..	..	..	..	..	..	1
Latin and Greek.....	1	1	24	26	3	1	3	1	8	1	..	9
Latin, Greek, and Sanskrit, and Comp. Phil.....	..	..	1	1	..	..	..	..	..	..	..	1
Law School.....	2	4	71	77	18	1	26	3	2	..	..	27
Mathematics.....	1	..	38	39	..	1	9	4	10	1	..	14
Morgan Park Academy.....	..	..	27	27	8	..	18	..	..	..	..	1
Music.....	..	..	2	2	..	..	2	..	..	..	..	..
Neurology.....	..	1	14	15	2	2	4	1	1	..	..	5
New Testament.....	..	..	7	7	1	..	2	..	2	..	..	2
Paleontology.....	..	..	5	5	..	..	1	..	1	..	..	3
Pathology.....	5	..	16	21	5	1	3	1	3	..	..	8
Pedagogy.....	15	34	7	56	7	1	32	2	5	..	1	8
Philosophy.....	..	4	18	22	..	..	3	3	10	..	1	5
Physical Culture.....	..	..	6	6	1	1	3	..	..	..	..	1
Physica.....	..	3	17	20	5	2	10	..	..	..	..	3
Physiological Chemistry.....	..	..	3	3	..	..	1	..	1	..	..	1
Physiology.....	..	..	17	17	..	1	1	3	..	..	..	12
Political Economy.....	17	72	12	101	25	1	37	6	14	..	1	17
Political Science.....	..	3	6	9	2	1	1	2	1	..	..	2
Romance.....	..	..	11	11	..	..	1	2	3	1	..	4
Sanskrit and Comparative Philology.....	..	1	10	11	..	..	1	..	3	1	..	6
School of Education.....	2	19	42	63	14	..	44	1	1	..	..	3
Semitic.....	4	..	15	19	1	..	1	3	5	1	2	6
Sociology.....	7	51	9	67	4	5	29	3	9	..	..	17
Sociology (Divinity).....	..	..	10	10	2	..	3	..	2	..	..	3
Sociology (Folk-Psychology).....	..	..	4	4	2	..	..	1	..	..	..	1
Systematic Theology.....	..	..	1	1	..	..	1	..	..	..	..	..
Zoology.....	1	1	21	23	1	1	4	..	1	..	2	14
Total.....	178	423	686	1,287	216	37	423	70	167	15	9	350



## SOCIETY PUBLICATIONS AND STATE DOCUMENTS

During the year the Board of Libraries, Laboratories, and Museums has placed at the disposal of the Librarian, for the purpose of exchange, 20 copies of back numbers of books and studies, 200 copies of current publications, a limited number of back files of the journals, and 150 copies of current numbers. With these an effort has been made to secure the publications of societies, studies, and bulletins of universities and state publications.

The following is a list of societies, institutions, and states with which exchanges have been made:

## SOCIETIES

American Philosophical Society, Philadelphia, Pa.	Moscow, Société Impériale des Naturalistes de Moscou
Berlin, Königliche Akademie der Wissenschaften	Munich, Königliche Akademie der Wissenschaften
Giessen, Oberhessische Gesellschaft für Natur- und Heilkunde	Royal Society of Canada
Göttingen, Königliche Gesellschaft der Wissenschaften	Royal Society of New South Wales

## STATES

Connecticut	Illinois	Iowa	Maryland	Michigan	New York	Texas
Idaho	Indiana	Maine	Massachusetts	New Hampshire	Ohio	Wisconsin

## CONDITION OF THE CATALOGUES

According to the ruling of the Administrative Board of Libraries, Laboratories, and Museums, each Departmental Library has two attendants selected from the Graduate Scholars and Fellows of the Department, each of whom serves the Library two hours a day in arranging

TABLE XI

## CONDITION OF CATALOGUING IN DEPARTMENTAL AND GROUP LIBRARIES

Libraries Having Author Catalogue	Libraries Having Subject Catalogue	Libraries Having Subject Arrangement on Shelves	Libraries Having Card Indicating Shelf Number
Anthropology <sup>1</sup>	.....	..... <sup>2</sup>	.....
Astronomy	.....	Astronomy	.....
Biology	Biology	Biology	Biology
Chemistry	.....	Chemistry	Chemistry
Classical Archæology	.....	Classical Archæology	.....
Comparative Philology	.....	Comparative Philology <sup>1</sup>	Comparative Philology <sup>1</sup>
English	English <sup>1</sup>	English	English
Geology	Geology	Geology <sup>1</sup>	Geology <sup>1</sup>
German	German	German	German
Greek	.....	Greek	Greek
Haskell	.....	Haskell	Haskell
History	History	History	History
Latin	Latin	Latin	Latin
Mathematics	.....	Mathematics	Mathematics
Pedagogy	.....	Pedagogy	Pedagogy
Philosophy	Philosophy	Philosophy	Philosophy
Physics	Physics	Physics	Physics
Political Economy	Political Economy	Political Economy	Political Economy
Political Science	Political Science	Political Science	Political Science
Romance	.....	Romance	Romance
.....	.....	School of Education	School of Education
Sociology	Sociology	Sociology	Sociology

School of Education has dictionary catalogue and decimal classification.

<sup>1</sup> In course of preparation.

<sup>2</sup> Author arrangement on the shelves.

and cataloguing old and new books, and in doing other necessary work connected with the Library. Owing to this arrangement all the library work necessary in each Departmental Library can be done only as such help is available.

The books in the General Library are all catalogued and arranged, except the undistributed portion of the Berlin collection.

There is also in the General Library a complete catalogue of the books in the John Crerar Library, which enables members of the University to keep themselves posted in regard to the resources of that library.

The preceding table shows the detailed statistics of the condition of the cataloguing throughout the University Library.

TABLE XII  
TABLE OF ROOMS USED FOR DEPARTMENTAL LIBRARIES

	A	B	C	Total
<b>Cobb Hall:</b>				
Modern Language Group.....	2, 3, 5, 6D	4D		5
Philosophical-Historical Group...	4, 5, 7, 11, 12C	{ 3, 6C, 1D	1C	10
Classical .....	4, 6B	{ Pol. Econ. office <sup>1</sup>		
		{ 5B		5
		{ Greek office <sup>1</sup>		
<b>Haskell Museum:</b>				
Haskell .....	35, 37	24		3
<b>Kent Chemical Laboratory:</b>				
Chemistry .....	35			1
Public Speaking .....			A	1
Music.....			B	1
<b>Ryerson Physical Laboratory:</b>				
Physics .....	27			1
Mathematics—Astronomy.....	37			1
<b>Zoology:</b>				
Biology.....	12, 13			2
<b>Physiology:</b>				
Physiology .....	24			1
<b>Walker Museum:</b>				
Geology.....	{ 3 rooms, 2d fl. <sup>1</sup>			4
Anthropology—Folk-Psychology ..	{ 1 room, 3d fl. <sup>1</sup>			1
	{ 1 room, 3d fl. <sup>1</sup>			
<b>Gymnasium:</b>				
Physical Culture .....			4	1
<b>Psychological Laboratory:</b>				
Psychology.....		Office		1
<b>School of Education:</b>				
School of Education.....	1 room <sup>1</sup>			1
<b>Total.....</b>	<b>26</b>	<b>9</b>	<b>4</b>	<b>39</b>

<sup>1</sup> Rooms not numbered.

TABLE XIII  
ACCESSIONS JULY 1, 1899-JULY 1, 1902

	Purchase	Gift	Exchange	Totals by Departments
General Library.....	2,028	8,284	1,817	12,107
Philosophy.....	435	9	23	467
Pedagogy.....	382	181	242	805
Pedagogy (Elementary School).....	....	34	....	34
Political Economy.....	490	181	265	936
Political Science.....	718	62	34	814
History.....	6,023	164	18	6,205
Classical Archæology.....	86	7	....	93
Classical Archæology and Greek.....	1	....	....	1
Sociology.....	283	115	221	619
Sociology (Divinity).....	123	16	7	146
Sociology (Folk-Psychology).....	42	....	....	42
Anthropology.....	259	22	22	303
Comparative Religion.....	112	6	90	208
Semitic.....	316	58	102	474
New Testament.....	148	66	220	434
Sanskrit and Comparative Philology.....	289	8	5	302
Greek.....	433	55	....	488
Latin.....	385	159	1	525
Latin and Greek.....	131	3	....	134
Romance.....	438	24	1	463
German.....	342	9	1	352
English.....	1,461	224	5	1,690
Mathematics.....	296	146	....	442
Mathematics and Astronomy.....	1	....	....	1
Astronomy (Byerson).....	80	69	4	153
Astronomy (Yerkes).....	96	127	147	370
Chemistry.....	171	13	3	187
Physics.....	301	20	11	332
Geology.....	85	163	125	373
Zoology.....	835	61	4	900
Anatomy.....	290	11	....	301
Paleontology.....	40	82	....	122
Neurology.....	149	19	2	170
Physiology.....	125	8	....	133
Physiological Chemistry and Pharmacology.....	73	1	12	86
Botany.....	232	126	283	641
Public Speaking.....	116	....	1	117
Church History.....	164	52	213	429
Systematic Theology.....	297	8	85	390
Homiletics.....	67	5	40	112
Morgan Park Academy.....	544	22	15	581
Scandinavian Seminaries.....	293	64	....	357
Commerce and Administration.....	348	104	11	463
Music.....	10	54	....	64
Physical Culture.....	21	1	....	22
Biology.....	16	161	....	197
Zoology and Botany.....	3	....	7	10
Bacteriology.....	52	21	....	73
Pathology.....	47	14	....	61
Divinity.....	1	70	21	92
Latin, Greek, and Sanskrit and Comp. Philology.....	13	....	....	13
Embryology.....	5	....	....	5
Church History, Homiletics, N. T. and Syst. Theol.	3	....	....	3
Latin, Sanskrit and Comp. Phil., and Class. Arch.	10	....	....	10
Literature in English.....	32	10	....	42
Latin, New Testament, and Church History.....	2	....	....	2
General Library and Mathematics.....	8	....	....	8
Semitic and New Testament.....	....	....	5	5
President's Office.....	....	4	....	4
School of Education.....	....	1	....	1
	19,729	11,122	4,063	34,914

## EXCHANGES FOR UNIVERSITY THESES, JULY 1, 1899-JULY 1, 1902

The following tabulation gives in detail the theses sent and received, and the names of the institutions, American and foreign, with which these exchanges were conducted :

TABLE XIV

Name of Institution	Theses Sent	Theses Received	Name of Institution	Theses Sent	Theses Received
<b>American:</b>			<b>Foreign:</b>		
Boston Public Library..	112	0	Berlin.....	22	188
Brown.....	27	1	Bonn.....	112	185
Bryn Mawr.....	27	1	Breslau.....	112	280
California.....	26	1	Christiania.....	22	0
Chicago Historical Soc..	112	0	Freiberg.....	0	19
Clark.....	27	0	Geneva.....	112	53
Columbia.....	48	76	Giessen.....	22	215
Cornell.....	27	18	Gottingen.....	25	362
Delaware Historical Soc.	6	0	Halle.....	22	298
Harvard.....	27	0	Heidelberg.....	25	381
Iowa—Hist. Dept. of....	6	0	Kiel.....	25	138
Iowa—State Hist. Soc..	6	0	Leiden.....	25	42
John Crerar Library....	77	0	Leipzig.....	22	11
Johns Hopkins.....	27	59	Strassburg.....	25	233
Leland Stanford Jr.....	27	0	Toulouse.....	28	246
New York State Library	23	0	Tubingen.....	28	205
Ohio Arch. & Hist. Soc..	6	0	Upeala.....	77	112
Pennsylvania.....	48	4			
Princeton.....	27	0	Total foreign.....	702	2,968
U. S. Library of Congress	112	0	Total American.....	859	168
U. S. War Dept. Library.	6	0			
Wisconsin.....	28	8	Grand total.....	1,561	3,136
Yale.....	27	0			
Total American.....	859	168			

## LOAN DEPARTMENT, 1899-1900, 1900-1901, AND 1901-1902

The report of the Loan Department for the last three years is as follows :

TABLE XV

## THE UNIVERSITY LIBRARY

	1900	1901	1902
Calls at the loan desk.....	23,239	38,241	51,822
Average per day.....	76	128	171
Volumes drawn.....	12,351	17,605	22,279
Average per day.....	41	58	74
Books from other libraries.....	45	68	100
Books to other libraries.....	85	90	367
New cards issued.....	758	668	773
Complimentary cards.....	18	8	6

TABLE XVI  
CHICAGO PUBLIC LIBRARY STATION, 11 SOUTH

	1900	1901	1902
Book orders sent in.....	11,609	12,188	11,013
Volumes delivered.....	7,595	8,271	6,762
Volumes renewed.....	803	844	657
New cards issued.....	325	381	387

TABLE XVII  
INTER-LIBRARY LOANS, 1899-1900, 1900-1901, 1901-1902

CHIEF LIBRARIES FROM WHICH BOOKS HAVE BEEN BORROWED BY THE UNIVERSITY

Boston Public Library - - - - -	3	Oberlin College Library - - - - -	1
Chicago Public Library - - - - -	4	U. S. Library of Congress - - - - -	4
Chicago Theological Seminary - - - - -	9	U. S. Surgeon General's Office - - - - -	5
Clark University - - - - -	1	U. S. Department of Agriculture - - - - -	1
Columbia University - - - - -	5	University of Michigan - - - - -	6
Cornell University - - - - -	3	University of Pennsylvania - - - - -	1
Harvard University - - - - -	71	University of Wisconsin - - - - -	4
Johns Hopkins University - - - - -	2	Wesleyan University - - - - -	1
Michigan Agricultural College - - - - -	1	Western Reserve University - - - - -	14
Minneapolis Public Library - - - - -	2	Wisconsin State Historical Society - - - - -	2
Newberry Library - - - - -	51	Yale University - - - - -	9
Northwestern University Library - - - - -	4		

CHIEF LIBRARIES TO WHICH THE UNIVERSITY HAS LOANED BOOKS

Antioch College - - - - -	1	North Carolina College of Agriculture - - - - -	3
Beloit College - - - - -	29	Oberlin College - - - - -	3
Bradley Polytechnic Institute - - - - -	5	Ouachita College - - - - -	23
Butler College - - - - -	13	Parsons College - - - - -	10
Cornell College - - - - -	6	Rockford College - - - - -	11
Denison University - - - - -	19	University of Cincinnati - - - - -	9
Field Columbian Museum - - - - -	10	University of Idaho - - - - -	1
Grinnell College - - - - -	2	University of Indiana - - - - -	1
Harvard University - - - - -	1	University of Iowa - - - - -	14
Iowa Agricultural College - - - - -	1	University of Kansas - - - - -	4
Jackson (Michigan) Public Library - - - - -	8	University of Michigan - - - - -	13
Jacksonville Ladies' Academy - - - - -	3	University of Minnesota - - - - -	4
Kansas State Normal - - - - -	2	University of Missouri - - - - -	10
Lake Forest University - - - - -	3	University of Nebraska - - - - -	1
Leland Stanford Junior University - - - - -	2	University of Pennsylvania - - - - -	1
Marietta College - - - - -	2	University of Texas - - - - -	10
Michigan School of Mines - - - - -	1	University of Wisconsin - - - - -	168
Milwaukee Public Library - - - - -	1	Washington University - - - - -	1
Northwestern University - - - - -	4		

TABULATED STATISTICS OF THE TRAVELING LIBRARIES  
1899-1900, 1900-1901, AND 1901-1902

The following table gives in detail the statistics of the traveling libraries for the last three years:

TABLE XVIII

Items	1900	1901	1902
Number of volumes.....	3,689	3,950	4,387
Volumes sent out.....	2,497	1,965	2,002
Libraries sent out.....	63	44	51
Number of states represented.....	9	6	8
Cities and towns represented.....	50	37	49
Libraries purchased.....	17	12	23
Books purchased.....	630	535	740
Books sold.....	463	228	74

## SPECIAL LIBRARY REGULATIONS

I. No book, map, manuscript, periodical, pamphlet, print, or other article shall be taken from any library, whether by administrative officer, member of Faculty, student, or other person, without record of such withdrawal being made at the time. The name of the person drawing, the title and accession number of the book drawn, and the date shall be recorded in every case. When a book is returned the person returning it shall see that record of return is made.

II. (1) No book under any circumstances may be kept for more than three months without renewal, except on the written permission of the Group Library Adviser or the Head of the Department concerned. Any Group or Single Department (if not included in a Group) may shorten the period for which a book may be kept out, at its option.

(2) Books may be drawn from Departmental Libraries by students only over night. The hours for the withdrawal and return of books shall be fixed by the Group or Departments concerned. This permission may be refused by any Group or by any Department (if not included in a Group), at its option.

(3) Members of the Faculty of the Department or Group concerned shall have the privilege of drawing books from their Department or Group Library, subject to the provisions of these regulations, for a period not to exceed three months. Books so drawn may be renewed at the end of the period, if not required by others. Instructors connected with other Departments shall be allowed this privilege only on the written permission of the Group Library Adviser or the Head of the Department from whose library the book is drawn. This permission shall be only for the book and person named, unless a general and continuous permission is specified. Anyone desiring to use in the library a book drawn out by an instructor may notify the Library Adviser, who may then request the immediate return of the book to the Library.

(4) The same privilege granted to instructors in the drawing of books may be extended to students engaged in the preparation of theses, or other research work of a similar advanced character, at the option of the Department concerned. A list of all persons in each Department (instructors and students) to whom this privilege is granted shall be kept where at all times it may be consulted by the library attendants in the Department or Group Library concerned.

(5) A member of the Faculty in any Department may grant written permission to draw books in his name from the Library of the Department concerned for a period not to exceed three months. Such permission shall only be for the particular book and person named, and shall not be a continuous or general permission. In every case the instructor granting such permission shall be personally liable for loss. This permission shall be filed and kept on record by the attendant or by the Library Adviser. This privilege may be refused by any Department at its option.

(6) Current numbers of periodicals may be withdrawn only on the written permission of the Group Library or Head of the Department concerned.

(7) Books in most frequent use, such as dictionaries, encyclopædias, and the like, books of special rarity or value, and books constantly needed for the use of any course, may be withdrawn from circulation with the approval of the Group Library Adviser or the Head of the Department. Such books shall be marked with a special label (to be procured from the General Library), indicating that the book to which it is attached is not to be taken from the library under any circumstances.

(8) From the library of the Biological Group complete files of serials not to exceed five in number, and other volumes not to exceed one hundred, may be withdrawn for a period not to exceed one year (but with privilege of renewal) to be placed in a Department building. The original application for such books must be made in writing by the Head of the Department, and must be approved by the Group Library Adviser and the Library Board. Yearly renewals may be made on approval of the Group Library Adviser. Books so drawn shall be treated as reserved books and withdrawn from circulation. They shall be under the supervision of the Head of the Department, or of someone designated by him, and shall be regularly inspected by the Library Inspector and the Group Librarian, who shall see that they are kept at all times accessible to instructors in all Departments.

(9) Books may be withdrawn from Group or Departmental Libraries for permanent keeping in Laboratories or Museums only when they are duplicate copies of books retained in a Departmental Library. Such duplicates shall be removed to a Laboratory or Museum room only when a locked case is there provided for shelving them. They shall be under the supervision of the instructor who has charge of the room, or of someone designated by him, who shall also keep the keys to the case. They shall be inspected regularly by the Library Inspector and the Group Librarian or Library Adviser. Such books shall not be withdrawn except upon written permission of the instructor in charge. Access to them shall not be denied to other instructors in any Department.

III. The Library Inspector shall send a notice in every case where a book is kept longer than three months without renewal. At the request of the Library Adviser he shall send a notice requiring the immediate return of a book which is needed in any library. He shall report to the Library Board (through the Librarian) all cases in which books are not returned within two weeks after such notice has been sent.

IV. Any book lost or not returned within six months after notice has been sent shall either be replaced by the person in whose name the book has been drawn, or said person shall pay into the hands of the Librarian such a sum as in the opinion of the Librarian is the present market value of the book.

V. Keys to any library room shall be given out only on the written order of the Library Adviser concerned. He shall keep a record in every case of the name and address of the person to whom each key is issued, and may recall the key at any time at his option. No person to whom a key has been given shall lend his key or admit others to the library with it.

VI. Any person violating these regulations may be denied the privilege of using any or all of the libraries of the University, either permanently or for a limited period of time, by a vote of the Library Board with the approval of the President.

VII. At the opening of each Quarter it shall be the duty of the Library Inspector to see that all library attendants are instructed in these regulations.

VIII. These regulations shall be printed, and a copy shall be sent to each member of the Faculty. A copy shall be posted in a conspicuous position in every library of the University.

## LIST OF PERIODICALS RECEIVED

A list of current periodicals received by the University.

The times of issue of periodicals are indicated as follows: d., daily; w., weekly; semi-w., semi-weekly; semi-m., semi-monthly; m., monthly; bi-m., bi-monthly; q., quarterly; semi-a., semi-annually; y., yearly.

The abbreviations for the journals used in exchange are: A. J. S. L. and L., American journal of semitic languages and literatures; A. J. S., American journal of sociology; A. J. T., American journal of theology; A. J., Astrophysical journal; B. W., Biblical world; B. G., Botanical gazette; E. S. T., Elementary school teacher; J. G., Journal of geology; J. P. E., Journal of political economy; S. R., School review; U. R., University record; Univ. Pub., University publications. The periodicals secured by purchase are marked "pur."

The abbreviations at the end of the line are for the libraries in which the publications can be found.

Society publications are entered under the name of the society.

- |  |   |                      |
|--|---|----------------------|
| Académie des inscriptions et belles-lettres, Paris. See Institut de France.    | American anthropologist. N. Y. q. pur.  |                      |
| Académie des sciences, Paris. See Institut de France.                          | American antiquarian and oriental journal. Chic. bi-m. B. W.                                  | Anthrop. Gen. Lib.   |
| Académie internationale de géographie botanique, Le Mans. Bulletin. m. B. G.   | — pur.  | Anthrop. Gen. Lib.   |
| Academy and Literature. Lond. w. pur.  | American banker. N. Y. w. J. P. E.  | Pol. Econ.           |
|  | American catholic quarterly review. Phil. A. J. S.  | Phil. Sociol.        |
| Academy of natural sciences of Philadelphia. Proceedings. irreg. J. G.         | American chemical journal. (Johns Hopkins university.) Balt. m. pur.                          | Chem.                |
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- Zeitschrift für wissenschaftliche Mikroskopie u. für mikroskopische Technik. Brns. q. pur. Biol.
- Zeitschrift für wissenschaftliche Theologie. Lpz. q. pur. Haskell
- Zeitschrift für wissenschaftliche Zoologie. Lpz. irreg. pur. Biol.
- Zentralblatt für innere Medizin. Lpz. w. pur. Biol.
- Zion's advocate. Portland, Me. w. B. W. Haskell
- Zion's herald. Bost. w. free. Haskell
- Zoological society of London. Proceedings. q. pur. Biol.
- Zoologische Jahrbücher. Jena. Abth. für Anatomie u. Ontogenie der Thiere. irreg. pur. Biol.
- Abth. für Systematik, Geographie u. Biologie der Thiere. irreg. pur. Biol.
- Zoologische Station zu Neapel. Mittheilungen. irreg. pur. Biol.
- Zoologischer Anzeiger. (Deutsche zoologische Gesellschaft.) Lpz. semi-m. pur. Biol.
- Zoologischer Garten. Frankfurt a. M. m. pur. Biol.
- Zoologisches Zentralblatt. Lpz. semi-m. pur. Biol.



#### THE LIBRARY OF PROFESSOR VON HOLST

January 15, 1900, the Trustees of the University of Chicago formally accepted from Professor Hermann Eduard von Holst, of the Department of History, his private library. The gift was accompanied by the following conditions:

1. That the University provide Mr. von Holst with a catalogue for his own private use of the books in this collection, the same to be made under his direction, and according to his convenience.
2. Each book to be plainly labeled as the gift of Mr. von Holst, it being understood that no special gift plate be provided
3. The University to defray all expense of cataloguing, plating, and transfer of the collection to the University.
4. The books to be delivered to the General Library for the present, leaving the matter open as to their ultimate destination.

#### REPORT

January 17 the work on Professor von Holst's library began, Miss Cora Belle Perrine having been secured by the Trustees to have charge of the technical work on the library.

The library contains a total number of 1,250 books and 200 pamphlets. The collection is strongly historical, but contains some books on other subjects. It is especially rich in periodical literature, among which is a file of the celebrated *Niles Register*, complete with the exception of Vol. LXIII, fifth series, No. 13.

In addition to the interest which attaches to this collection as being the tools of Professor von Holst's own work, it has an additional value from the fact that many of its books are presentation copies from authors, students, and governmental officials. Conspicuous among these is a volume containing a presentation inscription and autograph of President Rutherford B. Hayes.

#### THE LIBRARY OF DR. GEORGE WASHINGTON NORTHRUP

On March 12, 1900, Dr. George Washington Northrup formally presented to the University of Chicago his valuable private library, numbering in all 1,050 volumes and between 300 and 400 pamphlets.

The library is composed chiefly of books in the departments of Systematic Theology and Ethics, with a small group of fine reference books. The chief value of this collection lies in the fact that the library was gathered year by year under Dr. Northrup's personal direction, each book being selected with special care, and the whole collection kept so constantly pruned and overhauled that the usual drift material to be found in all private libraries is in this one conspicuous by its absence.

Dr. Northrup especially requested that the Librarian, Zella Allen Dixson, who during her librarianship of the Baptist Union Theological Seminary had had special care and oversight of these books, should personally divide the library into two groups, selecting in one books to be placed in the Divinity Library of Haskell Museum, and the other to become part of the circulating department of the General Library.

The University Trustees through the Library Department furnished Dr. Northrup a complete catalogue of the books thus presented.

#### NEEDS OF THE LIBRARY

1. The Board of Trustees having made arrangements for the better housing in the near future of the collections which comprise the University Library, it is unnecessary to explain in detail the pressing needs which are at present created by the overcrowded condition of the present insufficient Library accommodations.

2. The Library needs in the near future still further to extend its rearrangement of Departmental Libraries into appropriate groups. The following group is suggested as the next one to be formed:

The Mathematical Group, to be composed of the libraries of the Departments of Mathematics, Astronomy (Ryerson), and Physics.

This rearrangement is recommended for the following reasons:

a) It would enable these Departmental Libraries to be more efficiently and economically administered.

b) It would save the expense of duplicating works of equal interest to each of the three Departments.

c) Readers and investigators would be able to use each of the three Departments with less waste of time and energy than is possible under the present system.

d) The work of the Departments concerned will be brought into closer connection and harmony.

e) It would furnish an arrangement under which the University could give these Departments better library administration by employing a trained librarian for the group.

3. At present the work of the Library is cramped by the lack of a sufficiently large staff. The work of the accession of books and the accession of periodicals is at present carried on by the same assistant, notwithstanding the fact that it is a physical impossibility for one person to carry so much work. It is, therefore, necessary as a regular thing to permit the accessioning of books to fall constantly behind. There is much accessioning on books in special collections urgently needing to be done. It is respectfully requested that in the near future an extra assistant be added to the regular staff, whose duty it shall be to accession books only, devoting such time as is not needed for newly purchased books in accessioning books in special collections, whose accessions have never been written.

It is desired also to call attention to the fact that the Department of the Traveling Libraries connected with the Extension Division is increasing so rapidly that it can no longer be carried forward as it should be without added assistance. It is undesirable to curtail in any way the activities of this department, but the aim should rather be to permit it to develop as much as possible, providing for it new avenues of growth. It is respectfully suggested that, if more assistance would be given the Library in this direction, a Department of Home Libraries in connection with the work of women's clubs could be undertaken, with results which would redound to the credit and usefulness of the University.

4. The work of the Loan-Desk Department, as will be seen by the tabulated statistics in this report, has very greatly increased with each year. During the last six months this department became so burdened that a student assistant was added to the loan-desk during the two hours of the day when the demand for books reaches its maximum. This has not provided sufficient help, and the Library administration desires earnestly to request that an assistant, on full time, be given to the regular loan-desk attendant. Unless this need is met, the Library will be wholly unprepared to give to the increased number of readers, which a better Library building will undoubtedly bring, the prompt and efficient service which has been rendered in the past.

5. A stenographer should be added to the staff to assist the Librarian in caring for the ever-increasing business correspondence, and communications with members of the University, the solicitation on a large scale of the publications of associations and institutions, securing municipal and state documents, preparing reports, arranging exchanges of duplicates, and other similar work, which at present is carried on in an unbusinesslike and inefficient manner, through the lack of sufficient clerical help.

Respectfully submitted,

ZELLA ALLEN DIXSON, *Librarian.*

## OUTLINE HISTORY OF THE LEGISLATION OF UNIVERSITY BODIES ON THE QUESTION OF DEPARTMENTAL LIBRARIES AND THEIR RELATION TO THE GENERAL LIBRARY

The system of Departmental Libraries for research work, supplementing the General Library of the University, dates from the organization of the University itself. From the beginning, however, these Departmental Libraries were, to a limited extent, organized in groups, notably in the case of the Divinity School, the several libraries of which were, together with the Semitic Library, at first arranged in two groups, both being located in Cobb Hall, and afterwards, on their removal to Haskell, consolidated into one. Following the precedent thus set by experience, the Board of Libraries, Laboratories, and Museums by action of November 26, 1898, appointed a committee, consisting of Messrs F. I. Carpenter, W. I. Thomas, and E. D. Burton, to consider the relations of the Departmental Libraries with a view to grouping them. The report of this committee was adopted by the Library Board May 27, 1899. Its chief recommendations were:

1. That there be formed, as soon as practicable, the three following groups of Departmental Libraries: (1) the Classical Group, to be composed of the libraries of Comparative Philology, Greek, Latin, and Archæology; (2) the Historical Group, to be composed of the libraries of Political Economy, Political Science, History, and Sociology; (3) the Modern Language Group, to be composed of the libraries of Romance Languages, Germanic Languages, English Language, and Literature (in English).

2. That the libraries of all the Departments embraced in a Group be placed in adjoining rooms with a single common entrance; that a common catalogue be arranged for each Group; and that a single library adviser be appointed for each Group.

The committee urged the adoption of these recommendations, to the end that the libraries might be more efficiently and economically administered; that the readers and investigators might use them with less waste of time and energy; and that the work of the Departments concerned might be brought into closer connection and harmony.

April 8, 1899, the Senate voted to appoint a committee of five on the questions of educational policy connected with the building of a library, and the following were appointed such committee: E. D. Burton, J. L. Laughlin, H. P. Judson, T. C. Chamberlin, and J. U. Nef. This Committee formulated three plans and submitted them to the Heads of Departments for their judgment. These three plans were:

1. The plan of Departmental Libraries as already existing, with the modifications in the direction of grouping such libraries already approved by the Board of Libraries, Laboratories, and Museums, as indicated above.

2. The plan of centralization, by which the Departmental Libraries should be transferred to the General Library, provision being made in the General Library building for a seminar room for each Department, in which there might be kept a small collection of books, and for other offices, but the plan of Departmental Libraries being practically abandoned.

3. The compromise plan, by which those Departments which have laboratories should retain their Departmental Libraries in the laboratory buildings; those having no laboratories should be in general transferred to the General Library building, retaining, however, their character as Departmental Libraries.

The returns from the Departments indicated a decided preference for the third, or compromise, plan. Upon the basis of these departmental replies, the Committee made to the Senate a report, of which the following are the chief recommendations:

1. That the [General] Library building of the University be used for library purposes only, and in particular that it contain neither an assembly hall nor the general administration offices [of the University].

2. That at the outset the compromise plan (the third named above) be adopted. The Committee did not make specific recommendations as to what libraries should be placed in the General Library building and what in departmental buildings, but made the tentative suggestion (a) that all the Sciences represented in the Ogden Scientific School<sup>1</sup> retain their Departmental Libraries in connection with their laboratories; (b) that the Historical and Social Sciences, Modern Languages, and perhaps Mathematics, be located in the General Library; (c) that Theology and the Semitic Languages, and probably also the Classics, be provided for in departmental buildings.

While thus recommending the compromise plan, the Committee yet considered it very probable that, in consequence of the growth of the Library and the necessary limitations of space, certain Departments which in the beginning would occupy space in the General Library, would be obliged to remove in time to departmental buildings, and that thus the third plan would merge eventually into the first.

3. That the Departments which are located in the General Library building be grouped on substantially the plan recently adopted by the Library Board.

4. That adjoining the reading-room of each Group [in the General Library building] there be provided seminar rooms and private consultation rooms.

5. That the Group reading-rooms be of different size, according to the probable needs of the several Groups.

6. That, in addition to the Group reading-rooms, there be provided [in the General Library building] a general reading-room intended especially for undergraduate students, and capable of providing desk-room for a thousand students.

7. That the building be planned to contain shelf-room for a million volumes.

8. That the plan of the building be such as to permit erecting additional stack-rooms, and if necessary additional reading-rooms, without destroying its architectural symmetry, the location of the building being selected with this in view, and adjacent space being left vacant so as to render it possible.

9. That ample corridors be provided, and provision made in the plan of the building for the adornment of them with statuary and pictures.

10. That ample entrances and exits be provided, and that these be placed so as to make entrance to the building easy from different parts of the Quadrangle.

11. That the building be fireproof.

12. That fireproof vaults be provided for the preservation of specially valuable books and manuscripts.

13. That each Group Library be provided with cases in which books of special value might be protected under lock.

14. That a definite separation be made between the funds appropriated for the administration of the Library and those designated for the purchase of books.

15. That suitable provision be made for the proper administration and officering of the libraries of those Departments which remain in department buildings.

16. That the task of devising plans for the General Library building be intrusted to a committee consisting of the Head Librarian and representatives of the Senate and Library Board.

This report was adopted by the Senate April 7, 1900, with an additional section deprecating the placing of the General Library building on Ellis avenue, as contemplated in the original plan for the location of University buildings.

At the meeting of the University Congregation held October 2, 1900, Messrs. E. D. Burton and H. P. Judson, by appointment of the Congregation Committee, presented briefs on the proposition "that a limit should be put in the near future to the development of the Departmental Library system." These briefs are contained in the *University Record* of September 28, 1900. After discussion of them, reported in the *University Record* of October 12, 1900, the Congregation adopted two resolutions:

1. That it is the judgment of this body that the Departmental Library system should be retained.

<sup>1</sup> Astronomy, Physics, Chemistry, Geology, Zoölogy, Anatomy, Neurology, Paleontology, Botany, and Physiology.

2. That a committee of three for each of the several Groups of Departments recognized by the Board of Libraries, Laboratories, and Museums be appointed, the committee to consider and to recommend, respecting the group represented, what is best for it and the University in general.

This Committee, being appointed, reported, and its reports appeared in the issues of the *University Record* for November 9 and 16, 1900. These departmental replies were by vote of the Congregation of November 2, 1900, referred to the Board of Libraries, Laboratories, and Museums for consideration, with the request that it make recommendation upon the subject to the Congregation.

At the meeting of the Board of Libraries, Laboratories, and Museums held November 4, 1900, these departmental replies, together with certain other resolutions, entertained but not adopted by the Congregation at its meeting of November 2, 1900, and printed in the *University Record* of November 16, 1900, were by the Board referred to a committee consisting of Mr. E. D. Burton, Mr. F. I. Carpenter, and Mrs. Zella Allen Dixson. This Committee reported to the Library Board February 23, 1901; its report, with some modifications, was adopted March 16, 1901, and laid before the Congregation at its meeting of March 20, 1901. Of this report, which went into considerable detail with reference to the provision to be made for each Department, and was printed in full in the *University Record* of March 20, 1901, it will suffice to quote here the four principles which the Committee stated in its preamble as being those which, in its judgment, should be recognized in the determination of the policy of the University in respect to its Library:

1. That, while the maintenance of the departmental system is indispensable to the best development and the most profitable use of the library resources of the University, each Department and Group being specially responsible for and interested in the books pertaining to that Department or Group, yet all the library resources of the University should be recognized as belonging to the University as a whole, and should be as easily accessible as possible to any person who is competent to make use of them, the entire administration being directed to the cultivation of what may be called the library habit on the part of the student, and the promotion of research.

2. That, in the interest of investigators whose studies must often cross the lines separating Departments and even Groups, it is desirable to concentrate the library resources of the University as far as possible at some one point. There should, therefore, be one central building in which a large proportion of the books of the University should be deposited, and at which any book possessed by the University, and not at that moment in use, could be consulted, books from the various Departments being, when needful, temporarily brought together.

3. That, in the case of all Departments having laboratories, and of some Departments having museums, it is indispensably requisite that their library resources should in large part be in the same building with such laboratories and museums, in order to be available in immediate connection with experimentation and study of museum material.

4. That, in the interest of undergraduates and other students doing ordinary class-room work, it is highly desirable that there should be carefully selected collections of books in close connection with lecture-rooms, in order to promote the use of books in connection with lecture and recitation courses on the part of students not chiefly engaged in research work.

After extended discussion of the full report, action on it was postponed until a later meeting. When it again came before the Congregation, November 18, 1901, the Committee offered as a substitute a shorter report covering only the main points of its fuller report. This shorter report is as follows:

The Committee begs leave to recommend:

1. That the research libraries of the Departments of Physics, Chemistry, Geology, Paleontology, Botany, Zoology, Anatomy, and Physiology be located in the Department buildings of these several Departments in connection with their laboratories or museums.<sup>2</sup>

<sup>2</sup> That the chief library of Astronomy would remain at the Yerkes Observatory was taken for granted. The recommendation under sec. 3 refers only to that portion of the Library of Astronomy located in Chicago.

2. That the libraries of Law, Medicine, Technology, and Education be located in the Department buildings of these several schools.

3. That the research libraries of the following six Groups, viz.:

- (1) Philosophy, and History [and the Social Sciences];
- (2) Theology and Semitic Languages;
- (3) Classical Languages;
- (4) Modern Languages;
- (5) Mathematics and Astronomy [on the main Quadrangle];
- (6) Music and Fine Arts;

be located as Group Libraries in the General Library building or buildings, or in departmental buildings so located that the library rooms can be immediately connected with the General Library building.

4. That all the above-named Departmental and Group Libraries be maintained on substantially the same plan as that now pursued for the Group Libraries in the various buildings, such libraries being under the oversight of an adviser representing the Department or Departments concerned, and being administered with primary reference to the needs of instructors and graduate students in the Departments represented, but with due consideration also of the interests of the whole University.

5. That the General Library building be located in view of the fact that it is to contain the research libraries named in sec. 3 above, or to be closely connected with them, and be accordingly placed in the south half of the original Quadrangle.

6. That in departmental buildings which contain no research library, there be maintained, whenever circumstances demand and funds permit it, a local library auxiliary to the main research library of the Department concerned.

7. That, in order to reduce to the minimum the disadvantages entailed by the scattering of the library resources in various buildings, and to conserve the interests of investigators whose work covers several Departments, there be maintained a system of communication by messenger or otherwise between the General Library and all Group and Auxiliary Libraries on the University grounds, by which it shall be possible for an investigator desiring to use together books located in different buildings to obtain such books on reasonable notice at the central building; and, furthermore, that the General Librarian shall have access at all times to all libraries of the University, and have the right to call for any book in any library not at the moment actually in use, and not reserved for the use of students or instructors at a given time; provided, however that such books shall be promptly returned to the library from which they came as soon as the immediate need for them at the General Library has ceased, or on information that they are needed for the use of instructors or students in the Group or Auxiliary Library from which they came.

8. That the General Library maintain (1) a general University Circulating Library, containing such books as it is desirable should be accessible to all members of the University and open to be drawn for use outside the building; and (2) a general Reference Library; that it also receive and hold subject to suitable regulations such general collections of books as belong [*i. e.*, pertain] to several Groups in common, but which are too expensive to be duplicated in the several Groups, and any other books which for any reason the Departments do not wish at present in their library rooms.

Of this shorter report the first two sections were adopted. But after prolonged discussion of the third section, the Congregation adjourned without taking action.

Consideration of this report was resumed at the meeting of December 18, 1901, and the two following motions were passed:

1. That the Library Committee [*i. e.*, the committee whose report was before the Congregation] be instructed to place before the Trustees of the University all the information it has gained from the Departments, and to supplement it in cases where the present information is inadequate.

2. That the existing Committee on Libraries be instructed to use material already collected in the formation of a series of alternative propositions to be submitted to the six Departments<sup>1</sup> concerned, with a request for departmental replies, these to be collated and presented to the Congregation.

<sup>1</sup> Meaning the six Groups mentioned in sec. 3 of the substitute report at that time before the Congregation.



For reasons not necessary to be detailed the "alternative propositions" were submitted not only to the six Groups concerned, but to all Departments of the University and in the following form:

Shall the University establish a Central Library, with Departmental Libraries to meet exceptional requirements, or shall the present policy of Departmental Libraries be continued?

The two reports called for by the action of December 18 were presented by the Committee at the meeting of the Congregation held June 16, 1902. The report called for in the first motion was ordered transmitted to the Trustees. From the tabulation of the vote of the Departments submitted in accordance with the second motion the following facts appear:

1. A large majority of the representatives of the Departments of the Ogden Scientific School remained of the opinion previously expressed and approved by the Congregation, viz., that the Departmental Libraries of these several Departments should be located in the respective departmental buildings, subject, however, to such groupings as may be found desirable, and without prejudice to the right of these Departments to deposit books in the General Library. Some difference of opinion existed as to the extent to which grouping should be carried in the Biological Departments, but this did not affect the vote on the main question at issue.

2. The Department of Mathematics, which in previous reports on this subject had been assigned at least tentatively to a location in the General Library building, was unanimous in its expression of a desire that its Departmental Library should be located in its departmental building and in as close relation as practicable with the libraries of Astronomy and Physics. With this opinion the Department of Astronomy concurred, as respects that portion of the library which is to be located on the main Quadrangle (its main library being, of course, at the Observatory at Lake Geneva). The Committee also expressed approval of this vote of the Department of Mathematics.

3. The vote of the Departments of Philosophy, Political Economy, Political Science, History, Archaeology, Sociology, Comparative Religion, Semitic Languages, Biblical Greek, Comparative Philology, Greek, Latin, Romance Languages, Germanic Languages, English, Literature (in English), Systematic Theology, Church History, Homiletics (viz., those of which, with the addition of Mathematics and Astronomy, the Committee was instructed to obtain the votes) was as follows: By individuals, 39 for the central library system, 31 for the departmental system; by Departments, 12 for the central library system, 7 for the departmental system; by Groups, 3 for the central library system, 1 for the departmental system (Music and Fine Arts not yet organized and hence not voting).

It is important to observe that, while the votes of the so-called scientific Departments and of Mathematics and Astronomy referred, in several cases expressly and in all cases by implication, only to the preference of the Department as concerns the location of its own library, not to the policy to be pursued by the Humanities Groups, the votes of the several Departments of the Humanities Groups, on the other hand, referred not simply to the location of the library of the Department voting, but to the policy to be pursued respecting all these Groups. The latter was, indeed, the question to which the Committee was instructed to obtain replies, it having been recognized that among the Humanities Groups each Department was concerned, not only with the location of its own library, but in only less degree with that of other related Departments.

To its tabulation and interpretation of the vote the Committee added the following paragraphs:

The Committee is impressed with the fact that the three years of discussion of this question have served to clarify and crystallize opinion in the Faculties, and is persuaded that the votes reported today represent fairly the mature judgment of the different divisions of the Faculties. But,

while in sympathy with that policy which is favored by a majority of those whose votes are recorded, the Committee is still more strongly impressed with the unwisdom of the Congregation, or any other body of the University, taking final action at this time. The question at issue is one which involves the expenditure of a large sum of money, and, what is still more important, its decision involves the policy of the University on an important educational matter for many years to come. An error at this time might easily involve the waste of \$100,000 of money or the hampering of the work of the University for a generation, or both. No committee or governing body of the University has, so far as the present Committee is aware, investigated the subject with that thoroughness, and with that assistance from expert advice of architects and librarians, which would qualify it to decide the important issues involved. In particular the architectural possibilities require far more thorough study than they have received. We know fairly well what we want to accomplish, but we do not know in what different ways it may be accomplished, still less what is the best way. To act without further knowledge on a question of such importance would be, in the judgment of the Committee, extremely unwise.

The Committee therefore recommends the adoption of the following resolution: *Resolved*, That the Congregation request the Board of Trustees to appoint a joint commission on Library Building and Policy; it being further requested that such commission consist of representatives of the Board of Trustees and of the Faculty; that the Faculty members be selected to represent the different interests and opinions in the Humanities Groups, and that there be at least one representative also of the Science Groups; that a sufficient number of the Faculty members be released from the duty of instruction during the period of active service on the commission to enable them to make a thorough study of the problem; that the commission be authorized and instructed to secure the counsel of a competent architect and the advice of librarians and educators, and to incur necessary expenses, within an amount to be named by the Board of Trustees; that the commission be instructed to present its report to the Board of Trustees within four months, if possible, and requested in the meantime to take the advice of the Congregation or other governing bodies of the University.<sup>4</sup>

In recommending this action to the Congregation, the Committee needs only add that any subtraction of time from the work of instruction, or any expenditure of money, which the work of such a commission is at all likely to involve, would be amply justified by the magnitude of the interests involved and the urgent need that the wisest possible course be adopted, and that before the question shall be further complicated by the erection of other departmental buildings.

Respectfully submitted,

ERNEST D. BURTON,

F. I. CARPENTER,

ZELLA ALLEN DIXSON,

*Committee.*

The resolution recommended by the Committee was adopted by the Congregation and transmitted to the Board of Trustees. It was approved by the Board of Trustees, and the Commission was created by vote of June 24, 1902.

Before passing to the report of this Commission, it will be well to transcribe certain paragraphs from the report prepared by instruction of the Congregation in its vote of December 18, 1901, and by further instruction of the Congregation transmitted to the Board of Trustees simultaneously with the resolution requesting the creation of the Commission. These paragraphs sum up the results of legislation to the time of the creation of the Commission:

From the foregoing history the following facts emerge:

1. The Departmental Library system, in its essential features, viz., the provision of reading-rooms for the several Departments and the placing of the books needed for research work in or near such rooms and easily accessible to students, has commended itself to a large majority of the members of the Faculties.

2. A modification of the departmental system by the organization of Departments into Groups has likewise received the approval of a large majority of the members of the Faculties.

<sup>4</sup>This recommendation as here given embodies slight amendments made by the Congregation.



3. The need of more efficient administration both of the General Library and of the Departmental Libraries is generally—and by some members of the Faculties very keenly—felt.

4. The location of research libraries of the Science Groups in departmental buildings is favored by a large majority of the members of the Science Departments, and in this judgment the other Departments concur.

5. The Department of Mathematics, it is now generally recognized, should be, like the Science Departments, located in a departmental building in close association with the Departments of Astronomy and Physics.

6. In respect to the Science Groups there remain but two important questions on which there is serious difference of opinion; viz.: (1) To what extent should grouping be carried? and (2) Should the Department or Group Libraries contain practically the entire resources of each Department or Group, or should a considerable portion of these be deposited in the General Library, to be transferred to the library of the Department to which they belong according to need? On the first of these questions there is a difference of opinion among the representatives of the Biological Group. On the second, the Department of Physics is inclined to make a larger use of the General Library than most Departments of the Science Groups.

7. A far more serious difference of opinion exists among the representatives of the Humanities Groups. The tabulation of the vote, as reported by the Committee June 16, 1902, shows a majority in favor of placing the research libraries of the Departments which, broadly speaking, make up the Humanities [Groups] in the General Library [building], while still maintaining their character as Departmental or Group Libraries. It was with a view to the devising, if possible, of a plan which should meet the needs of all the Departments concerned more fully than any yet proposed that the Congregation adopted a recommendation of this Committee, requesting the Board of Trustees to appoint a Commission which should give prompt and yet thorough consideration to the important questions involved.

It thus appears that the question of the General Library had become a question chiefly concerning the Humanities Groups, it being settled that the Science Groups would be provided for mainly in their departmental buildings, though retaining the right to deposit books in the General Library building to any extent which they desired.

Two other facts need also to be named which are not specially referred to in any report on the subject of libraries:

1. It was generally recognized that the congested condition of the buildings of the original Quadrangle would soon demand the transfer of some portion of the work hitherto done on that Quadrangle to buildings to be erected elsewhere, and the transfer of the Junior College work to outside Quadrangles, involving the provision of special libraries for the students of the Junior Colleges, had already been approved by ruling bodies of the University. This fact served still further to limit the function of the General Library by confining it chiefly to the use of Senior College and Graduate students and members of the Faculties.

2. The Law School had been recently organized, and was expected to open its doors for students in October, 1902. It was the strong wish of a majority of the representatives of the Historical and Social Sciences that the Law building containing the Law library should be so located as to be in close connection with the building devoted to the Historical and Social Sciences, when that should be hereafter erected. The question of the location of the Law building was pending before the Board of Trustees when the Commission above referred to was appointed.

The work of the Commission above referred to will best appear in the following report of the Commission to the Congregation, presented to that body August 28, 1902:

In accordance with the request of the Congregation made June 16, 1902, the Board of Trustees, by action taken June 24, appointed as a Joint Commission on Library Building and Policy the following persons: Messrs. Martin A. Ryerson, Franklin MacVeagh, F. A. Smith, W. R. Harper, F. I. Carpenter, J. M. Coulter, A. W. Small, H. P. Judson, W. G. Hale, and E. D. Burton.

This Commission made a careful study of the past growth of the several Departments of the University, with a view to forming a judgment respecting their relative space requirements, both for books and students, and also of the growth of the several Departmental Libraries and the General Library, comparing these results with the reports of the libraries of several of the other leading universities of the country, with a view to determining approximately the probable rate of the future growth of the libraries.<sup>5</sup>

The result of these studies was to convince the Commission that it was practicable to devise a plan by which all the libraries of what have usually been called the Humanities Groups might be placed in the departmental buildings, and at the same time brought into such relation to the General Library building as to accomplish nearly all the good results which could be achieved by placing Departmental Libraries in the General Library Building.

Plans embodying this general idea were submitted to Shepley, Rutan & Coolidge, and Mr. Coolidge went carefully over them with the Commission to determine their feasibility from an architectural point of view. Mr. Coolidge having expressed the judgment that the plans were not only feasible, but the best that had been proposed, and the most practicable so far as could be seen now, the Commission at a meeting held August 12, 1902, adopted the following recommendations to the Board of Trustees:

1. That with a view to securing, as far as possible, the advantages both of location of Departmental Libraries in departmental buildings, and of placing such libraries in the General Library building, the Departmental Libraries of the following Groups of Departments and Schools, viz., (1) Philosophy, (2) History and the Social Sciences, (3) Classics, (4) Modern Languages, (5) Oriental Languages, (6) the Divinity School, (7) the Law School, be located in the buildings of these several Groups and Schools, but so connected with the General Library as to make communication between these several libraries as easy as possible.

2. And, in particular, that the sites indicated for the several buildings on the accompanying plan submitted by Shepley, Rutan, & Coolidge be assigned to those buildings, viz.:

To the General Library building, a space approximately 216 feet by 90 feet, extending 108 feet east and west of the center of the south line of the main Quadrangle and 90 feet north of this line.

To the Modern Language building, a space approximately 152 feet directly west of the General Library building, by 80 feet from north to south at its eastern end and 60 feet at its western end.

To the Classical building, a space approximately 60 feet by 115 feet, at the southwest corner of the Quadrangle; viz.: 20 feet west of the Modern Language building, and south of the already existing Dormitories on the west side of the Quadrangle.

To the building of the Historical and Social Sciences, a space approximately 168 feet directly east of the General Library building, by 80 feet from north to south at its western end and 60 feet at its eastern end; leaving a space of 20 feet between this building and Nancy Foster Hall.

To the Law building, a space approximately 170 feet from north to south beginning 20 feet north of the Historical building and 216 feet directly east of Haskell Museum.

To the Divinity building, a T-shaped space approximately 180 feet from east to west and 125 feet from north to south, 20 feet north of Haskell Museum, and 85 feet east of Cobb Hall.

To Philosophy the necessary amount of the space north of the site of the Law building and west of Walker Museum, the remainder of this space being reserved for the extension of the Museum.

3. That the several buildings, when erected, be connected by bridges substantially as indicated on the plan.

4. That in each of these buildings, to be hereafter erected, there be provided, in addition to lecture rooms, seminar rooms, offices, etc., a library for the use of the Senior College and Graduate students working in these several Groups of Departments, with reasonable provision for the prospective growth of these Departments.

5. That the Departmental Libraries of each Group consist of so many of those books desired by the several Departments for the use of Graduate and Senior College students as the space which can be allotted for the Departmental Library will permit, it being understood that other books belonging to the Departments in question will be placed in the General Library building.

6. That reasonable stack facilities be provided for each Departmental Library, either in the departmental building or in an adjacent portion of the General Library; in either case such stack to be subject to the same departmental control as the library in the departmental building.

7. That a large reading-room be provided in the General Library building.

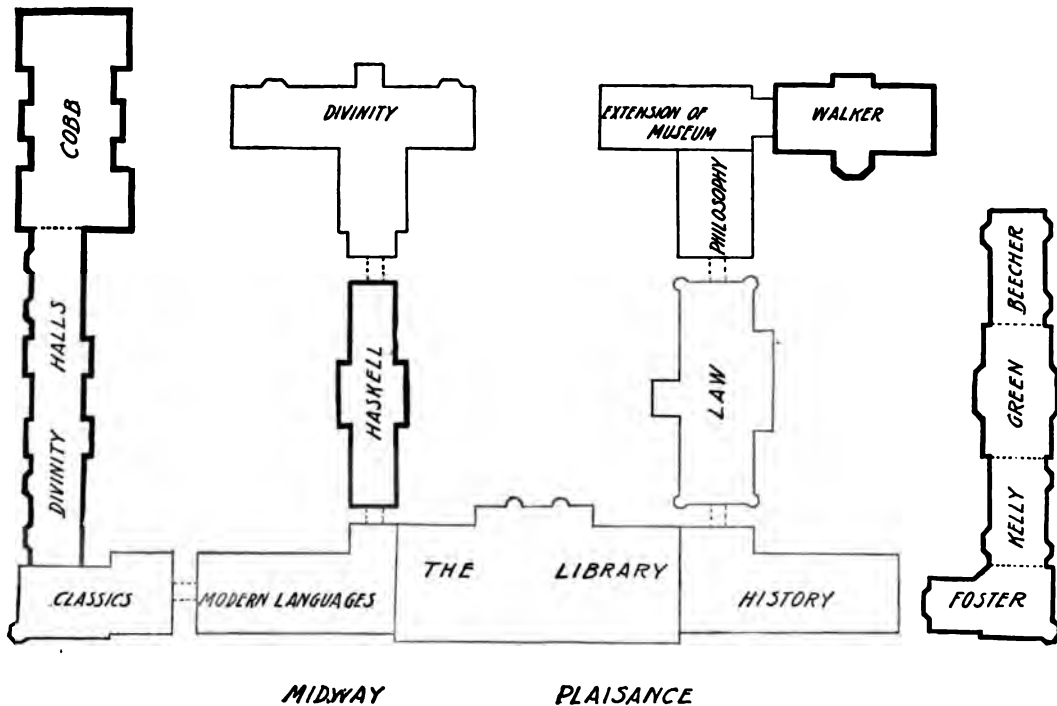
8. That a catalogue of each Departmental or Group Library be provided in the library-room of the Group, and that the General Library contain, accessible to readers, a catalogue of all books in the General Library and the several Departmental Libraries.

<sup>5</sup>The tables prepared for the purposes of this study are printed in somewhat revised form as an appendix to this history.

9. That such communication be established between the several Departmental Libraries above named and the General Library that transfer of books from any one of these libraries to any other may be made with the greatest possible facility, as nearly as possible as if they were all located in one building.

10. That, subject to the regulations of the Departmental Libraries, and to such regulations as the Library Board may approve, it shall be the privilege of students and instructors to bring together from the several libraries above named, books which they may need to use together, either to the General Library or to that Departmental Library in which they are working.

11. That the Library Board be instructed to appoint a Committee on Library Building, which shall make a deliberate and detailed study of the problem of the General Library building, and make recommendations to the Library Board, and through this Board to the Board of Trustees, concerning plans for the General Library building, and concerning its relation to the Departmental Libraries.



12. That, pending the erection of a General Library building, the Library Board be instructed to present to the Board of Trustees a plan for accomplishing the end aimed at in Recommendations 9 and 10, including the preparation of the catalogue described in Recommendation 8.

At a previous meeting of the Commission it had been voted to approve the placing of the Departmental Libraries of Chemistry, Physics, Geology, and the Biological Sciences in the departmental buildings of these Departments, it being understood that these Departments may place such books as they desire in the General Library building. The Commission also expressed its judgment that the Library of Mathematics, and that of Astronomy so far as it exists on the main Quadrangle, should be associated with the Library of Physics, it being expected that a building for Mathematics and Astronomy will at some time be erected near the Ryerson Physical Laboratory. These actions of the Commission were presupposed in the above recommendations, and in effect added to them.

The plans recommended in the foregoing report provide for the General Library a building which, in addition to ample corridors, stairs, and elevators, will yield approximately 18,000 square feet of floor space for administration and kindred purposes, 18,000 square feet of floor space for reading-rooms, and 100,000 square feet of stack floors, stories  $7\frac{1}{2}$  feet high. Such a building would store in

easily accessible stacks from 1,500,000 to 1,750,000 books,<sup>6</sup> and provide from 700 to 1,000 desks for readers. This provides for the growth of the General Library and the libraries of the Humanities Groups (not including Mathematics) for from seventy-five to one hundred and ten years, if that growth should continue at the rate averaged in the first five years of the history of the University; and this without making allowance for the capacity of the libraries of the departmental buildings. The rate assumed exceeds the current annual growth of Harvard, Cornell, Yale, Johns Hopkins, and, so far as is known to the Commission, that of any other American university with the probable exception of Columbia, whose annual growth of 19,000 volumes includes the Sciences and Mathematics, these being in our plan provided for outside the General Library and the group of buildings now under consideration.

These plans further provide for a building for each of the following Groups and Schools, viz.: Philosophy, History and the Social Sciences, Classics, Modern Languages, Oriental Languages (Haskell), the Divinity School, and the Law School, which, in addition to the lecture-rooms, classrooms, seminar rooms, studies, offices, etc., which the rate of growth of these Groups and Schools in the past (the estimate was made on the basis of the growth of the years 1895-1901) indicates will be needed to provide for their future development, will in each case contain a library for the Group or School occupying it. Provision is also made for a museum in each of the following buildings, viz.: Classics, Modern Languages, and History. The areas of these several libraries, as laid out in the provisional plans drawn by the architect to test the feasibility of the general scheme, are adjusted to the probable demands of the future, as indicated by the statistics of the past growth of the Departments and Schools now in existence. The number of students provided for, assuming that not more than two-thirds of the students in any Group or School will be in the library room at any given hour, is as follows: Philosophy and Pedagogy, 190;<sup>7</sup> History and the Social Sciences, 315; Classics, 130; Modern Languages, 490; Oriental Languages, 60 to 100; a total for these Departments of about 1,200 to 1,250. These figures are based upon a generous allowance of space for each reader [viz., 25 square feet of floor space for each student]. If the space in the Law building, which provides for 1,000 students, and that which is contemplated for the Divinity building, for approximately 450 students, be added, it will be seen that the proposed group of buildings in the south half of the main Quadrangle provides, outside the General Library building, Walker, and Cobb, for over 2,700 students in residence in any given Term or Quarter. The provision for Mathematics and the Sciences in the north half of the Quadrangle, and for Junior College students outside the main Quadrangle, is additional to this. If the actual seating capacity of the libraries of Philosophy, History, Classics, Modern Languages, and Oriental Languages—viz., two-thirds of the figures given above for these Groups—be added to the capacity of the General Library, as already stated, it will be seen that these libraries will provide desks for 1,500 to 1,800 students at work at a given moment. To these figures the Law and Divinity buildings will add perhaps 1,300 desks. The book capacity of the Departmental Libraries proposed for the south half of the Quadrangle would be approximately 100,000 volumes, exclusive of the libraries of Law and Divinity. These would add space for perhaps nearly as many more.

Respectfully submitted on behalf of the Commission,

ERNEST D. BURTON, *Chairman.*

FREDERICK I. CARPENTER, *Secretary.*

The recommendations of the Commission to the Board of Trustees, as transcribed in the above report, were approved by the Congregation August 28, 1902, and adopted by the Board of Trustees September 16, 1902.

<sup>6</sup> By the use of steel rolling stacks, such as are already in successful use in the Bodleian Library, Oxford, England, the capacity of the stack could be multiplied by nearly 2½.

<sup>7</sup> These figures exceed somewhat those which would be obtained from Table III of the Appendix. The difference arises from substituting the years 1896-1902 for 1895-1901,

and a comparison of averages for a comparison of single years. The result on the whole confirms the first calculation, but shows that the figures given in this paragraph would probably provide for the growth of more than the twenty-five years, which they were at first supposed to cover.

## APPENDIX

TABLES OF STATISTICS BEARING UPON THE SPACE REQUIREMENTS OF THE LIBRARY AND RELATED BUILDINGS:<sup>8</sup> PREPARED BY THE JOINT COMMISSION ON LIBRARY BUILDING AND POLICY, APPOINTED JUNE 24, 1902

TABLE I

## DEPARTMENTAL REGISTRATION

## PHILOSOPHY GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Philosophy:												
Summer <sup>9</sup> .....	50	35	45	54	47	72	7	8	19	26	20	35
Autumn.....	54	52	55	41	55	44	48	68	80	103	89	95
Winter.....	64	46	52	56	68	39	95	90	95	109	73	92
Spring.....	73	35	37	54	57	48	43	54	61	68	73	63
Pedagogy:												
Summer.....	31	76	56	71	88	44	3	14	12	2	15	17
Autumn.....	38	40	12	30	31	29	3	10	4	..	7	3
Winter.....	21	10	35	23	23	25	2	..	8	4	11	9
Spring.....	14	21	24	18	42	12	6	2	4	8	11	27
Group totals:												
Summer.....	81	111	101	125	135	116	16	22	31	28	35	52
Autumn.....	90	92	67	71	86	73	51	76	84	103	96	98
Winter.....	85	56	87	79	91	64	97	90	103	113	84	101
Spring.....	87	56	61	72	98	60	49	56	65	76	84	90
Average quar. reg....	85.75	78.75	79.00	86.75	102.50	78.25	53.25	61.00	70.75	80.00	74.75	85.25
Stud. ( $\frac{1}{4}$ av. quar. reg.)	28.58	26.25	26.33	28.92	34.16	26.08	17.75	20.33	23.58	26.66	24.92	28.42

	Grad. Sch.	Sen. Coll.
Three years' gain in average quarterly registration <sup>10</sup>	- - - - - 8.00	18.33
Three years' gain in students <sup>11</sup>	- - - - - 2.66	6.11
Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges, <sup>12</sup>	2.34.	

<sup>8</sup>The Commission compiled the following tables not under the impression that the future growth or needs of the University could be accurately predicted on the basis of statistics, but in the belief that by means of them the relative requirements of the several Groups of Departments, and to a less degree the actual future needs both of the Library and of the several Groups of Departments, could be somewhat more correctly estimated than by pure conjecture or personal impression.

<sup>9</sup>Throughout Table I the figures for registration represent the sum of the registrations in Major courses, plus one-half the registrations in Minor courses. In the Graduate School of Arts and Literature the registration is that of students in the Graduate Schools and Senior Colleges

respectively; in the Divinity School the figures represent registration in Divinity courses. Sunday courses are not counted, nor those in the Scandinavian Seminaries.

<sup>10</sup>Vis., excess of average for 1899-1902 over average for 1896-99.

<sup>11</sup>Vis., one-third of the average quarterly registration in the group, each student as a rule registering for three courses.

<sup>12</sup>Vis., the ratio of the estimated registration twenty-five years hence to present registration; obtained by multiplying the three years' gain in registration in the Graduate Schools and Senior Colleges combined by  $8\frac{1}{4}$ , adding the product to the registration for 1901-2, and dividing the sum by the registration for 1901-2.

TABLE I—Continued  
HISTORY GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
<b>Political Economy:</b>												
Summer.....	9	25	42	28	24	31	4	6	15	12	14	16
Autumn.....	30	30	35	24	27	30	32	24	44	31	47	57
Winter.....	35	39	35	32	33	25	37	23	37	49	35	80
Spring.....	34	17	36	24	21	28	17	12	43	24	41	47
<b>Political Science:</b>												
Summer.....	38	61	27	56	15	37	11	14	21	14	10	27
Autumn.....	49	47	43	57	26	27	28	33	41	38	42	59
Winter.....	33	38	25	44	25	25	21	48	42	46	38	51
Spring.....	44	44	67	37	19	19	23	66	45	43	32	42
<b>History:</b>												
Summer.....	82	80	89	73	108	121	15	30	33	44	45	64
Autumn.....	45	79	71	76	51	60	43	65	64	72	96	114
Winter.....	52	98	94	74	53	65	39	77	93	91	127	128
Spring.....	58	99	46	71	78	47	63	101	73	109	118	105
<b>Sociology:</b>												
Summer.....	25	42	32	30	24	36	8	25	16	27	27	51
Autumn.....	46	34	48	32	28	30	17	36	38	49	52	40
Winter.....	44	34	26	31	19	57	36	20	23	33	39	63
Spring.....	47	46	35	25	35	15	56	54	62	80	63	87
<b>Compar. Religion:</b>												
Summer.....	1	1	..	..	1	5	..	..	..	..	1	5
Autumn.....	1	..	2	2	..	..	..	..	1	..	..	2
Winter.....	..	..	..	1	3	..	..	1	..	1	6	..
Spring.....	..	..	1	1	..	1	..	..	2	2	..	3
<b>Group totals:</b>												
Summer.....	155	209	164	197	172	230	38	75	85	97	97	163
Autumn.....	171	190	199	191	132	147	120	158	188	190	237	272
Winter.....	164	209	180	182	133	172	133	169	195	220	245	322
Spring.....	181	206	185	158	153	110	159	233	225	258	254	284
Average quar. reg....	167.75	203.50	182.00	179.50	147.50	164.75	112.50	158.75	155.75	191.25	208.00	260.25
Stud. (½ av. quar. reg.)	55.92	67.83	60.33	59.83	49.17	54.92	37.50	52.92	51.92	63.75	69.33	86.75

Three years' gain in average quarterly registration<sup>10</sup> - - - - - Grad. Sch. Sen. Coll  
 Three years' gain in students<sup>11</sup> - - - - - -20.50 44.08  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges,<sup>12</sup> 1.60. - 6.80 14.69

CLASSICS GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
<b>Greek:</b>												
Summer.....	36	38	48	46	54	71	7	6	11	5	5	20
Autumn.....	50	46	47	57	32	30	21	17	40	21	20	28
Winter.....	44	47	59	42	33	27	27	20	26	22	24	24
Spring.....	39	46	46	50	30	18	26	23	33	23	29	30
<b>Latin:</b>												
Summer.....	80	101	145	90	103	166	8	12	13	14	29	28
Autumn.....	37	72	89	84	63	62	32	34	40	23	42	34
Winter.....	46	79	70	82	59	54	29	48	34	54	44	48
Spring.....	44	72	61	46	50	37	39	40	39	53	43	34

TABLE I—Continued  
CLASSICS GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Compar. Philology:												
Summer.....	8	5	5	5	7	7	..	..	..	..	1	1
Autumn.....	11	10	14	6	4	5	1	..	..	..	..	..
Winter.....	6	8	12	14	8	15	..	..	..	1	2	2
Spring.....	6	9	6	9	6	16	..	..	..	..	3	5
Archæology:												
Summer.....	12	..	..	..	..	4	3	..	..	..	..	2
Autumn.....	5	..	5	3	9	7	2	..	6	2	1	8
Winter.....	5	5	4	3	4	6	2	1	4	..	1	5
Spring.....	7	3	..	2	10	9	2	..	..	..	4	5
Group totals:												
Summer.....	136	144	198	141	164	248	18	18	24	19	43	50
Autumn.....	103	128	155	150	108	104	56	51	86	46	63	70
Winter.....	101	139	145	141	104	102	58	69	64	77	71	79
Spring.....	96	130	113	107	96	80	67	63	72	66	79	74
Average quar. reg....	109.00	135.00	152.75	134.75	118.00	133.50	49.75	50.25	61.50	62.00	64.00	68.25
Stud. (½ av. quar. reg.)	36.33	45.00	50.92	44.92	39.33	44.50	16.58	16.75	20.50	17.33	21.33	22.75

Three years' gain in average quarterly registration<sup>10</sup> - - - - - Grad. Sch. Sen. Coll.  
 -3.50 7.58  
 Three years' gain in students<sup>11</sup> - - - - - -1.16 2.53  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges,<sup>12</sup> 1.16.

DEPARTMENTAL REGISTRATION  
MODERN LANGUAGE GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Germanic Languages:												
Summer.....	115	73	88	96	119	153	10	9	13	15	14	32
Autumn.....	50	37	45	40	48	56	24	43	35	37	48	36
Winter.....	27	33	41	31	44	51	15	33	40	38	57	46
Spring.....	29	40	41	25	37	45	29	30	31	48	49	37
Romance Languages:												
Summer.....	67	55	101	96	88	85	12	8	24	30	28	45
Autumn.....	28	36	49	31	19	50	18	29	58	49	50	53
Winter.....	29	31	43	35	29	38	15	42	49	50	44	57
Spring.....	30	24	41	25	18	32	38	33	66	45	45	45
English:												
Summer.....	132	170	224	270	272	268	32	28	43	40	40	56
Autumn.....	80	97	132	160	125	125	44	58	80	85	94	99
Winter.....	71	97	145	151	121	103	64	71	91	67	114	114
Spring.....	72	81	125	127	110	65	98	58	106	76	76	69
Literature in English:												
Summer.....	1	..	2	66	40	40	1	..	3	8	11	11
Autumn.....	..	29	12	..	8	..	..	43	19	..	20	6
Winter.....	18	8	24	..	11	..	27	19	7	..	31	..
Spring.....	8	2	7	..	21	24	40	10	22	..	36	63
Group totals:												
Summer.....	315	298	415	528	519	546	55	45	83	93	93	144
Autumn.....	158	199	238	231	200	231	86	173	192	171	212	194
Winter.....	145	169	253	217	205	192	121	165	187	155	246	217
Spring.....	139	147	214	177	186	166	205	131	225	169	206	214
Average quar. reg....	189.25	203.25	280.00	288.25	277.50	283.75	116.75	128.25	171.75	147.00	189.25	192.25
Stud. (½ av. quar. reg.)	63.08	67.75	93.33	96.08	92.50	94.58	38.92	42.75	57.25	49.00	63.08	64.00

Three years' gain in average quarterly registration<sup>10</sup> - - - - - Grad. Sch. Sen. Coll.  
 -59.00 37.33  
 Three years' gain in students<sup>11</sup> - - - - - -19.66 12.44  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges,<sup>12</sup> 2.68

TABLE I—Continued  
MATHEMATICS GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1886-87	1887-88	1888-89	1889-90	1900-01	1901-02	1886-87	1887-88	1888-89	1889-90	1900-01	1901-02
<b>Mathematics:</b>												
Summer .....	138	116	142	136	124	198	3	7	3	5	15	12
Autumn .....	55	58	65	63	52	53	7	12	11	15	23	19
Winter .....	60	73	68	51	53	63	17	20	12	18	21	19
Spring .....	65	64	67	52	55	48	12	21	16	15	14	30
<b>Astronomy:</b>												
Summer .....	10	8	21	24	31	23	..	..	..	53	9	8
Autumn .....	14	12	28	19	11	12	8	4	3	..	..	4
Winter .....	11	7	23	17	16	18	2	4	1	..	1	7
Spring .....	13	10	11	9	12	11	..	2	3	5	6	1
<b>Group totals:</b>												
Summer .....	146	124	163	160	155	221	3	7	3	8	24	20
Autumn .....	69	68	91	82	63	65	15	16	14	15	23	23
Winter .....	71	80	89	68	69	81	19	24	13	18	22	28
Spring .....	78	74	78	61	67	59	12	23	19	20	20	31
Average quar. reg...	91.00	86.25	105.25	92.75	88.50	106.50	12.25	17.50	12.25	15.25	22.25	25.00
Stud. (¼ av. quar. reg.)	30.33	28.75	35.08	30.92	29.50	35.50	4.08	5.83	4.08	5.08	7.41	8.33

Three years' gain in average quarterly registration <sup>10</sup> - - - - - 1.66 6.83  
 Three years' gain in students <sup>11</sup> - - - - - 0.55 2.28  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges, <sup>12</sup> 1.54.

GEOLOGY

	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1886-87	1887-88	1888-89	1889-90	1900-01	1901-02	1886-87	1887-88	1888-89	1889-90	1900-01	1901-02
Summer .....	27	23	47	38	25	31	7	2	9	15	18	12
Autumn .....	21	33	52	49	35	47	6	9	16	21	16	21
Winter .....	29	27	39	48	44	45	18	29	7	33	24	36
Spring .....	33	25	41	33	30	21	3	19	27	15	25	37
Average quar. reg...	27.50	27.00	44.75	42.00	33.50	36.00	8.50	14.75	14.75	21.00	20.75	26.50
Stud. (¼ av. quar. reg.)	9.16	9.00	14.92	14.00	11.16	12.00	2.83	4.92	4.92	7.00	6.92	8.83

Three years' gain in average quarterly registration <sup>10</sup> - - - - - 4.06 10.08  
 Three years' gain in students <sup>11</sup> - - - - - 1.36 3.36  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges, <sup>12</sup> 2.88.

PHYSICS

	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1886-87	1887-88	1888-89	1889-90	1900-01	1901-02	1886-87	1887-88	1888-89	1889-90	1900-01	1901-02
Summer .....	71	69	66	116	113	118	1	6	5	10	9	12
Autumn .....	21	24	38	42	35	37	1	2	8	6	9	22
Winter .....	21	35	52	58	34	32	10	21	24	13	19	31
Spring .....	20	38	33	53	45	34	10	32	23	11	17	32
Average quar. reg...	33.25	41.50	47.25	67.25	56.75	55.25	5.50	15.25	15.00	10.00	13.50	24.25
Stud. (¼ av. quar. reg.)	11.08	13.83	15.75	22.42	18.92	18.42	1.83	5.08	5.00	3.33	4.50	8.08

Three years' gain in average quarterly registration <sup>10</sup> - - - - - 19.08 4.00  
 Three years' gain in students <sup>11</sup> - - - - - 6.36 1.33  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges, <sup>12</sup> 3.38.



TABLE I—Continued  
DEPARTMENTAL REGISTRATION  
CHEMISTRY

	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Summer .....	109	87	124	134	177	65	10	10	11	14	55	25
Autumn .....	74	84	65	51	73	89	15	19	24	17	37	39
Winter .....	68	80	69	81	88	63	23	31	23	30	37	42
Spring .....	54	1	43	52	68	79	22	2	19	25	27	73
Average quar. reg....	78.75	63.00	75.25	79.50	102.50	99.00	17.50	15.50	19.25	21.50	39.00	44.75
Stud. ( $\frac{1}{4}$ av. quar. reg.)	26.25	21.00	25.08	26.50	34.18	33.00	5.83	5.16	6.41	7.16	13.00	14.92

Three years' gain in average quarterly registration<sup>10</sup> - - - - - Grad. Sch. Sen. Coll.  
 Three years' gain in students<sup>11</sup> - - - - - 21.33 17.66  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges,<sup>12</sup> 3.26. 7.11 5.88

## BIOLOGY GROUP

DEPARTMENT	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
<b>Zoology:</b>												
Summer.....	32	31	63	68	98	33	6	3	7	3	15	67
Autumn.....	31	32	44	43	58	47	7	5	13	7	20	8
Winter.....	28	37	47	54	55	39	6	5	9	29	25	6
Spring.....	27	30	37	51	44	55	6	7	13	17	11	22
<b>Anatomy &amp; Histology:</b>												
Summer.....	17	19	20	16	9	27	3	9	7	5	1	6
Autumn.....	3	2	2	8	32	69	2	..	2	17	21	37
Winter.....	4	4	2	6	26	43	1	1	1	15	12	20
Spring.....	1	1	..	3	6	9	1	2	..	3	1	4
<b>Physiology:</b>												
Summer.....	23	22	20	7	13	18	4	..	2	4	4	3
Autumn.....	3	16	42	25	32	31	5	6	11	20	14	24
Winter.....	15	6	15	29	36	56	4	5	7	15	18	9
Spring.....	10	16	17	47	47	62	10	5	4	24	11	24
<b>Neurology:</b>												
Summer.....	..	4	14	8	18	13	..	1	1	..	5	2
Autumn.....	5	6	5	15	9	11	2	..	1	1	1	..
Winter.....	7	5	7	8	10	17	2	..	1	..	..	1
Spring.....	3	7	6	10	17	19	2	1	1	10	2	2
<b>Botany:</b>												
Summer.....	33	58	54	68	62	75	5	7	6	2	7	13
Autumn.....	29	26	48	36	34	60	4	7	5	5	5	6
Winter.....	27	20	35	46	51	73	1	5	6	8	8	4
Spring.....	28	33	44	43	45	83	8	12	24	16	14	33
<b>Group totals:</b>												
Summer.....	105	134	171	167	200	166	20	20	23	14	32	91
Autumn.....	71	82	141	127	165	218	20	18	32	50	61	75
Winter.....	81	72	106	143	178	228	14	16	24	67	63	40
Spring.....	69	87	104	154	159	228	27	27	42	70	39	85
Average quar. reg....	81.50	93.75	130.50	147.75	175.50	210.00	20.25	20.25	30.25	50.25	48.75	72.75
Stud. ( $\frac{1}{4}$ av. quar. reg.)	27.17	31.25	43.50	49.25	58.50	70.00	6.75	6.75	10.08	16.75	16.25	24.25

Three years' gain in average quarterly registration<sup>10</sup> - - - - - Grad. Sch. Sen. Coll.  
 Three years' gain in students<sup>11</sup> - - - - - 75.86 33.66  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges,<sup>12</sup> 4.22. 25.28 11.22

TABLE I—Continued  
DIVINITY GROUP

	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
<b>Old Testament:</b>						
Summer .....	114	85	116	136	156	171
Autumn .....	128	88	98	118	88	64
Winter .....	52	39	86	105	95	75
Spring .....	52	47	35	33	74	58
<b>New Testament:</b>						
Summer .....	61	83	99	65	95	121
Autumn .....	42	49	51	91	87	93
Winter .....	54	76	83	122	120	58
Spring .....	28	67	47	76	73	61
<b>Biblical Theology:</b>						
Summer .....	9	..	..	50	36	27
Autumn .....	..	7	..	5	18	29
Winter .....	..	20	..	..	..	..
Spring .....	16	16	22	41	14	14
<b>Systematic Theology:</b>						
Summer .....	..	43	42	53	41	55
Autumn .....	77	42	35	40	77	46
Winter .....	59	38	29	..	27	26
Spring .....	82	90	17	65	68	47
<b>Church History:</b>						
Summer .....	37	69	28	70	71	79
Autumn .....	86	76	56	71	64	57
Winter .....	75	97	65	90	54	83
Spring .....	78	74	65	85	79	55
<b>Homiletics:</b>						
Summer .....	17	54	34	46	41	38
Autumn .....	25	54	36	23	19	39
Winter .....	40	21	12	5	19	25
Spring .....	30	38	24	17	12	36
<b>Sociology:</b>						
Summer .....	43	..	..	74	5	..
Autumn .....	23	12	21	33	29	..
Winter .....	..	..	..	..	36	40
Spring .....	..	..	..	30	45	36
<b>Pub. Speak., Disciples, Cumberland Presby.:</b>						
Summer .....	26	41	89	21	39	42
Autumn .....	13	..	..	20	..	..
Winter .....	36	..	..	3	19	34
Spring .....	9	..	..	19	23	10
<b>Group totals:</b>						
Summer .....	407	375	408	515	484	533
Autumn .....	394	328	297	401	382	328
Winter .....	316	291	275	325	370	341
Spring .....	293	332	210	366	388	317
Average quar. reg .....	355.00	331.50	297.50	401.75	406.00	379.75
Stud. ( $\frac{1}{4}$ av. quar. reg.)..	118.33	110.50	99.16	133.92	135.33	126.58

Three years' gain in average quarterly registration<sup>10</sup> - - - - - 67.83  
 Three years' gain in students<sup>11</sup> - - - - - 22.61  
 Prospective 25 years' rate of gain,<sup>12</sup> 2.48.

TABLE I—Continued  
PUBLIC SPEAKING

	GRADUATE SCHOOLS						SENIOR COLLEGES					
	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Summer.....	7	3	11	12	14	24	3	1	4	4	12	13
Autumn.....	..	6	4	5	7	6	13	10	59	7	4	23
Winter.....	..	1	4	2	2	2	21	62	24	5	30	23
Spring.....	..	4	3	4	12	7	33	17	21	26	25	22
Average quar. reg....	1.75	3.50	5.50	5.75	8.75	9.75	17.50	22.50	27.00	10.50	17.75	20.25
Stud. (½ av. quar. reg.)	0.58	1.16	1.83	1.92	2.92	3.25	5.83	7.50	9.00	3.50	5.92	6.75

Three years' gain in average quarterly registration<sup>10</sup> - - - - - Grad. Sch. 4.50 Sen. Coll. -6.18  
 Three years' gain in students (one-third average quarterly registration)<sup>11</sup> - - - - - 1.50 -2.06  
 Prospective 25 years' rate of gain in Graduate Schools and Senior Colleges,<sup>12</sup> 0.53.

TABLE II  
TABLE OF CLASSES FOR YEAR 1901-1902  
PHILOSOPHY GROUP

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
Philosophy:							
Summer <sup>13</sup> .....	..	1	1	7	..	..	7
Autumn.....	1	3	4	6	..	..	6
Winter.....	2	..	2	5	1	..	6
Spring.....	..	2	2	5	..	1	6
Pedagogy:							
Summer.....	..	..	..	2	1	..	3
Autumn.....	..	..	..	3	..	1	4
Winter.....	..	..	..	5	..	1	6
Spring.....	..	..	..	7	..	..	7
Group totals:							
Summer.....	1	1	1	9	1	..	10
Autumn.....	1	3	4	9	..	1	10
Winter.....	2	..	2	10	1	1	12
Spring.....	..	2	2	12	..	1	13

HISTORY GROUP

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
Political Economy:							
Summer.....	2	..	2	3	1	..	4
Autumn.....	3	..	3	8	..	1	9
Winter.....	1	2	3	11	..	1	12
Spring.....	1	1	2	7	..	1	8
Political Science:							
Summer.....	..	..	..	3	..	..	3
Autumn.....	..	..	..	3	2	1	6
Winter.....	..	..	..	5	..	..	5
Spring.....	..	..	..	3	1	..	4

<sup>13</sup> Summer=First Term, Summer Quarter.

TABLE II—Continued

## HISTORY GROUP

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
<b>History:</b>							
Summer .....	1	1	2	5	4	..	9
Autumn .....	..	3	3	8	2	1	11
Winter .....	..	2	2	9	1	2	12
Spring .....	..	1	1	4	3	1	8
<b>Sociology:</b>							
Summer .....	..	..	..	7	1	..	8
Autumn .....	1	..	1	6	1	1	8
Winter .....	1	..	1	13	1	1	15
Spring .....	..	..	..	7	2	1	10
<b>Comparative Religion:</b>							
Summer .....	..	..	..	2	..	1	3
Autumn .....	..	..	..	1	..	..	1
Winter .....	..	..	..	..	..	..	..
Spring .....	..	..	..	1	..	..	1
<b>Group totals:</b>							
Summer .....	3	1	4	20	6	1	27
Autumn .....	4	3	7	28	5	4	35
Winter .....	2	4	6	38	2	4	44
Spring .....	1	2	3	22	6	3	31

## CLASSICS GROUP

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
<b>Greek:</b>							
Summer .....	5	..	5	4	..	..	4
Autumn .....	5	..	5	3	..	1	4
Winter .....	4	..	4	3	..	1	4
Spring .....	2	1	3	4	..	1	5
<b>Latin:</b>							
Summer .....	5	..	5	2	3	1	6
Autumn .....	5	5	10	3	1	2	6
Winter .....	5	1	6	8	1	2	11
Spring .....	6	2	8	5	..	2	7
<b>Archæology:</b>							
Summer .....	..	..	..	1	..	..	1
Autumn .....	..	..	..	1	..	..	1
Winter .....	..	..	..	1	..	..	1
Spring .....	..	..	..	1	..	..	1
<b>Comparative Philology:</b>							
Summer .....	..	..	..	4	..	..	4
Autumn .....	..	..	..	2	..	..	2
Winter .....	..	..	..	4	..	1	5
Spring .....	..	..	..	6	..	..	6
<b>Group totals:</b>							
Summer .....	10	..	10	11	3	1	15
Autumn .....	10	5	15	9	1	3	13
Winter .....	9	1	10	16	1	4	21
Spring .....	8	3	11	16	..	3	19

TABLE II—Continued  
MODERN LANGUAGE GROUP

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
<b>Romance:</b>							
Summer .....	1	3	4	10	1	2	13
Autumn .....	4	2	6	8	..	..	8
Winter .....	5	1	6	7	..	..	7
Spring .....	6	1	7	4	..	..	4
<b>Germanic:</b>							
Summer .....	2	4	6	6	1	..	7
Autumn .....	3	4	7	5	..	..	5
Winter .....	4	3	7	9	..	..	9
Spring .....	2	4	6	3	..	..	3
<b>English:</b>							
Summer .....	3	1	4	3	7	..	10
Autumn .....	1	9	10	12	1	1	14
Winter .....	5	5	10	11	2	1	14
Spring .....	4	2	6	8	..	..	8
<b>Literature in English:</b>							
Summer .....	..	..	..	..	2	..	2
Autumn .....	..	..	..	..	..	..	..
Winter .....	..	..	..	..	..	..	..
Spring .....	..	..	..	..	3	..	3
<b>Group totals:</b>							
Summer .....	6	8	14	19	11	2	32
Autumn .....	8	15	23	25	1	1	27
Winter .....	14	9	23	27	2	1	30
Spring .....	12	7	19	15	3	..	18

MATHEMATICS GROUP

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
<b>Mathematics:</b>							
Summer .....	1	4	5	9	..	..	9
Autumn .....	9	..	9	8	..	..	8
Winter .....	10	..	10	5	..	1	6
Spring .....	6	..	6	7	..	..	7
<b>Astronomy:</b>							
Summer .....	1	..	1	2	..	..	2
Autumn .....	..	..	..	2	..	..	2
Winter .....	1	..	1	3	..	..	3
Spring .....	..	..	..	4	..	..	4
<b>Group totals:</b>							
Summer .....	2	4	6	11	..	..	11
Autumn .....	9	..	9	10	..	..	10
Winter .....	11	..	11	8	..	1	9
Spring .....	6	..	6	11	..	..	11

TABLE II—Continued

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
<b>Physics:</b>							
Summer.....	4	..	4	7	..	..	7
Autumn.....	2	..	2	7	..	..	7
Winter.....	2	1	3	6	..	..	6
Spring.....	..	2	2	6	1	..	7
<b>Chemistry:</b>							
Summer.....	2	..	2	12	1	..	13
Autumn.....	1	3	4	12	1	..	13
Winter.....	2	1	3	13	..	..	13
Spring.....	2	3	5	13	..	..	13
<b>Geology:</b>							
Summer.....	..	1	1	5	..	..	5
Autumn.....	..	1	1	6	..	..	6
Winter.....	1	..	1	9	1	..	10
Spring.....	..	1	1	6	1	..	7

BIOLOGY GROUP<sup>14</sup>

DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
<b>Zoology:</b>							
Summer.....	2	..	2	6	..	..	6
Autumn.....	1	..	1	5	..	1	6
Winter.....	1	..	1	3	..	1	4
Spring.....	1	..	1	4	1	..	5
<b>Anatomy:</b>							
Summer.....	..	..	..	8	..	..	8
Autumn.....	..	..	..	2	4	1	7
Winter.....	..	..	..	1	2	1	4
Spring.....	..	..	..	3	..	..	3
<b>Neurology:</b>							
Summer.....	..	..	..	2	..	1	3
Autumn.....	..	..	..	3	..	1	4
Winter.....	..	..	..	2	1	1	4
Spring.....	..	..	..	2	..	1	3
<b>Botany:</b>							
Summer.....	2	1	3	6	..	..	6
Autumn.....	1	..	1	6	..	1	7
Winter.....	1	..	1	6	..	1	7
Spring.....	2	1	3	8	..	..	8
<b>Physiology:</b>							
Summer.....	1	..	1	1	..	..	1
Autumn.....	..	1	1	3	1	1	5
Winter.....	1	..	1	4	2	1	7
Spring.....	..	1	1	3	2	1	6
<b>Pathology and Bacteriology:</b>							
Summer.....	..	..	..	..	..	..	..
Autumn.....	..	..	..	3	1	..	4
Winter.....	..	..	..	3	1	..	4
Spring.....	..	..	..	5	1	..	6
<b>Group totals:</b>							
Summer.....	5	1	6	23	..	1	24
Autumn.....	2	1	3	22	6	5	33
Winter.....	3	..	3	19	6	5	30
Spring.....	3	2	5	25	4	2	31

<sup>14</sup> No classes in Paleontology during this year.

PUBLIC SPEAKING							
DEPARTMENT	JUNIOR CLASSES			SENIOR AND GRADUATE CLASSES			
	30 or Less	Over 30	Total	30 or Less	Over 30	Seminars	Total
Summer.....	3	..	3	1	..	..	1
Autumn.....	6	..	6	2	..	..	2
Winter.....	10	1	11	..	..	..	..
Spring.....	6	..	6	4	..	..	4

DIVINITY GROUP															
DEPARTMENT				DEPARTMENT				DEPARTMENT				DEPARTMENT			
30 or Less	Over 30	Seminars	Total	30 or Less	Over 30	Seminars	Total	30 or Less	Over 30	Seminars	Total	30 or Less	Over 30	Seminars	Total
<b>Old Testament:</b>				<b>Systematic Theol.:</b>				<b>Public Speaking:</b>							
Summer.....	10	2	1	13	Summer.....	2	..	..	2	Summer.....	1	..	..	1	1
Autumn.....	6	1	..	7	Autumn.....	4	..	1	5	Autumn.....	1	..	..	1	1
Winter.....	4	1	3	8	Winter.....	2	..	..	2	Winter.....	..	1	..	1	1
Spring.....	11	..	..	11	Spring.....	5	..	..	5	Spring.....	1	..	..	1	1
<b>New Testament:</b>				<b>Church History:</b>				<b>Group totals:</b>							
Summer.....	6	1	..	7	Summer.....	1	2	..	3	Summer.....	23	5	1	29	29
Autumn.....	5	1	1	7	Autumn.....	3	..	1	4	Autumn.....	21	2	4	27	27
Winter.....	5	1	..	6	Winter.....	4	1	..	5	Winter.....	19	4	3	26	26
Spring.....	3	1	1	5	Spring.....	3	..	..	3	Spring.....	28	1	2	31	31
<b>Sociology (Div.):</b>				<b>Homiletics:</b>											
Summer.....	..	..	..	..	Summer.....	3	..	..	3						
Autumn.....	..	..	..	..	Autumn.....	2	..	..	2						
Winter.....	2	..	..	2	Winter.....	2	..	..	2						
Spring.....	2	..	1	3	Spring.....	2	..	..	3						

TABLE III  
SUMMARY OF STATISTICS BEARING UPON REQUIREMENTS FOR DEPARTMENTAL BUILDINGS OF THE HUMANITIES GROUPS

	Philos'phy Group	History Group	Classics Group	Modern Language Group	Divinity Group
Number of Graduate and Senior College classes in Quarter of 1901-02 having largest number of such classes.....	12	40	17	30	28
Number of such classes having over 30 students.....	..	2	1	11	5
Number of Graduate and Senior classes in Quarter of 1901-02 having largest number of (Grad. and Sen.) classes over 30.....	11	28	14	30	28
Number of classes over 30 in said Quarter.....	1	6	3	11	5
Seminars in Quar. having largest number of seminars.....	1	4	4	2	4
Approximate number of classes in each room.....	5	5	5	5	5
Average size of rooms (sq. ft.).....	700	700	660	660	600
Grad. and Sen. Coll. students in Dep. (one-third reg.):					
Quarterly average for 1901-1902.....	55	142	67	159	127
Average for 1899-1902.....	58	128	63	153	132
Floor area needed for class rooms for present number of students, allowing 5 classes a day in each room:					
600 sq. ft. for classes of 30, 1,200 sq. ft. for larger classes.....	3,000	6,000	3,600	5,400	4,800
Floor area, as above, but allow'g 3 classes in each room.....	3,600	9,000	4,800	7,200	7,200
Floor area needed for Library, providing desks at any hour for two-thirds of present students at 25 sq. ft. each, and 1 ft. on all sides for wall cases.....	1,020	2,575	1,250	2,830	2,415
Multiplier to provide for growth of 25 years (ratio of growth estimated from experience of 6 years, 1896-1902).....	2.34	1.60	1.16	2.68	2.48

TABLE IV  
REQUIREMENTS FOR DEPARTMENTAL BUILDINGS, BASED ON STATISTICS OF THE DEPARTMENTS  
AND SUGGESTIONS OF DEPARTMENTAL REPRESENTATIVES

	Philos'phy Group	History Group	Classics Group	Modern Language Group	Divinity School
Assembly room .....	2,000 <sup>15</sup>	2,000	1,300	.....	.....
Theater .....	.....	.....	2,200	3,840	.....
Chapel .....	.....	.....	.....	.....	3,750
Departmental club room .....	600	800	600	1,200	600
Rest room for women .....	600	1,200	600	1,200	600
Class rooms for 60 students (1200 sq. ft. each) .....	1,200	2,400	1,200	2,400	2,400
Class rooms for 30 students (600 sq. ft. each) .....	7,200	8,400 to 13,800	4,800	6,000 to 12,000	7,200 to 12,000
Class rooms for 20 students (ca. 400 sq. ft. each) .....	.....	.....	1,800	2,000	2,000
Seminar rooms (ca. 400 sq. ft. each) .....	800	1,600	1,300	1,600	2,000
Instructors' study rooms and offices .....	2,400	3,600	3,000	3,600	3,600
Editorial rooms, etc .....	200	800	.....	200	200
Library, reading rooms .....	2,400	4,500	3,250	6,900	6,000
Library, stack rooms .....	600 <sup>16</sup>	.....	1,000 <sup>16</sup>	.....	600 <sup>16</sup>
Map, chart, and drafting rooms .....	.....	2,250	.....	.....	.....
Museum .....	.....	2,750 <sup>17</sup>	6,000	600	800
Laboratory .....	1,500	.....	.....	.....	.....
Office for Museum and Library .....	300	400	400	300	300
Toilet rooms .....	200 <sup>18</sup>	300 <sup>18</sup>	300 <sup>18</sup>	300 <sup>18</sup>	300 <sup>18</sup>
Elevators .....	.....	200 <sup>19</sup>	150 <sup>20</sup>	200 <sup>19</sup>	.....
Deans' offices .....	.....	.....	.....	.....	1,200
Corridors, 10 ft. wide .....	ca. 4,000	ca. 10,000	ca. 6,000	ca. 7,500	ca. 6,000
Lockers (in basement) .....	.....	.....	.....	.....	.....

TABLE V  
FACTS CONCERNING THE GROWTH OF THE LIBRARY

	Growth in 5 years (1892-97)	Average per year	Growth in 10 years (1892-1902)	Average per year
General Library .....	24,564 <sup>21</sup>	4,913	29,636 <sup>21</sup>	2,964
Philosophy and Pedagogy .....	3,923	785	5,612	561
Political Economy .....	5,392	.....	7,365	.....
Political Science .....	2,104	.....	3,298	.....
History .....	4,288	.....	10,481	.....
Sociology .....	3,410	.....	4,158	.....
History group total .....	15,194	3,039	25,292	2,529
Archæology .....	405	.....	547	.....
Comparative Philology .....	1,190	.....	1,683	.....
Greek .....	1,808	.....	2,762	.....
Latin .....	4,219	.....	5,234	.....
Greek and Latin .....	485	.....	.....	.....
Classical group total .....	8,107	1,621	10,226	1,022

<sup>15</sup> Figures in these columns denote square feet of floor space.

<sup>16</sup> Of 14-ft. story yielding double floor area in 7-ft. stack floor.

<sup>17</sup> In basement. <sup>18</sup> Exclusive of space in basement.

<sup>19</sup> 6x8 on each of four floors. <sup>20</sup> 5x6 on five floors.

<sup>21</sup> These figures represent the additions made within the period of five and ten years respectively. The Library began in 1892 with about 225,000 volumes, included in three collections, viz., the Baptist Theological Union Library, the Library of the Old University of Chicago, and the Berlin collection.



TABLE V—Continued

	Growth in 5 years (1892-97)	Average per year	Growth in 10 years (1892-1902)	Average per year
Romance.....	2,492	.....	3,097	.....
German.....	4,608	.....	5,173	.....
English.....	4,412	.....	6,705	.....
Modern Languages group total.....	11,510	2,302	14,975	1,497
Divinity, including Semitics and Comparative Rel.	8,060	1,612	10,913	1,091
Total "Humanities" with General Library ...	71,358	14,072	96,654	9,665
Mathematics.....	2,141	.....	2,814	.....
Astronomy.....	518	.....	652	.....
Chemistry.....	1,658	.....	1,891	.....
Physics.....	947	.....	1,491	.....
Geology.....	3,940	.....	4,514	.....
Biology.....	7,112	.....	9,904	.....
Total Sciences.....	16,316	3,263	21,266	2,126
Grand total of growth.....	87,674	17,335	117,920	11,792
Total possessions, 1897.....	ca. 312,674	.....	.....	.....
Total possessions, 1902.....	.....	.....	ca. 342,920	.....

TABLE VI  
COST OF LIBRARY—FOR PURCHASE OF BOOKS, ETC.

	1892-1893	1893-1894	1894-1895	1895-1896	1896-1897	1897-1898	1898-1899
General Library.....	\$100,099.22 <sup>22</sup>	\$17,049.68	\$ 184.10	\$1,034.27	\$1,102.26	\$930.28	\$802.06
Philosophy.....	.....	2,213.15	1,279.66	608.06	443.29	450.48	278.23
Pedagogy.....	.....	43.85	12.00	242.96	286.54	145.26	300.58
Group total.....	.....	\$2,257.00	\$1,291.66	\$851.02	\$709.83	\$596.74	\$578.81
Political Economy.....	.....	\$6,620.96	\$ 327.73	\$ 561.92	\$ 875.57	\$ 512.35	\$ 470.00
Political Science.....	.....	1,090.42	992.91	461.74	529.30	695.45	638.78
Sociology <sup>23</sup> .....	.....	2,530.92	701.41	1,389.34	686.26	1,121.46	742.76
History.....	.....	3,962.12	1,159.80	1,665.60	1,667.04	485.81	1,138.65
Comparative Religion.....	.....	652.98	234.81	284.94	112.21	256.25	198.46
Group total.....	.....	\$14,857.40	\$3,416.65	\$4,963.54	\$3,890.38	\$3,071.32	\$3,188.65
Archæology.....	.....	\$ 211.96	\$ 370.26	\$ 243.54	\$ 236.15	\$ 148.29	\$ 230.50
Comparative Philology.....	.....	1,898.64	321.26	379.62	241.83	346.07	486.20
Greek.....	.....	1,591.84	470.51	891.43	723.38	384.96	394.17
Latin.....	.....	3,347.25	456.10	723.12	940.34	413.46	364.60
Group total.....	.....	\$7,019.69	\$1,618.18	\$2,237.71	\$2,141.70	\$1,292.78	\$1,525.47
Romance.....	.....	\$ 2,059.16	\$ 385.46	\$2,096.66	\$ 513.81	\$ 183.23	\$ 347.69
Germanic.....	.....	4,022.85	286.57	324.78	460.85	274.39	314.61
English.....	.....	4,316.77	890.38	1,421.59	1,193.20	747.47	781.53
Group total.....	.....	\$10,396.78	\$1,482.41	\$3,843.03	\$2,167.86	\$1,205.09	\$1,443.83
Mathematics.....	.....	\$2,119.19	\$636.46	\$666.54	\$446.05	\$502.33	\$467.75
Astronomy.....	.....	.....	111.03	275.82	112.77	377.15	397.85
Group total.....	.....	\$2,119.19	\$747.49	\$942.36	\$558.82	\$879.48	\$865.60

<sup>22</sup> For 1892-93 accounts are not separate; this amount includes the amount spent for both the General Library and the Departmental libraries.

<sup>23</sup> Sociology includes Anthropology.

TABLE VI—Continued

	1892-1893	1893-1894	1894-1895	1895-1896	1896-1897	1897-1898	1898-1899
Physics.....		\$ 379.43	\$ 244.85	\$ 314.73	\$ 229.36	\$ 151.10	\$ 933.90
Chemistry.....		1,711.53	167.69	223.51	131.77	154.16	225.90
Zoology.....		139.04	348.54	348.49	324.32	350.39	425.61
Paleontology.....		104.49	102.06	204.78	101.73	102.04	450.36
Anatomy.....		82.04	136.97	131.99	250.37	166.87	159.04
Pathology.....							
Physiology.....		236.60	141.22	239.90	252.66	263.56	265.76
Neurology.....		100.22	82.39	162.52	433.83	152.03	150.97
Botany.....		191.36	137.87	707.24	635.67	165.64	489.36
Biology.....		8,878.04	136.55	107.17			
Group total.....		\$9,733.79	\$1,105.60	\$1,956.09	\$1,998.58	\$1,200.53	\$1,881.10
Medicine.....							
Geology.....		\$2,716.03	\$1,657.62	\$1,659.62	\$1,021.68	\$ 220.83	\$ 230.17
Elocution.....		50.03		48.29	93.51		36.24
University Extension.....		1,532.96	526.70	424.60	635.73	479.30	704.62
Physical Culture.....				76.97	10.71	19.90	39.27
New Testament.....							
Sociology (Div.).....							
Systematic Theology.....							
Church History.....							
Semitics.....		399.47	2,449.24	689.48	490.68	292.10	300.90
Homiletics.....							
Dano-Nor. and Swed.....							
Divinity <sup>24</sup> .....		2,641.37	960.23	2,218.42	1,272.20	961.30	1,033.42
Group total.....		\$3,030.84	\$3,399.47	\$2,907.90	\$1,762.88	\$1,243.40	\$1,334.32
Commerce and Adm.....							
Music.....							
Morgan Park Academy.....		\$ 428.33	\$ 765.85	\$ 482.79	\$ 456.77	\$ 329.40	\$ 242.47
Total.....	\$100,099.22	\$73,284.68	\$16,908.22	\$21,364.43	\$17,112.04	\$11,773.31	\$14,032.43

	1899-1900	1900-1901	1901-1902	Total by Departments	Total by Groups	Average	No. of Years Averaged
General Library.....	\$635.10	\$2,659.83	\$827.63	\$25,225.23 <sup>25</sup>	\$125,324.45 <sup>26</sup>	\$12,532.44	10
Philosophy.....	243.50	358.55	517.04	6,391.96		710.21	9
Pedagogy.....	300.21	196.73	128.58	1,636.71		181.85	9
Group total.....	\$543.71	\$555.28	\$645.62		\$8,028.67		
Political Economy.....	\$310.66	\$ 208.55	\$ 212.13	\$10,099.86		\$1,122.20	9
Political Science.....	488.51	845.90	404.89	6,147.90		683.10	9
Sociology.....	563.98	773.14	697.77	9,207.04		1,023.00	9
History.....	944.71	5,596.28	13,019.11	29,659.12		3,295.45	9
Comparative Religion.....	100.01	97.29	197.75	2,134.70		237.18	9
Group total.....	\$2,407.87	\$7,521.16	\$14,531.65		\$57,248.62		
Archaeology.....		\$191.64	\$270.85	\$1,953.19		\$217.02	9
Comparative Philology.....	\$373.60	285.86	608.56	4,911.64		545.73	9
Greek.....	180.46	513.34	636.72	5,786.81		642.97	9
Latin.....	177.61	380.86	548.96	7,352.29		816.92	9
Group total.....	\$731.67	\$1,371.70	\$2,065.06		\$20,008.93		
Romance.....	\$342.48	\$196.12	\$ 627.61	\$ 6,752.22		\$ 750.24	9
Germanic.....	249.27	263.56	354.32	6,501.20		722.35	9
English.....	634.39	606.02	1,010.80	11,574.15		1,286.01	9
Group total.....	\$1,226.14	\$1,067.70	\$1,992.73		\$24,827.57		

<sup>24</sup>The different departments of the Divinity School are combined for the year 1893-99, separate accounts not having been kept.

<sup>25</sup>Total for nine years, omitting 1892-93.

<sup>26</sup>Total for ten years; see also footnote 22.

TABLE VI—Continued

	1899-1900	1900-1901	1901-1902	Total by Departments	Total by Groups	Average	No. of Years Averaged
Mathematics .....	\$353.74	\$543.03	\$380.60	\$6,115.69	.....	\$679.52	9
Astronomy .....	261.50	341.29	411.93	2,289.34	.....	254.37	9
Group total .....	\$615.24	\$884.32	\$792.53	.....	\$8,405.03	.....	..
Physics .....	\$253.72	\$416.15	\$375.91	\$3,299.15	\$3,299.15	\$366.57	9
Chemistry .....	216.15	280.81	306.40	3,419.92	3,419.92	379.99	9
Zoology .....	.....	579.22	1,100.30	3,615.91	.....	451.98	8
Paleontology .....	.....	112.00	128.58	1,306.04	.....	163.25	8
Anatomy .....	.....	244.22	264.41	1,435.91	.....	179.46	8
Pathology .....	.....	.....	493.53	493.53	.....	246.76	2
Physiology .....	159.64	206.55	212.13	1,976.02	.....	219.55	9
Neurology .....	126.52	160.31	204.20	1,572.99	.....	194.77	9
Botany .....	.....	488.35	427.44	3,262.93	.....	407.86	8
Biology .....	.....	.....	.....	9,121.76	.....	3,040.58	3
Group total .....	\$286.16	\$1,792.65	\$2,630.59	.....	\$22,785.09	.....	..
Medicine .....	.....	63.45	\$1,302.55	.....	\$1,366.00	\$683.00	2
Geology .....	.....	183.40	293.35	\$7,980.90	7,980.90	997.61	8
Elocution .....	.....	60.61	73.39	362.07	362.07	45.25	8
University Extension .....	.....	.....	.....	.....	4,503.91	750.65	6
Physical Culture .....	.....	10.29	25.12	182.26	182.26	20.25	9
New Testament .....	163.16	209.42	140.51	513.09	.....	171.03	3
Sociology (Div.) .....	86.30	99.27	34.66	220.23	.....	73.41	3
Systematic Theology .....	115.29	215.61	216.36	547.26	.....	182.42	3
Church History .....	115.76	132.60	167.29	405.65	.....	135.21	3
Semitics .....	200.56	345.72	753.49	5,731.64	.....	636.84	9
Homiletics .....	.....	25.82	48.37	74.19	.....	37.09	2
Dano-Nor. & Swed. ....	128.74	111.34	128.15	368.23	.....	122.74	3
Divinity .....	.....	.....	.....	9,066.94	.....	1,511.15	6
Group total .....	\$309.81	\$1,139.78	\$1,298.83	.....	\$16,927.23	.....	..
Commerce and Adm. ....	.....	\$239.14	\$700.66	.....	\$939.80	\$469.90	2
Music .....	.....	.....	.95	.....	.95	.47	2
Morgan Park Academy ....	\$248.12	269.81	358.19	.....	3,608.73	400.97	9
Total .....	\$7,973.69	\$18,543.06	\$23,417.18	.....	.....	.....	.....
Grand total .....	.....	.....	.....	.....	\$309,214.28	.....	.....

# THE UNIVERSITY PRESS

*To the President of the University:*

SIR: I submit herewith a report on the University Press for the ten years ending June 30, 1902:

## I. ORIGIN AND ORGANIZATION

In the development of a great institution of learning publication of the literary and scientific contributions of members of the teaching staff has always been fraught with grave problems, because of the difficulty in securing adequate financial assistance to carry on even the more important undertakings. The experience of those engaged in the task of securing funds for educational purposes uniformly has been that it is vastly more easy to interest capital in a building needed for a college or university than it is to secure support for the endowment of instruction; and the question of making available to students in general the results of scientific research has been equally serious. As a consequence, much scientific material in America has remained unpublished, because it has not been possible to interest capital in the development of a business organization adequate to place scientific books and periodicals in the regular trade channels with profit.

The idea of a press controlled by a university was first worked out in England, and the great example of what may be accomplished is found at Oxford, where a mammoth institution has grown up, its origin dating back to the fifteenth century. In its scope it covers the entire field of printing and publishing. The varied processes of engraving, lithographing, printing, etc., are conducted, printing materials manufactured, and the finished product distributed or sold. In America, however, the idea has been slow of development and until very recently the scientific output of our institutions of learning has been left to commercial houses under uncertain and changing arrangements.

That a University Press should form an integral part of the University of Chicago was prominent in the minds of the founders at an early stage in the organization of the institution. The possibility of combining the large volume of miscellaneous printing required by such an institution with the work of issuing its several scientific periodicals already undertaken furnished a foundation on which to build. From this beginning it was hoped that it might be possible to develop an organization which would care both for the circulation of its magazines and for the distribution of the official documents of the University, as well as for the sale of books and pamphlets, the publication of which was in contemplation. No published plans, however, are found for this work prior to the opening of the University in 1892. In the announcement of the several Bulletins bearing on the organization of the University of Chicago one was to be devoted to The University Press, but the document was never issued, and the first outline in printed form of an organization is found in a collation of the statutes of the University, bearing date of June 27, 1893,<sup>1</sup> embodying the actions of the Trustees prior thereto. At the close of the fiscal year 1892-93 plans of organization had been adopted which recognized The University Press as one of the five Divisions of the University, with separate departments of Manufacturing, Publication, Purchase, and Retail. Provision was made for the general management to be in the hands of a Director, with a Board of Administration appointed from the University Faculties. While plans were being matured for the opening

<sup>1</sup>*Annual Register of the University of Chicago, 1892-93, pp. 3-8.*

of the University, its bulletins and miscellaneous announcements<sup>2</sup> were parceled out to various commercial printing firms, generally bearing, however, the imprint of "The University of Chicago Press."

The earliest recommendation looking toward the organization of The University Press was made April 11, 1892, when a communication was presented to the Board of Trustees from Messrs. D. C. Heath & Co., of Boston, outlining a plan of co-operation between the University of Chicago and a printing and publishing house to be incorporated on a separate basis, the same to be known as The University of Chicago Press. The proposition contemplated that the new corporation should provide a printing plant adequately equipped, a bookstore at the University, and an organization for the purchase of library books, and laboratory supplies and equipment. It was further stipulated that the new corporation should be the exclusive agent of the University in all matters of printing, publishing, and purchasing. At a meeting of the Board of Trustees of the University held May 17, 1892, the proposition was accepted, and a contract based thereon was authorized and afterward duly executed between the parties, its agreements being made effective from and after July 1, 1892, The University of Chicago Press in the meantime having been incorporated under the laws of the state of Illinois. Business was conducted under this agreement until July 1, 1894, at which time, by mutual consent, the contract was canceled as of that date, and the transactions thereafter were conducted by the University as its directly administered University Press, its imprint continuing to be "The University of Chicago Press."

## II. SCOPE AND MANAGEMENT

### I. PERIOD OF PRIVATE OWNERSHIP (1892-93 AND 1893-94)

During the first fiscal year the administrative organization was as follows: Director—Daniel C. Heath; members of the Board of Administration—President William R. Harper, Chairman; Recorder Charles R. Henderson, Secretary; and Messrs. Eri B. Hulbert, J. Laurence Laughlin, Henry H. Donaldson, Ira M. Price, and Francis A. Blackburn.

During the first year special attention was given to the organization of the manufacturing plant and to the retail sale of books and stationery. The operations of the manufacturing plant were conducted in connection with the firm of R. R. Donnelley & Sons Co., at 144 Monroe street, and temporary quarters for the Purchase and Retail Department were provided in Cobb Lecture Hall, Fifty-eighth street and Ellis avenue.

At the beginning of the second year, July 1, 1893, Director Heath found it impossible to continue his active connection with the affairs of The University Press, and Mr. Charles W. Chase was appointed Vice-Director. The Administrative Board, with the exception of the Recorder, who was succeeded by Mr. Howard B. Grose, was continued.

During the first half of the second year, with the increasing volume of business, it became apparent that the plans which had been made for carrying on the manufacturing interests were inadequate. From the editorial standpoint it was found to be a great inconvenience to have the mechanical department so far from the University, and, looking into the future, it was evident that The University Press, as an institution, could not be successfully operated without closer contact with the University itself. The situation was presented to the Board of Trustees by its Committee on Organization and Faculties January 30, 1894. After a discussion extending over several weeks, a new proposition was made and accepted by the Board of Trustees April 3, 1894, providing for the purchase of the equipment and stock of The University of Chicago Press and for the termination of its business as a private corporation.

<sup>2</sup> All documents issued prior to July 1, 1892, are now out of print.

Pending organization under the direct control of the University, the affairs were in the hands of a special committee composed of Messrs. William R. Harper, Henry A. Rust, and Edward Goodman.

#### II. PERIOD OF UNIVERSITY OWNERSHIP (1894-95 TO 1901-2)

The assumption of financial responsibility on the part of the University resulted in an enlargement of the field of activities anticipated by few of those interested in the undertaking early in its inception. The manufacturing plant, which consisted largely of body type, with a small job equipment, was transferred from the down-town district to the University Quadrangles and located in the temporary gymnasium and library building near the corner of Fifty-seventh street and Lexington avenue. As occasion demanded, the equipment was increased, so that in a short time all composition was done at first hand.

Mr. Charles W. Chase was advanced from the position of Vice-Director to that of Director, dating from July 1, 1894, which position he held for the succeeding two years. The personnel of the Administrative Board during this period was as follows: President William R. Harper, Chairman; Recorder Howard B. Grose, Secretary; and Messrs. Eri B. Hulbert, J. Laurence Laughlin, Henry H. Donaldson, Ira M. Price, and Francis A. Blackburn. Recorder Howard B. Grose, as Secretary of the Board, was succeeded by Mr. George S. Goodspeed during 1894-95. The field of the Purchase and Retail Department was enlarged, and special attention was given to the method of procuring library books.

In the spring of 1896 Director Chase was obliged by ill-health to resign his position, and was succeeded by Mr. Hazlitt Alva Cuppy. During Mr. Cuppy's administration, which extended over the fiscal year 1896-97 and a portion of the following year, the lines of work already organized were developed, special efforts being given toward increasing the circulation of the several departmental journals which had been established. Under Mr. Cuppy's guidance a substantial advertising patronage was secured, which has since enjoyed material increase. With the enlarging field of the journals it was found necessary to provide more adequate office room, and administrative quarters were assigned to The University Press in the Hull Botanical Laboratory, near the corner of Fifty-seventh street and Lexington avenue.

During the year 1896-97 the Administrative Board was made up as follows: President William R. Harper, Chairman; Recorder George S. Goodspeed, Secretary; and Messrs. Hazlitt Alva Cuppy, J. Laurence Laughlin, Thomas C. Chamberlin, John M. Coulter, Albion W. Small, George E. Hale, Charles H. Thurber, Eri B. Hulbert, Henry H. Donaldson, Francis A. Blackburn, Ira M. Price, and Ernst Freund. The enlargement of the Board was brought about by the increase in the number of departmental journals. The membership remained the same during 1897-98 and 1898-99, with the one change in the Directorship of The Press.

In the spring of 1898 Mr. Cuppy resigned his position as Director of The University Press, and was succeeded by Mr. Ned Arden Flood, who held the position until January, 1900. During Mr. Flood's connection with The Press special attention was given to perfecting the details of the various lines of organization, with emphasis on a revision of the system of accounting. A representative was employed whose entire time was given to the interests of the advertising department of the several journals, and it may be said that the faithful work of Mr. Flood opened the field for the more extensive enterprises which have since been undertaken. In January, 1900, Mr. Flood was succeeded by the present Director. Since that time attention has been given especially to the publishing interests of The Press, to perfecting the system of purchasing laboratory supplies and equipment, and to the differentiation of the various lines of work operating on separate bases.

In the spring of 1900 several members of the Administrative Board resigned, making new appointments necessary. Since July 1, 1900, the Board has been constituted as follows:

President William R. Harper, Chairman; the Recorder, *ex officio*, as Secretary; the Director of The University Press, *ex officio*; and Messrs. Thomas C. Chamberlin, John M. Coulter, J. Laurence Laughlin, Albion W. Small, George E. Hale, Shailer Mathews, George E. Vincent, James R. Angell, Ernst Freund, and Francis W. Shepardson.

### III. DEVELOPMENT OF THE WORK

#### I. GENERAL

Before entering upon a detailed statement of the operations of the several departments of The University Press, as they exist at the present time, it will be of interest to survey the results of the work for the ten years as a whole.

Brief mention has been made above of the plans developed under private control during the first two years of the University's existence. The expenses to the University of the operations of the period amounted to \$104,523.72. The income from appropriations and receipts amounted to \$94,243.55, which left a deficit of \$10,280.17. During this time very little attention was given to the development of a publishing organization. The routine printing of the University, and other manufacturing interests, together with the collection of the subscriptions of five periodicals, which had been undertaken, and the purchasing of library books and laboratory supplies and equipment, employed the energies of those engaged in the work. It was left for the management under University control to solve the difficult problems of publishing which must be the ultimate aim of a University Press.

At the beginning of the third year, July 1, 1894, when the University assumed ownership of The University Press, the valuation of its properties was estimated at about \$19,000. This included the plant of the mechanical department, a stock of books and stationery, and the publication rights in the few books and journals which had been undertaken. Under the new conditions the work of the next two years was largely experimental, as had been that of the first two years, and, as may have been expected, the operations were conducted at a financial loss.

The years 1896-97 and 1897-98 mark a development in organization, but while great advance was made in effectiveness, financial conditions did not improve. At the close of the year 1898-99 the expenses had reached \$167,290.95, with receipts amounting to \$162,955.84, leaving a deficit for the single year of \$4,335.11. At this point the adoption of certain economies in operation brought about a marked improvement in the financial showing for the first half of the next year, with the result that the year ending June 30, 1900, showed a net gain of \$2,553.12, the receipts for the period being \$167,907.47, with expenses amounting to \$165,354.35. Since that date it has been possible to maintain a creditable financial record, and the year ending June 30, 1902, resulted in a net gain of \$3,685.16. The volume of business was considerable, the receipts being \$242,994.17, with expenses amounting to \$239,309.01.

The following comparative statement will be of interest as showing the volume of business and financial outcome for the past four years:

TABLE I

Year	Receipts	Expenses	Results
1898-1899. ....	\$162,955.84	\$167,290.95	\$4,335.11 loss
1899-1900. ....	167,907.47	165,454.35	2,453.12 gain
1900-1901. ....	158,681.80	157,512.08	1,169.74 gain
1901-1902. ....	242,994.17	239,309.01	3,685.16 gain

The status of the business as a whole may be ascertained from the following statements for the fiscal year ending June 30, 1902:

TABLE II  
EXPENSES AND EARNINGS FOR THE YEAR ENDING JUNE 30, 1902

<i>Expenses:</i>	
Inventory June 30, 1901	\$ 19,773.58
Work in progress June 30, 1901	2,844.36
Manufacturing plant depreciation	1,169.08
Purchases, stock, merchandise, equipment, etc.	136,968.10
Pay-roll	35,641.86
General expense	41,880.79
Rent	625.14
Repairs	140.00
Heat	256.10
Gain	3,685.16
<i>Earnings:</i>	
From University Journals	\$ 36,978.72
From University Departments	108,284.94
Inventory work in progress	6,362.89
From sundry accounts	63,449.07
Inventories merchandise and stock	27,908.55
	\$242,984.17
	\$242,984.17

TABLE III  
ASSETS AND LIABILITIES JUNE 30, 1902

<i>Assets:</i>	
Cash	\$ 1,330.73
Inventory stock, Retail Department	13,708.21
Manufacturing Department	10,521.77
Inventory stock, Manufacturing Department	2,621.99
Inventory work in progress, Manufacturing Department	6,362.89
Furniture	797.74
Inventory stock, Publishing Department	11,578.35
Chicago Post-Office deposit	200.00
Accounts receivable	15,363.80
<i>Liabilities:</i>	
The University of Chicago*	\$62,485.48
	\$62,485.48
	\$62,485.48

It is natural to expect in developing any new business undertaking that satisfactory organization will be reached only through a series of readjustments. This has been especially true in the history of The University Press, and definite policy, so far as it exists at present, is the result of experience. Authority for the existing management of affairs is found in the Constitution, which is a formulation of enactments of the Board of Trustees. The document is intended as a guide in conducting the business and has been constructed to meet conditions as they have arisen. The text of the Constitution is as follows:

ARTICLE I

1. The general organization of the work of The University of Chicago Press shall be as follows:

A. *Manufacturing Department.*

To include:

- a) Composition and press work at first hand.
- b) Composition and press work at second hand.
- c) The manufacturing of books, stationery, etc.
- d) Purchase of stock, supplies, and necessary additions to plant.

\*In an independent business the account known as The University of Chicago would be divided in Capital, Profit and Loss, and Accounts Payable.



**B. *The Publication Department.***

To include:

- a) The publication of the University journals.
- b) The publication of all University literature, *e. g.*, the *Register*, *Circular of Information*, etc.
- c) The publication of books, pamphlets, etc.
- d) The publication of books, pamphlets, or periodicals for others.

**C. *Purchase and Retail Department.***

To include:

- a) The purchase and sale of books for the retail trade.
- b) The purchase and delivery of books for the general and departmental libraries.
- c) The purchase and delivery of stationery and supplies for the offices and Departments of the University.
- d) The purchase and delivery of permanent laboratory equipment, specimens, etc., and of current laboratory supplies.

## ARTICLE II

1. All orders and purchases falling within the scope of Article I shall be made in the name of the University of Chicago.
2. All assistants and employees necessary for carrying on the work as specified in Article I and as indicated in Schedules A, B, C, and D, attached hereto, shall be employed by the Director with the consent and approval of the President of the University.

## ARTICLE III

1. The following regulations shall be established for the conduct of the Manufacturing Department:
  - A. It shall be understood, for all work involving expense to the University, that a special appropriation shall be made covering the cost of the same, and that no copy shall be accepted or work undertaken to be charged to any department that is not accompanied by the proper requisition, which requisition shall be signed by the Secretary of the University and shall state specifically the Department or appropriation to which the job of work is to be charged.
  - B. For all University work a separate bill for each job shall be given indicating to which Department it is to be charged.
  - C. The price of work on all jobs shall be reckoned to include (a) the actual cost of the same, (b) the salaries of the superintendent and bookkeeper of the Manufacturing Department, after which 18 per cent. shall be added to the work actually done in connection with the Press plant (8 per cent. of the same being the proportionate percentage of the 40 per cent. of the general salaries and 10 per cent. of the same being for the maintenance of the Manufacturing Department), and further that 10 per cent. be added to the outside cost on each job (8 per cent. being the proportionate percentage of the general salaries and 2 per cent. for general expense).
  - D. A finished copy of every job shall be preserved in the office of The Press, and every job shall bear an office number.
  - E. Contracts for presswork, binding, etc., shall be made upon a basis of bids submitted to the Director.
  - F. The wages of compositors and other workmen in this department shall be paid weekly.
  - G. Of the general salaries as per Schedule A, hereunto attached, 40 per cent. shall be charged to this Department, together with all the special salaries of the superintendent and bookkeeper of the Manufacturing Department, and 10 per cent. of the bill clerk.
  - H. A monthly report of the business shall be submitted to the President of the University.

## ARTICLE IV

1. The following regulations shall be established for the conduct of the Publication Department:
  - A. It shall be understood that this department shall be responsible for the business management of the various University journals and for diligent and active efforts, in connection with the editors of the same, to increase the circulation and advertising patronage of each; and further

that this department shall be responsible for the business management of all publication enterprises which may be entered into from time to time.

- B. Copyrights shall be procured by the Director in the name of the University of Chicago.
- C. Of the general salaries as per Schedule A, hereunto attached, 40 per cent. together with the salaries of the subscription clerks and advertising representatives, and 10 per cent. of the salary of the bill clerk shall be charged to this department.
- D. A monthly report of the business shall be submitted to the President of the University.

## ARTICLE V

1. The following regulations shall be established for the conduct of the Purchase and Retail Department:
  - A. The Director shall have authority to order such books, stationery, supplies and equipment as in his judgment are needed from time to time to supply the retail trade.
  - B. In general the selling price of books to the retail trade shall be 12 per cent. above the cost price, the latter to include transportation charges.
  - C. Purchases to be charged to any department of the University shall be made in accordance with regulations specified from time to time, and it shall be understood that books for the general and departmental libraries, and equipment and supplies for the laboratories, and supplies for the offices and various departments, shall be billed at an increase of 5 per cent. over the cost price, the latter to include transportation charges.
  - D. Of the general salaries as per Schedule A, hereunto attached, together with the salary of the chief clerk of the Purchase and Retail Department, and all other special salaries as per Schedule D, hereunto attached, and 20 per cent. of the salary of the bill clerk, shall be charged to this department.
  - E. A monthly report of the business shall be submitted to the President of the University.

## GENERAL AND SPECIAL SALARIES

## SCHEDULE A

(General Salaries)

The Director.	First stenographer.
Head bookkeeper.	Second stenographer.
Assistant bookkeeper.	Shipping and mailing clerk.

## SCHEDULE B

(Special Manufacturing Department Salaries)

Superintendent.	Bill clerk, 10 per cent.
Record keeper.	Foreman and the regular weekly pay-roll of plant employees.

## SCHEDULE C

(Special Publication Department Salaries)

Subscription clerks.	Bill clerk, 10 per cent.
	Advertising representatives.

## SCHEDULE D

(Special Retail and Purchase Department Salaries)

Chief clerk.	Bill clerk, 10 per cent.
Assistant clerk.	Foreign periodical expert.
Messenger.	Purchasing agent for laboratory supplies and equipment.

## II. MANUFACTURING DEPARTMENT

The valuation of the equipment of the Manufacturing Department July 1, 1894, amounted to \$12,364.65. Subsequent purchases made to June 30, 1902, brought the total amount of the expenditures up to \$20,732.23. Deductions were made during the time to profit and loss on

account of depreciation, etc., so that at the close of the decennium the inventory shows a net valuation of \$10,521.77. The equipment is represented largely in the composing-room, where a most complete outfit has been collected. The main dress of the body letter is old style, the fonts of different sizes approximating the following weights: 12 point, 1,000 pounds; 11 point, 8,000 pounds; 10 point, 10,000 pounds; 9 point, 2,000 pounds; 8 point, 3,000 pounds, and 6 point, 3,000 pounds. In addition should be mentioned a smaller dress of modern body type, amounting, in the aggregate of the several sizes, to about 8,000 pounds. The plant is provided also with large fonts of Greek in five sizes, Hebrew in two sizes, Nestorian Syriac, Arabic, Ethiopic, etc., and with many special mathematical, astronomical, paleographic, and linguistic signs and accents. Through the latter means The University Press has made a record for its ability to produce work impossible in almost any other printing plant in the West. Preparatory to executing the mechanical work in connection with the Decennial Publications of the University, plans are being made to lay the foundation for a complete dress of modern body type, and sufficient quantities have been purchased to meet the immediate needs of the work.

The following statements show the operations of the Department since the responsibility for the same was assumed by the University:

TABLE IV

STATEMENT OF ORIGINAL COST OF MANUFACTURING PLANT AND ADDITIONS THERE TO	
1894, May 15, Original purchase	\$12,364.69
May 15 to June 30, 1894	387.79
Fiscal year 1894-1895	494.83
“ “ 1895-1896	1,585.66
“ “ 1896-1897	1,514.37
“ “ 1897-1898	1,062.09
“ “ 1898-1899	713.92
“ “ 1899-1900	448.85
“ “ 1900-1901	224.98
“ “ 1901-1902	1,935.05
	\$20,732.23
<i>Deductions:</i>	
By charge to "profit and loss" account depreciation:	
June 30, 1899	\$1,812.33
“ 1900	1,675.98
“ 1901	1,063.98
“ 1902	1,169.08
By charge to capital account June 30, 1901	4,469.09
	\$10,210.46
1902, June 30, inventory	\$10,521.77

TABLE V

STATEMENT OF PRINTING STOCK ON HAND AND WORK IN PROGRESS JULY 1 EACH YEAR

1894, July 1, inventory	\$ 845.84
1895 “ “	3,422.91
1896 “ “	6,598.60
1897 “ “	6,899.07
1898 “ “	12,024.34
1899 “ “	9,041.86
1900 “ “	13,264.72
1901 “ “	5,187.30
1902 “ “	8,829.27

TABLE VI  
SUMMARY OF PROFIT AND LOSS

Period	Profit	Loss
May 15, 1894, to June 30, 1895 .....	.....	\$2,414.49
Fiscal year 1895-1896 .....	.....	2,251.09
" " 1896-1897 .....	\$1,405.21	.....
" " 1897-1898 .....	2,296.95	.....
" " 1898-1899 .....	.....	3,906.40
" " 1899-1900 .....	.....	9.14
" " 1900-1901 .....	276.44	.....
" " 1901-1902 .....	1,156.88	.....
Total .....	\$5,135.48	\$8,581.12
Net loss .....	3,445.64	.....

TABLE VII  
STATEMENT OF RECEIPTS, EXPENSES AND RESULTS, 1900-1 and 1901-2

Year	Receipts	Expenses	Results
1900-1901 .....	\$68,045.87	\$67,769.43	\$ 276.44 gain
1901-1902 .....	90,543.93	89,387.05	1,156.88 "

### III. PUBLICATION DEPARTMENT

Prior to July 1, 1900, no attempt had been made toward the establishment of a Publication Department on a separate basis. Sales had been carried on through the Purchase and Retail Department, but the arrangement was found to be extremely unsatisfactory. During the year 1900-1901 the publication business, as such, was divorced from the Purchase and Retail Department and put under separate management. The wisdom of this procedure has been demonstrated, and it is believed, with the plans which are now being followed, that the Department will become one of the most important lines of activity yet entered upon. While the financial gain of the past two years has not been great, it shows the possibilities which lie in the field of the Department. It must always be true that much of the material published by a University Press will not be self-sustaining from a financial standpoint. The responsibility for issuing publications of this sort must always rest with the University itself, and the problem of The University Press will be that of distributing in the most economical way. The first step in the organization of the Department was the preparation of a catalogue announcing the titles of all books previously issued. This appeared February 1, 1901. Many of the more recently issued books will show a profit, and it is probable that the entire investment in separate books and pamphlets made up to this time can be cared for eventually without financial loss to the University.

The following statement shows the output of books and pamphlets by fiscal years, beginning July 1, 1892:

TABLE VIII			
1892-1893	-	-	2
1893-1894	-	-	3
1894-1895	-	-	11
1895-1896	-	-	8
1896-1897	-	-	31
1897-1898	-	-	27
1898-1899	-	-	22
1899-1900	-	-	28
1900-1901	-	-	28
1901-1902	-	-	40
Total	-	-	200

The following conspectus of the output by allied groups will be of interest :

TABLE IX

Philosophy and Psychology	10
Education	41
Theology and Religion	7
Political Economy, Political Science, and Sociology	31
History	7
Languages and Literatures	44
Natural Sciences	58
Miscellaneous	2
Total	200

A comparative statement of the financial results of the last two years is shown in the following table :

TABLE X

Year	Receipts	Expenses	Results
1900-1901 . . . . .	\$ 8,861.93	\$ 8,369.77	\$492.16 gain
1901-1902 . . . . .	17,862.62	17,423.38	439.24 "

The largest undertaking yet entered upon by The University Press in connection with its Publication Department is a series of volumes to be issued for the University in commemoration of the completion of the first ten years of academic work. These volumes, announced as the *Decennial Publications of the University of Chicago*, are authorized by special action of the Board of Trustees, and edited by a committee of the Faculty, of which Professor Edward Capps is the chairman. The plans contemplate two series of cloth-bound books; the first quarto, the second octavo. The First Series includes two volumes of Reports and eight volumes of Investigations, the latter consisting of a collection of articles representing the work of research of the several Departments of the University organized during the decennium. The Second Series includes eighteen separate volumes, embodying original research and consisting of systematic treatises, unpublished documents, and collections of articles on allied subjects.

Preprints from Vols. VII and IX, respectively (First Series), have recently appeared, namely, "On the Text of Chaucer's Parlement of Foules," by Eleanor Prescott Hammond, and "The Velocity of Light," by Professor Albert A. Michelson. The work as a whole is well under way, and will probably extend over several years, involving an expenditure, including the cost of manufacturing and publication, of about \$75,000. The expense of the First Series will probably represent a direct contribution of the University, as it is not expected that the general sales of the volumes will be large. The books of the Second Series, however, in almost every instance, have a special constituency to which they appeal, and the sales of these are expected to reimburse the University for a large portion of the total expenditure involved in carrying out the plans.

An important line of work connected with the Publication Department lies in the field of the departmental periodicals. These journals have formed one of the chief features of the Press from the beginning, the aggregate number of pages in all having averaged about eight thousand per year. The work includes at present the management of the subscription and advertising departments of ten periodicals and one quarterly magazine published on contract.

During the first fiscal year publication of the following journals was undertaken: the *Journal of Political Economy*, the *Journal of Geology*, the *American Journal of Semitic Languages and Literatures* (continuing *Hebraica*), the *Biblical World*, and the *University*

*Extension World*. The list was continued during the second year, 1893-94, and during 1894-95 the *American Journal of Sociology* and the *Astrophysical Journal* were established. During this year the *University Extension World* was discontinued. In 1895-96 publication of the *School Review*, the *Botanical Gazette*, and the *American Journal of Theology* was inaugurated, together with *Terrestrial Magnetism*, which was published for one year. Since that date the list of journals has remained the same, with the addition of a series of "Constructive Bible Studies" which was issued during 1899-1900. During this year the publication of the *Manual Training Magazine*, a quarterly, was assumed on contract.

While allowances for meeting the expenses of the journals have been liberal, it has been found impossible, with the enlarging scope, to keep them within their several appropriations, and in this connection it is to be said that The University Press has contributed materially toward the administrative support of the journals, aside from carrying its other financial burdens. The following figures will be of interest in this connection:

TABLE XI

Year	Appropriation	Cost	Overcharge	Receipts	Excess Cost over Receipts
1898-1899.....	\$38,600.00	\$40,671.92	\$2,071.92	\$17,815.42	\$22,856.50
1899-1900.....	40,100.00	40,673.73	573.73	17,870.01	23,003.72
1900-1901.....	39,600.00	42,403.04	2,803.04	23,795.82	18,607.22
1901-1902.....	41,100.00	46,358.92	5,258.92	24,136.38	22,222.54

Aside from the activities, already noted, of the Publication Department, the handling of University Extension Syllabi, Reading Lists, Tracts, Circulars, etc., has formed an important feature of the business. The publications of the University Extension Division now number more than one hundred and fifty titles, and the work connected therewith has to do with the care of the stock, the shipping of syllabi on special orders to University Extension lecture centers, the collection of all moneys due, etc.

Another important feature is the handling of all official documents of the University. This list now includes the miscellaneous circulars and departmental programs, the *President's Report*, the *Annual Register*, the *University Record*, the *Weekly Calendar*, the *Bulletin of Information*, the *Circular of Information*, and the *Announcements*.

The *President's Report* has been published in two volumes as follows:

TABLE XII

1897-98	- - - - -	viii + 261 pages
1898-99	- - - - -	xi + 224 "

The *Annual Register* has been published as follows:

TABLE XIII

1892-93	- - - - -	vii + 244 pages
1893-94	- - - - -	vii + 315 "
1894-95	- - - - -	vii + 399 "
1895-96	- - - - -	vii + 440 "
1896-97	- - - - -	vii + 444 "
1897-98	- - - - -	viii + 480 "
1898-99	- - - - -	viii + 501 "
1899-00	- - - - -	viii + 471 "
1900-01	- - - - -	viii + 490 "
1901-02	- - - - -	viii + 543 "

The *University Record*, edited by the Recorder of the University, is published monthly.

The *Weekly Calendar*, edited by the Recorder of the University, is published forty-five times a year during the scholastic sessions.

The *Bulletin of Information*, edited by the Recorder of the University, is published six times a year.

The *Circular of Information*, edited by the Recorder of the University, is published five times a year.

The *Announcements*, edited by the Recorder of the University, is published eight times a year.

#### IV. PURCHASE AND RETAIL DEPARTMENT

Through the Purchase and Retail Department all purchases of library books and laboratory supplies and equipment, are negotiated, and stationery and office supplies for the various Departments of the University are furnished. A book and stationery store for the convenience of patrons is maintained, and a depository for laboratory supplies is conducted, although goods are never sold through the latter agency. The following statements show the results of the operations of the Department for the period covered by University control:

TABLE XIV  
STATEMENT OF THE CONDITION OF THE STOCK FROM JULY 1, 1894, TO JULY 1, 1902

July 1, 1894, inventory	- - - -	\$7,009.92
" 1895, "	- - - -	8,410.24
" 1896, "	- - - -	10,450.59
" 1897, "	- - - -	7,754.73
" 1898, "	- - - -	9,163.94
" 1899, "	- - - -	9,091.00
" 1900, "	- - - -	11,550.14
" 1901, "	- - - -	10,634.70
" 1902, "	- - - -	14,505.95

TABLE XV  
SUMMARY OF PROFIT AND LOSS

Period	Profit	Loss
May 15, 1894, to June 30, 1895 .....	\$1,608.78	.....
Fiscal year, 1895-96 .....	3,522.29	.....
" " 1896-97 .....	.....	\$4,504.49
" " 1897-98 .....	.....	694.52
" " 1898-99 .....	.....	44.93
" " 1899-00 .....	2,868.71	.....
" " 1900-01 .....	911.46	.....
" " 1901-02 .....	1,718.76	.....
Totals .....	\$10,630.00	\$5,243.94
Net profit .....	.....	\$5,386.06

The experience of the past three years demonstrates conclusively that it is possible to operate the Department at a profit. Should the present arrangement be continued, however, it will be necessary for one portion of the business to contribute practically the entire administrative support to the other line, which is distinctly different, namely, the administration of the work connected with the distribution of laboratory supplies and equipment. In order that the results of these two lines may be differentiated, it has been thought wise to arrange for a division

of the Department into two operating upon separate bases. The arrangement will provide for the Retail Department, which will retain the business connected with the retailing of books and stationery and the purchase of library books, and for the Laboratory Supply Department, which will have charge of the purchase and distribution among the laboratories of all supplies and equipment.

#### IV. CONCLUSION

In a report of this character many of the details which have entered into the history of the organization must of necessity be omitted. It is fair to say, however, that The Press has already demonstrated its value as a factor in the development of the University. Much has been accomplished, and much remains to be accomplished. The generous support which has been extended to the undertaking gives ground for the belief that the founders of the University planned well when this feature of the new institution was provided; and we believe that The University Press is only on the threshold of its usefulness to the scholastic world.

At the close of the first decennium the management is looking forward to the fulfilment of plans which will provide for the housing of the several departments under one roof. A fireproof building, costing \$110,000, is nearing completion at the corner of Ellis avenue and Fifty-eighth street, which will eventually be devoted entirely to the interests of publishing. The basement and the first and fourth floors will be occupied immediately, while the second and third floors will be temporarily utilized for other University purposes. The space allotted to The Press in the new structure will provide only for immediate necessities. The whole building will be needed very soon to provide retail, stock, and administrative quarters, and for an enlargement of the mechanical equipment, so that all manufacturing excepting photo-engraving, lithographing, electrotyping, and edition bookbinding may be executed. Looking into the not far distant future, it is to be expected that all of these activities will be entered upon, together with undertaking to manufacture some materials and equipments, as, for example, printing inks and, possibly, founding the type needed in the work. An immediate investment to the extent of \$25,000 is contemplated, which amount, in addition to the present plant, will provide typesetting machines and book presses of the latest invention, folding, stitching, and sewing machines for book work, new dresses of job and body type, and an equipment for doing job bookbinding and library repairing.

An important need of The University Press remains to be cared for, namely, a working capital of sufficient magnitude to enable the management to conduct the growing business without the necessity of asking credit beyond the terms ordinarily granted business houses, and without embarrassment to the University budget appropriations. With a definite working capital it will be possible for the affairs to be conducted at a material saving; and, with the situation met and adjusted, The University Press is in a position to go on to even greater things than have been accomplished in the past.

Respectfully submitted,  
NEWMAN MILLER, *Director.*



# THE UNIVERSITY EXTENSION DIVISION

## THE LECTURE-STUDY DEPARTMENT

*To the President of the University:*

SIR: I submit herewith a report of the work of the Lecture-Study Department of the University Extension Division for the period 1892-1902.

The first official announcement of the contemplated work of the University Extension Division was made by the University in *Bulletin No. 6*, issued in June, 1892, as follows:

To provide instruction for those who for social or economic reasons cannot attend in its classrooms is a legitimate and necessary part of the work of every university. To make no effort in this direction is to neglect a promising opportunity for building up the university itself, and at the same time to fall short of performing a duty which from the very necessities of the case is incumbent upon the university. It is conceded by all that certain intellectual work among the people at large is desirable; those who believe in the wide diffusion of knowledge regard it as necessary; all are pleased to see that it is demanded. This work, while it must be in a good sense popular, must also be systematic in form and scientific in spirit; and to be such it must be done under the direction of a university, by men who have had scientific training. For the sake of the work it should in every instance come directly from the university, that thus

1. There may be a proper guarantee of its quality.
2. Character may be given it.
3. Continuity may be assured.
4. Suitable credit may be accorded.

The doing of the work by the university will

1. Do much to break down the prejudice which so widely prevails against an educated aristocracy.
2. Give to a great constituency that which is their just right and due.
3. Establish influences from which much may be expected directly for the university.
4. Bring inspiration to both professor and pupil in college and university.
5. Bring the university into direct contact with human life and activity.

In accordance with an announcement issued in the same *Bulletin*, the work of the Lecture-Study Department was to consist of instruction given by means of lectures, classes, and written exercises. The method of teaching was copied after that of the Syndicates for the Extension of University Teaching organized in connection with the English universities, which has since become familiar in this country, consisting of:

1. Lecture studies given in courses of six or twelve. "These are intended rather to interest the student in the work and to inspire him to study than to furnish information."
2. The class held at the beginning or close of each lecture, during which the instructor dwells upon points suggested in weekly exercises, explains difficulties or answers questions raised by members of the class.
3. The syllabus, which gives a brief outline of the subject for the guidance of the student and furnishes references to the principal authorities to be consulted.
4. The written exercises in connection with each lecture, which are intended not as an examination, but rather to lead the student into scholarly methods.
5. The examination given at the close of the course, which is open only to those who have satisfied the instructor in the matter of attendance at the lecture studies and classes and in the performance of the required number of weekly exercises.

In accordance with this method, there have been delivered during the ten years closing June 30, 1902, 1,326 courses of six lecture studies each, in 368 centers in 21 different states. Of

these 391 courses have been given in the city of Chicago and 356 in the state of Illinois, outside of Chicago. Other states in which one hundred or more courses have been delivered are: Ohio, 105; Iowa, 103; Michigan, 101; Indiana, 100. The courses are classified by departments in Table B, which is appended to this report. As was to have been expected, the Department of English Language and Literature leads with a total of 367 courses; Sociology and Anthropology is a close second, with 327; History, 260; Biblical Literature in English, 138. The statistics for the number of centers as given above is deceptive, in that University Extension work in any particular community may have been, and in many instances has been, done by different organizations, and hence while the report credits the work to the organization under the auspices of which it was done, this on the surface would appear to multiply unnecessarily the number of centers.

Table D contains statistics of the number of courses given by each lecturer. During this period courses of lectures have been given by ninety-one different men, but it is observed that one-third of the total number of courses has been given by three men, and that more than 95 per cent. of the total has been given by men devoting all of their time to University Extension work during the period in which their courses were in progress.

The average attendance at the lecture courses for the ten years is 272,967; or, in other words, the average number of people attending these courses each year has been 27,296. The total number of admissions, as reported, is 1,637,802. During this period syllabi for one hundred and fifty-seven different courses have been published. Seven hundred and fifteen traveling libraries, including 25,832 volumes, have been sent to the different University Extension centers and kept in circulation among their respective members.

A careful estimate of the expenditures of the University and the different University Extension centers during this period gives a grand total of \$325,000. Of this \$250,000 have been contributed by the centers themselves and \$75,000 by the University.

A statistical report of the work of the Department arranged by years is given in full in Table A. It is to be observed that the number of courses delivered during the last year of the period is 35 per cent. larger than the best year in the previous history of the Department.

We are sometimes asked: "What are the tangible results of this work?" We all know how impossible it is to estimate the value of any educational movement by giving statistics and definite results which have been accomplished by it. Nevertheless there are many such results which have followed the organization of University Extension work; for example, we can point:

1. To one who a few years ago was a grade teacher in the schools of a small town, and who afterward became a student at the University, and later a valuable and effective teacher in one of the best high schools of the state. She herself attributes her advancement to the original stimulus derived from attendance on a course of University Extension lectures.

2. To scores of students who have gone to this and other colleges and universities, and who date their original desire for a higher education at the time of personal contact with a scholarly, sympathetic, and inspirational University Extension lecturer.

3. To at least one public library, which was founded and has since been perpetuated as the result of the work of the Local Committee for the Extension of University Teaching. Many libraries can be indicated which took on new life from the date of the organization of University Extension centers in their respective communities.

4. To at least one city into the public schools of which a system of manual training was introduced as a direct result of the delivery of two courses of lectures on practical sociology.

It is equally true that to the interest aroused by the University Extension movement is to be attributed the successful inauguration of systems of free public lectures, most notably that conducted by the Board of Education of New York city.

However, as indicated above, the greatest and most lasting good done by University Extension, as well as other educational movements, cannot be indicated statistically. As another has said: "We are in a position to assert that a successful course perceptibly influences the *tone* of a locality for the period it lasts." We would not stop there. Any agency which keeps before the people of a community for any considerable length of time a higher educational standard and arouses an interest in the acquisition of knowledge and culture cannot be a merely temporary influence. The librarian of a large cosmopolitan city writes:

The University Extension lectures undoubtedly stimulate the use of books bearing upon the subjects treated. In this library collections of books on the subjects of the courses are reserved in the Reference Room and are in constant use; while in the Loan Department there is a greater demand for books on the subjects discussed than we can supply, though we have many copies of each book. Our experience shows that these lectures have a *permanent* effect on the character of the reading in this community. The interest aroused by the lectures is not merely for the time, but continues to stimulate the use of the literature of the subjects treated. Moreover, the beneficent contagion spreads to other people and to other subjects.

As stated by M. Bérenger in an address at the Paris Exposition, "University Extension is the effort to develop in human life, in all classes of society, ideas and sentiments of liberal culture—of religion, of art, of aspiration." As an agency for the attainment of such results University Extension has the strongest claim for recognition.

There are a number of practical difficulties which have confronted promoters of the University Extension movement. There are not wanting many prominent educators who have believed that these difficulties are insurmountable. The problems which, in their judgment, the friends of University Extension would be unable to solve are:

1. The local financial problem.
2. The discovery and engagement of satisfactory lecturers.
3. The absorption of university and college men in their own academic duties.
4. The extent of traveling and extra work required from busy professors.

Of these the first has to do primarily with the administration of the local University Extension centers; the others with the University or the societies under the auspices of which University Extension work is conducted.

That the first difficulty is not insurmountable we believe is abundantly demonstrated by the fact that the University Extension centers, under the auspices of which this work from the University of Chicago has been conducted during the past ten years, have contributed in small sums a total of \$250,000 in support of an educational movement, the development of which means much to the intellectual progress of the communities in which it is organized. Nevertheless it is recognized that if this work is to be conducted upon a university plane and according to plans which are approved by university authorities, it must look for its success to the ardent support of a limited number of people instead of to the passing interest of large numbers. Hence it is necessary that the university itself contribute to the support of this work in the same way and for the same reason that it contributes to the support of residence college work. The institution which devotes all its energies and resources to the education of the limited number of people who can spend a period of years within its walls is, to say the least, neglecting its duty to the great masses of the people upon the elevation of whose standards and ideals its success must ultimately depend.

The second, third, and fourth difficulties mentioned above may be discussed under one head—the University Extension lecturer. It is universally conceded that here is the most difficult problem with which the movement has yet had to contend. As Professor Moulton has said: "An Extension lecturer must be something more than a good teacher, something more than

an attractive lecturer; he must be inspired with the ideas of the movement and ever on the watch for opportunities of putting them forward. The lecturers must maintain in audiences a feeling that they are not simply receiving entertainment or instruction which they have paid for, but that they are taking part in a public work." Or, as has been forcibly said by another, an Extension lecturer must be "able to uplift, as well as to inform; able to energize, as well as mobilize facts and to interpret them in terms of life." Such a man must not only possess scholarship; he must be full of life and energy and enthusiasm, capable of imparting inspiration. His method of presentation must be clear, concise and effective. His audiences are not composed wholly of scholars; in many instances he lectures to a miscellaneous audience. His lecture must accordingly be constructed and delivered in such a way that those who come to be entertained may remain to be instructed. If they come to drink in and be fed by the lecturer, to gather information from what he has to say, the truly successful University Extension lecturer will arouse them to active thought and stimulate them to thoughtful reading. Again in the words of Professor Moulton: "If a system of instruction gives discipline, method, and even originating power, without arousing a lasting love for the subject studied, the whole process is but a mental galvanism, generating a delusive activity that ceases when the connection between the instructor and pupil is broken off. If then it be conceded that the essence of education is interest, does it not seem a soberly practical purpose that we should open up to the whole nation, without exception, an interest in intellectual pursuits?"

A successful popular lecturer is not necessarily a successful University Extension lecturer. Indeed, those elements which enter into successful popular lecturing are not at all essential to successful University Extension lecturing. While the Extension lecturer must be able during the hour in which he has his large audience before him to hold their attention and interest them in what he has to say, he has at the end of this period done at best not more than one-half his work. It is in the class that follows that his ability as a teacher must be shown. It is there that he has opportunity to come into intimate contact with the thoughtful members of his audience. It is here that he gains a deeper and clearer insight into the mental attitude and processes of those to whom he has been lecturing. Before, they were attentive listeners; now, they are, under his direction, thoughtful seekers for knowledge. Or even if in the class there is not found abundant opportunity to impart knowledge, it is still the hope of the lecturer to arouse by thoughtful questions a more careful consideration of the subjects which he could present at best in their general aspect only in the lecture.

Hence all are ready to admit that the successful University Extension lecturer is vastly more difficult to find than the successful class-room instructor, and whatever may be his natural qualifications, he, like the successful worker in any other field, attains the highest degree of success after years of experience. The Extension lecturer is made, not born.

As regards those men who are devoting their time and energy mainly to class-room instruction, it is universally conceded that they can at best do very little successful University Extension work. In the first place, the exacting duties of the class-room do not permit them to give the time and thought to Extension lecturing which is essential to the accomplishment of the results above mentioned. They cannot come before their audiences with that life and energy and vitality which is needed to arouse from its lethargy a mind which during eight or ten or twelve hours per day, year in and year out, is devoted to a consideration of the practical and material affairs of life. It is therefore conceded that if University Extension is to be conducted upon any large and permanent basis, it must be done by men who are giving their entire time to that work; or at least the major portion of it must be done by men who regard it as a primary and not a secondary duty. The University has done much in the solution of this difficulty by selecting a number of men prominent as scholars in the different fields of literature, history,

TABLE A  
 STATISTICAL REPORT OF THE LECTURE-STUDY WORK OF THE EXTENSION DIVISION OF THE UNIVERSITY OF CHICAGO,  
 1892-1902

Quarter	No. of Centers	No. of Courses	No. of Lecturers	Average Attendance at Lectures	Average Attendance at Class	Syllabi Published	No. of Twelve-Lecture Courses	Average No. of Lectures per Center	Courses taken in Chicago	Centers active in Chicago
1892-93, Autumn .	31	39	11	10,070	3,838					
Winter...	52	83	20	16,443	8,217					
Spring...	2	2	2	215	30					
Total...	67	124	21	26,728	12,085	37	0	11.01+	71	24
1893-94, Autumn .	33	36	17	5,129	2,880					
Winter...	35	44	16	7,059	4,224					
Spring...	9	9	4	1,875	1,305					
Total...	72	89	17	14,063	8,409	17	6	6.92-	37	23
1894-95, Autumn .	62	65	18	11,968	8,225					
Winter...	48	52	17	9,724	8,164					
Spring...	10	11	3	2,065	1,388					
Total...	95	128	23	23,757	17,775	15	6	8.01-	29	19
1895-96, Autumn .	61	72	24	14,980	7,855					
Winter...	41	46	18	9,615	4,005					
Spring...	4	4	2	750	500					
Total...	81	122	30	25,345	12,360	21	6	8.89-	41	23
1896-97, Autumn .	55	64	23	11,392	7,332					
Winter...	61	71	21	16,759	9,600					
Spring...	6	6	5	1,193	450					
Total...	95	141	29	29,344	17,382	15	8	8.90+	56	31
1897-98, Autumn .	71	79	17	16,888	6,338					
Winter...	53	60	22	12,990	4,785					
Spring...	2	2	2	437	372					
Total...	92	141	29	30,315	11,495	9	6	8.91-	49	30
1898-99, Autumn .	54	57	17	10,837	4,731					
Winter...	61	66	18	13,866	4,294					
Spring...	2	2	2	290	.....					
Total...	93	125	25	24,993	9,025	12	6	8.06+	25	18
1899-00, Summer .	2	2	1	550	.....					
Autumn .	50	55	14	11,091	4,805					
Winter...	61	67	15	17,488	7,923					
Spring...	2	3	2	264	50					
Total...	97	127	22	29,693	12,878	11	8	7.86+	21	16
1900-01, Autumn .	46	55	15	11,533	3,308					
Winter...	64	75	15	18,714	4,797					
Spring...	8	9	2	2,560	.....					
Total...	110	139	22	32,807	8,105	10	7	7.58	22	14
1901-02, Autumn .	81	88	19	15,461	6,954					
Winter...	77	93	18	18,831	8,690					
Spring...	9	9	5	1,630	789					
Total...	140	190	27	35,922	16,433	13	16	8.14+	28	14

Total number of courses delivered - - - - - 1,326  
 Total attendance at lecture courses - - - - - 272,967  
 Total attendance at lectures (No. of admissions) - - - - - 1,637,802  
 Total number of courses delivered in Chicago - - - - - 379

TABLE B  
STATISTICAL REPORT OF NUMBER OF COURSES GIVEN IN LECTURE-STUDY DEPARTMENT CLASSIFIED BY SUBJECTS

Department	1892-3	1893-4	1894-5	1895-6	1896-7	1897-8	1898-9	'99-'00	1900-1	1901-2	Total
English Language and Literature.....	28	23	39	45	41	43	37	32	39	40	367
Sociology and Anthropology.....	28	21	38	30	23	30	38	31	22	66	327
Biblical Literature in English.....	7	10	6	12	10	5	8	24	28	28	138
Geology.....	1	3	3	1	4	..	1	..	..	2	15
History.....	26	15	33	9	31	32	28	31	25	30	260
Art.....	16	8	4	5	4	14	4	5	2	3	65
Semitics.....	5	..	..	3	5	2	4	..	..	2	21
Philosophy and Pedagogy.....	..	..	..	10	4	..	..	2	10	15	41
Neurology.....	..	..	..	2	..	..	..	..	..	..	2
Botany.....	1	..	..	2	7	11	3	2	2	3	31
Astronomy.....	..	1	..	1	1	..	..	..	..	..	3
Chemistry.....	..	1	..	1	..	..	..	..	..	..	2
Political Science.....	3	2	..	1	2	1	..	..	3	..	12
Political Economy.....	8	5	4	..	8	..	..	..	..	..	25
Physics.....	1	..	..	..	..	..	..	..	..	..	1
Scandinavian Literature.....	..	..	1	..	..	..	..	..	..	..	1
Music.....	..	..	..	..	1	..	..	..	..	..	1
Greek Language and Literature.....	..	..	..	..	..	1	..	..	..	..	1
Anatomy.....	..	..	..	..	..	2	2	..	..	..	4
Zoology.....	..	..	..	..	..	..	..	..	8	..	8
Romance Languages and Literatures.....	..	..	..	..	..	..	..	..	..	1	1
Total.....	124	89	128	122	141	141	125	127	139	190	1,326

sociology, and science, and appointing them to regular positions in its faculty, with the understanding that their chief duty is the advancement of knowledge and the promotion of culture by the University Extension method. During the past ten years we have had not a little successful work done by men who were at the same time conducting classes in the University, but in the nature of the case the centers in which they are lecturing must not only be few but must likewise be located near the University.

We have in the past ten years not only discovered competent lecturers, but we have made another discovery which is equally important; namely, that the people are ready for a forward movement for popular education such as is supplied by University Extension. This, as stated above, is to many most abundantly proved by the fact that during this period several thousand people have contributed in small amounts a total sum of \$250,000 for the endowment of this form of instruction. Thus while the past ten years have revealed to us difficulties, they have likewise shown us the strength of our cause. We are now ready for more significant advances.

TABLE C  
TRAVELING LIBRARIES

The first Traveling Library was sent out in October, 1892, and the reports from that date to the present are as follows:

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Number volumes.....	1,100	1,834	1,935	2,460	3,467	3,663	3,550	3,689	3,950	4,387
Number volumes sent out <sup>1</sup> .....	1,754	2,001	2,010	1,782	3,536	3,562	2,848	2,497	1,965	3,877
Number libraries sent out.....	64	64	89	59	94	83	67	63	44	88
To how many states.....	4	5	9	7	8	8	8	9	6	9
To how many cities and towns....	30	44	56	45	36	48	46	50	37	75
Number libraries purchased.....	..	..	27	20	30	25	12	17	12	24
Number books purchased.....	..	..	828	523	1,396	586	642	630	535	1,051
Number books sold.....	..	..	242	116	274	478	896	463	249	550

<sup>1</sup> Counts each issue of a volume.

The Traveling Libraries supplement efficiently the resources of the General Library. When the books are not in active use at University Extension centers, they form a considerable proportion of the daily circulation from the loan desk of the General Library.

TABLE D  
NUMBER OF LECTURE-STUDY COURSES GIVEN BY EACH LECTURER  
1892-1902

R. G. Moulton - - -	185	John Dewey - - -	8	Shailer Mathews - - -	2
Charles Zueblin - - -	158	T. J. Lawrence - - -	8	T. G. Allen - - -	1
Edwin E. Sparks - - -	125	H. S. Fiske - - -	7	Augusta Chapin - - -	1
Herbert L. Willett - - -	69	William R. Harper - - -	7	George Dana Boardman - - -	1
Frederick Starr - - -	51	A. H. Cole - - -	6	Olaus Dahl - - -	1
J. G. C. Troop - - -	41	N. I. Rubinkam - - -	6	George Schreiber - - -	1
Nathaniel Butler - - -	41	Benjamin S. Terry - - -	5	B. M. Davis - - -	1
George E. Fellows - - -	41	O. J. Thatcher - - -	5	Wardner Williams - - -	1
S. H. Clark - - -	38	E. R. L. Gould - - -	4	Ferdinand Schwill - - -	1
F. W. Shepardson - - -	35	E. H. Lewis - - -	4	J. W. Thompson - - -	1
Henry W. Rolfe - - -	34	Ella Adams Moore - - -	4	Paul Shorey - - -	1
Lorado Taft - - -	33	Ira M. Price - - -	4	J. P. Gordy - - -	1
John Graham Brooks - - -	29	H. F. Reid - - -	4	George L. Hunter - - -	1
W. D. MacClintock - - -	29	Albert C. Eycleshymer - - -	4	Arthur Kaiser - - -	1
Edward Bemis - - -	28	Myra Reynolds - - -	4	H. L. Russell - - -	1
Thomas P. Bailey, Jr. - - -	25	Oscar L. Triggs - - -	3	F. L. Morse - - -	1
Ira W. Howerth - - -	23	W. H. Mace - - -	3	T. J. J. See - - -	1
Jerome H. Raymond - - -	21	Alleyne Ireland - - -	3	S. W. Stratton - - -	1
John M. Coulter - - -	20	Merton L. Miller - - -	3	A. W. Wishart - - -	1
W. C. Webster - - -	19	H. H. Donaldson - - -	2	George Kriehn - - -	1
James H. Breasted - - -	16	E. E. Barnard - - -	2	L. Taft - - -	1
Jenkin Lloyd Jones - - -	13	R. C. H. Catterall - - -	2	Albert H. Tolman - - -	1
H. B. Grose - - -	12	J. D. Forrest - - -	2	Pearl M. Pearson - - -	1
W. M. R. French - - -	12	H. C. Cowles - - -	2	Serge Wolkonsky - - -	1
W. H. Goodyear - - -	11	C. F. Kent - - -	2	W. W. Atwood - - -	1
R. D. Salisbury - - -	10	Emil G. Hirsch - - -	2	Alfred M. Brooks - - -	1
Albion W. Small - - -	10	C. A. McMurry - - -	2	George C. Howland - - -	1
Ernest Ingersoll - - -	9	F. W. Parker - - -	2	Charles A. Young - - -	1
Edward von Bensley - - -	9	J. R. Angell - - -	2	Other lecturers - - -	10
H. P. Judson - - -	9	James H. Tufts - - -	2		
C. R. Henderson - - -	9	Camillo von Klenze - - -	2	Total - - -	1,326
George E. Vincent - - -	8				

TABLE E  
PLACES AT WHICH COURSES HAVE BEEN DELIVERED  
1892-1902

Ada, Ohio - - -	1	Arlington Heights, Ill. - - -	1	Benton Harbor, Mich. - - -	1
Aiken, S. C. - - -	1	Asheville, N. C. - - -	1	Birmingham, Ala. - - -	3
Akron, Ohio - - -	1	Ashland, Wis. - - -	1	Bloomington, Ill. - - -	5
Algona, Iowa - - -	1	Athens, Ga. - - -	3	Blue Island, Ill. - - -	8
Alhambra, Calif. - - -	1	Atlanta, Ill. - - -	1	Braddock, Pa. - - -	1
Allegan, Mich. - - -	1	Aurora, Ill. - - -	14	Buffalo, N. Y. - - -	2
Allegheny, Pa. - - -	2	Austin—Oak Park, Ill. - - -	3	Burlington, Iowa - - -	9
Alton, Ill. - - -	3	Barrington, Ill. - - -	1	Burlington, Wis. - - -	1
Anderson, S. C. - - -	1	Batavia, Ill. - - -	1	Calumet, Mich. - - -	2
Ann Arbor, Mich. - - -	1	Bay City, Mich. - - -	9	Canton, Ill. - - -	6
Anniston, Ala. - - -	2	Belvidere, Ill. - - -	5	Canton, Ohio - - -	5

TABLE E—Continued

Cedar Rapids, Iowa - - 4	Kenwood Evangelical Ch. 1	South Park M. E. Church 1
Centralia, Ill. - - - 2	Kindergarten Club - - 1	Steinway Hall - - - 5
Charleston, Ill. - - - 2	Kindergarten College -10	Trade and Labor - - - 1
Charleston, S. C. - - - 1	Kindergarten Institute - 1	Univ. Cong. Church - - 1
Charlottesville, Va. - - 1	Klio Association - - - 1	Union Park - - - - 8
Chicago:	Lake Shore - - - - 2	Union Park L. B. S. - - 1
Almira Center - - - 5	Lake View - - - - 6	University (afternoons) -22
All Souls' - - - - 8	Leavitt Street - - - 3	U. of C. Settlement - - 3
Architectural Club - - 1	Lewis Institute - - -16	Wabash Ave. - - - - 1
Armour Institute - - - 1	Longwood - - - - 1	West End Club - - - - 2
Art Institute - - -10	Memorial Baptist - - - 4	Wicker Park - - - - 6
Association - - - - 4	Millard Avenue - - - 4	Windsor Park - - - - 3
Austin - - - - - 5	Monroe St. Christian Ch. 1	Woman's Club - - - - 5
Calumet - - - - - 2	Newberry Library - -21	Woodlawn - - - - - 5
Catholic Woman's League 1	New England Church - - 4	Woodlawn Park Club - - 1
Centenary M. E. Church 1	Normal Park - - - - 2	Chicago Heights, Ill. - - 1
Central Music Hall - - - 2	North Shore - - - - 6	Chillicothe, Ohio - - - 1
Central Park Pres. Ch. - 1	North Shore Club - - - 1	Cincinnati, Ohio:
Central Y. M. C. A. - - - 8	Notre Dame - - - - 2	H. Thane Miller School - 3
Church of the Redeemer 1	Oakland Club - - - - 6	Mt. Auburn - - - - 1
Columbia School Oratory 8	Oakland (Bible Study	Univ. Extension Center - 3
Cook County Normal Sch. 9	League) - - - - 1	Y. W. C. A. - - - - 5
D. A. R. - - - - - 2	Oakland - - - - - 1	Y. M. C. A. - - - - 1
Drexel - - - - - 6	Owen Scientific Center - 1	Claremont, Calif. - - - 1
Edgewater - - - - - 6	People's Institute - - - 4	Cleveland, Ohio - - - - 2
Englewood Men's Club - 1	Plymouth Church - - - 7	Clinton, Iowa - - - -14
Englewood Cong. Ch. - 1	Private - - - - - 1	Columbia, S. C. - - - - 2
Englewood Univer. Ch. - 9	Public School Dist. No. 8 2	Columbus, Ga. - - - - 3
Englewood Wom. Club - 2	Public School Dist. No. 1 2	Columbus, Ohio - - - - 5
Epworth League - - - 1	Public School Dists. Nos.	Constantine, Mich. - - - 1
Free Kindergarten - - - 5	3 and 4 - - - - - 1	Coshocton, Ohio - - - - 1
Free Lectures:	Public School Dist. No. 6 2	Dallas, Tex. - - - - - 1
Anderson School - - - 2	Ravenswood - - - - - 3	Danville, Ill. - - - - 6
Franklin School - - - 2	Robey St. - - - - - 1	Danville, Ky. - - - - 1
G. W. Curtis School - 3	Rogers Park - - - - 4	Davenport, Iowa - - -14
Hammond School - - - 1	Rush Medical - - - - 4	Dayton, Ohio - - - -15
Hull House - - - - 1	Ryder Lectures:	Decatur, Ill. - - - - 5
Medill School - - - - 1	Douglas School - - - 1	Decatur, Ind. - - - - 1
Perkins Bass School - 3	Franklin School - - - 2	De Kalb, Ill. - - - - 4
Horace Mann School - 3	Lewis School - - - - 1	Delaware, Ohio - - - - 2
Garfield - - - - - 2	N. W. Division High	Des Moines, Iowa - - - - 2
Garfield Park - - - - 3	School - - - - - 2	Detroit, Mich. - - - - 7
Goodrich School - - - 2	St. James's - - - - 9	DeWitt, Iowa - - - - 1
Herder Lodge - - - - 1	St. Gabriel's - - - - 1	Dixon, Ill. - - - - 5
Holy Angels' - - - - 1	St. Paul's - - - - 5	Dowagiac, Mich. - - - - 1
Hull House - - - - 7	Sedgwick St. - - - - 1	Downer's Grove, Ill. - - 1
Hyde Park - - - - - 1	Self Educational Club - 1	Dubuque, Iowa - - - - 9
Hyde Park M. E. Church 7	Sinai - - - - - 4	Earlville, Ill. - - - - 1
Hyde Park Christian Ch. 4	Sixth Presbyter'n Church 1	East Chicago, Ind. - - - 3
Irving Park - - - - 3	South Cong. Church - - 4	East St. Louis, Ill. - - 3
K. A. M. - - - - - 2	South Side Club - - - 3	Elgin, Ill. - - - - 7
Kenwood - - - - -13	South Park - - - - - 8	Elwood, Ind. - - - - 2



TABLE E—Continued

Emmettsburg, Iowa . . . 1	Kalamazoo, Mich. . . 7	S. S. Educ. Assoc. . . 2
Estherville, Iowa . . . 1	Kankakee, Ill. . . 6	Univ. Extension Center . . 2
Evanston, Ill. . . . 4	Kansas City, Mo. . . 1	Woman's Club . . . 1
Evanston, Ill. (Bible-Study League) . . . 1	Kenosha, Wis. . . . 4	Pastors' Assoc. . . . 1
Evansville, Ind. . . . 2	Kenton, Ohio . . . 1	Minneapolis, Minn.:
Fairfield, Iowa . . . 1	Keokuk, Iowa . . . 9	Institute Sac. Lit. . . 4
Fayette, Iowa . . . 1	Kewanee, Ill. . . . 1	Stanley Hall . . . 13
Findlay, Ohio . . . 3	Kokomo, Ind. . . . 3	Moline, Ill. . . . 12
Flint, Mich. . . . 10	LaCrosse, Wis. . . . 4	Monmouth, Ill. . . . 2
Fort Dodge, Iowa . . . 2	Lafayette, Ind. . . . 4	Morgan Park, Ill. . . . 2
Fort Madison, Iowa . . . 8	La Grange, Ill. . . . 3	Morgantown, W. Va. . . 1
Fort Wayne, Ind. . . . 2	Lagrange, Ind. . . . 1	Morrison, Ill. . . . 1
Frankfort, Ind. . . . 1	La Moille, Ill. . . . 2	Mount Carroll, Ill. . . 4
Freeport, Ill. . . . 5	Lansing, Mich. . . . 1	Muncie, Ind. . . . 1
Fremont, Ohio . . . 2	Lansing, Mich. (Agr. Col.) . 1	Muscatine, Iowa . . . 4
Galesburg, Ill. (Knox Col.) . 10	La Porte, Ind. . . . 5	Muskegon, Mich. . . . 2
Galveston, Tex. . . . 6	La Salle, Ill. . . . 2	Negunee, Mich. . . . 1
Geneseo, Ill. . . . 4	Lebanon, Ind. . . . 2	Newark, Ohio . . . . 1
Geneva, Ill. . . . 1	Lemont, Ill. . . . 1	New Brighton, Pa. . . . 1
Gibson City, Ill. . . . 1	Lexington, Ky. . . . 1	New Harmony, Ind. . . . 1
Glencoe, Ill. . . . 3	Lima, Ohio . . . . 4	Niles, Mich. . . . 3
Goshen, Ind. . . . 1	Lincoln, Ill. . . . 3	Oak Park, Ill. . . . 10
Grand Rapids, Mich. . . . 5	Lisbon, Ohio . . . . 2	Osage, Iowa . . . . 2
Grand Haven . . . . 4	Lockport, Ill. . . . 1	Oshkosh, Wis. . . . 1
Greenville, S. C. . . . 1	London, Ohio . . . . 1	Oskaloosa, Iowa . . . 1
Grinnell, Iowa . . . . 1	Long Beach, Calif. . . . 1	Ottawa, Ill. . . . 11
Hamilton, Ohio . . . . 6	Los Angeles, Calif. . . . 2	Ottumwa, Iowa . . . . 7
Hammond, Ind. . . . 6	Louisville, Ky. . . . 2	Owosso, Mich. . . . 5
Hannibal, Mo. . . . 2	Ludington, Mich. . . . 1	Palatine, Ill. . . . 2
Hartford City, Ind. . . . 1	Macon, Ga. . . . 1	Pana, Ill. . . . . 1
Herrington, Kan. . . . 1	Manistee, Mich. . . . 4	Paris, Ill. . . . . 3
Highland Park, Ill. . . . 6	Mansfield, Ohio . . . 3	Paris, Ky. . . . . 1
Hillsboro, Ohio . . . . 2	Maquoketa, Iowa . . . 1	Park Ridge, Ill. . . . 2
Hinsdale, Ill. . . . 5	Marion, Ala. . . . 1	Pasadena, Calif. . . . 2
Hiram, Ohio . . . . 1	Marion, Ind. . . . 5	Pekin, Ill. . . . . 5
Hoopeston, Ill. . . . 1	Marion, S. C. . . . 1	Peoria, Ill. . . . 11
Houston, Tex. . . . 2	Marquette, Mich. . . . 2	Peru, Ind. . . . . 3
Humboldt, Iowa . . . . 1	Marshall, Mich. . . . 5	Pittsburg, Pa.:
Huntington, Ind. . . . 1	Marshalltown, Iowa . . 2	Univ. Extension Society . 12
Independence, Iowa . . . 1	Mason City, Iowa . . . 2	Art Society . . . . 1
Indiana, Pa. . . . . 2	Mattoon, Ill. . . . . 4	Hazelwood Branch . . . 1
Indianapolis, Ind. (U. E. C.) 15	Maywood, Ill. . . . . 4	Mt. Washington Branch . 1
Indianapolis, Ind., Public School . . . . 1	Mazon, Ill. . . . . 1	Wylie Ave. Branch . . . 1
Indianapolis, Ind., Manual Training School . . . 1	Mendota, Ill. . . . . 1	20th Century Club . . . 3
Ironwood, Mich. . . . 1	Meridian, Miss. . . . 1	Plainwell, Mich. . . . 1
Ishpeming, Mich. . . . 1	Michigan City, Ind. . . . 3	Plymouth, Ind. . . . 1
Jackson, Mich. . . . . 4	Middletown, Ohio . . . 1	Polo, Ill. . . . . 3
Jacksonville, Ill. . . . 2	Milwaukee, Wis.:	Pomona, Calif. . . . 1
Joliet, Ill. . . . . 22	College Endowment Association . . . 23	Pontiac, Ill. . . . . 3
	Ethical Society . . . . 1	Potomac, Ill. . . . . 1
	Normal School . . . . 1	Princeton, Ill. . . . 4
		Pueblo, Colo. . . . . 1

TABLE E—Continued

Princeton, Ind. . . . .	1	Santa Anna, Calif. . . . .	2	Tremont, Ill. . . . .	2
Quincy, Ill. . . . .	4	Savanna, Ill. . . . .	1	Trenton, Mo. . . . .	1
Redlands, Calif. . . . .	2	Sedalia, Mo. . . . .	1	Tuscaloosa, Ala. . . . .	1
Richmond, Ind. . . . .	8	Selma, Ala. . . . .	2	Upper Alton, Ill. . . . .	1
Richmond, Ky. . . . .	1	Shelbyville, Ill. . . . .	1	Urbana, Ohio . . . . .	1
Richmond, Va. . . . .	1	Sidney, Ohio . . . . .	5	Valparaiso, Ind. . . . .	4
Riverside, Calif. . . . .	1	South Bend, Ind. . . . .	12	Vincennes, Ind. . . . .	1
Riverside, Ill. . . . .	7	South Evanston, Ill. . . . .	1	Wabash, Ind. . . . .	3
Rochelle, Ill. . . . .	4	Spencer, Iowa . . . . .	1	Washington, Iowa . . . . .	1
Rockford, Ill. . . . .	16	Springfield, Ill. . . . .	14	Washington, Ind. . . . .	1
Rock Island, Ill. . . . .	6	Springfield, Ohio . . . . .	6	Washington C. H., Ohio . . . . .	1
Saginaw, E. S., Mich. . . . .	12	Sterling, Ill. . . . .	9	Waterloo, Iowa . . . . .	2
Saginaw, W. S., Mich. . . . .	5	Storm Lake, Iowa . . . . .	1	Watertown, Wis. . . . .	2
St. Charles, Ill. . . . .	2	Streator, Ill. . . . .	9	Watseka, Ill. . . . .	1
St. John's, Mich. . . . .	2	Sycamore, Ill. . . . .	5	Waukegan, Ill. . . . .	4
St. Joseph, Mich. . . . .	1	Taylorville, Ill. . . . .	1	Wheaton, Ill. . . . .	3
St. Paul, Minn. . . . .	4	Terre Haute, Ind. . . . .	4	Winnetka, Ill. . . . .	4
San Antonio, Tex. . . . .	1	Tiffin, Ohio . . . . .	4	Winona, Minn. . . . .	6
San Diego, Calif. . . . .	1	Toledo, Ohio . . . . .	9	Xenia, Ohio . . . . .	2
Sandusky, Ohio . . . . .	2	Tonawanda, N. Y. . . . .	5	Youngstown, Ohio . . . . .	2
San Francisco, Calif. . . . .	1	Topeka, Kan. . . . .	1		

TABLE F  
SUMMARY

	Number of Centers	Number of Courses		Number of Centers	Number of Courses
Chicago . . . . .	90	391	Georgia . . . . .	6	7
Illinois (outside Chicago) . . . . .	81	356	New York . . . . .	2	7
Ohio . . . . .	32	105	South Carolina . . . . .	3	7
Iowa . . . . .	29	103	Kentucky . . . . .	5	6
Michigan . . . . .	31	101	Missouri . . . . .	4	5
Indiana . . . . .	30	100	Kansas . . . . .	2	2
Wisconsin . . . . .	13	44	Virginia . . . . .	2	2
Minnesota . . . . .	4	27	Mississippi . . . . .	1	1
Pennsylvania . . . . .	11	25	North Carolina . . . . .	1	1
California . . . . .	12	15	West Virginia . . . . .	1	1
Texas . . . . .	4	10			
Alabama . . . . .	4	9	Total . . . . .	368	1,326

Respectfully submitted,

WALTER A. PAYNE,  
Secretary Lecture-Study Department.

## THE CORRESPONDENCE-STUDY DEPARTMENT

*To the President of the University:*

SIR: I submit herewith my report on the work of the Correspondence-Study Department of the University Extension Division from the opening of the University to June 23, 1902, the close of our tenth scholastic year.

"To provide instruction for those who, for social or economic reasons, cannot attend in its class-rooms is a legitimate and necessary part of the work of every university. To make no effort in this direction is to neglect a promising opportunity for building up the university itself, and at the same time to fall short of performing a duty which, from the very necessities of the case, is incumbent upon the university."—*Official Bulletin No. 6, May, 1892.*

This is the earliest formulation here of the purpose and scope of university extension. To what extent the Correspondence-Study Department has met these obligations and opportunities may be gathered from the following facts and tables.

The first student registered for correspondence instruction in October, 1892—the month in which residence instruction began. From that date to this 2,952 different students have registered for from one to twelve courses each. Of these 1,715 have matriculated in the University through this Department. This is almost 11.6 per cent. of the total number of matriculants in the decade.

The great majority, nearly 87 per cent., of those who enroll are educators. This is but natural, inasmuch as instruction is given in academic subjects only. By the remaining 13 per cent. at least sixty-five other vocations are represented. If the data had been furnished in every case, the number of different vocations would certainly have been much larger; still it would appear that there are mature persons in many walks of life who are eager for the mental discipline and the culture which college courses afford.

The students have been scattered through every state and territory of our country, including our island possessions, and through the countries of every continent, Africa excepted. Obviously the work has extended the name and influence of the University. The type of student who is attracted by this kind of study may be inferred from the fact that some now serving on the Faculties, and several who have taken the Doctor's or the Master's degree, first established relations with the University through the Correspondence-Study Department.

The opportunity to do a part of the work required for the Bachelor's degree at home has led many to choose this in preference to another institution. Moreover, it has enabled not a few who have had to drop resident study on account of ill-health, insufficient funds, or business openings, to complete their college course and gain the degree. The interweaving of resident and non-resident study has grown noticeably within the last year and a half. Undoubtedly from this time on both regular students and those whose periods of residence must be brief and infrequent will more and more take advantage of the correspondence courses.

The number of instructors engaged in the work and the number of courses given have increased from year to year, until in 1901-2 ninety-two members of the Faculties gave two hundred and seventeen courses. These figures are significant as indicating the Faculty sentiment and the diversified demand—a demand which it would be difficult to satisfy without university resources.

During the ten years three hundred and thirty-eight courses were given by one hundred and fifty-seven different instructors. For the first few years these were confined to History, the Languages, and Mathematics, as, owing to the difficulty of giving laboratory instruction, it was deemed impracticable to advance into the scientific field. Finally, as the result of an

urgent request, a trial was made in Botany. The success attending the experiment led to a second and third course, and little by little to the announcement of courses in other sciences. It now seems not unreasonable to expect that, by means of detailed and graphic lesson sheets, and by supplying the required apparatus, this method of instruction may be applied successfully to the teaching of almost any subject in the curriculum—at least, in its elementary phases.

That correspondence work has been tested by both indifferent and enthusiastic instructors, incapable and brilliant students, application to so many subjects, and, most exacting of all, comparison with class-room results; that it has been tried in the case of so many people, through great distances, and for so long a time; and that it has not only survived, but stands today approved in the estimation of instructors and students alike, warrants the opinion that the experimental stage is passed, and that this method of instruction has fairly won its right to greater recognition as an effective educational factor.

Has not the time come to reorganize the work on an independent basis, and thus enlarge its scope and efficiency? Hitherto these courses have been prepared and conducted by those whose time was mortgaged to residence duties. While this arrangement possesses certain advantages, it necessarily limits the number of students who can be accommodated, and this defect is already beginning to be felt. Even the natural increase resulting from the efforts of zealous students to extend a knowledge of the work—and it is to these that the present development is due—will soon overtax our facilities. The desideratum is an endowment sufficiently large to permit of legitimate promotion, engaging special instructors, and supplying at nominal rates tuition and the necessary apparatus.

The present requirement that all fees be paid in full in advance prevents many from enjoying the privileges which the University desires to extend. The liberality shown in allowing students who are unable to complete their courses within the prescribed time, another year for so doing, upon payment of a small reinstatement fee, and in permitting final examinations to be taken outside the University under approved supervision, has yielded satisfactory results, and justifies, it is believed, a wider application of the same policy.

Table A, with its supplement, presents in a detailed manner the history of every registration in every course since the opening of the Department. For those who are interested simply in comparing the relative demand for different subjects, the summary of this detailed conspectus presented in Table B will answer. The steady growth of the Department will be seen in Table C, showing the annual totals of new registrations, total registrations, and courses completed; Table D, showing the number of instructors, courses, and students year by year; and Table E, showing the annual gross income. Table F presents the roster of correspondence instructors, and the number of years each has taught.

Respectfully submitted,

H. F. MALLOBY,

*Secretary Correspondence-Study Department.*



TABLE A  
DETAILED CONSPECTUS OF REGISTRATION, OCTOBER 1, 1892, TO JUNE 23, 1901

	1896-1897				1897-1898				1898-1899				1899-1900				1900-1901				
	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	
1	9	10			10	9	19	5	2	12	7	19	7	3	9	11	20	1			10
2	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
3	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
4	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
5	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
6	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
7	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
8	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
9	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
10	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
11	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
12	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
13	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
14	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
15	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
16	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
17	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
18	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
19	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
20	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
21	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
22	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
23	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
24	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
25	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
26	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
27	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
28	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
29	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
30	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
31	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
32	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
33	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
34	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
35	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
36	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
37	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
38	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
39	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
40	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
41	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
42	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
43	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
44	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
45	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
46	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
47	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
48	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
49	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10
50	10	10			10	10	19	5	2	12	7	19	7	3	9	11	20	1			10



TABLE A—Continued

	1896-1897					1897-1898					1898-1899					1899-1900					1900-1901							
	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over
49	..	..	..	..	..	..	..	..	..	..	5	..	5	1	..	4	6	..	10	5	..	55	5	..	10	4	..	6
50	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	7	2	..	..	..	..	5	1	..	1
51	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
52	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
53	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
54	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
57	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	7	..	1	6	10	..	16	4	2	10
58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
59	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
61	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
62	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
63	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
64	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	26	30	6	9	24	35	59	14	16	29	32	..	61	23	12	26	63	1	90	53	10	47	75	1	126	47	17	62
66	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	3	..	4	..	2	2
67	2	2	..	..	2	5	7	1	2	..	3	..	8	..	2	6	..	..	4	1	1	2	..	..	4	1	1	1
68	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
69	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
70	1	2	..	..	2	2	4	..	1	3	3	..	6	1	2	3	..	..	3	..	2	1	..	2	1	1	..	..
71	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
72	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
73	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
74	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
76	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
77	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
78	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
79	1	1	..	..	1	..	1	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
80	1	1	1	..	1	..	3	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
81	1	1	..	..	2	3	1	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	6	8	1	1	6	11	17	2	3	12	14	1	27	7	6	14	16	..	30	9	10	11	14	..	25	7	8	10
82	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	3	..	4	1	..	3	..	..	3	1	2	..
83	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	3	..	4	1	..	3	..	..	3	1	2	..
84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3	7	..	..	7	5	12	2	4	6	..	..	6	1	4	1	2	..	3	1	..	2	..	..	5	1	1	3
85	16	46	4	1	41	8	49	7	27	15	4	1	20	4	6	10	5	..	15	2	9	4	..	..	7	..	3	4
	1	1	..	..	1	5	6	..	6	3	..	..	9	3	4	2	4	..	6	..	6	..	..	..	8	1	5	2
86	8	30	6	1	23	10	33	6	15	12	6	3	21	5	8	8	2	..	10	1	5	4	..	..	5	2	2	1
	3	4	1	..	3	..	3	1	1	1	..	..	2	1	..	1	2	..	3	1	..	2	..	..	4	1	1	2
87	5	20	4	1	15	4	19	3	6	10	1	..	11	5	1	5	..	1	6	..	4	2	..	..	6	..	1	5
	1	1	..	..	1	..	1	..	1	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..
88	4	14	1	..	13	5	18	7	2	9	1	..	10	2	4	4	..	1	5	..	3	..	..	..	2	1	..	1
	1	1	..	..	1	..	1	..	1	..	..	..	2	..	1	1	..	..	1	..	..	1	..	..	1	..	..	..



TABLE A—Continued

DEPARTMENTS	1892-1893				1893-1894				1894-1895				1895-1896						
	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over
<b>VIII. SEMITIC LANG. AND LIT.—CONTINUED</b>																			
89. Exodus	1	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
90. Judges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
91. Isaiah (chaps. 1-39)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
92. Isaiah (chaps. 40-66)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
93. Jeremiah	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
94. Psalms (American Institute students)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
95. Elementary Arabic:																			
University students	1	..	1	..	2	2	..	..	2	1	3	..	1	2	3	5	2	2	1
American Institute students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
96. Elementary Assyrian	1	..	..	1	..	1	..	..	1	..	1	..	..	1	..	1	..	..	1
97. Advanced Assyrian	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	29	..	1	28	16	44	2	2	40	37	77	3	1	73	50	123	29	10	84
<b>IX. BIBLICAL AND PATRISTIC GREEK</b>																			
98. Elementary New Testament Greek:																			
University students	3	..	..	3	1	4	..	2	2	1	3	..	2	1	1	2	..	1	1
American Institute students	1	..	..	1	3	4	..	..	4	10	14	..	..	14	15	29	5	7	17
99. Intermediate New Testament Greek:																			
University students	..	..	..	..	1	1	..	..	1	..	1	..	..	1	..	1	..	1	..
American Institute students	1	..	..	1	5	6	..	..	6	6	12	..	..	12	7	19	1	4	14
100. Advanced New Testament Greek:																			
University students	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	..	..	..	1
American Institute students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
101. Readings in Septuagint	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
102. New Testament Times in Palestine:																			
University students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
English Theological Seminary students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
103. New Testament History	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..
104. Constructive Studies in Life of Christ:																			
University students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
105. Research Course in Life of Christ	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
106. Social Teachings of Jesus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
107. Life of Paul & Introduction to His Epistles:																			
University students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
English Theological Seminary students	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
108. The Epistle to Galatians	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
109. History of Apostolic Age	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
110. New Testament Quotations from the Old T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
111. New Testament Idea of Sin	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	5	..	..	5	10	15	..	2	13	19	32	1	2	29	24	53	6	13	34
<b>X. SANSKRIT</b>																			
112. Elementary Sanskrit	1	1	..	1	..	..	..	..	..	1	1	..	..	1	2	3	1	1	1
Total	1	1	..	1	..	..	..	..	..	1	1	..	..	1	2	3	1	1	1
<b>XI. THE GREEK LANGUAGE AND LITERATURE</b>																			
113. Elementary Greek—1st Mj.	1	..	..	1	4	5	1	4	..	..	..	..	..	..	1	1	..	..	1
114. Elementary Greek—2d Mj.	..	..	..	..	1	1	..	..	1	..	..	..	..	1	1	2	1	..	1
115. Xenophon: <i>Anabasis</i> , Books II-III	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1
116. Xenophon: <i>Anabasis</i> , Books IV-VI	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
117. Homer: <i>Iliad</i> , Books I-III	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	1	..	..	1
118. Advanced Greek Prose Composition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
119. Xenophon: <i>Memorabilia</i> , and Plato: <i>Apology</i> and <i>Crito</i>	..	..	..	..	1	1	..	..	1	..	1	1	..	..	3	3	1	..	2
120. Herodotus: <i>Historiae</i> , Books VI, VII—1st Mj.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
121. Herodotus: <i>Historiae</i> —2d Mj.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
122. Herodotus: <i>Historiae</i> —3d Mj.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
123. Thucydides	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
124. Demosthenes and Lysias	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
125. Lysias	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..
126. Aeschylus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
127. Greek Meters and Prosody	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
128. Plato's <i>Republic</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
129. Introduction to Greek Tragedy	..	..	..	..	1	1	..	..	1	1	2	1	..	1	..	1	1	..	..
130. The Attic Orators	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
131. Development of Religious Conception among the Greeks	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	1	..	..	1	7	8	1	4	3	3	6	3	..	3	6	9	3	..	6

TABLE A—Continued

	1896-1897					1897-1898				1898-1899				1899-1900				1900-1901					
	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	
89	1	1																					
90	1	1																					
91																							
92																							
93	1	1	1																				
94	1	1																					
95																							
96		1		1		1					2	3	1		2		1		1				
97											2	3	2		1		1		2				2
	45	129	17	4	108	40	148	28	56	64	22	4	90	26	29	35	17	2	54	9	21	24	17
98																							
99	1	2	1	1	2	3	4	13	3	6	9	1	3	5	5	10	1	3	6	3	6	1	13
100	1	23	2	7	14	6	20	5	7	8	1	2	3	1	1	5	3	1	4	2	3	1	11
101	1	2			4	6	1	3	2	5	3	3	3	1	3	3	3	1	4	4	3	3	1
102	1	1	1		10	1	11	3	2	6	1	1	7	1	3	3	1	1	4	1	1	1	8
103						5	5		1	4	1	4	8	4	4	1	8		12	3	3	6	1
104																							
105					1	1	1									2		2			2	1	1
106																							
107					1	1			1			1		1									
108	1	1	1													1	1						
109	1	1	1													1	1						
110																1	1						
111																1	1						
	35	69	6	15	48	23	71	16	23	32	29		61	11	15	35	30		65	12	23	30	23
112		1		1							1		1			1	1		2	1		1	
113	1	2		1	1	2	3		1	2	3		5	2	1	2	1		3		1	2	4
114		1	1										2	1	1	1	1		2	1	2	1	
115		2											2			2			2		1	1	
116													1			1			1		1	1	
117	2	3		1	2	2	1		1	1			2			1			3		1	1	
118	1	1		1	1	1	1		1	1			1			1			1		1	1	
119	2	4	1	2	1	1	1		1		1		1			1		1	1			2	
120	2	2	1		1	1	2				1		1			1			1			1	
121																						1	
122																						1	
123																						1	
124																						1	
125	1	1			1		1									1			1		1	1	
126																						1	
127																						1	
128					1	1	1															1	
129																						1	
130																						1	
131											1		1	1									
	10	16	3	4	9	4	13	5	4	4	15		19	9	1	9	11		20	8	4	8	13

TABLE A—Continued

DEPARTMENTS	1892-1893				1893-1894				1894-1895				1895-1896						
	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over
<b>XII. THE LATIN LANGUAGE AND LITERATURE</b>																			
132. Elementary Latin—1st Mj.	2	..	..	2	3	5	1	1	3	1	4	3	..	1	3	3	1	..	2
133. Elementary Latin—2d Mj.	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
134. Caesar: <i>De Bello Gallico</i> , Book I.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
135. Caesar: <i>De Bello Gallico</i> , Book II.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
136. Caesar: <i>De Bello Gallico</i> , Books III-IV.	1	..	..	1	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..
137. <i>Viri Romae</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
138. Nepos	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
139. Latin Prose Composition based on Caesar.	..	..	..	..	..	..	..	..	..	2	2	1	..	1	1	3	1	..	3
140. Cicero: <i>Orationes</i> —1st Mj.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
141. Cicero: <i>Orationes</i> —2d Mj.	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..
142. Latin Prose Composition based on Cicero.	..	..	..	..	..	..	..	..	..	2	2	1	..	1	2	2	1	..	1
143. Topical Work in Cicero's Orations	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
144. Virgil: <i>Aeneid</i> , Book I.	1	..	..	1	5	6	1	1	4	1	2	2	..	2	2	2	1	..	2
145. Virgil: <i>Aeneid</i> , Books II-III.	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..
146. Virgil: <i>Aeneid</i> , Books IV-VI.	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..
147. Virgil (special)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
148. Classification of Subjunctives in Virgil and Cicero	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
149. Cicero: <i>De Senectute</i> .	1	..	..	1	2	3	1	..	2	3	5	3	..	1	1	9	10	4	6
150. Cicero: Tusculan Disputations	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
151. Terence: <i>Phormio</i>	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
152. Livy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
153. Advanced Latin Prose Composition	..	..	..	..	..	..	..	..	..	4	4	1	..	1	1	6	6	1	5
154. Cicero: <i>De Amicitia</i> .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
155. Cicero: <i>Epistulae</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
156. Tacitus: <i>Agricola</i> and <i>Germania</i> .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
157. Terence and Tacitus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
158. Terence and Plautus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
159. Plautus: <i>Captivi</i>	..	..	..	..	1	1	..	..	1	3	4	2	..	2	4	6	1	..	5
160. Odes of Horace, Books I-III.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161. Ovid	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
162. Seneca, the Latin Tragedy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
163. Roman Belief with Reference to Soul and Life after Death	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
164. Special Courses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..
Total	5	..	..	5	12	17	4	3	10	21	31	16	3	12	40	52	15	5	32
<b>XIII. ROMANCE LANGUAGES AND LITERATURES</b>																			
165. Elementary French—1st Mj.	..	..	..	..	..	..	..	..	..	2	2	..	..	2	..	2	..	2	..
166. Elementary French—2d Mj.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
167. Intermediate French	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
168. French Prose Composition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
169. Modern French Comedies	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
170. History of French Literature	..	..	..	1	1	..	..	..	1	..	1	..	..	1	1	2	2	..	..
171. History and Theory of French Romantic Drama	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
172. French Literature of Nineteenth Century	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
173. Victor Hugo	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
174. History of Old French Lit. and Culture	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
175. Old French Readings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
176. Old French Morphology	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
177. Old French Provençal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
178. Old French Epic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
179. Old French Drama	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
180. French Philology	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
181. Historical French Phonology	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
182. Historical French Grammar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
183. French Dialects	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
184. Elementary Spanish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
185. Modern Spanish Novels and Dramas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
186. Spanish Prose Composition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
187. Cervantes: <i>Don Quixote</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
188. Old Spanish Readings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
189. Elementary Italian	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
190. Italian Philology and Phonology	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
191. Special Courses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	1	1	..	..	1	2	3	..	..	3	6	9	7	2	..

TABLE A - Continued

	1896-1897					1897-1898					1898-1899					1899-1900					1900-1901							
	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over
132	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
133	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
134	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
135	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
136	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
137	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
138	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
139	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
140	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
141	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
142	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
143	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
144	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
145	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
146	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
147	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
148	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
149	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
150	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
151	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
152	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
153	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
154	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
155	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
156	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
157	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
158	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
159	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
161	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
162	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
163	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
164	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	45	75	33	14	28	53	81	19	19	43	42	85	30	22	33	71	104	47	14	43	76	2	121	54	16	51		
165	3	3	1	2	1	3	1	2	5	7	2	7	2	5	4	9	6	1	2	12	5	14	1	1	1	12		
166	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
167	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
168	2	2	1	1	3	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
169	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
170	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
171	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
172	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
173	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
174	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
175	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
176	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
177	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
178	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
179	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
181	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
182	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
183	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
184	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
185	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
186	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
187	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
188	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
189	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
190	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
191	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	10	10	5	5	13	18	9	3	6	15	21	8	2	11	38	49	24	5	20	46	66	11	11	44				

TABLE A — Continued

DEPARTMENTS	1892-1893				1893-1894				1894-1895				1895-1896						
	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over
<b>XIV. GERMANIC LANGUAGES AND LITERATURES</b>																			
192. Elementary German — 1st Mj.					1	1				1	2			1	4	5			
193. Elementary German — 2d Mj.															1	1			
194. Intermediate German															1	1			
195. Intermediate German Prose Composition															1	1			
196. Advanced German Prose Composition															1	1			
197. Idiomatic Vocabulary															1	1			
198. German Idioms and Synonyms															1	1			
199. Modern German Comedies																			
200. Contemporaneous German Literature																			
201. Deutsche Aufsätze und Stilübungen																			
202. Deutscher Satzbau																			
203. Outline History of German Literature																			
204. Goethe's Lyrical Poetry as an Exponent of His Life																			
205. Faust	2			2	2	4	1	2	1	1	1			1	1	2			2
206. Goethe										1	1			1	1				1
207. Schiller																			
208. Heine										1	1	1							
209. Wallenstein																			
210. Das Nibelungenlied										1	1			1					1
211. Gothic	1	1																	
212. Old High German																			
213. German Phonology																			
214. Special Courses									2	2				2	1	3	2		1
<b>Total</b>	<b>3</b>	<b>1</b>	<b>..</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>10</b>	<b>16</b>	<b>4</b>	<b>2</b>	<b>10</b>
<b>XV. ENG. LANGUAGE, LITERATURE, RHETORIC</b>																			
215. English Composition and Rhetoric (Eng. Theo. Sem. students)																			
216. Grammar and Composition																			
217. Preparatory English Composition																			
218. English I					8	8		1	7	7	14	3	3	8	12	20	3	3	14
219. English II										3	3	2	3	1	7	8	1		7
220. English III																			
221. English IV																			
222. Preparatory English Literature																			
223. Introduction to English Literature																			
224. Masterpieces of English Literature	11			11	7	13	5	4	9	7	16	1	8	7	12	19	4	4	11
225. Studies in Elizabethan Literature										6	6		1	5	5	10	1	3	6
226. Studies in Shakespeare																			
227. Comedies of Shakespeare																			
228. Tragedies of Shakespeare																			
229. The English Epic																			
230. English Literature of Classical Period																			
231. Beginnings of English Romantic Movement					1	1		1	2	2	2		2	1	3		2	1	
232. English Romantic Poetry (1750-1830)										1	1			1	2	3		1	2
233. Eng. Romantic Poets of Early 19th Century																			
234. English Literature from 1793 to 1832																			
235. Representative Eng. Writers 19th Century																			
236. English Essayists of the 19th Century																			
237. English Novelists of the 19th Century																			
238. Studies in Works of Robert Browning	2			2	3	5		2	3	1	4	2	1	1	4	5	2	2	1
239. Studies in Works of Wordsworth																			
240. Studies in Poetry of Tennyson	2			2		2		2		6	6			6	4	10	1	4	5
241. Studies in Works of Walt Whitman																			
242. Studies in American Literature																			
243. Studies in Fiction																			
244. Laws and Types of Fiction																			
245. Modern Realistic Fiction															3	3	2		1
246. Types of Modern Drama																			
247. Elements and Kinds of Literature																			
248. Element of Art in English Literature									1	1		1							
249. Poetry and Modern Literature																			
250. Elementary Old English									2	2	1			1	1	2		1	1
251. Advanced Old English																			
252. Special Courses																			
<b>Total</b>	<b>15</b>	<b>..</b>	<b>..</b>	<b>15</b>	<b>19</b>	<b>34</b>	<b>5</b>	<b>10</b>	<b>19</b>	<b>36</b>	<b>55</b>	<b>9</b>	<b>14</b>	<b>32</b>	<b>51</b>	<b>83</b>	<b>14</b>	<b>20</b>	<b>49</b>

TABLE A—Continued

	1896-1897					1897-1898					1898-1899					1899-1900					1900-1901					
	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	
182	5	5																								
183	3	3																								
184	2	2																								
185	1	1																								
186																										
187																										
188																										
189																										
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251																										
252																										
69	118	25	20	73	116	189	26	34	129	146	275	46	83	146	201	4	351	75	96	178	223	9	410	108	80	222







TABLE A—Concluded

DEPARTMENTS	1892-1893				1893-1894				1894-1895				1895-1896						
	New Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over
<b>XLI. O. T. LITERATURE AND INTERPRETATION</b>																			
<b>296. General View of Period of Samuel, Saul, David, and Solomon:</b>																			
University students.....	..	..	..	..	1	1	1	..	..	..	..	..	..	..	1	1	..	1	1
Eng. Theo. Sem. students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
American Institute students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.....	..	..	..	..	1	1	1	..	..	..	..	..	..	..	4	4	..	1	3
<b>XLII. N. T. LITERATURE AND INTERPRETATION</b>																			
<b>299. Life of Christ in Connection with Gospel of Luke:</b>																			
University students.....	..	..	..	..	2	2	..	..	2	..	2	..	..	1	1	1	..	1	..
American Institute students.....	2	..	..	2	5	7	..	..	7	..	12	..	..	12	6	18	1	8	9
<b>300. Life of Christ in Connection with Gospel of John:</b>																			
University students.....	..	..	..	..	1	1	..	..	1	..	1	..	..	1	..	1	..	1	..
American Institute students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>301. The Acts:</b>																			
University students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
American Institute students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>302. Founding of Apostolic Church:</b>																			
University students.....	..	..	..	..	3	4	..	..	4	..	8	..	..	8	2	10	1	2	7
American Institute students.....	3	..	..	3	1	4	..	..	4	4	8	..	..	8	2	10	1	2	7
Total.....	5	..	..	5	9	14	..	..	14	9	23	..	..	1	22	8	30	2	16
<b>XLIV. SYSTEMATIC THEOLOGY</b>																			
<b>303. Apologetics (Eng. Theo. Sem. students) ...</b>																			
Total.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>XLV. CHURCH HISTORY</b>																			
<b>304. Church History Prior to Constantine (Eng. Theo. Sem. students).....</b>																			
Total.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>305. The Protestant Reformation:</b>																			
University students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1
Eng. Theo. Sem. students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>306. The Early Christian Church (100-313 A. D.)</b>																			
Total.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1
<b>XLVI. HOMILETICS</b>																			
<b>307. Outline Course on Homiletics:</b>																			
University students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Eng. Theo. Sem. students.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>LIBRARY SCIENCE</b>																			
<b>308. Methodology .....</b>																			
<b>309. Elementary Library Economy.....</b>																			
<b>310. General Bibliography.....</b>																			
<b>311. Technical Methods of Library Science.....</b>																			
Total.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grand total.....	98	4	4	85	124	209	38	32	139	172	311	63	28	220	261	481	106	89	254

TABLE A—Concluded

	1896-1897					1897-1898					1898-1899					1899-1900					1900-1901									
	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over	New Registrations	Lapsed Courses Renewed	Total Registrations	Courses Completed	Courses Dropped	Holding Over		
298.....	1	3	1	2	3	2	9	2	2	4	1	7	14	3	4	7	3	10	2	2	1	1	1	3	1	1	2	1	1	1
	1	4	1	3	8	11	11	4	7	9	16	3	5	8	4	12	2	9	1	1	1	1	1	1	2	2	2	2	2	2
299.....	1	1	1	1	2	2	3	1	2	2	5	3	7	1	2	5	2	7	3	4	3	4	1	2	1	1	5	2	2	1
	7	16	1	5	10	7	17	2	7	8	8	5	11	1	2	8	2	10	3	4	3	3	2	2	1	2	6	2	2	2
300.....	4	4	4	4	1	1	5	1	4	4	1	4	6	1	1	7	2	2	9	1	6	2	1	2	1	1	1	1	1	2
	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
301.....	13	13	13	13	13	13	13	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
302.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
303.....	27	43	1	9	33	14	47	5	20	22	12	34	1	8	25	6	31	5	16	10	7	1	1	18	6	5	7	7	7	
	1	1	1	1	1	4	5	2	3	2	5	2	2	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
304.....	1	1	1	1	1	3	4	1	3	3	6	2	2	2	3	5	2	3	2	3	2	2	2	2	2	2	2	2	2	2
305.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
306.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1	2	2	2	3	5	1	4	8	12	4	2	6	4	10	5	4	1	3	3	4	3	3	4	2	2	2	2	2	
307.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
308.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
309.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
310.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
311.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	355	641	127	102	412	469	881	182	211	488	522	5	1015	282	261	472	676	10	1158	536	282	540	753	18	1311	392	246	673	673	

SUPPLEMENT TO TABLE A  
FOR THE YEAR 1901-1902

COURSES <sup>1</sup>	1901-1902						COURSES <sup>1</sup>	1901-1902						COURSES <sup>1</sup>	1901-1902					
	New Registra- tions	Registrations Renewed	Total Regis- trations	Registrations Completed	Registrations Dropped	Holding Over July 1, 1902		New Registra- tions	Registrations Renewed	Total Regis- trations	Registrations Completed	Registrations Dropped	Holding Over July 1, 1902		New Registra- tions	Registrations Renewed	Total Regis- trations	Registrations Completed	Registrations Dropped	Holding Over July 1, 1902
<b>I</b>													<b>XI</b>							
1.....	10	2	22	9	3	10	63.....	1	..	1	..	1	113.....	3	..	3	2	2	4	
2.....	..	..	..	..	..	..	64.....	..	..	3	2	..	114.....	..	..	3	1	..	..	
3.....	..	..	..	..	..	..	<b>Total.....</b>	<b>66</b>	<b>..</b>	<b>123</b>	<b>50</b>	<b>29</b>	<b>49</b>	115.....	..	..	1	1	..	..
4.....	..	..	..	..	..	..	<b>VI</b>	..	..	..	..	..	117.....	..	..	5	..	..	..	
5.....	..	..	..	..	..	..	65.....	3	..	..	..	..	118.....	..	..	..	..	..	..	
6.....	..	..	..	..	..	..	66.....	1	..	5	1	2	119.....	..	..	4	2	1	..	
7.....	..	..	..	..	..	..	67.....	..	..	1	..	..	120.....	..	..	1	..	..	..	
8.....	14	7	23	3	12	66	68.....	1	..	1	..	..	121.....	..	..	1	..	..	..	
9.....	..	..	..	..	..	..	69.....	1	..	1	..	..	122.....	..	..	2	..	..	..	
10.....	3	3	6	2	5	67	70 (E. T. S.)	1	..	1	..	..	<b>Total.....</b>	<b>20</b>	<b>..</b>	<b>28</b>	<b>10</b>	<b>5</b>	<b>13</b>	
11.....	..	..	..	..	..	..	71.....	..	..	3	1	2	<b>XII</b>							
12.....	..	..	..	..	..	..	72.....	..	..	1	..	..	132.....	6	1	17	3	9	5	
13.....	..	..	..	..	..	..	73.....	..	..	1	..	..	133.....	..	..	6	2	2	1	
14.....	5	1	11	4	5	68	74.....	..	..	1	..	..	134.....	..	..	4	1	1	..	
15.....	..	..	..	..	..	..	75.....	..	..	1	..	..	135.....	..	..	9	1	1	..	
16.....	..	..	..	..	..	..	76.....	..	..	1	..	..	136.....	..	..	5	2	2	..	
17.....	..	..	..	..	..	..	77.....	..	..	1	..	..	137.....	..	..	3	1	1	..	
18.....	1	4	4	2	1	69	78.....	..	..	1	..	..	138.....	..	..	3	3	2	..	
19.....	..	..	..	..	..	..	79.....	..	..	1	..	..	139.....	..	..	3	3	2	..	
20.....	..	..	..	..	..	..	80.....	..	..	2	1	1	140.....	..	..	2	2	2	..	
21.....	..	..	..	..	..	..	81.....	..	..	2	..	..	141.....	..	..	3	3	..	..	
<b>Total.....</b>	<b>58</b>	<b>3</b>	<b>114</b>	<b>32</b>	<b>26</b>	<b>56</b>	<b>Total.....</b>	<b>16</b>	<b>..</b>	<b>26</b>	<b>12</b>	<b>3</b>	<b>11</b>	142.....	..	..	4	1	1	..
<b>II</b>							<b>VII</b>	3	1	4	1	1	2	143.....	..	..	5	..	..	..
23.....	8	..	13	4	5	4	<b>Total.....</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>	144.....	..	..	6	..	..	..
24.....	4	..	5	..	1	4	<b>VIII</b>	..	..	..	..	..	145.....	..	..	1	..	..	..	
25.....	..	..	..	..	..	..	82.....	..	..	..	..	..	146.....	..	..	1	..	..	..	
26.....	2	..	2	..	1	1	83.....	..	..	..	..	..	147.....	..	..	1	..	..	..	
27.....	1	..	1	..	..	..	84.....	..	..	..	..	..	148.....	..	..	7	..	..	..	
28.....	..	..	..	..	..	..	85.....	..	..	..	..	..	149.....	..	..	5	..	..	..	
<b>Total.....</b>	<b>15</b>	<b>..</b>	<b>22</b>	<b>6</b>	<b>7</b>	<b>9</b>	86.....	..	..	..	..	..	150.....	..	..	12	..	..	..	
<b>III</b>							87.....	..	..	..	..	..	151.....	..	..	10	..	..	..	
36.....	4	..	7	3	1	3	88.....	..	..	..	..	..	152.....	..	..	6	6	2	10	
37.....	2	..	3	..	..	3	89.....	..	..	..	..	..	153.....	..	..	14	6	1	7	
38.....	3	..	6	2	1	3	90.....	..	..	..	..	..	154.....	..	..	1	1	..	..	
39.....	..	..	1	..	..	..	91.....	..	..	..	..	..	155.....	..	..	1	1	..	..	
<b>Total.....</b>	<b>9</b>	<b>..</b>	<b>17</b>	<b>6</b>	<b>2</b>	<b>9</b>	92.....	..	..	..	..	..	156.....	..	..	6	..	..	..	
<b>IV</b>							93 (A. I. S.)	..	..	..	..	..	157.....	..	..	1	..	..	..	
40.....	..	..	5	..	4	1	<b>Total.....</b>	<b>14</b>	<b>4</b>	<b>38</b>	<b>15</b>	<b>9</b>	<b>14</b>	158.....	..	..	3	..	..	..
41.....	6	..	11	7	1	3	<b>IX</b>	..	..	..	..	..	159.....	..	..	..	..	..	..	
42.....	4	..	7	3	4	4	94.....	..	..	..	..	..	160.....	..	..	8	..	..	..	
43.....	3	..	5	2	2	2	95.....	..	..	..	..	..	161.....	..	..	11	3	2	7	
44.....	..	..	..	..	..	..	96.....	..	..	..	..	..	162.....	..	..	6	2	2	3	
45.....	10	..	17	11	2	4	97.....	..	..	..	..	..	163.....	..	..	1	..	..	..	
46.....	..	..	..	..	..	..	98.....	3	..	9	2	5	<b>XIII</b>							
47.....	..	..	..	..	..	..	99.....	..	..	..	..	..	165.....	7	..	19	4	8	7	
48.....	..	..	..	..	..	..	100.....	..	..	..	..	..	166.....	..	..	11	3	2	6	
49.....	5	..	11	3	2	6	101.....	..	..	..	..	..	167.....	..	..	6	2	2	3	
50.....	1	..	2	1	..	..	102.....	..	..	..	..	..	168.....	..	..	18	9	3	7	
51.....	..	..	..	..	..	..	103.....	..	..	..	..	..	169.....	..	..	1	..	..	..	
52.....	..	..	..	..	..	..	104.....	..	..	..	..	..	170.....	..	..	3	6	2	3	
53.....	..	..	..	..	..	..	105.....	..	..	..	..	..	*1.....	..	..	1	..	..	..	
54.....	3	..	5	4	1	1	106.....	..	..	..	..	..	180.....	..	..	4	2	1	1	
55.....	3	..	8	4	1	3	107.....	..	..	..	..	..	181.....	..	..	1	..	..	..	
56.....	8	..	12	3	3	9	108.....	..	..	..	..	..	182.....	..	..	6	2	1	1	
57.....	11	..	21	6	7	8	<b>Total.....</b>	<b>23</b>	<b>1</b>	<b>53</b>	<b>9</b>	<b>19</b>	<b>25</b>	183.....	..	..	5	2	1	1
58.....	7	..	9	3	1	5	<b>XI</b>	..	..	..	..	..	184.....	..	..	2	1	1	..	
59.....	1	..	1	..	..	..	113.....	..	..	..	..	..	185.....	..	..	2	1	1	..	
60.....	4	..	4	2	1	1	114.....	..	..	..	..	..	186.....	..	..	2	2	..	..	
61.....	..	..	2	1	1	..	115.....	..	..	..	..	..	187.....	..	..	1	..	..	..	

<sup>1</sup> For title of course consult corresponding number in Table A.

\* The Method of Some Subjects in the Elementary School Curriculum. (New course, 1901-2.)

† Urban Life in the United States. (New course, 1901-2.)

‡ Origin of Social Institutions. (New course, 1901-2.)

§ English Theological Seminary Student. (Not counted as a new course, 1901-2.)

¶ Homer: *Odyssey*. (New course, 1901-2.)

\*\* Introduction to the Greek Drama. (New course, 1901-2.)

\*† Catullus. (New course, 1901-2.)

\*‡ Comedies of Molière. (New course, 1901-2.)

SUPPLEMENT TO TABLE A—Continued

COURSES <sup>1</sup>	1901-1902						COURSES <sup>1</sup>	1901-1902						COURSES <sup>1</sup>	1901-1902					
	New Registra- tions	Registra- tions Renewed	Total Regis- trations	Registra- tions Completed	Registra- tions Dropped	Holding Over July 1, 1902		New Registra- tions	Registra- tions Renewed	Total Regis- trations	Registra- tions Completed	Registra- tions Dropped	Holding Over July 1, 1902		New Registra- tions	Registra- tions Renewed	Total Regis- trations	Registra- tions Completed	Registra- tions Dropped	Holding Over July 1, 1902
XIII—Cont.							XVII							XXVIII						
* ..	1	..	1	1	..	..	253 .....	4	..	9	2	4	3	296 .....	2	..	2	2	..	
† ..	1	..	1	1	..	..	254 .....	3	1	5	3	1	1	297 .....	1	..	1	1	1	
Total .....	46	..	90	20	20	40	255 .....	6	..	7	7	4	4	298 .....	1	..	1	1	..	
XIV							256 .....	6	..	7	7	4	4	Total .....	4	..	4	3	..	
192 .....	6	1	13	3	6	4	257 .....	7	..	19	8	5	6	XLI						
193 .....	9	..	15	4	4	7	258 .....	9	..	15	4	1	8	298 .....	..	..	1	..	1	
194 .....	6	..	14	3	3	5	259 .....	2	..	4	1	1	2	(A. I. S.) .....	..	..	1	..	1	
195 .....	11	..	17	9	3	5	260 .....	2	..	1	1	1	1	(E. T. S.) .....	..	..	1	..	1	
197 .....	..	..	1	..	2	2	261 .....	3	..	10	2	4	4	† .....	1	..	1	..	1	
198 .....	15	..	22	5	2	15	262 .....	..	..	1	1	1	1	† .....	1	..	1	..	1	
199 .....	1	..	3	3	3	3	263 .....	..	..	2	3	..	3	† .....	1	..	1	..	1	
201 .....	3	..	7	3	1	3	264 .....	3	..	3	..	..	3	Total .....	2	..	4	..	2	
202 .....	1	..	1	..	1	1	265 .....	1	..	2	2	..	2	XLII						
203 .....	1	..	1	..	1	1	266 .....	2	..	3	3	..	2	299 .....	2	..	3	..	3	
Total .....	52	1	94	30	23	41	267 .....	1	..	1	1	..	1	300 .....	1	1	4	2	1	
XV							268 .....	1	..	1	1	..	1	301 (A. I. S.) .....	1	..	2	1	1	
215 .....	11	..	20	2	8	10	269 .....	1	..	1	1	..	1	Total .....	4	1	12	4	2	
216 .....	2	..	2	1	1	2	270 .....	1	..	1	1	..	1	XLIV						
217 .....	28	..	47	9	9	29	271 .....	1	..	2	2	..	2	303 (E. T. S.) ..	3	..	3	1	..	
218 .....	66	..	112	26	20	66	272 .....	..	..	1	1	..	1	Total .....	3	..	3	1	..	
219 .....	..	..	12	3	3	1	273 .....	..	..	2	2	..	2	XLV						
220 .....	35	..	56	16	8	31	274 .....	..	..	1	1	..	1	304 (E. T. S.) ..	3	..	5	..	2	
221 .....	6	..	10	5	1	4	275 .....	1	..	2	2	..	2	† .....	1	..	1	1	..	
222 .....	6	..	6	..	6	6	276 .....	..	..	1	1	..	1	† .....	1	..	1	1	..	
223 .....	19	..	47	2	14	31	277 .....	..	..	1	1	..	1	† .....	1	..	1	1	..	
224 .....	17	..	39	3	23	23	278 .....	..	..	1	1	..	1	† .....	1	..	1	1	..	
225 .....	2	..	6	2	2	2	279 .....	..	..	1	1	..	1	† .....	1	..	1	1	..	
226 .....	1	..	1	..	1	1	280 .....	1	..	2	..	1	1	Total .....	6	..	8	3	2	
227 .....	5	..	7	3	1	3	Total .....	50	1	94	30	21	43	XLVI						
228 .....	8	..	8	5	3	3	XVIII							305 (E. T. S.) ..	3	..	3	1	..	
229 .....	..	..	1	..	..	..	281 .....	1	..	3	1	1	1	Total .....	3	..	3	1	..	
230 .....	4	..	4	1	1	..	282 .....	1	..	1	..	..	1	XLVII						
231 .....	3	..	4	1	1	..	Total .....	2	..	4	1	1	2	XXI						
232 .....	1	..	2	2	2	2	284 .....	7	..	11	2	2	7	Total .....	7	..	11	2	2	
233 .....	3	..	8	2	2	2	XXII							XXII						
234 .....	8	..	8	8	4	8	286 .....	4	..	4	..	..	4	Total .....	4	..	4	..	4	
235 .....	3	..	15	5	4	5	287 .....	1	..	3	..	2	1	XLVIII						
237 .....	6	..	13	5	5	5	Total .....	5	..	7	..	2	5	307 (E. T. S.) ..	7	..	15	4	4	
238 .....	4	..	13	5	5	5	XXVII							308 .....	3	..	3	1	..	
239 .....	..	..	2	2	2	2	288 .....	2	..	2	..	..	2	Total .....	10	..	18	5	4	
240 .....	4	..	5	1	1	2	289 .....	6	..	9	3	3	7	LIB. SCIENCE						
241 .....	3	..	3	3	3	3	290 .....	7	..	25	8	10	6	311 .....	12	..	23	8	..	
242 .....	7	..	7	..	1	5	291 .....	3	..	14	5	1	3	Total .....	12	..	23	8	..	
243 .....	4	..	18	3	3	3	292 .....	1	..	1	1	..	1	Grand total ..	799	132	1485	438	338	
245 .....	1	..	3	2	2	2	293 .....	1	..	1	1	..	1							
246 .....	3	..	5	1	1	1	294 .....	2	..	7	2	3	2							
247 .....	1	..	1	..	1	1	295 .....	..	..	6	3	..	..							
250 .....	1	..	1	..	1	1	Total .....	30	..	67	25	19	23							
Total .....	259	..	481	111	106	264														

<sup>1</sup> For title of course consult corresponding number in Table A.

<sup>2</sup> This represents only those whose time expired on or before June 30, 1901, who reinstated during the scholastic year 1901-2. In addition to these there were 61 whose time expired during 1901-2 who reinstated during the same year.

\* Italian Novels. (New course, 1901-2.)

† Outline History of Italian Literature. (New course, 1901-2.)

‡ English V. (New course, 1901-2.)

§ Shakespeare: Typical Plays. (New course, 1901-2.)

¶ English Literature from 1832-92. (New course, 1901-2.)

\*\* American Literature: The Renaissance of New England. (New course, 1901-2.)

†† The Short Story in English and American Literature. (New course, 1901-2.)

‡‡ Plane Geometry, 2d Mj. (New course, 1901-2.)

\*\* Trigonometry, Special. (New course, 1901-2.)

‡ Calculus, Special. (New course, 1901-2.)

†† Analytic Statics. (New course, 1901-2.)

‡‡ Elementary Plant Physiology. (New course, 1901-2.)

¶¶ General Morphology of the Spermatophytes. (New course, 1901-2.)

§§ Clinical Examination of Blood and Secretions. (New course, 1901-2.)

†† Old Testament Prophecy. (New course, 1901-2.)

‡‡ Old Testament Worship. (New course, 1901-2.)

¶¶ Origen and Augustine. (New course, 1901-2.)

‡‡ The Ecumenical Councils. (New course, 1901-2.)

§§ The Missions to the Northern and Western Tribes. (New course, 1901-2.)

\*\*\* Constructive Homiletics—English Theological Seminary. (New course, 1901-2.)

Total number of different courses given in the decade, 338.

TABLE B  
SUMMARY OF REGISTRATION BY DEPARTMENTS  
October 1, 1892, to June 23, 1902

Departments	Registra- tions	Lapsed Courses Renewed	Courses Completed	Courses Dropped	Holding Over July 1, 1902
I A. Philosophy .....	141	3	72	51	21
I B. Education .....	161	1	72	55	35
II. Political Economy .....	61	1	27	28	9
III. Political Science .....	85	..	60	16	9
IV. History .....	346	2	197	102	49
VI. Sociology and Anthropology .....	84	1	42	32	11
VII. Comparative Religion .....	9	1	5	3	2
VIII. Semitic Languages and Literatures .....	287	10	136	147	14
IX. Biblical and Patristic Greek .....	221	3	69	130	25
X. Sanskrit and Indo-European Philology .....	6	..	3	3	..
XI. Greek Language and Literature .....	90	..	52	25	13
XII. Latin Language and Literature .....	446	3	262	129	58
XIII. Romance Languages and Literatures .....	177	..	94	43	40
XIV. Germanic Languages and Literatures .....	256	2	148	69	41
XV. English Lang. and Lit. and Rhetoric .....	1,135	13	419	465	264
XVII. Mathematics .....	296	3	134	122	43
XVIII. Astronomy .....	10	..	5	3	2
XXI. Geology .....	20	..	5	8	7
XXII. Zoology .....	13	..	5	3	5
XXVII. Botany .....	143	1	86	35	23
XXVIII. Pathology and Bacteriology .....	6	..	5	..	1
XXI. Old Test. Literature and Interpretation .....	30	..	6	22	2
XLII. New Test. Literature and Interpretation .....	101	2	24	73	6
XLIV. Systematic Theology .....	11	..	5	4	2
XLV. Church History .....	26	..	15	8	3
XLVI. Homiletics .....	27	..	11	7	9
Library Science .....	36	..	9	12	15
<b>Total .....</b>	<b>4,224</b>	<b>46<sup>1</sup></b>	<b>1,968</b>	<b>1,593</b>	<b>709</b>

TABLE C  
SUMMARY OF REGISTRATIONS BY YEARS  
October 1, 1892, to June 23, 1902

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Holding over .....	..	85	139	220	284	412	488	472	540	673
New registrations .....	..	124	172	261	355	469	522	676	753	799
Lapsed courses renewed .....	..	..	..	..	..	.. <sup>2</sup>	5 <sup>3</sup>	10 <sup>4</sup>	18 <sup>5</sup>	13 <sup>6</sup>
Total registration .....	93	209	311	481	641	881	1,015	1,158	1,311	1,485
Registrations completed .....	4	38	63	106	127	182	282	336	392	438
Registrations dropped .....	4	32	28	89	102	211	261	282	246	338

<sup>1</sup>This represents only those who reinstated in a *different* scholastic year from that in which their term expired. There were 169 others who reinstated in the same scholastic year in which their term expired, of whom obviously no account could be taken in this table.

<sup>2</sup>There were 5 students whose time expired during the scholastic year 1897-98 who reinstated in their respective courses *during* that year.

<sup>3</sup>This represents only those whose time expired on or before June 30, 1898, and who reinstated during the scholastic year 1898-99. In addition to these there were 34 whose time expired during 1898-99 and who reinstated *during* the same year.

<sup>4</sup>This represents only those whose time expired on or

before June 30, 1899, and who reinstated during the scholastic year 1899-1900. In addition to these there were 25 whose time expired during 1899-1900 and who reinstated *during* the same year.

<sup>5</sup>This represents only those whose time expired on or before June 30, 1900, and who reinstated during the scholastic year 1900-1901. In addition to these there were 44 whose time expired during 1900-1901 and who reinstated *during* the same year.

<sup>6</sup>This represents only those whose time expired on or before June 30, 1901, and who reinstated during the scholastic year 1901-2. In addition to these there were 61 whose time expired during 1901-2 who reinstated *during* the same year.

**TABLE D**  
**TABLE SHOWING NUMBER OF INSTRUCTORS, COURSES, STUDENTS, AND REGISTRATIONS BY YEARS**  
**OCTOBER 1, 1892, TO JUNE 23, 1902**

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Teachers giving instruction.....	23	33	41	44	59	66	73	80	89	92
Courses actually given.....	39	62	78	97	128	151	186	208	208	217
Different students enrolled.....	82	185	279	425	555	755	845	930	1,081	1,249
Total registration in all courses...	93	209	311	481	641	881	1,015	1,158	1,311	1,485

**TABLE E**  
**GROSS INCOME FROM MATRICULATION AND TUITION FEES IN THE CORRESPONDENCE-STUDY DEPARTMENT, 1892-1902**

1892-1893.....	\$1,123.40	1897-1898.....	\$7,278.02 <sup>1</sup>
1893-1894.....	1,717.00	1898-1899.....	7,996.93
1894-1895.....	1,898.00	1899-1900.....	10,010.55
1895-1896.....	2,870.92	1900-1901.....	12,062.25
1896-1897.....	4,386.03	1901-1902.....	13,165.61

**TABLE F**  
**TABLE SHOWING THOSE WHO HAVE GIVEN INSTRUCTION BY CORRESPONDENCE EACH YEAR**  
**OCTOBER 1, 1892, TO JUNE 23, 1902**  
 -- indicates that instruction was given

Names	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
1. Abbott, E. W.....								-		
2. Allen, P. S.....										
3. Almstedt, H. B.....						-				
4. Anderson, G.....						-				
5. Bailey, J. W.....										
6. Bensley, E. V.....	-									
7. Berry, G. R.....										
8. Blackburn, F. A.....			-	-	-					
9. Boyd, C. E.....										
10. Boyd, J. H.....										
11. Bronson, F. M.....	-	-								
12. Bruère, R. W.....										
13. Bruner, J. D.....										
14. Buck, C. D.....	-									
15. Buckley, E. J.....										
16. Bulkley, J. E.....										
17. Burgess, T. C.....										
18. Burnet, P. B.....										
19. Burton, E. D.....										
20. Calhoun, F. H. H.....										
21. Cameron, M. C. E.....										
22. Capps, E.....										
23. Cary, A.....										
24. Carpenter, F. I.....										
25. Castle, C. F.....										
26. Catterall, R. C. H.....										
27. Chamberlain, C. J.....										
28. Chamberlin, T. C.....	-	-								
29. Child, C. M.....										
30. Clement, W. K.....										
31. Colyer, F. H.....	-	-								
32. Conard, L. M.....										
33. Cowles, H. C.....										

<sup>1</sup> Includes an item of \$300.00 not earned in 1897-98.



TABLE F—Continued

Names	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
97. Moore, C. H.....				—		—			—	—
98. Moore, E. H.....	—	—	—	—	—	—	—	—	—	—
99. Morgan, O. T.....								—	—	—
100. Moulton, F. R.....								—	—	—
101. Mulfinger, G. A.....		—							—	—
102. Neff, T. L.....			—	—	—	—	—		—	—
103. Owen, W. B.....			—	—	—	—	—		—	—
104. Pellett, S. F.....	—	—	—	—	—	—	—	—	—	—
105. Pietsch, K.....								—	—	—
106. de Poyen-Bellisle, R.....		—	—	—	—	—	—	—	—	—
107. Price, I. M.....				—	—	—	—	—	—	—
108. Radford, M. L.....						—	—	—	—	—
109. Raycroft, E. B.....							—	—	—	—
110. Reynolds, M.....							—	—	—	—
111. Robertson, J. C.....								—	—	—
112. Robson, A.....			—	—				—	—	—
113. Rolfe, H. W.....						—	—	—	—	—
114. Sanders, F. K.....	—	—	—	—	—	—	—	—	—	—
115. Schmidt-Wartenberg, H.....						—	—	—	—	—
116. Schub, F. O.....							—	—	—	—
117. Schütze, M.....								—	—	—
118. Seidenadel, C. W.....							—	—	—	—
119. Shepardson, F. W.....	—	—	—	—	—	—	—	—	—	—
120. Shorey, P.....		—	—	—	—	—	—	—	—	—
121. Sisson, E. O.....	—	—	—	—	—	—	—	—	—	—
122. Slaughter, H. E.....						—	—	—	—	—
123. Smedley, F. W.....							—	—	—	—
124. Smith, H. J.....							—	—	—	—
125. Smith, J. M. P.....							—	—	—	—
126. Sparks, E. E.....				—	—					
127. Spillman, G. L.....			—							
128. Starr, F.....		—			—	—	—	—	—	—
129. Stratton, A. W.....							—	—	—	—
130. Stuart, H. W.....								—	—	—
131. Talbot, M.....		—					—	—	—	—
132. Tanner, A. E.....				—	—	—	—	—	—	—
133. Tanner, J. S.....				—	—	—	—	—	—	—
134. Thatcher, O. J.....	—	—	—	—	—	—	—	—	—	—
135. Thomas, W. I.....							—	—	—	—
136. Thurber, C. H.....					—	—	—	—	—	—
137. Tolman, A. H.....						—	—	—	—	—
138. Tower, W. L.....							—	—	—	—
139. Triggs, O. L.....			—	—	—	—	—	—	—	—
140. Troop, J. G. C.....							—	—	—	—
141. Tufts, J. H.....			—	—	—	—	—	—	—	—
142. Varney, E. D.....							—	—	—	—
143. Veblen, T. B.....	—	—					—	—	—	—
144. Vincent, G. E.....								—	—	—
145. Votaw, C. W.....	—	—	—	—	—	—	—	—	—	—
146. Walker, A. T.....						—	—	—	—	—
147. Wergeland, A. M.....								—	—	—
148. West, M.....		—	—					—	—	—
149. Whitford, H. N.....								—	—	—
150. Wilcox, W. C.....			—	—	—	—	—	—	—	—
151. Willett, H. L.....				—	—	—	—	—	—	—
152. Wolcott, J. D.....								—	—	—
153. Wood, I. F.....	—	—						—	—	—
154. Woodruff, C. E.....		—	—	—				—	—	—
155. Young, E. F.....									—	—
156. Young, J. W. A.....									—	—
157. Zueblin, C.....									—	—
Total.....	23	33	41	44	59	68	73	80	89	92



## PHYSICAL CULTURE AND ATHLETICS

*To the President of the University:*

SIR: I submit herewith my report on the condition of the Department of Physical Culture and Athletics during the first decade of the University.

The Department of Physical Culture and Athletics was organized October 1, 1892, with the following corps of instructors:

Amos Alonzo Stagg, Associate Professor and Director; Dr. Alice Bertha Foster, Tutor; Joseph Edward Raycroft, Assistant; Horace Butterworth, Assistant; Charles W. Allen, Assistant.

No change was made in the officers of instruction until the Autumn Quarter of 1894, when Miss Kate S. Anderson, Instructor, was placed in charge of the women's work, in place of Dr. Foster, who had resigned in June. Miss Bertha Steig was also appointed Assistant. Miss Anna F. Davies temporarily conducted the women's work during the Summer Quarter of 1894.

The Department began its work on October 1, 1892, when the candidates for the football team met for the first time in Washington Park for practice. Thirteen men reported.

Compulsory work in physical training began during the third week in October. The women met in three classes in one of the rooms on the fourth floor of Cobb Hall. The men took their physical culture on an open lot west of the Quadrangles. The work of the former consisted of free standing exercises, while the latter were trained in football formations without scrimmage.

The Gymnasium was thrown open for use on November 30, 1892, and the classes were put through squad drills until the completion and fitting up of the building, about two months later.

From the beginning of the University, compulsory work in physical training was made a requirement for graduation. In this the University became a pioneer among western institutions, some of which had a requirement in military drill, but no department of physical culture. Since then nearly every college and university of note in the middle West has added a department of physical training.

Upon the completion of the Gymnasium, early in the Winter Quarter, the practice of exercises for both men and women, which had before been conducted under difficulty (on account of cramped quarters, bad weather, and lack of conveniences) on three days of the week, was extended to one half-hour's work on Tuesday, Wednesday, Thursday, and Friday. Four to seven classes, in different forms of exercise, have been conducted regularly since that time, in addition to the training for athletic teams, which a student had the option of taking.

The following paragraph appeared in the General Regulations which were to govern the University on its organization:

"All students will be examined as to their physical condition on entering the University, and at intervals during the course. The University physician, who will make the examination, will give each student thus examined a written statement, in detail, of his physical condition, indicating constitutional weaknesses, and forms of exercise, desirable and undesirable, for the individual in question. A student will not be permitted to study in the University four consecutive Quarters without a physician's certificate that he may do the work of the fourth Quarter without injury to his health. The Director of the Department of Physical Education will give his personal attention, not only to the organization and training of athletic teams, and the general athletic interests of the students, but especially to the physical training of each student in so far as it is practicable."

The original regulations demanded ten Quarters' work in Physical Culture, unless excused on account of disability or other sufficient reasons. This rule was changed on April 24, 1893, to read: "Six Quarters' work in Physical Culture is required of Academic College students, and four Quarters of University College students." This change was deemed advisable in order to give the student freedom where he would enjoy it most, and had the greatest need for it, and also because in the enforcement of the requirements it was not to the advantage of the student to omit his work during two Quarters at the beginning of his course.

As the difficulties of enforcing the requirement presented themselves, additional rules were made. At the beginning no penalty was attached to non-attendance at classes, but there was general statement that students were required to take Physical Culture—the idea of the Department at the beginning being to require eleven Quarters of work. No statement in definite form, however, was made to this effect, so that one of the first actions of the Board of Physical Culture, which was organized March 27, 1893, was to announce definitely that "The requirements for graduation shall be thirty-six Majors and ten Quarters' work in Physical Culture."

It was thought that the change of the rule so as to require six Quarters' work in the Academic College would have the effect of preventing delinquency, inasmuch as the student would want to get his transfer to the University Colleges as quickly as possible. This he could not get if he were deficient in Physical Culture.

Later it was found that this was not sufficient inducement, and a regulation was passed, stating that "students taking an excessive number of cuts will not be allowed to continue their University work until they shall conform to the requirements."

This was strengthened afterward by the action of the Board of Physical Culture and Athletics, in passing a rule, December 7, 1895, that, "If a student have ten or more absences in the course of Physical Culture, no credit will be allowed him for the work; if he have five to ten absences, he will receive 50 per cent. credit for the work."

Later this rule was changed to conform with the general requirements of all University work, namely: "Should the number of a student's absences reach 25 per cent. of the whole number of class exercises, he will receive credit for one-half of the course. No credit will be given when the number of absences is equal to 50 per cent. of the class exercises."

In enforcing the requirement of ten Quarters of Physical Culture it has been necessary, in three or four cases, to have students remain in residence after their other University work was completed.

The Administrative Board of Physical Culture and Athletics met for the first time on March 27, 1893. The members of this pioneer body for the administration of the Department of Physical Culture and Athletics were:

The President, *ex officio*.

Associate Professor A. A. Stagg, *ex officio*, Director of Physical Culture.

Dr. Alice B. Foster, *ex officio*, Tutor, Physical Culture.

Professor H. P. Judson, Political Science.

Associate Professor J. H. Tufts, Philosophy.

Associate Professor Franklin Johnson, Church History.

Associate Professor Marion Talbot, Sanitary Science.

Mr. William Caldwell.

In 1894 the newly appointed Examining Physician, Dr. C. P. Small, and in 1895 the new Recorder, Associate Professor G. S. Goodspeed, became *ex officio* members of the Board.

In May, 1896, it was voted to admit one student representative each from the Graduate School, the Divinity School, the Senior College, and the Junior College, to membership on the Board. Messrs. H. T. Clarke, H. E. Jones, H. G. Gale, and John Mentzer were elected by their respective schools.

In 1898 it was deemed wise to have one of the Deans serve as an *ex-officio* member of the Board, and Associate Professor James H. Tufts was appointed. During this year the Department of Military Science and Tactics was organized in which work might be taken as an equivalent for Physical Culture. Since then the instructor in this Department as well as the instructor in the Department of Physical Culture in the School of Education have become members *ex officio* of the Board. The Examining Physician for the men's Department has also become a member *ex officio*.

In the spring of 1893, in response to a request from President Harper, Mr. Marshall Field granted the University the use of the vacant block situated between Fifty-sixth and Fifty-seventh streets and Ellis and Greenwood avenues for an athletic field. Arrangements were at once made for inclosing this space. A large proportion of the lumber necessary for the purpose was contributed by the John Spry Lumber Company, and the work of nailing on the boards was performed gratuitously by the students. The field was graded, sodded, and prepared for baseball by the latter part of June, and the first game on our grounds was played between the Varsity team and that of the University of Virginia, during examination week, 1893. The diamond faced from the northeast to the southwest. The summer was extremely hot, the water supply limited, and, notwithstanding the most constant care, the grass withered and died.

A football field was laid out at the beginning of the Autumn Quarter, but there were no seats arranged until the Thanksgiving Day game, when some wooden horses and planks that were being used in the construction of the new University buildings were utilized as a temporary stand.

The same arrangement continued during the baseball season of 1894, but the need of something better and of a more permanent character was so apparent that subscriptions for a grandstand were solicited early in that year, the total sum received from this source being \$818.95. This is the only subscription for athletic purposes which the Department has ever solicited. The covered stand in the northwest corner of the field, seating about 1,200 people, which was finished in time for the football games at a cost of \$1,210.50, was a result of the co-operation of students and Faculty. The chairs of the grandstand were provided, in part, through the courtesy of Mr. John J. Mitchell.

In the spring of 1895 a new diamond, facing from the northwest toward the southeast, was laid out, and a large quantity of black dirt was put on the cutfield. A running-track of a little less than four laps to the mile was built at an expense of \$465. In the autumn of that year additional accommodations for the Thanksgiving Day football game, in the form of bleachers seating 3,600 people, were erected at a cost of \$900.

In the spring of 1896 a large quantity of clay and black dirt was put on the field outside the diamond, and sowed with clover and grass seed. This secured an excellent turf for both football and baseball.

In the fall of 1898 new bleachers capable of holding 6,000 people were erected, and in the following autumn additional bleachers for 4,000 persons were built. During the winter of 1899 the University acquired possession of the block of land adjoining the athletic field and placed a twelve-foot board fence around it. This purchase added much needed room to the field and permitted the moving of the east bleachers back from the running-track and baseball field for the spring athletics.

A new quarter-mile running-track, averaging more than 20 feet wide was built of cinders in the spring of 1900.

The Intercollegiate Conference meet which was organized that year accepted our offer for the free use of our field and track.

The Gymnasium building, which was to be a temporary structure and built of rough brick, was erected during the Autumn Quarter of 1892 at a cost of about \$18,000. The Women's Gym-

nasium which was torn down in the summer of 1901 to make room for the University Commons buildings was 100 feet by 50 feet, of which 50 feet by 30 feet was devoted to baths, lockers dressing-rooms, and office. The exercising room was fitted up with apparatus of the best quality. During the years 1901 and 1902 the women used the chapel of the Hyde Park Baptist Church for temporary quarters.

The Men's Gymnasium was 200 feet by 50 feet, the exercising rooms having the large dimensions of 140 feet by 50 feet. Besides being fitted up with the finest apparatus, it possessed space and equipment for training in many kinds of outdoor sports, including ground practice, batting, and base-sliding for baseball; sprinting, pole-vaulting, high and broad jumping, shot-putting, etc. In addition to these there were handball courts, a tennis court, and a running-track of a fraction over twelve laps to the mile.

The Men's Gymnasium originally contained 200 lockers. Additional lockers were built at different times, which increased the locker supply to 500. The Women's Gymnasium also had to enlarge its locker supply, while the number of dressing-rooms was doubled.

In the summer of 1894 a special room for the physical examination of students was built over the locker room in the Gymnasium. This was used also as the library room, where a small selected library was kept.

Other changes consisted in the laying of a linoleum carpet on the running track, at a cost of \$200, and the partitioning off of a room for rubbing purposes.

The old Gymnasium was a unique building in gymnasium construction, and will pass out of existence still unique. The idea of a combination gymnasium and a diminutive athletic field under one roof was a new feature in physical training at the time of its construction. The plan of having a dirt floor at one end of the exercising room furnished special advantages for the practice of certain kinds of outdoor sports. The newer development of a special building for athletic work during the winter months is a larger consummation of the same idea.

On Thanksgiving Day, 1901, the corner stone of the magnificent new Gymnasium was laid with appropriate ceremonies. This accomplishment was brought about through the splendid munificence of Mr. Adolph C. Bartlett, one of the Trustees of the University, who wished to rear the most useful and fitting memorial to the memory of his son, Frank Dickinson Bartlett, who died while in the midst of his college course at Harvard.

The building is 200 feet by 80 feet and has two stories and a basement. It is located on the southeast corner of the athletic field. The top floor is an immense exercising room wholly free from pillars and other obstructions. A thirteen-lap-to-the-mile running-track twelve feet wide is suspended from the girders holding the roof. The ground floor contains locker rooms, Faculty exercising room, swimming-tank, and bath rooms and offices. The basement will be devoted to special rooms for the athletic teams. The building when finished and equipped will cost \$260,000. It will be finished for occupancy in the fall of 1903.

#### INSTRUCTION

During the first ten years of the University, courses were offered to men in the following forms of exercises: calisthenics and free movements; setting-up drills; Swedish movements; pulley-weights; dumb-bells; bar-bells; iron wands; Indian clubs; wall machines, ladders, etc.; light apparatus; elementary, intermediate, and advanced work on heavy apparatus; corrective work on special apparatus; general work on various apparatus; tumbling; advanced gymnastics; wrestling; fencing; basketball; handball; tennis; golf; swimming; track and field sports; pole-vaulting, hurdling, and sprinting; cross-country and long-distance running; baseball, and football.

TABLE A

## THE STAFF OF THE DIVISION OF PHYSICAL CULTURE AND ATHLETICS, 1892-1902

Name	Title	Year
Amos Alonzo Stagg	Professor and Director	1892-1902
Alice Bertha Foster, M.D.	Tutor	1892-1894
Joseph Edward Raycroft, M.D.	Instructor and Examining Physician	1892-1902
Horace Butterworth	Instructor	1892-1902
Charles W. Allen	Assistant for Divinity School	1892-1895
Charles Porter Small, M.D.	Examining Physician	1892-1902
Kate Anderson	Instructor	1894-1897
Anna F. Davies	Tutor (Summer Quarter)	1894-1895
Clara Tilton	Assistant (Summer Quarter)	1897
Bertha Steig	Assistant	1894-1899
Gertrude Dudley	Instructor	1897-1902
Dorcas Merriman	Assistant (Summer Quarter)	1898
Ida Furniss	Assistant	1899-1902
Clara Comstock	Assistant	1901-1902
William F. Bender	Assistant (Winter Quarter)	1901
Perry J. Payne	Assistant	1897-1902

## ASSISTANT COACHES

Name	Department	Year
Charles W. Allen	Football	1896-1897
Henry Gordon Gale	Football	1898-1899
Charles Foster Roby	Football	1898
Clarence Bert Herschberger	Football	1899-1901
Walter Scott Kennedy	Football	1900
Ralph C. Hamill	Football	1901
Morris Gordon Clarke	Baseball	1899
Fred. Merrifield	Baseball	1901
T. Burton Smith	Baseball	1902

## FACULTY REPRESENTATIVES ON THE ADMINISTRATIVE BOARD OF PHYSICAL CULTURE AND ATHLETICS, 1893-1902

The President, *Chairman*

Professor Amos Alonzo Stagg, Director, <i>ex officio</i>	- - - - -	1893-1902
Dr. Alice Bertha Foster, <i>ex officio</i>	- - - - -	1893-1894
Professor Harry Pratt Judson	- - - - -	1893
Assistant Professor Franklin Johnson	- - - - -	1893-1894
Associate Professor Marion Talbot	- - - - -	1893-1895
Assistant Professor James H. Tufts	- - - - -	1893
Mr. William Caldwell	- - - - -	1893
Miss Kate Anderson, <i>ex officio</i>	- - - - -	1894-1897
Associate Professor Robert Francis Harper	- - - - -	1893-1899
Associate Professor Oliver J. Thatcher	- - - - -	1893-1902
Mr. William Hill	- - - - -	1893-1894
Examining Physician Charles Porter Small	- - - - -	1894-1902
Professor Shailer Mathews	- - - - -	1894-1899
Professor Carl Darling Buck	- - - - -	1894-1902

The Recorder, <i>ex officio</i> - - - - -	1895-1902
Assistant Professor Myra Reynolds - - - - -	1895-1898
Professor Frank Frost Abbott - - - - -	1896-1897, 1899-1900
Miss Gertrude Dudley, <i>ex officio</i> - - - - -	1897-1902
Associate Professor James Hayden Tufts, Dean, <i>ex officio</i> - - - - -	1898-1899
Assistant Professor George Herbert Mead - - - - -	1898-1899
Professor Eri Baker Hulbert, Dean, <i>ex officio</i> - - - - -	1899-1902
Professor John Merle Coulter - - - - -	1899-1902
Professor Starr Willard Cutting - - - - -	1899-1901
Professor Edward Capps - - - - -	1900-1902
Lieutenant-Colonel Brinkerhoff, <i>ex officio</i> - - - - -	1901-1902
Assistant Professor Carl J. Kroh, <i>ex officio</i> - - - - -	1901-1902
Dr. Joseph Edward Raycroft, <i>ex officio</i> - - - - -	1901-1902
Mr. Horace Butterworth, <i>ex officio</i> - - - - -	1901-1902
Professor George Stephen Goodspeed - - - - -	1901-1902

STUDENT REPRESENTATIVES ON ATHLETIC QUESTIONS ON THE ADMINISTRATIVE BOARD OF ATHLETICS

- 1896 — Henry Gordon Gale, representing the Graduate Schools.  
Hayden E. Jones, representing the Divinity School.  
Henry Tefft Clarke, representing the Senior Colleges.  
John Mentzer, representing the Junior Colleges.
- 1896-97 — Henry Gordon Gale, representing the Graduate Schools.  
Robert B. Davidson, representing the Divinity School.  
John Mentzer, representing the Senior Colleges.  
LeRoy Tudor Vernon, representing the Junior Colleges.
- 1897-98 — Henry Gordon Gale, representing the Graduate Schools.  
Robert Bailey Davidson, representing the Divinity School.  
Charles Lindsey Burroughs, representing the Senior Colleges.  
LeRoy Tudor Vernon, representing the Junior Colleges.
- 1898-99 — Fred Harvey Hall Calhoun, representing the Graduate Schools.  
Fred Merrifield, representing the Divinity School.  
LeRoy Tudor Vernon, representing the Senior Colleges.  
Kellogg Speed, representing the Junior Colleges.
- 1899-00 — Allen T. Burns, representing the Graduate Schools.  
Fred Merrifield, representing the Divinity School.  
LeRoy Tudor Vernon, representing the Senior Colleges.  
Kellogg Speed, representing the Junior Colleges.
- 1900-01 — Clarence Bert Herschberger, representing the Graduate Schools.  
Howard B. Woolston, representing the Divinity School.  
Edward C. Kohlsaas, representing the Senior Colleges.  
James M. Sheldon, representing the Junior Colleges.
- 1901-02 — James Finch Royster, representing the Graduate Schools.  
John Wellington Hoag, representing the Divinity School.  
Frank McNair, representing the Senior Colleges.  
Philip Armour Sunderland, representing the Junior Colleges.

TABLE B  
THE ATHLETIC TEAMS OF THE UNIVERSITY  
CAPTAINS

Year	Football	Baseball	Track and Field Athletics	Tennis
1892-1893	A. A. Stagg, Act. Capt.	A. A. Stagg, Act. Capt.		W. H. Prescott
1893-1894	A. R. E. Wyant	F. D. Nichols	H. C. Holloway	W. S. Bond
1894-1895	C. W. Allen	H. D. Abells	H. C. Holloway	C. B. Neel
1895-1896	C. W. Allen	H. D. Abells	C. U. Bachellé	W. S. Bond
1896-1897	C. F. Roby	H. T. Clarke	F. F. Steigmeyer*	P. Rand
1897-1898	C. B. Herschberger	G. H. Sawyer	T. H. Patterson	C. D. Halsey
1898-1899	W. S. Kennedy	F. Merrifield	F. H. Calhoun	E. L. Poulson
1899-1900	W. S. Kennedy	L. T. Vernon	B. B. Smith	H. N. Gottlieb
1900-1901	K. Speed	T. B. Smith	W. A. Moloney	P. P. Bruce
1901-1902	{ J. R. Henry* J. M. Sheldon	F. E. Harper	W. A. Moloney	J. W. Bingham
			F. G. Moloney	

TABLE C  
THE MEMBERS OF THE TEAMS

Football	Baseball	Track and Field Athletics	Tennis
<p>1892-93</p> <p>W. Rullkoetter, c. G. N. Knapp, r. g. W. R. Smith, l. g. A. R. E. Wyant, r. t. R. E. Brennemann, } 1. t. C. W. Allen, } H. T. Chace, r. e. W. B. Conover, l. e. J. E. Raycroft, q. b. C. B. McGillivray, l. h. b. A. A. Stagg, r. h. b. W. Rapp, f. b.</p> <p>SUBSTITUTES</p> <p>H. G. Gale J. LaMay J. V. Fradenburg</p>	<p>1892-93</p> <p>F. D. Nichols, c. A. A. Stagg, p. W. H. Prescott, 1st b. H. M. Adkinson, 2d b. H. G. Gale, } 3d b. L. B. Vaughan, } R. W. Webster, s. s. C. B. McGillivray, r. f. C. S. Pike, c. f. W. B. Conover, l. f.</p> <p>SUBSTITUTES</p> <p>H. D. Speer A. E. Logie</p>		<p>1892-93</p> <p>W. H. Prescott V. R. Lansingh C. A. Torrey C. S. Pike</p>
<p>1893-94</p> <p>A. R. E. Wyant, c., Capt. W. Rullkoetter, } r. g. N. W. Flint, } C. W. Allen, } 1. g. W. R. Smith, } G. R. Sikes, r. t. G. N. Knapp, } 1. t. A. M. Wyant, } H. G. Gale, } r. e. F. E. Hering, } J. LaMay, } 1. e. H. T. Chace, } J. E. Raycroft, q. b. F. D. Nichols, r. h. b. C. K. Bliss, } 1. h. b. J. Flint, } C. B. Neel, f. b.</p>	<p>1893-94</p> <p>C. S. Pike, c. F. D. Nichols, p., Capt. H. D. Abells, 1st b. H. M. Adkinson, 2d b. J. S. Brown, 3d b. R. W. Webster, s. s. H. G. Gale, r. f. F. E. Hering, c. f. F. Grant, l. f.</p> <p>SUBSTITUTE</p> <p>C. B. McGillivray</p>	<p>1893-94</p> <p>C. V. Bachellé S. D. Barnes C. R. Barrett G. Bliss W. P. Behan H. D. Church H. L. Clarke A. E. Davis A. A. Ewing H. Holloway, Captain H. D. Hubbard W. B. Keen A. M. Wyant J. LaMay E. F. Mandell T. L. Neff E. W. Peabody</p>	<p>1893-94</p> <p>W. S. Bond, Captain P. Rand V. R. Lansingh W. E. Chalmers C. B. Neel R. C. Dudley C. B. McGillivray</p>

\* Resigned

TABLE C—Continued

Football	Baseball	Track and Field Athletics	Tennis
<p><b>SUBSTITUTES</b>                      W. R. Rapp                      H. G. Lozier                      H. D. Speer</p>		<p>A. T. Pienkowsky                      P. Rand                      L. Sass                      F. E. Sherman                      V. W. Sincere                      F. F. Steigmeyer                      L. Wolf</p>	
<p>1894-95                      A. R. E. Wyant, } c.                      N. D. Flint, }                      C. W. Allen, r. g., Captain                      W. Rullkoetter, l. g.                      G. N. Knapp, r. t.                      C. F. Roby, l. t.                      J. LaMay, r. e.                      E. R. Yundt, l. e.                      F. E. Hering, q. b.                      H. I. Coy, } r. h. b.                      A. A. Ewing, }                      F. D. Nichols, l. h. b.                      H. G. Gale, } f. b.                      C. B. Herschberger, }</p>	<p>1894-95                      H. E. Jones, } c.                      C. S. Pike, }                      H. T. Clarke, }                      F. D. Nichols, } p.                      J. S. Brown, }                      H. D. Abells, 1st b., Capt.                      H. M. Adkinson, 2d b.                      C. S. Winston, 3d b.                      F. D. Nichols, } s. s.                      F. Grant, }                      J. S. Brown, } r. f.                      H. T. Clarke, }                      F. Grant, } l. f.                      C. S. Pike, }                      F. E. Hering, c. f.</p>	<p>1894-95                      T. H. Patterson                      E. W. Peabody                      C. B. Herschberger                      F. F. Steigmeyer                      E. F. Mandel                      W. P. Drew                      H. C. Holloway, Capt.                      J. LaMay                      H. I. Coy                      H. B. Campbell                      S. C. Dickerson                      L. Sass                      F. Johnson                      C. V. Bachellé                      C. L. Burroughs                      C. B. Neel                      G. A. Bliss                      A. B. Hancock                      P. G. Wooley                      T. L. Neff</p>	<p>1894-95                      C. B. Neel, Capt.                      P. Rand                      V. R. Lansingh                      W. E. Chalmers                      W. S. Bond                      C. A. Torrey                      C. B. McGillivray                      R. C. Dudley</p>
<p><b>SUBSTITUTES</b>                      W. E. Garrey                      R. N. Tooker                      H. W. Black                      V. E. McCaskill                      H. T. Chace</p>	<p><b>SUBSTITUTES</b>                      G. H. Sawyer</p>		
<p>1895-96                      P. S. Allen, c.                      B. E. Looney, } r. g.                      T. L. Ketman, }                      W. Rullkoetter, l. g.                      C. W. Allen, r. t., Captain.                      E. V. Williamson, l. t.                      C. F. Roby, r. e.                      N. W. Flint, } l. e.                      J. LaMay, }                      A. A. Ewing, } q. b.                      H. T. Clarke, }                      F. D. Nichols, r. h. b.                      H. G. Gale, } l. h. b.                      A. A. Ewing, }                      C. B. Herschberger, } f. b.                      H. G. Gale, }                      C. B. Neel, }</p>	<p>1895-96                      H. E. Jones, c.                      H. T. Clarke, }                      F. D. Nichols, } p.                      J. S. Brown, }                      H. D. Abells, 1st b., Capt.                      H. M. Adkinson, 2d b.                      C. S. Winston, 3d b.                      O. T. Sweet, } s. s.                      M. G. Clarke, }                      J. S. Brown, } l. f.                      C. S. Pike, }                      C. B. Herschberger, c. f.                      G. H. Sawyer, r. f.</p>	<p>1895-96                      C. V. Bachellé, Capt.                      T. H. Patterson                      F. F. Steigmeyer,                      E. Gundlach                      G. L. White                      F. H. Calhoun                      E. Williamson                      E. L. Poulson                      H. McClenahan                      C. B. Neel                      C. R. Barrett                      C. B. Herschberger                      E. W. Peabody                      A. E. Logie                      H. A. Peterson                      C. L. Burroughs                      H. W. Dickey                      H. T. Chace                      W. Jackson                      P. G. Wooley                      C. O. Taylor</p>	
<p><b>SUBSTITUTES</b>                      J. S. Brown                      H. W. Dickey                      H. G. Leighton</p>			
<p>1896-97                      W. J. Cavanagh, c.                      R. N. Tooker, r. g.                      J. E. Webb, l. g.                      C. F. Roby, r. t., Captain.</p>	<p>1896-97                      H. T. Clarke, p., Capt.                      W. T. Gardner, c.                      H. D. Abells, 1st b.                      H. M. Adkinson, 2d b.</p>	<p>1896-97                      T. H. Patterson, Capt.                      G. L. White                      B. B. Smith                      F. H. Calhoun</p>	<p>1896-97                      P. Rand, Capt.                      W. S. Bond                      C. D. Halsey                      W. F. Anderson</p>



TABLE C—Continued

Football	Baseball	Track and Field Athletics	Tennis
W. S. Kennedy, } 1. t. T. W. Mortimer, } R. C. Hamill, r. e. C. Firth, } E. D. K. Leffingwell, } 1. e. M. G. Clarke, q. b. H. I. Coy, r. h. b. C. B. Herschberger, } 1. h. b. J. S. Johnson, } W. T. Gardner, f. b.	F. Merrifield, 3d b. J. S. Brown, } 1. f. J. F. Hagey, } G. H. Sawyer, r. f. C. B. Herschberger, c. f. L. T. Vernon, } M. G. Clarke, } s. s.	C. V. Brown C. B. Herschberger F. P. Lachmund A. L. Barton W. S. Bond C. L. Burroughs J. B. Hyman G. A. Brayton H. L. Ickes C. V. Bachellé H. B. Campbell N. M. Fair F. A. Brown W. M. Burns	E. L. Poulson P. Blackwelder H. N. Gottlieb R. G. Gould
SUBSTITUTES H. T. Clarke C. B. Neel V. W. Sincere P. B. Davis M. A. Cleveland H. M. Burchard	SUBSTITUTES H. G. Leighton		
1897-98 W. J. Cavanagh, c. A. C. Bowdish, r. g. K. Speed, 1. g. J. E. Webb, r. t. T. W. Mortimer, 1. t. R. C. Hamill, r. e. G. H. Garrey, } 1. e. H. Fox, } M. G. Clarke, q. b. C. B. Herschberger, r. h. b., C. W. S. Kennedy, 1. h. b. W. T. Gardner, f. b.	1897-98 W. T. Gardner, c. T. B. Smith, p. W. S. Kennedy, 1st b. M. G. Clarke, } 2d b. H. B. McElree, } F. Merrifield, 3d b. L. T. Vernon, s. s. D. B. Southard, } 1. f. E. A. Wriedt, } C. B. Herschberger, c. f. G. H. Sawyer, r. f., Capt.	1897-98 F. H. Calhoun, Capt. B. B. Smith G. L. White C. V. Brown C. B. Herschberger A. L. Barton C. L. Burroughs N. M. Fair F. A. Brown A. E. Beers M. B. Parker B. G. Leake W. A. Moloney W. S. Kennedy T. W. Mortimer W. J. Schmahl W. H. Andrews D. R. Richberg H. S. Walker J. F. Goodenow M. H. Pettit E. L. Heath D. E. Fogle	1897-98 C. D. Halsey, Capt. H. M. MacQuiston P. D. MacQuiston H. N. Gottlieb P. Blackwelder E. L. Poulson H. W. Belfield R. Page
SUBSTITUTES T. H. Patterson N. K. Anderson	SUBSTITUTE H. G. Leighton		
1898-99 K. Speed, } W. J. Cavanagh, } c. C. J. Rogers, r. g. O. S. Burnett, 1. g. J. E. Webb, r. t. T. W. Mortimer, 1. t. R. C. Hamill, r. e. J. R. Henry, } 1. e. W. J. Schmahl, } W. S. Kennedy, q. b., Capt. C. B. Herschberger, r. h. b. M. G. Clarke, } 1. h. b. J. R. Henry, } F. L. Slaker, f. b.	1898-99 H. G. Bodwell, c. T. B. Smith, p. W. S. Kennedy, 1st b. L. T. Vernon, 2d b. F. Merrifield, 3d b., Capt. G. E. Allen, s. s. D. B. Southard, 1. f. C. B. Herschberger, c. f. J. C. Ewing, r. f.	1898-99 B. B. Smith, Capt. C. L. Burroughs W. A. Moloney H. B. Slack C. B. Herschberger W. J. Schmahl C. V. Brown T. W. Mortimer N. M. Fair M. B. Parker J. F. Goodenow D. P. Trude P. Ross F. G. Moloney R. C. Hamill	1898-99 E. L. Poulson, Capt. P. D. MacQuiston C. D. W. Halsey H. N. Gottlieb H. W. Belfield C. Richards J. W. Bingham P. P. Bruce

TABLE C—Continued

Football	Baseball	Track and Field Athletics	Tennis
<p><b>SUBSTITUTES</b>                      P. Knolla                      M. A. Cleveland                      B. J. Cassels                      J. C. Ewing                      E. G. Allen</p>	<p><b>SUBSTITUTES</b>                      F. C. Cleveland                      H. G. Leighton                      C. S. Jacobs</p>	<p>C. V. Drew                      L. Byrne                      C. R. Manning                      J. P. Magee                      W. A. Gordon                      G. L. White                      G. E. Tucker                      G. A. Brayton                      S. T. Bowen                      A. B. Snider                      D. R. Richberg                      H. Street                      Z. R. Pettet                      G. G. Davis                      D. E. Fogle</p>	
<p>1899-00                      K. Speed, c.                      H. F. Ahlswede, r. g.                      C. G. Flanagan, l. g.                      J. E. Webb, r. t.                      F. Feil, l. t.                      B. J. Cassels, } r. e.                      W. F. Eldridge, }                      J. M. Sheldon, l. e.                      W. S. Kennedy, q. b., Capt.                      R. C. Hamill, r. h. b.                      J. R. Henry, l. h. b.                      F. L. Slaker, f. b.</p>	<p>1899-00                      F. E. Harper, } c.                      E. O. Wood, }                      T. B. Smith, }                      F. Merrifield, } p.                      W. S. Rogers, }                      W. S. Kennedy, 1st b.                      L. T. Vernon, Capt. }                      E. O. Wood, } 2d b.                      C. M. Van Patten, }                      F. Merrifield, } 3d b.                      T. B. Smith, }                      L. T. Vernon, } s. s.                      C. M. Van Patten, }                      R. Merrifield, } l. f.                      E. O. Wood, }                      A. W. Place, c. f.                      J. C. Ewing, r. f.</p>	<p>1899-00                      W. A. Moloney, Capt.                      T. W. Mortimer                      H. H. Lord                      F. G. Moloney                      C. E. Hulbert                      C. R. Manning                      F. M. Horton                      G. G. Davis                      J. P. Magee                      J. T. Lister                      H. B. Slack                      W. J. Schmahl                      C. V. Brown                      D. R. Richberg                      E. D. Leffingwell                      Z. R. Pettet                      D. P. Trude                      B. J. Cassels</p>	<p>1899-00                      H. N. Gottlieb, Capt.                      C. D. W. Halsey                      W. F. Eldridge                      C. W. Richards                      J. P. Magee                      J. S. Hammond                      P. P. Bruce                      J. H. McCune</p>
<p><b>SUBSTITUTES</b>                      C. W. Ervin                      A. F. Holste</p>			
<p>1900-01                      K. Speed, c., Captain                      C. W. Ervin, } r. g.                      W. Carey, }                      H. G. Bodwell, }                      C. G. Flanagan, l. g.                      J. G. MacNab, r. t.                      F. Feil, } l. t.                      O. E. Atwood, }                      W. F. Eldridge, } r. e.                      Z. R. Pettet, }                      E. P. Rich, l. e.                      J. M. Sheldon, } q. b.                      G. H. Garrey, }                      A. W. Place, } r. h. b.                      F. O. Horton, }                      J. R. Henry, } l. h. b.                      H. H. Lord, }                      A. B. Snider, } f. b.                      E. E. Perkins, }</p>	<p>1900-01                      F. E. Harper, c.                      T. B. Smith, Capt., } p.                      H. C. Calhoun, }                      C. R. Howe, }                      A. L. Hoover, 1st b.                      R. Merrifield, 2d b.                      C. M. Van Patten, 3d b.                      P. A. Sunderland, s. s.                      F. M. Horton, l. f.                      A. W. Place, c. f.                      H. J. Sloan, r. f.</p>	<p>1900-01                      W. A. Moloney, Capt.                      F. G. Moloney                      H. H. Lord                      F. M. Horton                      Z. R. Pettet                      W. Carey                      L. A. Hopkins                      A. W. Place                      R. L. Henry                      E. R. Ferriss                      R. H. Wellington                      E. B. Bliss                      M. B. Louer                      A. Jahn                      E. E. Perkins</p>	<p>1900-01                      P. P. Bruce, Capt.                      H. L. Axtell                      J. W. Bingham                      H. W. Belfield                      C. W. Richards                      A. Frake</p>
<p><b>SUBSTITUTES</b>                      B. Strauss                      J. W. Hoag                      J. H. Jensen                      A. H. Fowler</p>	<p><b>SUBSTITUTE</b>                      H. C. Smith</p>		

TABLE C—Continued

Football	Baseball	Track and Field Athletics	Tennis
<p>1901-02</p> <p>A. C. Ellsworth, c. M. M. Beddall, r. g. R. L. Knapp, l. g. R. B. Kennedy, r. t. C. G. Flanagan, l. t. J. G. MacNab, r. e. F. A. Speik, l. e. G. H. Garrey, } q. b. L. W. Maxwell, } p. E. E. Perkins, r. h. b. J. M. Sheldon, Capt., } l. h. b. F. O. Horton, } O. E. Atwood, } f. b. B. Strauss, }</p> <p>SUBSTITUTES</p> <p>E. B. Cooke J. J. Laird C. S. Jennison M. S. Dondanville P. M. Conrad</p>	<p>1901-02</p> <p>H. J. Sloan, c. f. W. A. Rooney, s. s. P. A. Sunderland, 1st b. F. E. Harper, c. Capt., W. C. Smith, } l. f. A. W. Place, } R. W. Merrifield, r. f. A. C. Ellsworth, } C. R. Howe, } p. L. Ballenger, } F. W. Patrick, 3d b. G. R. MacClyment, 2d b.</p>	<p>1901-02</p> <p>F. G. Moloney, Capt. C. A. Blair Z. R. Pettet R. L. Henry J. P. Magee M. L. Cahill F. A. Speik H. M. Friend E. W. Miller O. E. Granberg R. H. Wellington L. A. Hopkins E. E. Quantrell W. G. Matthews W. Carey A. W. Place H. Kalamatiano H. D. Warner E. E. Perkins F. M. Horton W. R. Jayne G. Senn F. G. Smith E. P. Gale</p>	<p>1901-02</p> <p>J. W. Bingham, Capt. E. Blackwelder H. Belfield A. P. Nelson C. A. Proctor A. Frake</p>

TABLE D

## WINNERS OF THE "C"

1892-93

Football	Baseball
<p>J. E. Raycroft, Captain H. T. Chace W. B. Conover G. N. Knapp W. R. Smith W. Rapp</p>	<p>C. B. McGillivray W. Rullkoetter H. G. Gale C. W. Allen A. R. E. Wyant R. E. Brennehan</p>

1893-94

Football	Baseball	Track
<p>A. R. E. Wyant, Captain H. G. Gale J. E. Raycroft C. B. Neel H. T. Chace C. K. Bliss W. Rapp F. D. Nichols W. R. Smith</p>	<p>G. R. Sikes A. M. Wyant J. Flint J. La May G. N. Knapp C. W. Allen F. E. Hering W. Rullkoetter</p>	<p>F. D. Nichols, Captain C. S. Pike F. E. Hering J. S. Brown R. W. Webster H. M. Adkinson H. D. Abells H. G. Gale F. Grant</p>

TABLE D—Continued  
1894-95

Football	Baseball	Track
C. W. Allen, Captain C. B. Hershberger J. La May H. T. Chace F. D. Nichols N. Flint E. R. Yundt W. Garrey C. F. Roby G. N. Knapp H. W. Black A. A. Ewing H. G. Gale W. Rullkoetter F. E. Hering A. R. E. Wyant H. I. Coy	H. D. Abells, Captain H. E. Jones H. M. Adkinson F. E. Hering H. T. Clarke F. Grant F. D. Nichols J. S. Brown C. S. Winston C. S. Pike	H. C. Holloway, Captain C. V. Bachellé C. B. Hershberger T. H. Patterson L. Sass E. F. Mandel F. Johnson

1895-96

C. W. Allen, Captain H. G. Gale P. S. Allen F. D. Nichols H. G. Leighton A. A. Ewing C. B. Neel C. F. Roby N. Flint H. W. Dickey O. H. Looney W. Rullkoetter E. V. Williamson H. T. Clarke J. LaMay T. L. Ketman	H. D. Abells, Captain C. S. Winston C. B. Hershberger M. G. Clarke H. E. Jones H. T. Clarke H. M. Adkinson F. D. Nichols C. S. Pike J. S. Brown O. E. Sweet G. H. Sawyer	C. V. Bachellé, Captain T. H. Patterson E. W. Peabody F. F. Steigmeyer H. A. Peterson W. P. Drew S. C. Dickerson C. B. Hershberger E. T. Gundlach E. V. Williamson F. H. Calhoun C. B. Neel
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1896-97

C. F. Roby, Captain C. B. Hershberger W. S. Kennedy W. T. Gardner V. Sincere R. N. Tooker F. D. Nichols R. C. Hamill J. E. Webb T. W. Mortimer P. B. Davis H. I. Coy C. Firth C. B. Neel W. J. Cavanagh M. G. Clarke J. S. Johnson H. T. Clarke E. D. K. Leffingwell H. M. Burchard	H. T. Clarke, Captain H. D. Abells H. M. Adkinson C. B. Hershberger W. T. Gardner J. S. Brown G. H. Sawyer L. T. Vernon F. Merrifield M. G. Clarke J. F. Hagey	T. H. Patterson, Captain G. L. White B. B. Smith C. L. Burroughs F. H. Calhoun C. B. Hershberger C. V. Bachellé
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TABLE D—Continued  
1897-98

Football	Baseball	Track
C. B. Hershberger, Captain W. S. Kennedy K. Speed A. C. Bowdish G. H. Garrey T. H. Patterson M. G. Clarke W. T. Gardner J. E. Webb N. K. Anderson W. J. Cavanagh T. W. Mortimer R. C. Hamill H. Fox	G. H. Sawyer, Captain M. G. Clarke T. B. Smith L. T. Vernon F. Merrifield H. G. Leighton W. T. Gardner E. A. Wriedt W. S. Kennedy C. B. Hershberger H. B. McElree	F. H. Calhoun, Captain W. S. Kennedy C. B. Hershberger W. J. Schmahl N. M. Fair M. H. Pettit E. L. Heath W. A. Moloney G. L. White B. B. Smith C. V. Brown B. G. Leake A. E. Beers W. H. Andrews C. L. Burroughs M. B. Parker J. F. Goodenow A. L. Barton T. W. Mortimer

1898-99

W. S. Kennedy, Captain J. E. Webb M. G. Clarke J. R. Henry W. J. Cavanagh K. Speed B. J. Cassels F. L. Slaker C. J. Rogers T. W. Mortimer O. S. Burnet C. B. Hershberger R. C. Hamill W. J. Schmahl M. A. Cleveland	F. Merrifield, Captain L. T. Vernon F. C. Cleveland T. B. Smith E. G. Allen J. C. Ewing H. G. Leighton W. S. Kennedy D. B. Southard H. G. Bodwell C. B. Hershberger C. G. Jacobs	B. B. Smith, Captain D. A. Trude C. V. Brown W. A. Moloney M. B. Parker C. B. Hershberger H. B. Slack R. C. Hamill F. G. Moloney T. W. Mortimer C. R. Manning W. J. Schmahl L. Byrne J. F. Goodenow P. Ross C. L. Burroughs C. V. Drew
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1899-00

W. S. Kennedy, Captain J. E. Webb J. M. Sheldon A. F. Holste F. S. Slaker H. F. Ahlswede B. J. Cassels J. R. Henry C. W. Ervin W. F. Eldridge K. Speed F. Feil R. C. Hamill C. G. Flanagan	L. T. Vernon, Captain A. W. Place R. Merrifield F. E. Harper J. C. Ewing W. S. Kennedy C. M. Van Patten F. Merrifield T. B. Smith E. O. Wood W. S. Rogers	W. A. Moloney, Captain H. B. Slack C. E. Hulbert G. G. Davis D. R. Richberg J. P. Magee F. G. Moloney T. W. Mortimer H. H. Lord C. V. Brown T. J. Lister D. A. Trude E. D. K. Leffingwell J. F. Goodenow
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TABLE D—Continued  
1900-01

Football	Baseball	Track
K. Speed, Captain J. M. Sheldon W. F. Eldridge A. B. Snider F. Feil E. P. Rich O. E. Atwood H. G. Bodwell H. H. Lord C. G. Flanagan G. H. Garrey C. W. Erwin F. O. Horton J. R. Henry J. G. MacNab W. M. Carey A. W. Place E. E. Perkins Z. R. Pettet	T. B. Smith, Captain C. R. Howe A. W. Place F. E. Harper R. Merrifield C. M. Van Patten H. J. Sloan A. L. Hoover H. C. Smith P. A. Sunderland H. C. Calhoun F. M. Horton	W. A. Moloney, Captain W. M. Carey Z. R. Pettet H. H. Lord R. L. Henry F. M. Horton F. G. Moloney E. E. Perkins A. W. Place L. A. Hopkins

1901-02

J. M. Sheldon, Captain C. G. Flanagan P. M. Conrad F. A. Speik R. L. Knapp L. W. Maxwell E. B. Cooke O. E. Atwood B. Straues M. M. Beddall G. H. Garrey J. J. Laird C. S. Jennison F. O. Horton E. E. Perkins R. B. Kennedy J. G. MacNab A. C. Ellsworth	F. E. Harper, Captain H. J. Sloan C. R. Howe G. R. MacClyment W. E. Smith L. Ballinger A. C. Ellsworth A. W. Place P. A. Sunderland R. Merrifield W. A. Rooney F. W. Patrick	F. G. Moloney, Captain F. M. Horton J. P. Magee C. A. Blair M. L. Cahill E. E. Perkins H. M. Friend W. G. Matthews A. W. Place Z. R. Pettet R. L. Henry L. A. Hopkins E. E. Quantrell F. A. Speik
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LIST OF "C" MEN

Name	Years Won "C" in Baseball	Years Won "C" in Football	Years Won "C" in Track
Abells, H. D.....	1894, 1895, 1896, 1897	.....	.....
Adkinson, H. M.....	1893, 1894, 1895, 1896, 1897	.....	.....
Ahlsweide, H. F.....	.....	1899, 1902	.....
Allen, C. W.....	.....	1892, 1893, 1894, 1895	.....
Allen, E. G.....	1899	.....	.....
Allen, P. S.....	.....	1895	.....
Anderson, N. K.....	.....	1897	.....
Andrews, W. H.....	.....	.....	1898
Atwood, O. E.....	.....	1900, 1901	.....

## LIST OF "C" MEN—Continued

Name	Years Won "C" in Baseball	Years Won "C" in Football	Years Won "C" in Track
Bachellé, C. V.			1894, 1895, 1896, 1897
Ballenger, L.	1902		
Barton, A. L.			1898
Beddall, M. M.		1901	
Beers, A. E.			1898
Behan, W. P.			1894
Bezdek, H. F.		1902	
Black, H. W.		1894	
Blair, C. A.			1902
Bliss, C. H.		1893	
Bliss, G. A.			1894
Bodwell, H. G.	1899	1900	
Bowdish, A. C.		1897	
Brenneman, R. E.		1892	
Brown, C. V.			1898, 1899, 1900
Brown, J. S.	1894, 1895, 1896, 1897		
Burchard, H. M.		1898	
Burnet, O. S.		1898	
Burroughs, C. L.			1897, 1898, 1899
Byrne, L.			1899
Cahill, M. L.			1902
Calhoun, F. H.			1898, 1897, 1898
Calhoun, H. C.	1901		
Carey, W. M.		1900	1901
Cassels, B. J.		1898, 1899	
Catlin, M. S.		1902	
Cavanagh, W. J.		1898, 1897, 1898	
Chace, H. T.		1892, 1893, 1894	
Church, H. V.			1894
Clarke, H. T.	1895, 1896, 1897	1895, 1896	
Clarke, M. G.	1896, 1897, 1898	1896, 1897, 1898	
Cleveland, F. C.	1899		
Cleveland, M. A.		1898	
Conover, W. B.	1893	1892	
Conrad, P. M.		1901	
Cooke, E. B.		1901	
Coy, H. I.		1894, 1898	
Davis, G. G.			1900
Davis, P. B.		1898	
Dickey, H. W.		1895	
Dickerson, S. C.			1896
Drew, C. V.			1899
Drew, W. P.			1898
Eldridge, W. F.		1899, 1900	
Ellsworth, A. C.	1902	1901, 1902	
Erwin, C. W.		1899, 1900	
Ewing, A. A.		1894, 1895	1894
Ewing, J. C.	1899, 1900		
Fair, N. M.			1898
Farr, E. W.		1902	
Feil, F.		1899, 1900	
Firth, C.		1898	
Flanagan, C. G.		1899, 1900, 1901	
Flint, J.		1893	
Flint, N.		1894, 1895	
Fox, H.		1897	
Friend, H. M.			1902
Gale, H. G.	1893, 1894	1892, 1893, 1894, 1895	
Gardner, W. T.	1897, 1898	1898, 1897	
Garrey, G. H.		1897, 1900, 1901	
Garrey, W.		1894	

List of "C" Men—Continued

Name	Years Won "C" in Baseball	Years Won "C" in Football	Years Won "C" in Track
Goodenow, J.			1898, 1899, 1900
Grant, F.	1894, 1895		
Gundlach, E. T.			1896
Hagey, J. F.	1897		
Hamill, R. C.		1896, 1897, 1898, 1899	1899
Harper, F. E.	1900, 1901, 1902		
Heath, E. L.			1898
Henry, J. R.		1898, 1899, 1900	
Henry, R. L.			1901, 1902
Hering, F. E.	1894, 1895	1893, 1894	
Herschberger, C. B.	1896, 1897, 1898, 1899	1894, 1896, 1897, 1898	1895, 1896, 1897, 1898, 1899
Holloway, H. C.			1894, 1895
Holste, A. F.		1899	
Hoover, A. L.	1901		
Hopkins, L. A.			1901, 1902
Horton, F. M.	1901		1901, 1902
Horton, F. O.		1900, 1901	
Howe, C. R.	1901, 1902		
Hulbert, C. E.			1900
Ivion, G. E.		1902	
Jacobs, C. S.	1899		
Jennison, C. S.		1901, 1902	
Johnson, F.			1895
Johnson, J. S.		1896	
Jones, H. E.	1895, 1896		
Kennedy, R. B.		1901	
Kennedy, W. S.	1898, 1899, 1900	1896, 1897, 1898, 1899	1898
Ketman, T. L.		1895	
Knapp, G. N.		1892, 1893, 1894	
Knapp, R. L.		1901	
Koehler, J. P.		1902	
Laird, J. J.		1901	
Lamay, J.		1893, 1894, 1895	
Leake, B. G.			1898
Leffingwell, E. D. K.		1896	1900
Leighton, H. G.	1898, 1899	1895	
Lister, T. J.			1900
Looney, O. H.		1895	
Lord, H. H.		1900	1900, 1901
MacElree, H. B.	1898		
MacNab, J. G.		1900, 1901	
MacClyment, G. R.	1902		
Magee, J. P.			1900, 1902
Mandel, E. F.			1895
Manning, C. R.			1899
Matthews, W. G.			1902
Maxwell, L. W.		1901, 1902	
Maxwell, R. W.		1902	
McGillivray, C. B.	1893	1892	
Merrifield, F.	1897, 1898, 1899, 1900		
Merrifield, R.	1900, 1901, 1902		
Moloney, F. G.			1899, 1900, 1901, 1902
Moloney, W. A.			1896, 1899, 1900, 1901
Mortimer, T. W.		1896, 1897, 1898	1898, 1899, 1900,
Neel, C. B.		1893, 1895, 1896	1896
Nichols, F. D.	1893, 1894, 1895, 1896	1893, 1894, 1895, 1896	
Parker, M. B.			1898, 1899
Patrick, F. W.	1902		
Patterson, T. H.		1897	1895, 1896, 1897
Peabody, E. W.			1896
Perkins, E. E.		1900, 1901, 1902	1901, 1902



## LIST OF "C" MEN—Continued

Name	Years Won "C" in Baseball	Years Won "C" in Football	Years Won "C" in Track
Peterson, H. A.			1896
Pettit, M. H.			1898
Pettet, Z. R.		1900	1901, 1902
Pike, C. S.	1893, 1894, 1895, 1896		
Place, A. W.	1900, 1901, 1902	1900	1901, 1902
Prescott, W. H.	1893		
Quantrell, E. E.			1902
Rapp, W.		1892, 1893	
Raycroft, J. E.		1892, 1893	
Rich, E. P.		1900	
Richberg, D. R.			1900
Roby, C. F.		1894, 1895, 1896	
Rogers, C. J.		1898	
Rogers, W. S.	1900		
Rooney, W. A.	1902		
Ross, P.			1899
Rullkoetter, W.		1892, 1893, 1894	
Sass, L.			1894, 1895
Sawyer, G. H.	1896, 1897, 1898		
Schmahl, W. J.		1898	1898, 1899
Schnur, G. E.		1902	
Sheldon, J. M.		1899, 1900, 1901, 1902	
Sherman, F. C.			1894
Sikes, G. R.		1893	
Sincere, V.		1896	
Slack, H. B.			1899, 1900
Slaker, F. S.		1898, 1899	
Sloan, H. J.	1901, 1902		
Smith, B. B.			1897, 1898, 1899
Smith, H. C.	1901		
Smith, T. B.	1898, 1899, 1900, 1901		
Smith, W. E.	1902		
Smith, W. R.		1892, 1893	
Snider, A. B.		1900	
Southard, D. B.	1899		
Speed, K.		1897, 1898, 1899, 1900	
Speer, H. D.	1893		
Speik, F. A.		1901, 1902	1902
Steigmeyer, F. F.			1896
Strauss, B.		1901	
Sunderland, P. A.	1901, 1902		
Sweet, O. E.	1896		
Terry, S. B.		1902	
Tooker, R. N.		1896	
Tripp, R. C.		1902	
Trude, D. A.			1899, 1900
Van Patten, C. M.	1900, 1901		
Vaughn, L. B.	1893		
Vernon, L. T.	1897, 1898, 1899, 1900		
Webb, J. E.		1896, 1897, 1898, 1899	
Webster, R. W.	1893, 1894		
White, G. L.			1897, 1898
Wightman, S. H.		1902	
Williamson, E. V.		1895	1896
Winston, C. S.	1895, 1896		
Wood, E. O.	1900		
Wriedt, E. A.	1898		
Wyant, A. M.		1893	
Wyant, A. R. E.		1892, 1893, 1894	
Yundt, E. R.		1894	

TABLE E  
RECORDS OF GAMES—FOOTBALL

1892	Autumn Quarter, 1892	Score
October 22.....	Chicago vs. Northwestern University	0-0
November 2.....	Northwestern University	4-6
November 5.....	Lake Forest University	18-18
November 12.....	University of Michigan	10-18
November 15.....	University of Illinois	10-4
November 19.....	Purdue University	0-38
November 24.....	University of Illinois	12-28

Number of games won, 1; lost, 4; tied, 2. Points scored by Chicago, 54; by opponents, 112.

1893	Autumn Quarter, 1893	Score
October 14.....	Chicago vs. Lake Forest University	0-10
October 17.....	Northwestern University	12-6
October 21.....	University of Michigan	10-6
October 25.....	Purdue University	10-20
October 28.....	University of Cincinnati	28-0
November 4.....	Oberlin University	12-33
November 8.....	Northwestern University	6-6
November 12.....	Armour Institute	18-6
November 18.....	Lake Forest University	14-14
November 30.....	University of Michigan	10-28
December 16.....	Northwestern University	22-14
January 1, 1894.....	University of Notre Dame	8-0

Number of games won, 6; lost, 4; tied, 2. Points scored by Chicago, 148; by opponents, 143.

1894	Autumn Quarter, 1894	Score
September 29.....	Chicago vs. Chicago Athletic Association	4-12
October 6.....	Northwestern University	46-0
October 11.....	Rush Medical College	14-6
October 13.....	Beloit College	16-0
October 17.....	Chicago Athletic Association (Second Team)	20-0
October 20.....	University of Wisconsin	0-30
October 24.....	Chicago Athletic Association	0-30
October 27.....	University of Iowa	18-18
October 31.....	Prairie Athletic Club	28-0
November 3.....	Purdue University	6-10
November 7.....	Englewood Y. M. C. A.	4-0
November 10.....	Lake Forest University	28-0
November 21.....	University of Illinois	10-6
November 24.....	Northwestern University	36-0
November 29.....	University of Michigan	4-6
December 25.....	Leland Stanford Junior University	24-4
December 29.....	Leland Stanford Junior University	0-12
January 1, 1895.....	Reliance Athletic Club	0-6
January 3, 1895.....	Salt Lake Y. M. C. A.	52-0

Number of games won, 11; lost, 7; tied, 1. Points scored by Chicago, 308; by opponents, 140.

TABLE E—Continued

1895	Autumn Quarter, 1895	Score
September 21.....	Chicago vs. Eureka College	28-0
September 28.....	Chicago Athletic Association	8-0
October 5.....	Lake Forest University	52-0
October 19.....	Northwestern University	6-22
October 22.....	Armour Institute	24-4
October 26.....	University of Minnesota	6-10
November 2.....	University of Wisconsin	22-12
November 9.....	Western Reserve University	14-0
November 16.....	Northwestern University	6-0
November 28.....	University of Michigan	0-12

Number of games won, 7; lost, 3. Points scored by Chicago, 166; by opponents, 60.

1896	Autumn Quarter, 1896	Score
September 19.....	Chicago vs. Wheaton College	47-0
September 26.....	Eureka College	46-0
October 3.....	Monmouth College	43-0
October 7.....	Hahnemann Medical College	34-0
October 10.....	University of Iowa	6-0
October 14.....	Notre Dame University	18-0
October 17.....	Oberlin University	30-0
October 21.....	Armour Institute	36-0
October 24.....	Northwestern University	6-46
October 31.....	University of Illinois	12-0
November 7.....	University of Wisconsin	0-24
November 10.....	Lake Forest University	0-0
November 14.....	Northwestern University	18-6
November 26.....	University of Michigan	7-6

Number of games won, 11; lost, 2; tied, 1. Points scored by Chicago, 303; by opponents, 82.

1897	Autumn Quarter, 1897	Score
October 2.....	Chicago vs. Monmouth College	41-4
October 9.....	Lake Forest University	71-0
October 12.....	Armour Institute	24-0
October 16.....	Beloit College	39-6
October 23.....	Northwestern University	21-6
October 30.....	University of Illinois	18-12
November 6.....	Notre Dame University	34-5
November 13.....	University of Wisconsin	8-23
November 25.....	University of Michigan	21-12

Number of games won, 8; lost, 1. Points scored by Chicago, 277; by opponents, 68.

TABLE E—Continued

1898	Autumn Quarter, 1898	Score
September 24 .....	Chicago vs. Knox College	22-0
September 28 .....	Rush Medical College	8-0
October 1 .....	Monmouth College	24-0
October 5 .....	Physicians and Surgeons College	22-0
October 8 .....	University of Iowa	38-0
October 15 .....	Beloit College	21-0
October 22 .....	Northwestern University	34-5
October 29 .....	University of Pennsylvania	11-23
November 5 .....	Purdue University	17-0
November 12 .....	University of Wisconsin	6-0
November 24 .....	University of Michigan	11-12

Number of games won, 9; lost, 2. Points scored by Chicago, 214; by opponents, 40.

1899	Autumn Quarter, 1899	Score
September 23 .....	Chicago vs. Knox College	40-0
September 30 .....	Physicians and Surgeons College	12-0
October 4 .....	Notre Dame University	23-6
October 7 .....	University of Iowa	5-5
October 11 .....	Dixon College	29-0
October 14 .....	Cornell University	58-0
October 28 .....	University of Pennsylvania	5-5
November 4 .....	Purdue University	44-0
November 11 .....	Northwestern University	78-0
November 18 .....	Beloit College	35-0
November 25 .....	University of Minnesota	29-0
November 30 .....	Brown University	17-6
December 9 .....	University of Wisconsin	17-0

Number of games won, 12; lost, 0; tied, 2. Points scored by Chicago, 407; by opponents, 28.

1900	Autumn Quarter, 1900	Score
September 23 .....	Chicago vs. Lombard College	24-0
September 26 .....	Monmouth College	29-0
September 29 .....	Knox College	16-0
October 3 .....	Dixon College	23-5
October 6 .....	Purdue University	17-5
October 9 .....	Rush Medical College	40-0
October 13 .....	University of Minnesota	6-6
October 20 .....	Brown University	6-11
October 27 .....	University of Pennsylvania	0-41
November 3 .....	University of Iowa	0-17
November 10 .....	Northwestern University	0-5
November 17 .....	University of Wisconsin	5-39
November 29 .....	University of Michigan	15-6

Number of games won, 7; lost, 5; tied, 1. Points scored by Chicago, 181; by opponents, 135.

TABLE E—Continued

1901	Autumn Quarter, 1901	Score
September 21.....	Chicago vs. Lombard College	38-0
September 28.....	Monmouth College	23-0
October 2.....	Milwaukee Medical College	12-0
October 5.....	Knox College	6 0
October 9.....	Illinois Wesleyan College	22-0
October 12.....	Purdue University	5-5
October 19.....	University of Illinois	0-24
October 28.....	University of Pennsylvania	0-11
November 2.....	Beloit College	17-17
November 9.....	Northwestern University	5-6
November 16.....	University of Michigan	0-22
November 28.....	University of Wisconsin	0-35

Number of games won, 5; lost, 5; tied, 2. Points scored by Chicago, 128; by opponents, 120.

TABLE F  
BASEBALL

1898	Games Played	Score
May 8.....	Chicago vs. Denison University	7-11
May 13.....	University of Wisconsin	6-10
May 16.....	University of Iowa	6-2
May 17.....	Rush Medical College	25-2
May 18.....	Electrics	19-2
May 20.....	Rivals	5-10
May 22.....	University of Illinois	2-3
May 24.....	Lake Forest University	14-8
May 27.....	University of Illinois	6-0
May 30.....	Elgin (morning)	18-6
May 30.....	Elgin (afternoon)	9-8
June 2.....	University of Wisconsin	11-5
June 9.....	St. Ignatius College	15-12
June 14.....	Electrics	6-1
June 24.....	University of Virginia	8-3

Number of games won, 11; lost, 4.

1894	Games Played	Score
April 21.....	Chicago vs. Rush Medical College	18-9
April 28.....	Rush Medical College	1-16
May 5.....	University of Wisconsin	16-6
May 9.....	Northwestern University	2-3
May 7.....	Armour Institute	14-4
May 12.....	University of Illinois	9-10
May 14.....	Englewood Y. M. C. A.	15-4
May 18.....	University of Illinois	17-18
May 20.....	Englewood Y. M. C. A.	14-6
May 23.....	Northwestern University	4-6
May 24.....	Englewood Commercials	15-4
May 26.....	University of Iowa	10-4
May 30.....	University of Michigan	2-3
June 2.....	Englewood Commercials	18-5
June 7.....	Chicago Athletic Association	24-19
June 13.....	University of Minnesota	4-2
June 14.....	Northwestern University	1-8
June 16.....	University of Wisconsin	2-12

Number of games won, 9; lost, 9.

TABLE F—Continued

1895	Games Played	Score
April 20.....	Chicago vs. Northwestern University	23-13
April 22.....	Rush Medical College	18-9
April 24.....	Rush Medical College	8-6
April 29.....	Northwestern University	11-6
May 1.....	Lake Forest University	10-4
May 3.....	Chicago (National League)	2-5
May 4.....	University of Wisconsin	8-2
May 6.....	Rush Medical College	6-4
May 7.....	Northwestern University	8-9
May 11.....	University of Iowa	40-6
May 14.....	Northwestern University	21-10
May 15.....	Grinnell College	18-4
May 25.....	University of Michigan	13-1
May 30.....	Omaha	11-6
May 31.....	Omaha	11-12
June 1.....	University of Wisconsin	5-16
June 5.....	Lake Forest University	28-5
June 10.....	Northwestern University	26-1
June 11.....	St. Johns Military Academy	27-3 ?
June 15.....	University of Michigan	4-6

Number of games won, 16; lost, 5.

1896	Games Played	Score
April 11.....	Chicago vs. University of Illinois	9-6
April 14.....	Illinois Cycling Club	18-6
April 15.....	City League	19-3
April 16.....	Lake Forest University	27-3
April 19.....	Whitings	4-5
April 21.....	Rush Medical College	8-5
April 24.....	Blackburn University	12-9
April 25.....	Whitings	6-8
April 29.....	University of Illinois	10-4
May 1.....	Chicago (National League)	2-7
May 2.....	Northwestern University	28-5
May 4.....	Illinois Wesleyan	22-3
May 7.....	Rush Medical College	8-4
May 9.....	University of Michigan	7-3
May 11.....	Detroit League	3-15
May 13.....	University of Michigan	0-6
May 16.....	University of Indiana	14-9
May 18.....	Grinnell College	9-1
May 20.....	University of Michigan	2-9
May 22.....	Cornell University	3-2
May 23.....	Orange Athletic Club	3-6
May 25.....	University of Pennsylvania	15-10
May 27.....	Yale University	5-31
May 28.....	Harvard University	7-10
June 4.....	University of Michigan	7-3
June 11.....	University of Michigan	10-5
June 13.....	University of Wisconsin	9-5
June 27.....	Brown University	1-0
June 30.....	Brown University	3-13
July 2.....	Brown University	5-6

Number of games won, 18; lost, 11.

TABLE F—Continued

1897	Games Played	Score
April 9.....	Chicago vs. Edgars	4-1
April 15.....	Edgars	18-5
April 17.....	University of Illinois	5-9
April 20.....	Cranes	12-4
April 24.....	Lake Forest University	11-3
April 26.....	Rush Medical College	6-5
April 30.....	Alumni	14-8
May 1.....	University of Illinois	9-5
May 4.....	University of Wisconsin	5-0
May 5.....	Beloit College	11-12
May 8.....	University of Michigan	5-3
May 12.....	University of Michigan	4-1
May 15.....	Notre Dame University	10-2
May 18.....	Oak Park Club	12-6
May 20.....	University of Nebraska	4-2
May 24.....	University of Iowa	10-6
May 29.....	University of Michigan	3-5
May 31.....	Oak Park Club	24-13
June 5.....	University of Wisconsin	18-2
June 7.....	University of Michigan	24-3
June 12.....	Oak Park Club	6-16

Number of games won, 17; lost, 4.

1898	Games Played	Score
April 16.....	Chicago vs. Beloit College	4-3
April 20.....	Northwestern University	10-3
April 23.....	Whitings	1-2
April 25.....	Rush Medical College	22-4
May 3.....	University of Michigan	4-5
May 7.....	Northwestern University	6-1
May 11.....	University of Michigan	4-2
May 14.....	University of Illinois	12-9
May 18.....	Northwestern University	8-1
May 19.....	University of Michigan	2-4
May 21.....	Beloit College	1-4
May 22.....	University of Illinois	6-5
May 26.....	University of Illinois	13-4
May 28.....	University of Michigan	1-4
May 31.....	Notre Dame University	9-12
June 4.....	University of Illinois	2-1
June 8.....	Lake Forest University	7-1
June 9.....	Graduates	5-12
June 17.....	Graduates	15-13

Number of games won, 12; lost, 7.

1899	Games Played	Score
April 22.....	Chicago vs. University of Illinois	2-4
April 24.....	Rush Medical College	13-1
April 25.....	Lake Forest University	11-5
April 26.....	University of Wisconsin	8-2
April 29.....	Northwestern University	23-2
May 3.....	University of Illinois	9-11

TABLE F—Continued

1899	Games Played	Score
May 4	University of Indiana	13-6
May 6	Hamilton Club	21-12
May 9	University of Wisconsin	9-6
May 10	Purdue University	1-10
May 13	Northwestern University	6-4
May 15	Lake Forest University	7-6
May 18	University of Minnesota	12-0
May 20	Notre Dame University	2-7
May 24	University of Illinois	9-3
May 25	Northwestern University	11-0
May 27	Ravenswood Athletic Club	4-8
May 31	Oberlin College	5-2
June 2	Naval Reserves	4-2
June 6	University of Illinois	2-9
June 7	Northwestern University	1-2
June 10	Beloit College	4-3
June 17	University of Pennsylvania	9-3
June 19	University of Pennsylvania	6-3
June 21	University of Pennsylvania	1-7
June 24	Hamilton Club	7-4

Number of games won, 18; lost, 9.

1900	Games Played	Score
March 29	Chicago vs. Vanderbilt University	18-3
March 30	Vanderbilt University	11-8
March 31	Vanderbilt University	22-7
April 10	Northwestern University	10-4
April 14	Marquettes	12-3
April 17	Northwestern University	6-7
April 18	Chicago American League	2-10
April 19	Chicago American League	4-18
April 21	University of Illinois	1-11
April 24	Rush Medical College	10-7
April 26	Lake Forest University	10-3
April 28	Northwestern University	11-2
May 3	University of Kansas	13-7
May 5	University of Illinois	1-4
May 9	University of Michigan	9-6
May 12	University of Michigan	11-18
May 16	University of Michigan	11-11
May 17	Purdue University	6-2
May 19	Notre Dame University	2-7
May 22	University of Wisconsin	5-9
May 23	University of Illinois	4-9
May 26	University of Illinois	3-10
May 29	University of Wisconsin	5-2
May 31	Northwestern University	12-7
June 1	Beloit College	4-3
June 2	University of Michigan	2-3
June 4	Cornell University	4-5
June 5	University of Pennsylvania	10-6
June 7	Georgetown University	8-10
June 9	Georgetown University	3-6
June 12	University of Minnesota	4-1
June 16	University of Pennsylvania	7-10
June 18	University of Pennsylvania	6-12
June 19	University of Pennsylvania	11-2

Number of games won, 17; lost, 16; tied, 1.



TABLE F—Continued

1901	Games Played	Score
April 10.....	Chicago vs. Wheaton College	36-3
April 13.....	Lake Forest University	9-6
April 16.....	University of Michigan	7-6
April 17.....	Chicago American League	0-14
April 18.....	Chicago American League	8-12
April 20.....	Northwestern University	6-2
April 24.....	Beloit College	9-8
April 27.....	Northwestern University	4-3
May 1.....	University of Illinois	3-15
May 4.....	Notre Dame University	3-11
May 7.....	University of Minnesota	4-6
May 8.....	University of Illinois	6-17
May 11.....	University of Wisconsin	5-6
May 15.....	University of Michigan	6-10
May 17.....	University of Illinois	7-8
May 18.....	Purdue University	3-7
May 22.....	University of Illinois	2-5
May 25.....	University of Wisconsin	9-8
May 28.....	Northwestern University	4-2
May 29.....	University of Iowa	9-3
June 1.....	Oberlin University	2-3
June 3.....	Brown University	4-10
June 4.....	Harvard University	1-7
June 5.....	Holy Cross College	0-12
June 6.....	Syracuse University	2-12
June 7.....	Oberlin College	4-6
June 8.....	University of Michigan	3-6
June 14.....	University of Wisconsin	4-1
June 15.....	Northwestern University	14-7
June 17.....	University of Michigan	3-5

Number of games won, 11; lost, 19.

1902	Games Played	Score
April 5.....	Chicago vs. Physicians and Surgeons	12-3
April 8.....	Morgan Park Academy	5-3
April 10.....	St. Ignatius College	8-0
April 11.....	South Side Academy	7-0
April 12.....	Culver Military Academy	17-5
April 14.....	University of Michigan	14-7
April 16.....	Lake Forest College	6-2
April 19.....	Northwestern University	3-2
April 23.....	University of Wisconsin	7-8
April 26.....	University of Illinois	6-5
April 30.....	University of Illinois	1-10
May 3.....	University of Illinois	3-2
May 7.....	University of Illinois	3-7
May 14.....	University of Indiana	9-1
May 16.....	Purdue University	18-5
May 17.....	University of Illinois	1-15
May 21.....	Northwestern University	2-4
May 22.....	St. Albans Academy	11-4
May 23.....	Oberlin College	8-1
May 24.....	University of Michigan	8-4
May 28.....	University of Wisconsin	4-5
May 29.....	Oberlin College	9-6
June 4.....	Northwestern University	0-1
June 7.....	University of Michigan	8-7
June 14.....	Northwestern University	11-2
June 16.....	Beloit College	3-5

Number of games won, 17; lost, 8.

TABLE G  
TRACK MEETS AND SCORES FOR YEARS 1894-1902

Date	Meet	Score
<b>1894:</b>		
May 25.....	Chicago, Northwestern, and Lake Forest	72-45-36
June 2.....	Western Intercollegiate	Chicago won fourth place with 10 points
<b>1895:</b>		
March 16...	Lake Forest, Chicago, and Northwestern	34-31-13
May 18.....	Chicago, Lake Forest, and Northwestern	50-39-39
June 1.....	Western Intercollegiate	Chicago won fifth place with 11 points
<b>1896:</b>		
March 1....	Chicago vs. Lake Forest	56-33
May 30.....	Chicago, Lake Forest, and Northwestern	63-36-44
June 6.....	Western Intercollegiate	Chicago won third place with 16 points
June 13....	Chicago vs. Michigan	50-67
<b>1897:</b>		
May 11.....	Chicago vs. Illinois	77-43
May 29.....	Chicago vs. Michigan	46-94
June 5.....	Western Intercollegiate	Chicago won fourth place with 12 points
<b>1898:</b>		
February 19.	Chicago vs. Northwestern	39-47
March 6....	Invitation Meet at Tattersalls	Chicago won first place with 42 points
April 30....	1-Mile Relay Race at Philadelphia	Chicago won
May 7.....	Chicago vs. Northwestern	54-71
May 14.....	Chicago vs. Illinois	74-54
June 4.....	Western Collegiate Athletic Meet	Chicago won second place with 41 points
June 11....	Chicago vs. Michigan	72-72
<b>1899:</b>		
January 23..	{ Annual Championship Meet of A. A. U. at Milwaukee	{ (1) Second place with 24½ points { (2) Relay Race won by Chicago
February 19.	Chicago vs. 1st Regiment Athletic Club	62-44
March 11....	Triangular Indoor Meet at Notre Dame	Notre Dame, 37; Chicago, 28; Illinois, 28
April 29....	1-Mile Relay Race at Philadelphia	Chicago won third place
May 13.....	Chicago vs. Northwestern	106-38
May 20....	Chicago vs. Notre Dame	81½-62½
May 27....	Chicago vs. Illinois	67-61
June 2.....	Western Intercollegiate	Chicago won first place with 46 points
<b>1900:</b>		
March 3....	A. A. U. Meet at Milwaukee	Chicago, 23 points
March 10....	Triangular Meet at Notre Dame	Chicago, 48; Notre Dame, 33; Illinois, 17
April 28....	1-Mile Relay Race at Philadelphia	Chicago won
May 12.....	Chicago vs. Illinois	90-38
May 26....	Chicago vs. Wisconsin	71-57
June 2.....	Western Intercollegiate	Chicago won second place with 30½ points
July 9.....	Paris Games	
<b>1901:</b>		
February 20.	Chicago vs. Michigan	30-42
March 2....	A. A. U. Meet at Milwaukee	Chicago won third place with 15 points
March 9....	Triangular Meet at Notre Dame	Notre Dame, 43; Chicago, 37; Illinois, 28
March 16....	Chicago vs. Michigan	17-55
April 27....	1-Mile Relay Race at Philadelphia	Chicago second
May 18.....	Chicago vs. Michigan	52¾-73¾
May 25....	Chicago vs. Wisconsin	53-59
June 2.....	Conference Meet	Chicago won third place with 17 points
<b>1902:</b>		
February 15.	Chicago vs. Wisconsin	33-47
March 1....	A. A. U. Meet at Milwaukee	Chicago won with 44 points
March 15....	Chicago vs. Wisconsin	25½-46½
April 26....	{ Relay Races at { Special events Philadelphia { Team of three men	One first; three seconds
May 3.....	Chicago vs. Illinois	65-61
May 10....	Chicago vs. Northwestern	77-35
May 17....	Chicago vs. Michigan	65-61
May 31....	Conference Meet	Chicago won second place with 25 points
June 7.....	Chicago vs. California	8-5

TABLE H  
RECORD OF THE ONE MILE RELAY TEAMS AT THE PENNSYLVANIA RELAY GAMES

Names	Time	Names	Time
<i>1898:</i>		<i>1900:</i>	
C. L. Burroughs.....	.53	H. B. Slack.....	.50½
N. M. Fair.....	.51½	H. H. Lord.....	.51½
W. A. Moloney.....	.51½	F. G. Moloney.....	.52
G. L. White.....	.51	W. A. Moloney.....	.49½
Chicago first, Pennsylvania second, Michigan third. Time 3:27		Chicago first, Pennsylvania second, Georgetown third. Time 3:23½.	
<i>1899:</i>		<i>1901:</i>	
D. P. Trude.....	....	Z. R. Pettet.....	.54
H. B. Slack.....	....	F. G. Moloney.....	.53½
G. L. White.....	....	H. H. Lord.....	.51½
W. A. Moloney.....	....	W. A. Moloney.....	.52½
Yale first, Pennsylvania second, Chicago third. Time 3:24½.		Yale first, Chicago second, Syracuse third, Penn- sylvania fourth. Time 3:27½.	

TABLE I  
TRACK AND FIELD ATHLETICS—RECORDS MADE IN CONTEST

Event	Winner	Record	Date
<i>1894:</i>			
100 yards dash.....	E. F. Mandel	10½ sec.	June 2
220 yards dash.....	J. LaMay	23½ sec.	May 25
880 yards run.....	F. C. Sherman	2 min. 9½ sec.	May 25
1 mile run.....	H. C. Holloway	4 min. 47½ sec.	May 25
120 yards hurdles.....	L. Sass	19½ sec.	May 25
1 mile bicycle.....	S. Barrett	2 min. 39½ sec.	June 2
Shot put.....	A. M. Wyant	36 ft. 3 in.	May 25
Hammer throw.....	A. M. Wyant	78 ft. 9½ in.	May 25
Running high jump.....	J. L. Laning	5 ft. 4 in.	.....
Running broad jump.....	H. V. Church	21 ft.	June 2
Pole vault.....	A. A. Ewing	10 ft.	June 2
<i>1895:</i>			
35 yards dash.....	T. H. Patterson	4½ sec.	May 10
100 yards dash.....	T. H. Patterson	10½ sec.	May 10
220 yards dash.....	T. H. Patterson	23 sec.	May 18
440 yards run.....	H. Holloway	52½ sec.	May 10
880 yards run.....	E. W. Peabody	2 min. 13½ sec.	April 13
1 mile run.....	A. C. Johnson	5 min. 13 sec.	May 10
120 yards hurdles.....	L. Sass	18½ sec.	May 10
220 yards hurdles.....	C. B. Herschberger	30½ sec.	May 10
1 mile walk.....	F. Johnson	7 min. 55 sec.	May 10
1 mile bicycle.....	C. V. Bachellé	2 min. 32½ sec.	May 10
Shot put.....	C. B. Herschberger	33 ft. 9 in.	April 13
Hammer throw.....	T. Neff	33 ft. 9 in.	May 18
Running high jump.....	C. B. Herschberger	73 ft. 7 in.	May 10
Running broad jump.....	F. F. Steigmeyer	5 ft. 5 in.	May 13
Pole vault.....	C. B. Neel	20 ft. 2½ in.	May 18
	C. B. Herschberger	10 ft. 6 in.	June 1
<i>1896:</i>			
35 yards dash.....	C. L. Burroughs	4½ sec.	February 29
100 yards dash.....	P. G. Woolley	10½ sec.	June 13
220 yards dash.....	T. H. Patterson	22½ sec.	May 30
	C. L. Burroughs		

TABLE I—Continued

Event	Winner	Record	Date
<i>1896:</i>			
440 yards run .....	T. H. Patterson	54½ sec.	May 4
880 yards run .....	F. H. Calhoun	2 min. 8 sec.	May 29
1 mile run .....	H. A. Peterson	4 min. 52½ sec.	June 13
120 yards hurdles .....	F. F. Steigmeyer	17½ sec.	June 13
220 yards hurdles .....	C. B. Herschberger	28½ sec.	May 30
1 mile walk .....	E. T. Gundlach	7 min. 25½ sec.	June 13
1 mile bicycle .....	E. W. Peabody	2 min. 29 sec.	May 4
Shot put .....	E. V. Williamson	36 ft. 9 in.	May 4
Hammer throw .....	C. B. Herschberger	102 ft. 3 in.	June 13
Running high jump .....	F. F. Steigmeyer	5 ft. 4¾ in.	March 1
Running broad jump .....	C. B. Neel	21 ft. 2 in.	June 13
Pole vault .....	C. B. Herschberger	10 ft.	June 13
<i>1897:</i>			
35 yards dash .....	C. L. Burroughs	4½ sec.	March 13
100 yards dash .....	C. L. Burroughs	10 sec.	June 11
220 yards dash .....	C. L. Burroughs	23½ sec.	May 11
440 yards run .....	G. L. White	52½ sec.	May 29
880 yards run .....	G. L. White	2 min. 7 sec.	May 29
1 mile run (trial for record) .....	B. B. Smith	4 min. 46½ sec.	June 11
120 yards hurdles .....	C. B. Herschberger	17½ sec.	June 11
220 yards hurdles .....	F. H. Calhoun	28½ sec.	May 11
¼ mile bicycle (paced) .....	C. V. Bachellé	1 min. 9½ sec.	June 11
Shot put .....	C. B. Herschberger	35 ft. 5 in.	May 11
Hammer throw .....	C. B. Herschberger	86 ft. 1 in.	May 29
Running high jump .....	F. F. Steigmeyer	5 ft. 4 in.	March 13
Running broad jump .....	C. B. Herschberger	20 ft. 3 in.	May 11
Pole vault .....	C. B. Herschberger	10 ft. 7 in.	February 20
<i>1898:</i>			
35 yards dash .....	C. L. Burroughs	4½ sec.	February 19
100 yards dash .....	C. L. Burroughs	10½ sec.	June 4
220 yards dash .....	C. L. Burroughs	22 sec.	June 4
440 yards run .....	W. A. Moloney	51½ sec.	May 14
880 yards run .....	W. A. Moloney	2 min. ½ sec.	June 11
1 mile run .....	B. B. Smith	4 min. 33 sec.	June 4
120 yards hurdles .....	C. B. Herschberger	17 sec.	May 14
220 yards hurdles .....	W. H. Andrews	28½ sec.	May 11
1 mile walk .....	M. B. Parker	8 min. 5½ sec.	May 7
¼ mile bicycle .....	C. V. Brown	34 sec.	June 4
1 mile bicycle (paced) .....	C. V. Brown	2 min. 8 sec.	May 14
Shot put .....	W. S. Kennedy	35 ft. 6 in.	May 7
Hammer throw .....	T. W. Mortimer	122 ft. 7 in.	June 4
Running high jump .....	L. Byrne	5 ft. 6½ in.	June 4
Running broad jump .....	W. J. Schmahl	19 ft. 11½ in.	May 14
Pole vault .....	W. A. Moloney	10 ft. 6½ in.	March 5
Discus throw .....	C. B. Herschberger	96 ft. 9 in.	June 4
<i>1899:</i>			
35 yards dash .....	C. L. Burroughs	4½ sec.	May 1
50 yards dash .....	C. L. Burroughs	5½ sec.	May 1
75 yards dash .....	C. L. Burroughs	7½ sec.	January 28
100 yards dash .....	C. L. Burroughs	10 sec.	June 3
220 yards dash .....	C. L. Burroughs	22½ sec.	May 20
440 yards run .....	W. A. Moloney	49½ sec.	April 29
440 yards run, straightaway .....	H. B. Slack	49½ sec.	April 20
880 yards run .....	W. A. Moloney	2 min. 4½ sec.	May 20
1 mile run .....	B. B. Smith	4 min. 39 sec.	March 11
75 yards hurdles .....	C. R. Manning	11½ sec.	January 28
120 yards hurdles .....	F. G. Moloney	16½ sec.	May 27
220 yards hurdles .....	D. P. Trude	26½ sec.	May 20

TABLE I—Continued

Event	Winner	Record	Date
<b>1899:</b>			
1 mile walk .....	M. B. Parker	7 min. 14½ sec.	May 13
¼ mile bicycle .....	C. V. Brown	34 sec.	May 13
1 mile bicycle .....	C. V. Brown	2 min. 39 sec.	May 13
Shot put .....	W. J. Schmahl	36 ft. 5 in.	May 27
Hammer throw .....	T. W. Mortimer	121 ft. 2 in.	June 3
Running high jump.....	L. Byrne	5 ft. 7 in.	May 13
	W. J. Schmahl		May 20
Running broad jump.....	H. Street	21 ft. 6 in.	May 27
Pole vault .....	C. B. Herschberger	10 ft. 8 in.	June 3
Discus throw .....	W. J. Schmahl	108 ft. 8½ in.	May 27
<b>1900:</b>			
100 yards dash.....	E. D. K. Leffingwell	10 sec.	May 12
220 yards dash.....	H. B. Slack	22 sec.	May 12
440 yards run .....	W. A. Moloney	49½ sec.	April 28
880 yards run .....	W. A. Moloney	2 min. 2 sec.	June 2
1 mile run .....	C. E. Hulbert	4 min. 33½ sec.	May 26
75 yards hurdles .....	F. G. Moloney	10½ sec.	March 3
120 yards hurdles .....	F. G. Moloney	16½ sec.	June 2
220 yards hurdles .....	F. G. Moloney	25 sec.	May 12
¼ mile bicycle .....	C. V. Brown	33 sec.	May 12
½ mile bicycle .....	C. V. Brown	45½ sec.	May 26
1 mile bicycle.....	J. F. Goodenow	2 min. 19 sec.	May 12
Shot put.....	T. J. Lister	39 ft. 2½ in.	May 26
Hammer throw .....	T. W. Mortimer	130 ft. 7 in.	May 26
High jump.....	C. Smith	5 ft. 8½ in.	February 10
Broad jump.....	Z. R. Pettet	21 ft. 7½ in.	March 10
Pole vault .....	J. P. Magee	10 ft. 7 in.	May 25
Discus throw .....	E. D. K. Leffingwell	103 ft. 4½ in.	May 12
<b>1901:</b>			
100 yards dash.....	W. A. Moloney	10 sec.	May 25
220 yards dash.....	W. A. Moloney	22½ sec.	May 25
440 yards run.....	W. A. Moloney	50½ sec.	June 4
880 yards run.....	W. A. Moloney	1 min. 50½ sec.	May 18
1 mile run .....	E. Bliss	4 min. 47½ sec.	January 31
2 miles run .....	R. L. Henry	10 min. 33 sec.	May 18
75 yards high hurdles.....	F. G. Moloney	10½ sec.	March 2
120 yards high hurdles.....	F. G. Moloney	15½ sec.	October 5
220 yards low hurdles.....	F. G. Moloney	24½ sec.	October 5
Shot put .....	E. E. Perkins	38 ft. 8 in.	May 25
Hammer throw .....	W. Carey	140 ft.	May 25
Running high jump.....	E. Ferriss	5 ft. 7 in.	February 20
Running broad jump.....	L. A. Hopkins	22 ft. 8½ in.	May 18
Pole vault .....	C. F. Kennedy	10 ft.	February 2
Discus throw .....	A. W. Place	110 ft.	May 25
<b>1902:</b>			
100 yards dash.....	C. A. Blair	9½ sec.	May 9
220 yards dash.....	C. A. Blair	22 sec. { 12¾ yds., around the curve }	June 7
	F. G. Moloney		May 17
120 yards hurdles.....	F. G. Moloney	15½ sec.	May 31
220 yards hurdles.....	F. G. Moloney	24½ sec.	May 3
440 yards run.....	Z. R. Pettet	51½ sec.	May 3
880 yards run .....	M. L. Cahill	2 min. 1 sec.	May 3
1 mile run .....	W. G. Matthews	4 min. 41 sec.	May 3
2 miles run .....	R. L. Henry	10 min. 14½ sec.	May 3
Running high jump.....	E. E. Quantrell	5 ft. 9 in.	May 31
Running broad jump.....	H. Friend	22 ft. 8 in.	May 17
Pole vault .....	J. P. Magee	11 ft. 9 in.	May 3
Discus throw .....	A. W. Place	112 ft. 8½ in.	May 31
Hammer throw .....	F. A. Speik	120 ft. 1 in.	June 21
Shot put.....	F. A. Speik	40 ft. 2½ in.	June 7

TABLE J  
FINANCIAL STATEMENT OF ATHLETICS, 1892-1902

	Receipts	Expenditures	Gain	Loss
<i>1892-93 (July 1-June 30):</i>				
Football.....	\$723.92	\$633.33	\$90.15	.....
Baseball.....	451.22	689.15	.....	\$237.93
Totals.....	\$1,175.14	\$1,322.48	.....	.....
<i>1893-94:</i>				
Football.....	\$2,792.20	\$2,421.99	\$370.21	.....
Baseball.....	1,011.82	894.13	117.69	.....
Athletic field.....	885.50	1,311.15	.....	\$445.65
Totals.....	\$4,689.52	\$4,627.27	.....	.....
<i>1894-95:</i>				
Football.....	\$8,761.32	\$7,557.88	\$1,203.44	.....
Baseball.....	2,460.00	1,834.25	625.75	.....
Athletic field.....	.....	821.96	.....	\$821.96
Totals.....	\$11,221.32	\$10,214.09	.....	.....
<i>1895-96:</i>				
Football.....	\$10,736.07	\$8,846.47	\$1,889.60	.....
Baseball.....	5,341.51	5,271.39	70.12	.....
Athletic field.....	652.24	841.00	.....	\$188.76
Totals.....	\$16,729.82	\$14,958.86	.....	.....
<i>1896-97:</i>				
Football.....	\$15,497.31	\$13,734.78	\$1,762.53	.....
Baseball.....	2,690.19	2,599.88	90.31	.....
Athletic field.....	461.00	777.95	.....	\$316.95
Track and field sports.....	649.23	879.00	.....	229.77
Totals.....	\$19,297.73	\$17,991.61	.....	.....
<i>1897-98:</i>				
Football.....	\$21,965.84	\$18,161.90	\$3,803.94	.....
Baseball.....	2,252.39	3,886.00	.....	\$1,633.61
Athletic field.....	49.00	5,458.49	.....	5,409.49
Track and field sports.....	1,498.40	3,455.83	.....	1,957.43
Tennis.....	23.00	241.60	.....	218.60
Totals.....	\$25,788.63	\$31,203.82	.....	.....
<i>1898-99:</i>				
Football.....	\$30,324.76	\$21,783.46	\$8,541.30	.....
Baseball.....	2,369.30	4,165.74	.....	\$1,796.44
Track and field sports.....	852.26	2,253.61	.....	1,401.35
Tennis.....	.....	129.55	.....	129.55
Athletic field.....	1,890.70	6,499.00	.....	4,608.30
Gymnasium and miscellaneous.....	201.92	1,033.79	.....	831.87
Totals.....	\$35,638.94	\$35,865.15	.....	.....
<i>1899-1900:</i>				
Football.....	\$38,124.95	\$27,109.14	\$11,015.81	.....
Baseball.....	3,253.18	5,731.86	.....	\$2,478.68
Track and field sports.....	610.01	2,245.07	.....	1,635.06
Tennis.....	.....	154.87	.....	154.87
Athletic field.....	182.75	5,210.67	.....	5,027.92
Gymnasium and miscellaneous.....	78.40	2,001.40	.....	1,923.00
Totals.....	\$42,249.29	\$42,453.01	.....	.....
<i>1900-01:</i>				
Football.....	\$35,633.18	\$27,756.72	\$7,876.46	.....
Baseball.....	3,062.24	4,667.48	.....	\$1,585.24
Track and field sports.....	1,295.12	5,118.05	.....	3,822.93
Tennis.....	.....	169.17	.....	169.17
Athletic field.....	159.55	2,197.46	.....	2,037.91
Gymnasium and miscellaneous.....	398.78	848.85	.....	450.07
Totals.....	\$40,568.87	\$40,757.73	.....	.....

TABLE J—Continued

	Receipts	Expenditures	Gain	Loss
<i>1901-02:</i>				
Football.....	\$27,347.56	\$22,678.82	\$4,668.74	.....
Baseball.....	2,188.89	3,208.46	.....	\$1,019.57
Track and field sports.....	1,633.04	3,584.16	.....	1,951.12
Tennis.....	30.00	333.14	.....	303.14
Athletic field.....	675.56	2,191.93	.....	1,516.37
Gymnasium and miscellaneous.....	234.60	402.37	.....	167.77
Totals.....	\$32,109.65	\$32,398.88	.....	.....

Respectfully submitted,  
AMOS ALONZO STAGG, *Director.*

### WOMEN'S DEPARTMENT

*To the President of the University:*

SIR: I herewith submit my report upon the condition of the Department of Physical Culture and Athletics for Women, for the ten years ending June 30, 1902.

The report of the work for the first five years is incomplete, since the records cannot be found and it is impossible to give an accurate summary without them.

#### THE GYMNASIUM

From October, 1892, to June, 1901, the north end of the temporary building used for the men's gymnasium was assigned the women. From June, 1901, to October, 1901, the activity was restricted to an office in a frame building on Ellis avenue. From October, 1901, to the present time the Sunday-school room of the Hyde Park Baptist Church has been used. In the autumn of 1898 there were enrolled on the gymnasium list 315 students; in 1899, 360; in 1900, 459; in 1901, 495; in 1902, 525.

#### ATHLETIC FIELDS

In addition to the gymnasium, the Department has the use of two fields. In October, 1901, permission was given to use a part of the open field on Woodlawn avenue and Fifty-ninth street for a hockey field, where this sport has since been enthusiastically participated in. In April, 1902, the northeast corner of Marshall Field, 300×175 feet, was inclosed, affording a fine opportunity for athletic training and contests. In May, 1902, this field was formally opened by the first of a series of basket-ball games between the Junior and Senior College teams.

#### STAFF

The following table shows the teaching staff of the Department, together with the dates of service:

TABLE A

RANK	YEARS					
	1892-1894	1894-1898	1898-1899	1899-1900	1900-1901	1901-1902
Instructor.....	.....	Kate S. Anderson	Gertrude Dudley	Gertrude Dudley	Gertrude Dudley	Gertrude Dudley
Assistants.....	Dr. Alice Foster	Bertha Steig	Bertha Steig Ida M. Furniss	Ida Furniss Dorcas Merriman	Ida Furniss Dorcas Merriman	Ida Furniss Clara Comstock
Examining Physician.....	Dr. C. P. Small	Dr. C. P. Small	Dr. C. P. Small	Dr. C. P. Small	Dr. C. P. Small	Dr. C. P. Small
Coaches.....	.....	.....	Frances A. Kellor	Frances A. Kellor	Frances A. Kellor	Frances A. Kellor

INSTRUCTION

Instruction covers three well-defined branches — gymnastic, corrective, and athletic. The gymnastic work is made the basis of all athletic work and must be continued, even when a student is a member of an athletic team. The corrective work occupies a place of growing importance, and has become a well-recognized feature of the Department. This is individual, not class work, and is based upon special physical needs of the student which are ascertained by careful physical examinations. In accordance with this system of work, the following are the courses of instruction offered:

TABLE B

	Autumn, 1898	Winter, 1899	Spring, 1899	Summer, 1899
Gymnastics..	General work Simple apparatus Pulleys Corrective work	General work Simple and advanced apparatus work Pulley weights Corrective work Fencing	General work Apparatus work Corrective work Fencing	General work
Athletics....	Basket-ball	Basket-ball	Basket-ball Tennis Walking Wheeling Rowing	Basket-ball Tennis Rowing Golf

	Autumn, 1899	Winter, 1900	Spring, 1900	Summer, 1900
Gymnastics..	General work Apparatus work Pulley weights Corrective work	General work Simple and advanced apparatus work Pulley weights Corrective work Fencing	General work Apparatus work Corrective work Fancy dancing	General work
Athletics....	Rowing Golf Basket-ball	Basket-ball	Basket-ball Tennis Golf Rowing	Tennis Golf Rowing Swimming

	Autumn, 1900	Winter, 1901	Spring, 1901	Summer, 1901
Gymnastics..	General work Simple apparatus work Pulley weights Corrective work	General work Simple and advanced apparatus work Pulley weights Corrective work Fancy dancing Fencing	General work Simple and advanced apparatus work Corrective work Fancy dancing	.....
Athletics....	Basket-ball	Basket-ball Indoor baseball	Basket-ball Indoor baseball Rowing Tennis Golf	Wheeling Walking Rowing Tennis Golf Swimming



TABLE B—Continued

	Autumn, 1901	Winter, 1902	Spring, 1902	Summer, 1902
Gymnastics..	General work Simple apparatus work Pulley weights Corrective work	General work Simple and advanced apparatus work Corrective work Fancy dancing Fencing	General work Corrective work Fencing	General work
Athletics....	Basket-ball Hockey Golf	Basket-ball Indoor baseball	Basket-ball Baseball Hockey Rowing Golf	Baseball Hockey Rowing Tennis

## ATHLETICS

From the courses of instruction offered, it will be seen that the athletic work has been a steady growth. In the first years basket-ball was the only sport known, and from this small beginning have grown the following: indoor gymnastic contests, baseball games between University teams, class contests in hockey and tennis, and golf tournaments. Besides the regular

TABLE C  
BASKET-BALL

Year	Junior College Teams	Position	Senior College Teams	SCORE	
				Junior	Senior
1899	Wayman, Agnes (Captain) Crockett, Grace Gilman, Margaret Buck, Hazel Robinson, Ella	C.	Paddock, Carol (Captain)	6	4
		L. F.	Bevans, Edna	4	8
		R. F.	Reichman, Alvina	2	6
		L. G.	Brehl, Helen		
		R. G.	Ohrenstein, Eda		
1900	Wayman, Agnes (Captain) Ostergren, Nanna Steagall, Mary Buck, Hazel Sweezy, Anne Ridlon, Hester; Hopkins, M.; Biddlecomb, M.; Hogan, B. }	C.	Shailer, Louise (Captain)	6	8
		L. F.	Fairman, Marion	13	8
		R. F.	Freeman, Ethel	10	8
		L. G.	Merriman, Dorcas		
		R. G.	Bushnell, Grace		
		Substitutes			
1901	Ashby, Winnifred Wayman, Agnes (Captain) Ostergren, Nanna Goldstein, Anne Wilder, Mabel Martin, E.; Warren, G.; McBride, M. }	C.	Shailer, Louise	2	11
		L. F.	Fairman, Marion	0	4
		R. F.	Russell, Eva	10	6
		L. G.	Robey, Ann (Captain)		
		R. G.	Yondorf, Alma		
		Substitutes	{ McKinney, I.; Bowman, C.; Freeman, E.		
1902	Tschirgi, Martha McDonnell, Katherine (Capt.) Just, M. L. Goldstein, Anne Suadener, Julia Rhodé, A.; Sedgwick, G.; McGoorty, A.; Munson, E. }	C.	Houghton, Madge	9	9
		L. F.	Wayman, Agnes, (Captain)	7	3
		R. F.	Bickell, Edith	14	5
		L. G.	Moore, Ruth		
		R. G.	Cox, A. B.		
		Substitutes	{ Brandeis, H.; Conlon, M.; Hopps, C.		

instruction leading to these contests, there is regular class work in rowing, fencing, and swimming. The most important athletic as well as social feature is the series of basket-ball games played annually, before large and enthusiastic audiences, between the Junior and Senior College teams, for possession of a silver cup and banner. Emphasis is placed upon what may be called the educational, æsthetic, and social, as well as the physical, value of sports, and the competitive spirit is developed in harmony with these.

The accompanying tables show the membership of the athletic teams, together with the dates and records of contests.

TABLE D

BASEBALL

Year	Reds	Positions	Blues	SCORE	
				Reds	Blues
1902	Pond, L. Vaughan, K. Schmidt, B. Daskiewitz, M. Golden, K. Millis, V. Freeman, H. MacFarland, E. Price, E.	P. C. 1 B. 2 B. 3 B. R. F. L. F. S. S. C. F.	Gaylor, G. Porter, L. Swanson, G. More, B. Biegler, M. Comstock, C. Jaynes, K. Munger, E. Bradley, E.	23	32
				16	18

TABLE E

TENNIS TOURNAMENT—Spring, 1900

Dymond, Edith	Landers, M.	De Cew, L.
Ridlon, Hester	Baier, J.	Darlington, G.
Lackner, J.	Hayman, G.	Coleman, H.
Goodwin, C.	Sweezy, Anne	Patrick, C.

Won by L. De Cew and G. Darlington

TABLE F

GYMNASTIC CONTESTS

YEAR	LADDER		BROAD JUMP	HORSE	INCLINE ROPE	STRAIGHT ROPE	HIGH JUMP	HIGH KICK
	Time	Form						
1901 Won by 1	Martha Allerdice	Martha Allerdice	Margaret McBride	Martha Allerdice	Martha Allerdice	Omitted	Omitted	Omitted
	Lil Stevens	Nanna Ostergren	Mildred Dodge	Nanna Ostergren	Ina Griffin			
1902 Won by 1	Alice Rhodé	Katherine McDonnell	Rena Hooper	Alice Rhodé	Omitted	Omitted	Rena Hooper	Omitted
	Frances Taussig	Alice Rhodé	Katherine Golden	Katherine McDonnell				

## PHYSICAL EXAMINATIONS

Each student is given three examinations—the first when she enters the gymnasium, the second at the close of the first year, and the third when the ten Quarters of required work are completed. These examinations include a history of the case, heights, girths, depths, breadths, weight, lung capacity, strength tests, and heart and lung examinations. Heart and lung examinations are repeated each year when students are taking athletic as well as gymnastic work.

The following is the record of the numbers examined:

TABLE G

	DATE	NUMBER			
		First	Second	Third	Total
By Miss Anderson	1884-98.....	...	...	...	500
By Miss Dudley	Autumn, 1898.....	153	57	17	227
	Autumn, 1899.....	142	62	21	225
	Autumn, 1900.....	195	133	18	346
	Autumn, 1901.....	212	126	6	344

Respectfully submitted,

GERTRUDE DUDLEY, *Instructor.*

## THE RELIGIOUS WORK IN THE UNIVERSITY

*To the President of the University:*

SIR: I submit herewith my report on the Religious Work in the University.

The first public act of the University was the first Chapel Assembly, on October 1, 1892, at 12:30 o'clock. The order of service was as follows:

Doxology.

The Lord's Prayer in concert, led by President Harper.

Hymn—"Nearer, My God, to Thee."

Responsive reading of Psalm 96, led by President Harper.

Hymn—"O Could I Speak the Matchless Worth."

Scripture reading—Gen., chap. 1; John, chap. 1; and Phil., chap. 4, vss. 8 and 9—by Dean Harry Pratt Judson.

Prayer, by Professor Galusha Anderson.

Hymn—"Hail to the Lord's Anointed."

Benediction, by Dean Eri B. Hulbert.

At the first meeting of the Autumn Quarter of each year a service has been held in connection with the Chapel Assembly, in which this order of worship was followed.

### I. THE OFFICIAL RECOGNITION OF RELIGION

The people who established the University of Chicago placed in its charter and fundamental regulations an expression of their desire that religion should not only be recognized, but assume an important and influential place in its activities. It was expressly provided that the Trustees and the President should be men in sympathy with the essential ideals and principles of Christianity; and all that law can do to guarantee this kind of direction and control has been done under the best legal advice. In administering this trust the governing body has uniformly and without exception dealt with it in good faith.

It has always been assumed that the religious body thus made responsible for the life of the institution held among its essential religious principles and teachings the duty of freedom and courtesy, and the obligation to treat persons of different beliefs, not only with tolerance, but with respect. It is confidently believed by the Trustees and by the administrative officers that any attempt at constraint or artificial pressure upon members of the community would tend to produce annoyance or pretense, but never sincerity, earnestness, and genuine zeal. It is not believed that generous and courteous conduct is ever inconsistent with enthusiasm and devotion.

Those who lead in the conduct of worship are Christians, and their expression of religion is in the language of the Christian world, familiar and sacred to most of us from the dawn of consciousness. But this does not exclude other dialects of the common faith of the world, and freedom to voice the deeper feelings of the soul in any form hallowed by reverence and family associations is permitted and encouraged.

It is unreasonable to interpret the granting of liberty of thought, speech, and action as a sign of indifference. By its very nature religion forbids compulsion; it is free or it is nothing.

## II. THE DIVINITY SCHOOL

There is a Divinity School in connection with the University. The Faculty of this Divinity School is nominated by a body whose membership is constantly renewed and made representative of the Baptist denomination, which is responsible for the University. But this Divinity School does not exclude any reputable student on account of his denominational relations, and the University permits any body of religious people to establish lectureships which represent the particular tenets of the various communions, and permits students freely to elect courses under these lectureships. The presence of this body of instructors and students, profoundly interested in the religious life of mankind, is itself a guarantee that this supreme element of culture shall never be forgotten. The power of the Trustees will naturally always be exerted to maintain a high standard of scholarship to correspond to that of other Departments.

Under this system of responsibility and of freedom it is reasonable to expect that a hearty, sincere, rational, and aggressive type of spiritual life will be cultivated and held in honor. Nothing but skepticism as to the inherent power of truth would question the wisdom of this policy. Those who are in administrative positions are convinced, after years of trial, that this policy is honest, fair, and safe, and that, in the circumstances, no other policy could be substituted for it without injury to the cause of Christianity.

## III. THE CHAPLAIN

A statute of the University, enacted by the Trustees, thus defines the duty of the University Chaplain:

The University Chaplain, in co-operation with the President and other officers, studies and proposes methods of promoting the spiritual life of the University; serves as needed in religious exercises; ministers as a pastor; and advises with the religious and benevolent organizations of the University in the interest of harmony and efficiency.

In accordance with this statute, the Chaplain has published in the *University Record* the following standing notice of his readiness to serve, and the Bureau of Information posts a notice of his office hours:

The Chaplain is an officer of the University appointed by the Trustees to serve the spiritual interests of the institution. He is expected to bring to the work of organization the experience of a pastor and the special information derived from a study of religious and philanthropic activities. Together with other instructors, he assists in the devotional exercises of the Chapel Assemblies, and co-operates with student organizations as occasion arises. He is ready to visit the sick, to have conversation in his office or at home by appointment with individual students. Such appointments may be made in person at the close of any Chapel Assembly, or at the office hour, or in response to a note left in the Faculty Exchange. The Chaplain does not wish to intrude upon any person, and yet earnestly desires to respond to the calls of those who honor him with their confidence.

One of the ways in which the Chaplain makes himself useful is in connection with his duties as teacher of practical ethics and sociology. In this relation he is brought into natural relations with students of Colleges and Graduate Schools. Almost every day students seek him for conversation on practical ways of usefulness by personal service, and some days many students solicit advice of this kind. All recent writers on the psychology and pedagogy of religious education strongly urge that emotion and thinking must be translated into character through action and habit. One does not become good merely by thinking he would like to become good, and young people of noble purpose and fresh enthusiasm need to have ways of service pointed out to them by persons who have had considerable experience in the great world of business, social intercourse, philanthropy, politics, and religion. At this point the connection between the teaching duty and the office of Chaplain has proved to be fruitful and wise. A similar arrangement has vindicated its wisdom at Harvard University and elsewhere.

## IV. THE NEW BOARD OF PREACHERS

The Board of Trustees, acting upon a fundamental principle in the law of the University, has made liberal provision by a fund for securing the service of eminent preachers who are invited to visit the University, conduct a service on Sunday, preach a sermon, assist in the Chapel Assemblies, and be accessible for consultation at specified office hours during the week days of the residence. So far as practicable, the engagement of each visiting preacher will extend over the entire period of six weeks, and in the year of his service he will be designated as an officer of the institution, a member of the staff. Experience shows that there are great advantages in this supplementary service. The students have thus an opportunity of coming into personal contact with the most eminent living exponents of spiritual experience and thought. The great variety of needs is richly met by a variety of types of expression, character, and thought. A spirit of fairness, candor, sympathy, and catholicity will naturally be fostered. The essential harmony in the variety of forms of thought will be a witness to the reality of the divine life in man.

Since all human beings are greatly influenced in their estimate of the value of religion by the personality of those who represent it, many hundreds and thousands of talented youth will learn to associate faith with all that is manly, robust, forceful, human, and attractive. For those who are to be public speakers this object-lesson will be one of the highest factors in their culture.

From every point of view this new addition to our educational resources is at once a noble opportunity to our honored visitors and to the throngs of young people who are destined to be leaders of public thought and conduct.

It should be said that, while this measure is new with us, it was introduced because it had been proved fruitful and useful, in an eminent degree, at Harvard and Yale Universities, and in other institutions. Its adoption by our Trustees is an evidence that they sincerely intend to leave no means neglected to minister in the best possible form to the religious needs of the students, and through them to help mankind.

## V. NEW MANDEL HALL

In connection with the introduction of the Board of Preachers it is cheering to mention the erection of a new and commodious hall. Hitherto, as remarked in previous reports, we have not been able to accommodate all who desire to attend upon occasions of unusual interest. With the completion of the Mandel Hall, made possible by the noble generosity of a merchant of Chicago, we shall be able to provide a suitable audience room for the great company who will desire to enjoy the public ministry of gifted preachers.

Yet even with this hall we can foresee the need of the great religious edifice, with more commodious space and appropriate structure and adornment, which shall some day crown the groups of buildings devoted to science, art, and faith. What more fitting monument for some devout person of adequate wealth than the erection of such a permanent sanctuary, where faith, hope, and love, the never-failing inspiration of striving spirits, shall be breathed into the culture of our community, with the ministry of the arts of music, eloquence, sculpture, painting, and architecture subservient to the divine honor! Something fine and splendid as Giotto's tower, only with the "glory of the spire," should, in good time, point toward the Highest.

## VI. THE BOARD OF THE CHRISTIAN UNION

The appointment of the Board of Preachers has been the more immediate occasion of another improvement in our religious organization. By recent amendments in its constitution the Christian Union has come to be more closely and vitally an official organization of the University. This has become necessary in order to give efficiency to the new and more complete

provisions supplied by the Trustees for religious work, and to meet more adequately the demands of the situation.

Hitherto the Christian Union has been a voluntary association, without formal and official place in the general organization of the University; henceforth it is to be an organic part of that organization.

#### I. ITS PURPOSE AND METHOD

The Christian Union was formed in the autumn of 1892, at the very beginning of the University work. Its purpose has been and is to open the way for all members of the University to join in religious and humane effort. This society carries forward certain lines of spiritual and philanthropic activity common to all teachers and students who choose to participate. It leaves all to organize in more special efforts in which any number of persons may be interested. In order to promote unity and common understanding, it is agreed that the presidents of all the religious societies shall meet with the Board for conference. This arrangement, which admits entire liberty and yet prevents friction, has been admirably adapted to our conditions.

#### II. CONSTITUTION

##### PREAMBLE

WHEREAS, It is highly desirable to unite all the members of the University in a single, harmonious organization on the basis of those elements of religious faith which are held in common; and

WHEREAS, All may unite upon this common ground without inconsistency with the maintenance of individual religious conceptions; and

WHEREAS, In the spirit and purpose of the above it has seemed good to form such an organization, to be known as the "Christian Union;" therefore be it

*Resolved*, That the undersigned students and instructors of the University of Chicago do hereby subscribe ourselves as members in the Christian Union.

Membership in the Union, with privilege of voting at all meetings, shall belong to all instructors and students of the University without any subscription or other formal act, and without payment of fees.

##### REGULATIONS

1. The officers of the Christian Union shall be a President chosen from the Faculties of the University, a Vice-President chosen from the student body, and a Secretary-Treasurer chosen at large.

2. The direction of the Christian Union shall be in charge of a University Board, constituted as follows:

a) *Ex officio*, the President of the University, the Chaplain of the University, the officers of the Christian Union, the president and secretary of the Board of the University Settlement, and of each religious society of the University recognized by the Board.

b) Five members of the Faculties, recommended by the President of the University and appointed by the Trustees.

c) Two representatives of each district student division.

The administrative work of the Board shall be in the hands of the Chaplain and the President of the Christian Union, in consultation with the President of the University.

3. The elections shall be by ballot, and, with the exception of the President and Secretary-Treasurer, from a double list of nominees presented to the Union one week before the annual meeting by a nominating committee of five appointed by the President. In the case of the President there shall be only one name presented by the committee; but ten or more persons may unite in presenting (through the committee) another name if they so desire. The Secretary-Treasurer shall be chosen by the Board, subject to the approval of the University Council.

4. The Board shall direct the work of the Christian Union in all its departments, appointing such standing committees as may be necessary for the purpose of conducting public worship, Bible study, work in philanthropy, and such other work as the Union may see fit to undertake. The presidents of the represented organizations shall be chairmen of the committees in their respective depart-

ments. The committee on philanthropy is identical with the incorporated Board of the University of Chicago Settlement. This Board has power to fill vacancies in its membership according to its own rules.

5. The President and Secretary-Treasurer of the Christian Union shall be *ex officio* members of all committees.

6. No work shall be undertaken in the various departments of the Christian Union without the previous consent of the Board.

7. Each committee appointed for continuous service shall make, through its chairman, a monthly report to the Board of all work done in its department.

8. There shall be a regular monthly meeting of the Board.

9. At a regular time in each Quarter, which the Board may fix, the Board shall present a report of its work to the Christian Union.

10. The officers of the Union shall be elected annually, in March, at a special meeting to be called for that purpose by the President, and they shall take office at the first regular meeting of the Board in April.

11. These regulations may be altered or amended by a two-thirds vote of the Union at any regular meeting, provided a week's notice of the proposed change shall have been given.

12. Fifteen members of the Union shall constitute a quorum for the transaction of business.

#### VII. RELIGIOUS ACTIVITIES OF UNIVERSITY INSTRUCTORS

As has already been noted, the members of the teaching staff are entirely free in relation to the expression of their spiritual life. What they do is done freely and because they desire to help. Every act is voluntary. Therefore it is interesting to consider how many are engaged in positive and active service. No attempt has been made to collect statistics, for these would necessarily be fragmentary and misleading. But it is known that in the neighboring churches, in city, home, and foreign missions, and in philanthropic enterprises the motives of the inner life come to expression. Some of the most trusted and generous leaders in churches are members of the Faculty. In the social relations of the Campus these instructors are ready to help the students in their meetings or in personal conversation. The presidents of the Christian Union for several years represented a department of nature science, and one also widely felt in connection with the Young Men's Christian Association, and it is a pleasure to recognize the high value of their service.

On Sunday mornings Bible classes are taught by the President and by other representatives of the biblical Departments, and this work is on the same plane with scholarly instruction in all other subjects. This department will gradually be developed until it is hoped to have upon the Campus a model organization of modern religious education. In all of its official meetings and assemblies a solemn act of worship is part of every order; as at the regular meetings of Senate, Congregation, and Convocation. Thus in the most distinct, articulate, and public form does the University offer witness to the world of its faith and reverence.

Religious conferences have been held, at frequent intervals, to encourage the students to make known their difficulties, so that they may be met in the open and, so far as possible, overcome.

Among the publications of the University are important magazines devoted to sacred learning and to the practical direction of religious organization and effort; and these have gained a wide and ever-growing influence.

With the rapid increase in the number of students it is becoming a serious question whether it will not become advisable for the members of the Faculty to concentrate their religious efforts more and more upon the University community, one of the largest of parishes, and one whose composite membership gives it a central position in the world's spiritual life. It is to the students that teachers owe their first and the best service in all that may contribute to character.



## VIII. THE ASSOCIATIONS

In the Report of the President for July, 1897-July, 1898, pp. 201-16, may be found many details of the religious work of the University up to that time; and further details are given in the Report for July, 1898-July, 1899, pp. 143-53.

## YOUNG MEN'S CHRISTIAN ASSOCIATION

The Y. M. C. A was organized during the first Quarter after the University began its work of teaching. The first meeting to consider the subject was held November 26, 1892, and complete organization was effected December 2, 1892.

The most important facts relating to the work of the past two years are here given:

## WORK OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION FOR 1899-1900 AND 1900-1901

During 1899-1900 substantial progress was made in the work and development of the Association. A large and enthusiastic corps of workers was secured, the Advisory Committee and Faculty showed lively interest, and an efficient man gave part of his time to the work of General Secretary. As a result, the membership was largely increased, the influence of the Association became more widely felt, and the spiritual life of many men was quickened and deepened.

If somewhat less may be said for 1900-1901, it is because during this year the Association had no General Secretary. The work of a Y. M. C. A. in a great university is far too large and exacting to be done by a regular student, be he ever so faithful. However, the Association has been kept together and along several lines has done excellent work.

For convenience, the facts with regard to the two years may be exhibited together:

## I. MEMBERSHIP

Members, April 1, 1899	- - - - -	150
Received during the year	- - - - -	72
Terminated membership	- - - - -	44
Members, April 1, 1900	- - - - -	178
Received during the year	- - - - -	22
Terminated membership	- - - - -	43
Net total April 1, 1901	- - - - -	157

## II. RELIGIOUS MEETINGS

## A. 1899-1900

Meetings for men only	- - - - -	33
Average attendance	- - - - -	40
Union meetings	- - - - -	44
Average attendance	- - - - -	52

The week of prayer was observed in November by holding five morning meetings; average attendance, twelve.

Of special interest were the conferences on religious difficulties, conducted by Professor Shailer Mathews.

## B. 1900-1901

Meetings for men only	- - - - -	33
Average attendance	- - - - -	30
Union meetings	- - - - -	44
Average attendance of men	- - - - -	25

The week of prayer in November was observed as usual, the average attendance being nine.

Several of the religious meetings were addressed by members of the Faculty and by speakers from abroad. Especially noteworthy were two series of addresses of four evenings each. The first was by Mr. C. W. Votaw, in April-May, 1900; subject, "Practical Religion." The second was by Mr. Gerald B. Smith, in January and February, 1901. His subject was "Some Phases of Twentieth-Century Christianity." Others who spoke during the year were: Messrs. John M. Coulter and Charles R. Henderson, Miss Myra Reynolds, and Messrs. Theodore Neff, George S. Goodspeed, Tufts, Edgar J. Goodspeed, Herbert Willett, A. H. Tolman, F. M. Blanchard, G. E. Vincent, John R. Mott and H. W. Hicks, of the International Committee of the Y. M. C. A.; Miss Mary McDowell, of the University Settlement; and Mr. John Boose, of McCormick Seminary.

III. BIBLE STUDY

	<i>A. 1898-1900</i>	
Number of classes	-	8
Men enrolled	-	83
In private study	-	23
Total engaged in study	-	106

Most of the classes continued only one or two Quarters. Men were also urged to attend the regular Bible classes of the University. President Harper conducted for a short time a class for the study of personal difficulties.

*B. 1900-1901*

One class in the study of the Bible was conducted by the Association, for two months in the spring, with an attendance of seventeen. The men seemed to prefer to attend the classes in the regular course.

IV. MISSIONARY WORK

*A. 1898-1900*

Three missionary meetings were held, with an average attendance of thirty-seven. A Volunteer Band of Ten met throughout the year, except during the Second Term of the Summer Quarter. A missionary library was begun. Three courses in the study of missions were offered: "Japan and its Regeneration," by Mr. Isao Hatai; "Social Evils in the Non-Christian World," by Mr. Burlingame; and "Side-Lights on Missionary Byways," by Mr. Solenberg. The classes were conducted informally.

A few members of the Association performed helpful service at the University Settlement.

*B. 1900-1901*

Three missionary meetings were held; average attendance, twenty. The Volunteer Band numbered ten and held monthly meetings throughout the year. For some of these meetings special speakers were provided, notably Mr. Kelsey, returned from Mexico; Mr. McKibben, from China; Mr. Kelso, from Singapore; and the president of the Anglo-Chinese College in Peking. The Association also brought Dr. and Mrs. Howard Taylor to the University for two public addresses on missions. Two courses in mission study were conducted: one on "Evangelization of the World in This Generation," by Mr. Bailey; average attendance, four; and one on "China," by Mr. McKibben, with an average attendance of twelve. Several addresses on missions were made by students in neighboring churches. Two additions were made to the library.

V. INTERCOLLEGIATE RELATIONS

*A. 1898-1900*

Letters sent out by Corresponding Secretary	-	28
Letters received by Corresponding Secretary	-	22
Visits made by students	-	10
Visits received from students and secretaries	-	8

The Association has been represented at one conference and one convention by fourteen delegates. Twenty-eight copies of the *Inter-Collegian* are being taken.

General correspondence through the General Secretary:

Letters received	222
Letters sent out	213

Nine outside meetings were held, or addressed by members of the Association.

*B. 1900-1901*

Letters sent out by Corresponding Secretary	35
Letters received by Corresponding Secretary	28
Visits made by students	3
Visits received from students and secretaries	6
Delegation to the summer conference	7

VI. FINANCE

*A. 1899-1900*

Cash on hand April 1, 1899	\$ 0.05
Received from membership fees	130.50
Received from subscriptions	182.50
Received from miscellaneous sources	14.51
Total	\$327.56

*Estimated budget* for year from July 1 to July 1:

Receipts from membership fees	\$200.00
Receipts from subscriptions	200.00
Receipts from miscellaneous sources	61.40
Total	\$461.40

*B. 1900-1901*

Cash on hand April 1, 1900	\$ 12.27
Received from dues and subscriptions	118.17
Total receipts	\$130.44
Current expenses, printing, etc.	\$ 53.88
Payments on the piano	40.00
The General Secretary of 1899-1900	10.00
Part expenses of one delegate to Geneva	5.00
State Committee	10.00
Total expenditures	\$118.88
Balance on hand April 1, 1901	11.56

The Association during 1901-2 is obliged to meet a debt of seventy-five dollars on the piano, and of forty-five dollars of pledges to the state and international committees of some years' standing. The estimated income for current expenses is about three hundred dollars.

VII. SOCIAL ACTIVITIES

The social activities of the Association for the two years may be summarized in one statement. At the opening of the Fall Quarter a large committee was on duty to welcome newcomers and aid in registration and in finding board and rooms. During the second week of the Quarter a general reception was given, at which President Harper and other members of the Faculty assisted in receiving. In 1899 this reception was held at the home of Professor George Vincent; in 1900, in Haskell Museum. At both the attendance was between four and five hundred. In 1899-1900 an informal social for men and a dinner were given. In the summers of both years several socials were arranged for, and trips to places of interest planned and conducted.

## VIII. ADVISORY COMMITTEE

In 1899 the Advisory Committee of the Association was appointed. It is a self-perpetuating body of the greatest value. It has the power to nominate the General Secretary and regulate his term of office and salary. Further, it stands ready to advise the Association on any important matter submitted to it. In the spring of 1901 this committee raised a thousand dollars for a General Secretary on full time. Its personnel April 1, 1901, was as follows: The Faculties: C. R. Barnes, chairman; J. M. Coulter, A. A. Stagg; business men: Charles Marsh, E. Burritt Smith, Judge Freeman; alumni: H. D. Abells, W. A. Payne, S. C. Mosser; Association officers: J. F. Hosic, president; R. W. Merrifield, treasurer.

## IX. MISCELLANEOUS POINTS

During 1899-1900 excellent work was done in visiting the sick. Names of the sick were sent to the General Secretary by the Deans. In all thirty-five calls were made. In this year also a permanent arrangement was consummated by which "at least ten members of the Y. M. C. A., who had been in residence three Quarters and whose standing in class work was good, might be excused from examinations to attend the entire Conference at Lake Geneva." As a result large delegations were sent in both this and the following year.

The officers for 1899-1900 were:

President—C. F. Yoder  
Vice-President—M. R. Myers  
Recording Secretary—H. P. Kirtley

Corresponding Secretary—A. E. Bestor  
Treasurer—E. H. Sturtevant, H. H. Nelson  
General Secretary—Fred Merrifield

The officers for 1900-1901 were:

President—C. W. Button  
Vice-President—R. W. Merrifield

Recording Secretary—R. B. Nelson  
Corresponding Secretary—A. E. Bestor  
Treasurer—L. R. Cartwright, F. J. Tische

The officers for 1901-1902 were:

President—J. F. Hosic  
Vice-President—H. H. Lord

Recording Secretary—M. B. Pratt  
Corresponding Secretary—L. J. Bevan  
Treasurer—R. W. Merrifield

In view of the employment of a competent General Secretary, the outlook for Association work in the University is bright. The field is peculiar, but very important, and destined, when properly cultivated, to yield most happy and profitable results. One of the most encouraging aspects of the situation is the friendly attitude of members of the University toward well-conducted Y. M. C. A. work. There seems to be no doubt that the hopes and desires of all in this connection are soon to be realized.

CONSTITUTION OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE UNIVERSITY  
OF CHICAGO

## ARTICLE I—NAME

The name of this organization shall be "The Young Men's Christian Association of the University of Chicago."

## ARTICLE II—OBJECT

The object of this Association shall be to promote Christian life, Christian faith, and Christian fellowship among its members; to carry on aggressive Christian work, especially by, and for, students; to train its members for Christian service; and to lead them to devote their lives to Jesus Christ, not only in distinctively religious callings, but also in secular pursuits.

## ARTICLE III — MEMBERSHIP

SECTION 1. The active membership of the Association shall consist of men, either students or members of the Faculty of this institution, who are members in good standing of evangelical churches, who have declared themselves to be in sympathy with the purpose and methods of the Association as indicated in its Constitution, and who have been elected by a two-thirds vote of the members present at any meeting. Only active members shall have the right to vote and to hold office.

SEC. 2. Any man of good moral character, either a student or member of the Faculty of this institution, may become an associate member by a two-thirds vote of the members present at any meeting.

SEC. 3. Any student or member of the Faculty who has been an active or associate member of another College Christian Association having the evangelical basis may be transferred by letter to the same grade of membership in this Association by a two-thirds vote of the members present at any meeting.

SEC. 4. The membership fee shall be one dollar (\$1) per annum, payable at such time or times as the Association may determine.

SEC. 5. It shall be the duty of each member to co-operate heartily in carrying out the object of the Association according to the policy as determined each Quarter by the Cabinet or Executive Committee.

## ARTICLE IV — OFFICERS

SECTION 1. The officers of this Association shall be a President, Vice-President, Recording Secretary, Corresponding Secretary, Treasurer, and General Secretary.

SEC. 2. *Duties of officers.*

a) The President shall preside at all business meetings of the Association and on all public occasions. He shall be the chairman of the Executive Committee and of the Cabinet. He shall appoint, with the advice of the General Secretary, all committees, and notify all committeemen of their appointment. He shall see that all committees are organized and set at work as soon after their appointment as possible, and shall hold the chairmen responsible for the work of their respective committees. He shall have general supervision of all the work of the Association. On retiring from office he shall present to the Association a written report covering his term of service, together with recommendations concerning the future work of the Association.

The President shall be *ex officio* a member of all committees.

b) The Vice-President shall assist the President in the performance of his duties, and assume the place of the President when he is absent.

c) The Recording Secretary shall keep in permanent form full minutes of all business meetings of the Association, of the Cabinet, and of the Executive Committee. He shall notify all officers and members of their election.

d) The Corresponding Secretary shall conduct the correspondence between the Association and other associations relative to the exchange of ideas and the interchange of visits. He shall be chairman of the Committee on Intercollegiate Relations.

e) The Treasurer shall have charge of the funds of the Association, and shall pay out money only on the order of the Executive Committee, signed by the President. He shall collect all dues, and keep an account in permanent form of all receipts and disbursements. He shall be chairman of the Finance Committee, and, with the advice of the Executive Committee, he shall prepare and present to the Association the annual budget. At the close of the Association year the Treasurer shall present to the Association a report of the financial condition of the Association, including the receipts and expenditures of the Association for the preceding year.

f) The General Secretary shall sustain an advisory relation to the other officers of the Association, and shall assist them in the discharge of their executive duties. He shall be *ex officio* a member of all committees, and shall advise with them in regard to the execution of their policies, and shall receive and file all their reports. He shall conduct all the general correspondence of the Association. He shall, at the end of each Association year, present in writing a complete report covering the work of the several departments of the Association during the year. The amount of time which the General Secretary shall devote to the work, and the amount of his compensation, shall be determined by the Executive Committee.

SEC. 3. a) The six officers shall constitute the Executive Committee. This committee shall have charge of all property belonging to the Association and shall have general management of its affairs. Meetings of this committee shall be held weekly.

b) The six officers of the Association, together with the chairmen of the standing committees, shall constitute the Cabinet. It shall be the duty of the Cabinet to meet within three weeks of the opening of each Quarter, to discuss the condition of the work in each department and to adopt policies to govern the committees for the ensuing Quarter.

#### ARTICLE V—COMMITTEES

##### SECTION 1. *Regular committees.*

Upon entering the duties of his office, the President shall appoint, with the advice of the General Secretary, the following committees:

a) A Committee on Work for New Students, which shall organize and direct the special work for new students at the beginning of the Autumn Quarter, and likewise of the other Quarters, if there be a sufficient need.

b) A Committee on Membership, which shall follow up the work of the preceding committee and endeavor to bring every man in the University ultimately into the Association.

c) A Committee on Bible Study, the object of which shall be to interest men in the Bible and to enlist them in some form of systematic Bible study.

d) A Committee on Religious Meetings, which shall have charge of the regular and special devotional and gospel meetings.

e) A Missionary Committee, which shall aim, by missionary meetings, study classes, and other methods, to secure the active interest of every member of the Association in the cause of missions, and to promote the Student Volunteer Movement as an organic department of the Association. A majority of the committee shall be, when possible, student volunteers.

f) A Committee on Intercollegiate Relations, which shall bring to the Association the results of the experience of similar organizations, and make the influence of the Association felt in the intercollegiate movement. This committee shall have supervision of all delegations to conventions and summer schools, arrange for interchanges of delegations between this and other Associations, and shall undertake such forms of Christian work in the city as shall not interfere with the cultivation of the University field.

g) A Finance Committee, which shall secure for the Association the funds necessary for the cultivation of its own field and for the extension of the Association movement.

h) A Social Committee, which shall endeavor to promote the social life of the Association and make the social element prominent in its meetings.

SEC. 2. Each regular committee shall hold a monthly meeting for the consideration of its work. Immediately after the monthly meeting the chairman of each committee shall file with the General Secretary a written report of the work of the committee for the preceding month.

SEC. 3. Immediately after the annual report of the Treasurer (or at the close of his term of office, if there occur an irregular change in the office), the President shall appoint a committee of three to audit his accounts.

SEC. 4. Special committees may be provided and their work defined by vote of the Association at any business meeting.

SEC. 5. Whenever practicable, all committees shall include one or more members from the Divinity School, from the Graduate School, from the Senior College, and from the Junior College.

#### ARTICLE VI—MEETINGS AND ELECTIONS

##### SECTION 1. *Meetings.*

a) Devotional meetings. A weekly meeting for men and a weekly meeting in union with the Y. W. C. A. shall be maintained by the Association. Special meetings may be arranged at the discretion of the Cabinet.

b) Business meetings. The annual business meeting shall be held not later than one month before the close of the Winter Quarter. In connection with the last men's meeting of each Quarter,

the chairmen of the various committees shall read before the Association reports covering the work done by their respective committees during the Quarter. Special business meetings may be called by the President or at the written request of five members.

**SEC. 2. Elections.**

a) The annual election of officers shall be held at the annual business meeting. A Nominating Committee of five members, two of whom shall also be members of the Faculty, shall be appointed at least two weeks before the annual election. This committee shall post its nominations at least one week before the election, and shall receive and post such other nominations as are indorsed in writing by at least five members of the Association. In case there is more than one nomination for any office, election to that office shall be by ballot. The officers shall enter upon their duties at the beginning of the Spring Quarter, and shall hold office for one year, or until their successors are elected. Provided, that this paragraph does not apply to the election of General Secretary.

b) In case a vacancy occurs in any office, it shall be filled by special election either at a regular or a special business meeting. A Nominating Committee of three, appointed at least one week in advance, shall present the nomination for a special election.

c) In case of the election of General Secretary, at the annual business meeting or at any other time, the Nominating Committee shall consist of the Executive Committee of the Association, the President of the University, the Chaplain of the University, and the President of the Christian Union. This committee shall present one name to the Association for its confirmation.

**SEC. 3.** Fifteen active members shall constitute a quorum for the transaction of business.

**ARTICLE VII—CESSATION OF MEMBERSHIP**

**SECTION 1.** Any member in good standing may sever his connection with this Association by written resignation, and upon request shall receive a letter of dismissal. When any member in good standing severs his connection with the University he ceases to be a member of the Association, but if he again connects himself with the University, he thereby resumes his former membership.

**SEC. 2.** Any member may be dropped from membership by a unanimous vote of the Executive Committee for the non-payment of dues, immoral conduct, or other sufficient reason.

**ARTICLE VIII—DEBT**

No debt shall be incurred by any administration beyond the amount provided for in the annual budget.

**ARTICLE IX—AMENDMENTS**

Amendments to this Constitution shall require for their adoption notice at a meeting of the Association at least one week in advance and a two-thirds vote of the members present, except that this article, Article I, and Article III, section 1, shall not be amended or repealed without the concurrence of the International Committee of the Young Men's Christian Associations.

**AMENDMENTS**

**I**

The members of the Divinity School of the University of Chicago, in order to secure affiliation with the World's Student Christian Federation, shall constitute the Divinity Section of the Y. M. C. A. of the University of Chicago. (Adopted March 15, 1899.)

**II**

The chairman of the Missionary Committee of the Divinity Council shall, after his election as an active member of the Y. M. C. A. of the University of Chicago, be a member of the Executive Committee of the Association. (Adopted March 15, 1899.)

**III**

**THE ADVISORY COMMITTEE**

**SECTION 1.** a) The Advisory Committee shall consist of three members of the Faculty, three business men, and three alumni of the University who formerly were members of the Association, together with the President and Treasurer of the Association.

b) Only members of evangelical churches may become members of this committee.

c) Seven members shall constitute a quorum.

SEC. 2. The regular term of office, excepting that of the President and the Treasurer of the Association, shall be three years. The committee shall be self-perpetuating.

SEC. 3. The regular election of members of the committee shall be held at its last meeting in the Spring Quarter. The term of office shall begin on July 1. All vacancies which may occur during the year in its membership shall be filled by the committee.

SEC. 4. The committee shall elect its own officers and appoint its own committees, and shall adopt such rules of procedure as it may deem necessary.

SEC. 5. The committee shall be selected first in the following manner: The Association shall elect the three members of the Faculty, who, acting with the President and the Treasurer, shall select the six remaining members. At the first meeting of the committee the three members of each of the three classes mentioned shall determine, by lot, who shall hold office for one, two, and three years respectively.

SEC. 6. The duties of the committee shall be as follows:

- a) To act through the General Secretary in an advisory relation to the Association.
- b) To select the General Secretary, subject to the confirmation of the Association; such selection to be posted not later than one week before the first of March of each year.
- c) To provide for the salary of the General Secretary and to determine the term of office.

(Adopted June, 1899.)

YOUNG WOMEN'S CHRISTIAN ASSOCIATION

The Young Women's Christian Association<sup>1</sup> was established December 2, 1892. Without repetition of details published in earlier reports, the main facts relating to the past two years are given herewith.

REPORT OF THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION, 1899-1900, 1900-1901

PURPOSE

It is the purpose of the Association "to promote Christian life, Christian faith, and Christian fellowship among the members; to carry on active Christian work, especially by and for students; to train the members for Christian service, and to lead them to devote their lives to Jesus Christ."

ORGANIZATION

All women connected with the University are eligible to membership, those belonging to any evangelical church as active, others as associate, members. The work of the Association is carried on by the following committees, serving under the direction of the usual officers: Membership, Religious Meetings, Bible Study, Philanthropic, Social, Rest-Room, Publication, Finance, and Intercollegiate Relations. The Cabinet, consisting of the officers and the chairmen of committees, meets monthly to plan and discuss the work of the Association. During the past year the Constitution has been revised and broadened to meet the present needs and methods of administration by incorporating an Advisory Board, and the office and duties of a General Secretary. The value to the Association of possessing a General Secretary has been inestimable, and the efficiency of the work has increased many times. The need of an Advisory Board was greatly felt, not only to provide for the election and payment of a General Secretary, but also to bring the Association into closer touch with the Faculty of the University.

MEMBERSHIP

Number of members in the Association, June, 1899	- - - - -	83
Number of members received during the year 1899-1900	- - - - -	73
Number who terminated their membership 1899-1900	- - - - -	61
Total number, June, 1900	- - - - -	95
Number received 1900-1901	- - - - -	77
Number terminating membership 1900-1901	- - - - -	59
Total number, June, 1901	- - - - -	113

<sup>1</sup> Later changed to the Young Women's Christian League.



## MEETINGS

Religious meetings are held weekly; they are usually led by students, but are occasionally addressed by outside friends. In co-operation with the young men, union meetings have been held on Sunday evenings. The week of prayer in November was observed in 1900 by holding five morning meetings, with an average attendance of twelve.

Number of Young Women's meetings, 1899-1900	. . . . .	28
Average attendance	. . . . .	22
Number of Young Women's meetings, 1900-1901	. . . . .	31
Average attendance	. . . . .	35
Number of Union meetings, 1900-1901	. . . . .	33
Average attendance	. . . . .	54

## BIBLE STUDY

The Association has urged its members to avail themselves of the exceptional opportunities for thorough and intelligent Bible study offered by the University, and has repeatedly called attention to the courses offered by the American Institute of Sacred Literature.

## PHILANTHROPY

Visits have been made to the women of the University who were ill, and in need of friendly service, whenever such cases were known. The philanthropic committee has also been instrumental in securing young women to assist at the University Settlement, some of whom have given regular systematic service throughout the year.

## SOCIAL

Each Quarter assistance in registration has been offered to students who are strangers at the University. Early in the Autumn Quarter new students have been welcomed at an evening reception given in co-operation with the Y. M. C. A. A special reception for women entering the University for the first time was given early in the fall, and was well attended. New members are welcomed into the Association at a Quarterly Recognition Service, which service is partly devotional and partly social.

## REST-ROOM

The room on the fourth floor of Cobb Hall, formerly used by the Association as a rest-room for women, has been needed by the University through two Quarters for class-room purposes; but it is once more at the disposal of the Association. The proceeds of a concert under the auspices of the alumnae members were used to purchase new furnishings, which add to the attractiveness and comfort of the room. It was formally opened at the beginning of the Spring Quarter.

## FINANCES

<i>1899-1900</i>	
Balance from previous year	\$16.10
Dues	63.50
Pledges	8.55
Total receipts	\$91.15
Total expenditures	78.88
Balance	\$12.27
<i>1900-1901</i>	
Balance from previous year	\$12.27
Dues	65.25
Pledges	26.20
Total receipts	\$103.72
Expenditures	102.64
Balance	\$1.08

## INTERCOLLEGIATE RELATIONS

Letters have been exchanged with about twenty associations connected with other colleges and universities. Copies of the *Inter-Collegian* and the *Evangel* are available to the officers of the Association.

## CONFERENCES AND CONVENTIONS

Three delegates attended the Summer Conference at Lake Geneva, Wis., in the summer of 1899, and five were present in 1900. One delegate was sent to the State Convention at Bloomington in the winter of 1901, and several members have interested themselves in the conferences held each spring.

The work during the summer has been carried on by a committee of twelve, six of whom are taken from the members of the Association and six from the members of the Young Men's Christian Association who remain in residence during the summer. The summer students have entered into the work in hearty co-operation with the former members, making both summers very successful. The receptions were very largely attended, and the summer devotional meetings, held jointly with the young men on Wednesday and Sunday evenings, were very helpful and successful.

The officers of the Association are as follows:

1899-1900	1900-1901
President—Catherine Cleveland, Florence Parker	Ethel Freeman, Margaret Coulter
Vice President—Grace Conant, Mary Averett, Grace Manning	Grace Manning, Florence Miller
Recording Secretary—Edith Bullis, Olive Sieben	Cecile Bowman, Cecile Bowman
Corresponding Secretary—Elizabeth Lingle, Anna Ellison	Anna Ellison, Mildred French
Treasurer—Mabel Porter, Margaret Calvin	Helen Gardiner, Jessie Sherman
General Secretary—Florence Parker	Ethel Freeman

The officers are elected at the close of the Winter Quarter, so as to get the work well under way for the next year before the close of the Spring Quarter.

The members of the Advisory Board are as follows:

Dr. Coulter	Mrs. Goodspeed	Miss Freeman
Mr. Mathews	Mrs. Miller	Miss Donnan
Miss Talbot	Miss Reed	Miss Coulter
Miss Bronk		

## IX. MISSIONS

In the Divinity School and in the Christian Associations systematic provision is made for instruction in the history, aims, and methods of city, home, and foreign missions; organized efforts are made to hold the duty of this service before the minds of the students and help them to wise personal decisions. The most earnest and successful missionaries and managers of societies are frequently invited to present some aspect of the subject as it appears to one whose whole life is devoted to this branch of Christian enterprise.

As a result of this effort the pastors who have been educated here are leaders of missionary enterprises; many of our alumni are spending their lives in the service of humanity and of the kingdom of God, both in hard fields in our own country and at difficult posts abroad. Many have offered themselves to missionary boards and are ready to go where they are most needed.

## X. MORAL INFLUENCES

Parents and patrons have a right to ask us what effort is made at the University to build up the moral character of the students intrusted to us, to help them overcome temptation and to become positive forces of good in the world. The implied question has, in part, been answered by all the statements of this report, but only in part. The Physical Culture Depart-

ment, by the personal character of the instructors and by the discipline it gives in good habits, lays the physical foundation for all virtue and offers worthy and powerful motives for good conduct. The ordinary discipline of the class-rooms and of the Deans is carefully ordered with a view to repress selfish and degrading tendencies, and to ennoble and refine the heart and life of all. Perhaps it is this daily habit, far more than ethical precepts, which is the most important factor in moral development. There is no time for dissipation. This is a "working university." The idle, the heedless, the dissolute are sifted out by frequent examinations. Those who are guilty of immoral conduct are required to withdraw from the community. That wrong acts are done we do not deny; but the atmosphere of the society is favorable to all those qualities which are held in just esteem by all Christian communities. One of the most helpful factors in this connection is the presence of refined and pure women who are inspired by the noblest ideals and sustained by the most worthy aims.

Respectfully submitted,

CHARLES RICHMOND HENDERSON, *Chaplain.*

## THE HOUSE SYSTEM AT THE UNIVERSITY

*To the President of the University:*

SIR: I submit herewith my report on the House system at the University.

True education aims to produce harmony with environment—to enable men to live, and to live nobly. The American college of today is the result of experience which has been adapted to environment. It differs from both the colleges and the universities of Europe. It is the outgrowth of American life. The early college was designed to be a training school for preachers and teachers. But with the expansion of the nation and the development of its material resources, the scientific and technical curriculum has gained upon the older form, and today has place in every college of eminence in the country. Wondrous material changes have been wrought in the foundation of libraries, the equipment of laboratories, the erection of student dormitories, the establishment of professional and technological schools. Nor has the evolution ended here. Continental ideals and practices—witness the *seminar*—have been assimilated, although, fortunately, all attempts to empty the American college of its native characteristics have proven futile.

These changes have naturally resulted in an enormous increase in the number of students in our universities and colleges. Yet in two respects until recently higher education has been curiously backward: first, in appreciating the fact that a certain amount of physical culture may be profitably joined with mental effort; and, second, in developing the social instinct in the student during the formative period of life, when character is most adaptable and the lessons of experience are most easily learned. The first of these has now been overcome. The college man today secures relaxation from his books in healthful and well-directed exercise either in the gymnasium or upon the athletic field. But the *social* life of almost every American college is a yet undeveloped factor; or if it has been developed, it has grown haphazardly, and is either lacking in coherence, or else has hardened into narrow cliques which perpetuate unwise traditions and breed antagonism. Broad, genuine, sympathetic, *social* life is still an unknown element in far too many institutions. But the change is happening—has happened. It is only tardily that American college authorities have become aware of this deficiency in student life, and have grown to appreciate that liberal culture implied the development of the American college student in all right directions, intellectual, physical, æsthetic, social. The building of the well-equipped men's clubhouse at the University of Chicago marks the purpose in the minds of the Trustees to provide a symmetrical education, lying four-square, in the Liberal Arts, in Science, in Gymnastics, and in "the manners that make men."

American education has been slow in some ways to profit by the experience of Europe. Everyone knows in a general way that the mediæval universities "were at first simply an expansion and evolution of the existing ecclesiastical organization," but not all are familiar with the fact that the colleges of Oxford and Cambridge, which today with their separate faculties emphasize the instructional side of education, originally were social organizations; indeed, that the colleges which formed the universities of the Middle Ages grew out of eating clubs of students and were originally only endowed hostels. There must be some common bond or common occasion among men for meeting. Table talk is doubtless one of the most ancient forms of literature, and now as always one of the most universal. Man relaxes when he eats, and becomes social. Strangely enough, the founders of American collegiate institutions ignored

the lessons of experience, or perhaps the penury of all of our earlier colleges prevented the development of this necessary feature of student life. At any rate, the social life of American students for generations lacked the unity and sympathy derived from living together and breaking the bread of silence or of mirth in neighborly company. Students boarded in private families, enjoying few of the comforts of home, and led a life of isolation, combined with intense intellectual effort, or else of frivolity undisciplined by and unknown to the college authorities. Harvard was the first college to attempt the betterment of such conditions and to realize the advantageous results to be derived from a community life on the part of the students. In October, 1747, the Overseers passed a vote that it would be "beneficial for the college that the members thereof be in commons," and recommended that "speedy and effectual care should be taken that the law on that subject be carried into execution." The corporation immediately passed a vote to this effect, "but unfortunately," says Quincy, in his *History of Harvard College*, "the provision for various reasons was a dead letter from the very beginning." Ten years later the Overseers endeavored to revive the statute and restrained students from lodging or boarding in private houses, on the ground that life in commons would very much contribute to the health of the students, facilitate study, and prevent extravagance. The corporation regarded the suggestion as impracticable; yet from the building of Hollis Hall at Harvard until the present beautiful edifice of the Harvard Union, Harvard has attempted to stimulate and develop the communion and social life of students at Cambridge.

The history of social development at Chicago proves that the University has profited by the light of experience. It is an interesting story of social experimentation, adaptation, and development. The Quinquennial Convocation statement of the President, made July 2, 1896, admirably describes this genesis:

There were at first no bonds of association, and only to the slightest extent was there acquaintanceship of any kind. Bold and courageous were those first men and women who began work October 1, 1892. The recollection of life in the Beatrice, and the removal of the women to Snell in the spring, will never be forgotten by those who took part in these experiences. . . . The decision of the Faculty to discourage the organization of fraternities now seems to have contributed much to the confusion of earlier years. There was, however, everywhere the presence of an excellent spirit, and the pioneer days performed no slight service in developing character that would not otherwise have been developed. At the beginning of the second year the House system was adopted, and immediately social organization began to take form. Meantime several efforts were put forth to organize literary societies, and these, with the associations formed in connection with the University of Chicago *Weekly* and other similar efforts, furnished the basis for still further development. The simple division of all undergraduate students into two classes . . . prevented all friction of a traditional character between Freshmen and Sophomores, and at the same time encouraged a more independent feeling on the part of the younger students as compared with those who had been longer engaged in college work. The large number of graduate students unquestionably exerted restraining influence upon the undergraduates—an influence, however, which was upon the whole good. The same influence was exerted by the life of the Houses, especially in the women's Houses, where graduate and undergraduate women have lived together. The athletic activity was cultivated vigorously from the beginning. Here more than anywhere else paternalism may be said to have existed. The University did not wait for the students to organize. The work of the athletic field was placed under the direct supervision of a University officer. The results show that under certain circumstances paternalism is an effective agency. The Monday receptions instituted soon after the organization of the Houses have contributed perhaps more than any other single agency to the general social life of the students. . . . Naturally the Senior students took in hand the celebration of Washington's birthday, and the custom of Junior College Day seems to have become a law. Within two years the exercises connected with graduation have become more and more distinctive, until now certain events of a specific character seem to have become permanent. The more important traditions of student life may be regarded as established.

It will be seen by this statement that from the beginning the University of Chicago appreciated the educational importance of the social life of the student. It recognized the fact that the student's development is determined almost, if not quite, as much by contact with his fellows as with the libraries, laboratories, and his teachers. But it required some time to discover the most happy method of association among the students. It was not until 1893 that, in accordance with this appreciation, the system of the University Houses was established, a "House" being understood to be a group of members of the University entitled to continuous residence in a particular Hall, this residence being limited to students in attendance upon courses in the University, and to officers of the University. Each House had a Head, appointed by the President of the University; a Counselor, chosen from the Faculty of the University by the members of the House; a House Committee, elected by the members of the House, of which House Committee the Head of the House was chairman and the Counselor an *ex officio* member; and a secretary and treasurer, elected by the members of the House.

The adoption of this form of administration was in June, 1893, although the application of it was deferred until the ensuing autumn. It was the result of a request by the Deans of the University, made to the Faculties of Arts, Literature, and Science, to appoint a Parietal Committee which should consider the details of student and University life upon the grounds of the University as well as at a distance from these grounds. This committee held a meeting and considered the various problems presented by the members of the committee. In view of the circumstances, at this meeting of the committee it was not found possible to formulate anything that was in any sense satisfactory. A little later the Council of the University took up the matter, and as the result of its work a plan was proposed which was submitted to various members of the Faculty, to the Parietal Committee, to a Committee of the Board of Trustees on Organization, and finally to the Board of Trustees itself. This plan, after many modifications and many suggestions, combined, as well as could be combined, the wisdom of many persons, and was legally adopted.

A word or two of explanation as to the origin, and what might be called the philosophy, of the plan may be of interest.

In the University life there were many things to draw students apart, many departments of work, many different interests, many instructors, and very many courses of instruction. From the beginning the University did not have that influence which comes from class organization. The University had been organized upon another scheme. No one doubts for a minute that there is a great gain in all that constitutes class interest, but it was thought that this gain might be secured in some other way. No one doubted for a minute the need of some interest which would bring those of kindred spirits together and bind them into a unit. In an institution as large as the University of Chicago it was entirely out of the question that every man and woman in the institution could know or become intimate with every other man and woman. In the nature of things this was impossible. In a small college, where the number is limited to but one or two or three hundred students, it is possible; and here without doubt is one of the strongest arguments in favor of the small college and smaller institutions. But might not a great university accomplish this same result by being organized in such a way that there might be the equivalent of many smaller colleges, so that those who were like-minded might associate together? For this purpose, and in part also to introduce the principle of self-government, the plan of the House system was adopted. It was understood that these Houses, as they were organized, should cultivate the individual spirit; that each House should have its own traditions and its own interests; that there should be a rivalry, but a generous rivalry, between Houses. It was understood that the control of the House should be in the hands of those who constituted the membership, yet with certain safeguards established. The Head of

the House was to be appointed by the President. This meant that the Head was in every case confirmed by the Board of Trustees, and by virtue of this appointment and confirmation became an officer of the University. The Councilor, selected from some Faculty of the University, was the representative of the House in Faculty meetings. He was to have in his hands the public interests of the House. Aside from these officers, the remainder of the organization was entirely in the hands of the members of the House. The executive committee was the committee chosen by those who lived in the House; the secretary and treasurer was elected by the members of the House; in real truth, each House was to be self-governed.

A more important fact, from the point of view of the constitution of the House, was that the membership of the House was to be determined by those who already had become members. This practically made a House a club or a society. Those who had once gained membership in a House decided, within certain limitations, who should afterward become members of the House. There were, of course, many possibilities of vacancies in the House, and for the interest of the members of the House, as well as for the interests of the University, it was necessary that these vacancies be filled, and provision was made in the plan for the temporary filling of such vacancies. But a guest, a temporary occupant of a room in the House, occupied it only for a specific number of weeks, and if at the end of that time the guest were not elected to membership, the guest had no longer any claim upon the room which he or she might have occupied. This meant that no person should become a permanent member of the House without the consent of those who had already become members of the House, and was a most important feature of the plan, for its assured congeniality among the members.

The plan of working all four Quarters in the year, of welcoming students who were able to come for only a single Quarter, made it necessary that rooms upon the grounds should be furnished. It seemed wise to render all the assistance that could be rendered in this matter, and so the Trustees proposed to provide the money for the furnishing of the Houses upon terms the examination of which shows that they were businesslike and reasonable. This plan allowed those who so desired to have a House furnished with some degree of elegance. It even permitted those who so desired to have a House furnished very elegantly. It enabled members of the Houses who might wish to do so, to purchase and put into the House any furniture that they might desire; but a restriction was put upon all furniture for which the House paid only a percentage. It was not thought wise that those who were present today, for example, should establish a debt too large for those who were to follow, and hence the Trustees provided that all furniture which was to be purchased and for which the Trustees were to advance the money must be purchased by an officer of the Board of Trustees and purchased upon a requisition approved by a committee of the Board which has charge of the buildings.<sup>1</sup>

In pursuance of the new policy, thus somewhat fully outlined, the dormitories occupied by the men and women students of the University were first organized as Houses, distinction being given by prefixing the name of the Hall to the House. The first Houses were established under the above form in October, 1893. These were Beecher Hall, Kelly Hall, and Foster Hall, whose charter members had been residents of the Beatrice. In December Graduate Hall and Middle and South Divinity were organized under the House system. Snell Hall, the first undergraduate House for men, was organized in January, 1894. Green Hall, the largest of the women's Houses, was established on December 13, 1898.

The government of each House was intended to be, and is yet, a democracy, the power of the Head, except in the case of certain broad University regulations, being limited to the enforcement of statutes framed by the House members. For three principles have been upper-

<sup>1</sup> Adapted from remarks made by President Harper in Chapel, June 20, 1893 (unprinted).

most in the minds of those most interested in organizing and influencing the life and activities of the students of the University: unity, liberty, and equality.

Within a short time, however, after the inauguration of the House system, modification was made necessary, owing to the fact that various Greek-letter fraternities had entered the University. At the inception of the University the methods of this kind of organization were believed by some to be in distinct antagonism to the ends desired by the administration; the original thought of the University authorities was to discourage every effort at the establishment of fraternities at Chicago, where it was aimed to foster the spirit of a great university rather than of a provincial college. The error of this policy was soon seen, however, and the general vote of the Trustees in 1893 allowed fraternities to enter. The action was taken without special reference to the effect on the somewhat complicated and extremely important form of House organization which was then in process of formation. The results have been most gratifying. It is an undoubted fact that in the authorization of the Greek-letter fraternities the University created the opportunity to stimulate House life among the students, and at the same time eliminate the undesirable features of the fraternity system. By becoming members of the larger House system the fraternities at Chicago stand in much more healthful relations to each other and to the student body as a whole, and to the Faculty, than is usual elsewhere; for they are not in the position of student organizations merely tolerated, but are normal, co-operating organs of the whole University life.

The following Greek-letter Houses, organized outside the Quadrangles, have been recognized by the University:

1. Delta Kappa Epsilon House, 5754 Woodlawn avenue; established December, 1893. Councilor, Associate Professor J. R. Angell; Head, Professor Shailer Mathews.
2. Phi Kappa Psi House, 5635 Lexington avenue; established January 4, 1894. Councilor, Professor George Lincoln Hendrickson; Head, Dr. D. J. Lingle.
3. Beta Theta Pi House, 5806 Washington avenue; established January 25, 1894. Councilor, Associate Professor F. W. Shepardson; Head, Associate Professor William Bishop Owen.
4. Alpha Delta Phi House; established March 20, 1896. Councilor, Professor G. S. Goodspeed; Head, Dr. Joseph Edward Raycroft.
5. Sigma Chi House, 5723 Washington avenue; established January 23, 1897. Councilor, Associate Professor S. H. Clark; Head, Director Newman Miller.
6. Phi Delta Theta House, 5719 Monroe avenue; established February 18, 1897. Councilor, Associate Professor John W. Moncrief; Head, W. E. Godso.
7. Psi Upsilon House, 6006 Woodlawn avenue; established November 24, 1897. Councilor, Professor Robert Francis Harper; Head, Assistant Professor George Carter Howland.
8. Delta Tau Delta House, 5731 Monroe avenue; established May, 1898. Councilor, \_\_\_\_\_; Head, Associate Professor Alexander Smith.
9. Chi Psi House, 6028 Kimbark avenue; established November 25, 1898. Councilor, Professor John Matthews Manly; Head, Assistant Professor Walter A. Payne.
10. Delta Upsilon House, 6018 Kimbark avenue; established January, 1901. Councilor, Assistant Professor R. M. Lovett; Head, Dr. James Westfall Thompson.
11. Phi Gamma Delta House, 341 E. Fifty-third street; established May, 1902. Councilor, Professor John M. Coulter; Head, Professor Wilbur S. Jackman.
12. Sigma Alpha Epsilon House, 6116 Lexington avenue; established 1902. Councilor, Mr. A. R. Hatton; Head, Mr. F. G. Smith.

But apart from its connection with dormitory and fraternity life, the House system, soon after its inauguration, was destined to experience other expansion. Notwithstanding the establishment of Houses in the Quadrangles, and the organization of fraternities into University Houses,



outside the Quadrangles, a radical social need still remained for which there was no provision. This sprang from the large number of students—nearly 40 per cent. of the body—which came from the city of Chicago and vicinity. Most of these, who lived at home, and a large per cent. of them at a distance from the University, were getting very little of the University life and atmosphere outside the class-room. The situation was briefly described by the President in his Quarterly Statement of January 3, 1898:

Of the twelve hundred students in residence, about one-fourth have homes in the Quadrangles; that is to say, in Halls situated upon the University grounds. Three-fourths of the entire number live at a greater or less distance from the University. Many come to the University from the North and West Sides of the city. The accommodations provided in the University buildings for students who come for the day have been inadequate, and many well-grounded complaints have been made. Such students, to their very great disadvantage, have been compelled in many cases to take courses which were scheduled for three successive hours, in order that their work at the University might be finished within the shortest possible time, and an opportunity thus afforded for returning home.

To meet this demand the President announced at this time that the University had appropriated rooms and money for the establishment of two new Houses for men who were day students, and, in accordance with the appropriation, Lincoln and Washington Houses were organized in February, 1898. The plan of organization was essentially the same as that of the other Houses located upon the Campus. The members of the new Houses had headquarters assigned. These headquarters consisted of a large room, which formed the home of the members during the day. These Houses were in reality clubs, the students themselves determining the membership. Each House had its Head appointed by the President. The membership was limited to fifty, and was restricted to students not members of other University Houses, including fraternities. From the beginning these Houses have been successful, being formed by a congenial group of men who were not greatly interfered with and managed by the Faculty, and who were at liberty to select men of their own stamp, and who built up a tradition and perpetuated it. A simple but important element in their success was due to the fact that the members had a common luncheon hour and crude facilities for preparing simple food.

It was determined at this time that, should there be a demand for more than two Houses, organization of additional Houses would be considered, and it was thought that this further adaptation of the House system would relieve what in the case of many students had been a serious hardship and deprivation. The success of Washington and Lincoln Houses emboldened thirteen young women of the University not resident in the women's dormitories, late in the spring of 1898, to petition for similar accommodations for their enjoyment. Recognizing that the demand was just, the University, with the generous assistance of Mrs. Rockefeller, furnished quarters for Spelman House, named in honor of Mrs. Rockefeller (May 7, 1898). Although the efficiency of these Houses was handicapped from the start by their disadvantageous location in quarters primarily designed for class-rooms, they have abundantly justified their organization.

The broad purpose of the House system by this time embodied the hope of organizing every group of six or more students living together as an organization outside the Quadrangles into a House subject to the general rules of Houses, with such modifications of the rules in each case as might be determined by the administrative board. But even without the realization of this ideal, the proper supervision of the Houses already established, and the oversight of numerous student organizations of various sorts, demanded more centralization; and therefore, on March 19, 1896, the Board of Student Organizations was created, complementary to the Board of Physical Culture and Athletics. The spheres of activity of the new Board comprehended students' organizations, publications, and exhibitions. The establishment of the

Board was announced to the public at the end of the Winter Quarter by the President in these words:

Upon the recommendation of the Council, the Trustees have established the Board of Student Organizations, Publications, and Exhibitions. This Board is charged with the execution of all University regulations bearing upon the University Houses, student fraternities, student publications, and also general supervision of all student entertainments and exhibitions. It will be the policy of the Board to encourage these student activities and in no way to interfere with or repress them. The large freedom which from the beginning has been granted the students of the University will be continued, and every effort will be put forth by the new Board to encourage the development of student activity within reasonable limits. The college is a place for study, but the college life includes more than study. The life of the student must be considered in all the elements which make up that life.

The most ideal institution of learning, so far as the word *home* is concerned, is Oxford, where the colleges are only houses developed. Yet even if the University of Chicago could have a garden for the use of the members of each House, the Oxford ideal would be far from realization. The American college fraternity lodge or students' dormitory inclines to be like a modern club, yet the mediævalism of immemorial tradition still remains to a certain degree in social and domestic life among college men. It is unfortunate that a certain amount of defiance or independence of the best social usage is considered a possession to be fostered in their life. All this is wholly counter to what is best in the House system, which at Chicago is yet in its formative stages, particularly in the case of the men's Houses upon the Campus.

In the spring of 1900 a Committee on Membership in the University Houses applied to the House secretaries with very poor success, so far as the men's Houses were concerned, and on September 25, 1900, reported to the Board of Student Organizations that "the House membership seems to be only a matter of form in the men's Houses whose organization has been examined, while in the women's Houses it is developing along the lines anticipated by the Council and is growing to be more and more an influential agency in the personal and social life of the University." Despite the marked success of the women's Houses, the future, however, must see an adaptation of the House life of the University of Chicago to the local women's societies. At present the opportunity afforded by the great community of interest and social sympathy existing among the members of the various women's societies is not cultivated as it should be. It may be that living together in separate dwellings, as in the case of the fraternity men, may not prove expedient, but a compromise is possible. The erection of women's dormitories, divided after the model of Hitchcock Hall, into distinct sections, would at once respond to the desires of separate social groups of women, and at the same time preserve the larger unity which is so fine a social feature of the women's Halls. The history of a Hall like Green or Foster is a story with a moral not to be ignored. The report of a committee on a plan for the future development of the Junior Colleges, submitted on May 17, 1902, to the Junior College Faculty, to the effect that the future residence Quadrangles east and west of the main Campus be subdivided into Houses, each with its own commons and resident Head, and that Houses or clubs with common luncheon be provided for students who live outside the University, already points this way. The essential reason for the variation apparent between the social life of the men and of the women seems to be the fact that the women enjoy real home life, while the men do not. Where there is no common table, it is difficult for men young or old to be social and intimate. The best nucleus of social life is some sort of a club table, and the new Commons, when opened, is quite likely to stimulate this form of student association.

The following features would seem to be essential, if House life among the *men* of the University is to be made a success: First, the house must not be too large as to membership.

Second, there must be a common dining-room, or at least a club table, in the Commons. Third, there must be a common meeting-place—library, lounging room, or something of the sort. The main defects of Snell have related to the club room, which was not very well adapted to this purpose. The club room of each House ought to be commodious, convenient, comfortably furnished, and provided with some writing materials. It ought to have on the walls photographs of former members, and other things which will give distinctive character to the place. In these apartments the tables should be small, the public rooms large, and there should be no *long* corridors. Fourth, there must be a control of membership by the body of the House. If the administration is to foist anybody upon the group, the principles of selection and self-perpetuation disappear; and these are fundamental to the real growth of a House tradition. Obviously, therefore, the matter of the selection of the Head of the House is one of prime importance. He should be a man of some degree of executive ability, of such strength of character as to command the respect of all the members of the House, and at the same time one who should be both an example worthy of imitation in the matter of personal conduct, and of social ability, so as to give a tone to the whole social life of the House. In this connection it may be suggested that the present deans' system might be modified so that Heads of Houses of those students under their respective supervision be made deans—an innovation which would be likely to bring the student seeking for direction in his study into connection with the one most familiar with his position and attainments. The office of Head, it is plain, is one of influence, capable and worthy of development. The Head in every case should be a resident member of the House. That this is not so in the case of the fraternity Houses is a serious deficiency in the House administration. There is a wide difference between the efficiency of the Head of the House and the Councilor thereof. In general it may be said that the Councilors, except in the case of the women's Houses, do not seem to have been very useful. Another change which might be tried is that of making Heads of Houses *ex officio* members of the Board of Student Organizations.

The question of maintaining discipline in the undergraduate Houses upon the Campus is a more difficult one than in the case of those which are fraternity lodges. The temptation to and the undesirability of "rough housing" are patent to all familiar with student ways, but in the latter organizations the risk of imperiling or destroying furniture and other property, which is *owned by the House members*, acts as a deterrent, while in the men's undergraduate dormitories the property, belonging to the University, is of so public a character that thoughtless students lose respect for property rights. The remedy seems to lie in increasing the responsibility and powers of the Head, while at the same time the student is held sharply to account for any destruction which may occur. Beyond this perhaps it should be urged that the buildings, either by the Head of the House or perhaps by some other University officer, require frequent inspection as to the condition of the furniture, bedding, etc. Perhaps the Head is the best person upon whom to lay this responsibility. But one can easily imagine that in some cases a man fitted to be Head would not be willing to take the responsibility in this matter.

The benefits accruing to the student from congenial House life during his or her residence at the University are manifold. It has been truly said that

the student who lives in a private family does not enjoy the full advantage of University life. The student who lives at home, though enjoying for this reason special privileges, nevertheless loses many of the important privileges of University life. . . . The ideal college and university life will be attained only in those cases in which the life of the individual is brought into the closest contact with the life of many other individuals, and this is impossible when students isolate themselves and maintain association in large measure with those who have no connection with the University. . . . The development of University life is largely dependent upon the growth of the University Houses.

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Some of the advantages alluded to are: the increase of good fellowship among all; the stimulus given to students having local residence, who are least likely to get into the spirit of college life; closer inspection of and more interest in the life of the students; social culture for many who at present have no social opportunity. The words of the President in the Quarterly Statement made October 1, 1896, are both a prophecy and a promise:

The time will come when every student of the University will be a member of a University House. This time, however, cannot come until more University Houses have been built, and until provision is made for residence at the University during the day of those who from necessity must live at home or with friends in the city. The development of University life is largely dependent upon the growth of the University Houses, and the increase in the number of students who live upon the University grounds.

Respectfully submitted,

JAMES WESTFALL THOMPSON,

*Director of University Houses.*



## **REPORTS OF THE LABORATORIES**



# THE YERKES OBSERVATORY

*To the President of the University:*

SIR: I beg to present my report on the work of the Yerkes Observatory for the period covered by your forthcoming report on the condition of the University—July 1, 1899, to June 30, 1902. A sketch of the circumstances connected with the establishment of the Observatory by Mr. Yerkes, and a brief description of the buildings and instruments, are given in the First Annual Report of the Director. The present report deals almost exclusively with the period which has elapsed since the publication of my report for the year ending June 30, 1899. Much valuable information on the work of various departments of research, derived from data furnished by members of the staff, may be found in the more detailed statements given below. In these introductory pages I shall confine my remarks to some of the more general questions which concern the Observatory.

## PLAN OF WORK

The plan of work entered upon by the Yerkes Observatory in 1897 was defined by two closely related considerations: (1) the fields of research which under all the circumstances seemed to promise the best returns, and (2) the importance of realizing in the fullest possible degree the special qualities of the forty-inch telescope.

Hitherto, in view of the necessity of constructing in our own shops the greater part of the auxiliary apparatus required, it has been impossible to bring into effect a well-rounded plan of research. But, one by one, such instruments as a three and one-fourth-inch transit, a six-inch comet-seeker, a double-slide plate-carrier for the forty-inch telescope, the Bruce spectrograph, the two-foot reflector, and the apparatus necessary to equip the spectroscopic laboratories, have been completed and brought into use. At the present time, although much important work of construction remains to be done, the equipment of the Observatory is sufficiently complete to permit many of the details of a general plan of research, which has been contemplated from the outset, to be described.

## THE FORTY-INCH YERKES TELESCOPE

A statement regarding the performance of the great refractor may be found on p. 407. The result of the test of the object-glass by Professor Hartmann's new and valuable method is most satisfactory. Professor Hartmann states that, so far as can be determined from measures of the photographs sent to him, the forty-inch is superior to any objective, large or small, that he has yet tested. The telescopes tested by Professor Hartmann include many of the best instruments of both European and American opticians.

The performance of the mounting, dome, and rising-floor has also been entirely satisfactory, and much credit is due to Messrs. Warner & Swasey for their successful work.

## MICROMETRIC OBSERVATIONS

The forty-inch telescope, on account of its great aperture and focal length, the stability and perfection of its mounting, and its ease of manipulation, is admirably adapted for micrometric measurements of all kinds. At present, four nights of each week are devoted to such work. On two of these nights Professor Burnham is engaged in the measurement of double stars. Up to the time of publication of his "General Catalogue of 1290 Double Stars,"<sup>1</sup> Professor

<sup>1</sup> *Publications of the Yerkes Observatory, Vol. I.*



Burnham devoted his nights with the forty-inch to the measurement of  $\beta$  stars for the purposes of the Catalogue. Since that time, as is explained more fully on p. 408, he has been engaged in the measurement of a long list of neglected double stars, taken in large part from the catalogues of the Herschels. Much of the effectiveness of Professor Burnham's work is due to his invariable adherence to a carefully considered plan, from which he permits himself to deviate for no side-issues, however attractive they may be. This accounts for the fact that he has found very few new double stars with the forty-inch telescope. All of these were picked up accidentally. If he had made a regular search for such objects, there can be no doubt that hundreds would have been added to his long list of discoveries.

Professor Barnard's micrometric work has also been pursued with very definite objects in view, but it has covered a wider field. If I am not mistaken, his measures of the fifth satellite of *Jupiter* are the only ones published during the past few years. These show a remarkable degree of precision, and afford excellent evidence of the qualities of the forty-inch telescope for exact micrometric work on the faintest and most difficult objects. There is good reason to believe that his extensive measures of *Eros*, which represent the contribution of the Yerkes Observatory to the recent international campaign for the determination of the solar parallax, will prove to be exceedingly well adapted for their purpose. His triangulations of star clusters have involved an immense amount of work, and should be of great value, both for the detection of possible changes and for comparison with measures of photographs of these clusters taken by Mr. Ritchey with the same telescope. A more complete account of Professor Barnard's micrometric work may be found on p. 408. Attention is called to the measures of stars in the *Pleiades*, made in an investigation of the variation of the focal length of the objective with the temperature. It would be interesting to compare these with similar results obtained with other large telescopes.

#### CELESTIAL PHOTOGRAPHY

The possibility of using the forty-inch refractor as a photographic telescope, which Mr. Ritchey's work with a color screen and isochromatic plates has so amply demonstrated, was not foreseen when the first plans for research with this instrument were made. In view of the uncertainty which still exists regarding systematic errors that may affect visual and photographic measures of star places, it is fortunate that by this simple means it becomes possible to use a single telescope, with no change of objective or focal length, for both classes of work. In the stellar parallax campaign which is planned for the immediate future, a simultaneous visual and photographic study of the parallax of certain stars will be made with the forty-inch telescope. As it should also be possible to use the new coelostat reflector for simultaneous work, both visual and photographic, on the same stars, there would seem to be an exceptional opportunity to discover sources of systematic error, especially as the coelostat reflector is wholly free from flexure.

The large scale of the photographs taken with the forty-inch telescope, and the sharpness of definition made possible by the use of a double-slide plate-carrier, should permit a high degree of precision to be attained in measures of star places made with their aid. The Observatory does not yet possess a measuring machine for use in both co-ordinates, but, through the kindness of Miss Whitney, the excellent Repsold machine belonging to the Vassar College Observatory was loaned to us during the summer of 1901. The measures of stellar photographs made by Professor Barnard with this machine, and compared with his visual results, were exceedingly satisfactory. As soon as measuring machines can be obtained, it is hoped that much work may be done on photographs made with the large refractor.

Photographs of the Moon taken with the same instrument by Mr. Ritchey are remarkably sharp, and selenographers have stated that they exhibit many details not previously recorded

photographically. In view of the recent publication of photographic maps of the Moon, it has not been considered advisable to make a new one, but enlargements from selected regions will soon be published. Some of the negatives have been sent to Mr. S. A. Saunder, of Berks, England, at his request for measurement.

A comparison of photographs of the same objects taken by Mr. Ritchey with the forty-inch refractor and the two-foot reflector brings out in a striking way the relative advantages of the two instruments for work of this kind. On account of the great focal length (sixty-four feet) of the forty-inch telescope, the scale of photographs taken with this instrument is eight times that of photographs taken with the reflector. The star images are larger in the case of the forty-inch. But as settings can be made on them with a linear error hardly greater than that with the small scale pictures, the precision of the resulting measures is many times greater. The angular field of good definition is doubtless considerably larger with the refractor than with the reflector, but the field actually included on the 8×10 plate employed with the forty-inch is not larger than the field of good definition with the reflector. In all other particulars the reflector has very great advantages. For example, stars beyond the reach of the forty-inch refractor can be photographed with the two-foot reflector in forty-five minutes. In the case of nebulae the advantages of the reflector are far greater. The absence of chromatic aberration and absorption, which gives the reflector its power of photographing so quickly, is equally important in spectroscopic work, for which the reflector seems eminently adapted. For a continuation of Professor Nichols's research on the heat radiated by the stars (p. 422), a great reflector will be indispensable. The bearing of these facts on the importance of mounting our five-foot mirror is obvious.

#### THE FIVE-FOOT REFLECTOR

As stated in my First Annual Report, a five-foot mirror for a reflecting telescope, constructed in our optical shop at the expense of Mr. William E. Hale, was offered by him to the University on condition that funds be obtained to mount and house it. The University decided to accept this offer if it could obtain the necessary funds, but no money has been secured for the purpose. Meanwhile, the work of Keeler and Perrine with the three-foot Crossley reflector, and that of Ritchey with the two-foot reflector built in our own shops, has convinced astronomers of the great advantages of reflecting telescopes. In November, 1901, a circular letter was sent to a number of astronomers and physicists, requesting their opinion regarding the most powerful telescope that could be constructed for use in various specified fields of astrophysical research. Replies were received from Mr. C. G. Abbot, Washington; Sir Robert Ball, Cambridge (England); Professor A. B elopolsky, Pulkowa; Professor W. W. Campbell, Mount Hamilton; Mr. W. H. M. Christie, Greenwich; Dr. A. A. Common, London; Professor G. C. Comstock, Madison; Professor A. Cornu, Paris; Sir William Huggins, London; Professor H. Kayser, Bonn; Dr. S. P. Langley, Washington; Sir Norman Lockyer, London; Professor A. A. Michelson, Chicago; Mr. H. F. Newall, Cambridge (England); Professor Simon Newcomb, Washington; Professor E. F. Nichols, Hanover; Professor E. C. Pickering, Cambridge (Mass.); Professor J. K. Rees, New York; Professor A. Ricc , Catania; Professor Arthur Schuster, Manchester; Professor H. H. Turner, Oxford; Professor H. C. Vogel, Potsdam; Mr. W. E. Wilson, Daramona, Ireland; Professor Max Wolf, Heidelberg; and Professor C. A. Young, Princeton. The opinion was unanimous that a great reflecting telescope, provided with such a mirror as the one of five feet aperture constructed here, would be decidedly superior to any other instrument for our purpose, and would render possible many advances quite beyond the range of existing telescopes. It is greatly to be hoped that the funds necessary to mount the five-foot mirror can be obtained very soon.

## SPECTROSCOPY

Spectroscopic research at the Yerkes Observatory is conducted along three converging lines, involving stellar, solar, and laboratory investigations. The importance of this three-fold mode of attack seems to me very great. Observations of stellar spectra include (1) the measurement of stellar motions in the line of sight, and (2) the detailed investigation of all the lines, for the identification of the chemical elements present in the star's atmosphere, the study of its physical constitution, and the determination of the star's place in some general scheme of stellar evolution. With the aid of suitable instruments, immense advances in our knowledge of stellar evolution can be made when stellar spectroscopy is studied alone. But when it is remembered that the Sun is the only star which is near enough the Earth to allow its individual phenomena to be investigated, while all the other stars are mere points of light in the most powerful telescopes, it becomes obvious that solar research is absolutely essential to the interpretation of stellar phenomena, and that great advantages must result from the simultaneous study of both subjects in a single institution. Even this is not enough. Peculiarities of stellar and solar spectra, for which no explanation based on existing knowledge is adequate, are constantly presenting themselves. It may happen, for example, that the wave-length of a certain line is different in different stars; or in an investigation of pressure in the solar atmosphere, based upon pressure shifts of the lines, the amount of shift per unit atmosphere may not be known for the lines in question; or in a study of the lines widened in Sun-spots it may be of the utmost importance to be able to produce reversals of certain lines at will in the laboratory. Such examples could be given without number. To me they indicate the great desirability of providing means in an observatory for making physical researches whenever they may be needed. The equipment of the laboratory should be such as to permit the spectrum of any element to be photographed at short notice, under a great variety of conditions of temperature, pressure, and potential, in any desired gaseous or liquid medium. Furthermore, to derive the full advantage of such an equipment, provision should be made, not only for brief experiments, but also for extended researches on questions connected with stellar or solar problems.

## STELLAR SPECTROSCOPY

The principal stellar spectroscopic investigations hitherto conducted at the Yerkes Observatory comprise a research on the evolution of the red stars, made by myself, with the assistance of Messrs. Ellerman and Parkhurst, and a research on the motion in the line of sight of twenty stars of the *Orion* type, made by Professor Frost and Mr. Adams. The first-mentioned research, which has been alluded to in previous reports, is now approaching completion; the photographs have been measured and reduced by Mr. Parkhurst, and the results are about to be published. Sir Norman Lockyer contends that bright lines are absent from fourth-type spectra, but recent results have only tended to strengthen my earlier conclusion in favor of their presence. An important fact brought out by this research is the striking similarity of the dark-line spectra of the two types of red stars. If we except the regions just including the blue and yellow carbon bands, we find a very close and suggestive agreement of these spectra. Further remarks on these stars may be found on another page (p. 414).

The stellar spectrograph used in the above research was built by Brashear after the design of Keeler's Allegheny Observatory spectrograph. The instrument embodies many excellent features, but is not suited to work of precision requiring long exposures under changing temperature. This fact materially affected the accuracy of the work on the red stars, but it made itself even more distinctly felt in Professor Frost's and Mr. Adams's investigations of motion in the line of sight. Fortunately the defects had already been recognized, and the construction of the Bruce spectrograph was well under way before the most serious difficulty with the old

spectrograph was experienced. Except for the prisms, for which more homogeneous glass might perhaps be obtained, the Bruce spectrograph leaves nothing to be desired. The results obtained with this instrument show a remarkable degree of precision, and are nearly equally good for long or short exposures. As magnitude  $5\frac{1}{2}$  is about the limit of this instrument, it is planned to undertake as soon as possible the construction of a spectrograph of smaller dispersion for use with fainter stars. This will be particularly useful in cases where the lines of the spectra are broad and ill-defined.

The question of general co-operation in line of sight investigations is one which will naturally arise in the near future. A beginning has been made, at the instance of Professor Frost, through the adoption by the Lick, Potsdam, Cape, Pulkowa, Meudon, Cambridge, and Yerkes Observatories of a list of standard stars, to be measured at stated intervals at each of these institutions. The check thus afforded on the work of these spectrographs, and the consequent detection of systematic errors, should prove invaluable. From such results it will ultimately appear whether a more general plan of co-operation is likely to be feasible.

#### SOLAR INVESTIGATIONS

With the renewal of solar activity, and the completion of several instruments required for researches on the Sun, it is hoped that a full program of solar observations may soon be in progress at the Yerkes Observatory. As no field of investigation offers more promising opportunities, it is difficult to account for the comparative neglect of solar observation during the last twenty years. Inaccessibility of site and expense of equipment have not prevented the universal observation of total eclipses, but the vast majority of the astronomers who take part in these expeditions make no observations of the Sun at home.

The full program of solar observations prepared for the Yerkes Observatory some years ago, which will be fully realized within a few months, includes systematic investigations along the following and related lines:

1. *Direct photography*.—Daily photographs of the Sun on a scale of seven inches; large-scale photographs of spots and other regions.

2. *Monochromatic photography*.—Daily photographs with the spectroheliograph, for systematic study of the form, area, distribution, and motion of the calcium and other vapors on the disk and in the chromosphere and prominences. Comparative photographs of spots and other regions in various bright and dark lines, and other special researches.

3. Daily photographs of the spectrum—

a) Of Sun-spots, for the systematic study of the positions and intensities of the widened lines and the bright H and K lines.

b) Of various regions of the photosphere, for the study of the bright H and K lines, and the detection of possible changes in the position and intensity of dark lines.

c) A special series of photographs, taken at the shortest practicable time intervals near the Sun-spot maximum, in order to register, if possible, such remarkable changes in the reversing layer as are referred to on p. 416.

4. Special researches, radiometric, visual, and photographic, on the spectrum of the reversing layer and the chromosphere with a large solar image and powerful grating spectroscope.

5. Investigations on the solar rotation, determined with the spectroheliograph and by spectrographic observations of the photosphere, spots, chromosphere, and prominences.

6. Radiometric investigations of various kinds.

7. Visual observations to supplement those made photographically.

Much time has been devoted to the construction and perfection of the instruments required for these various pieces of work. Several of the researches enumerated are now in progress, and the others will be undertaken very soon.

## LABORATORY RESEARCHES

The provision of a well-equipped spectroscopic laboratory, for which space was reserved in the plans of the Observatory, was begun by the erection of the Kenwood four-inch concave grating spectroscope in 1897. Several investigations were made with this instrument, but continuous laboratory work was not undertaken until July, 1900. During the previous winter, in connection with our observations of *Nota Persei*, I had endeavored to repeat Wilsing's experiments on the spectrum of a spark between metallic poles in liquids, but no alternating dynamo was then available, and in other respects the equipment proved inadequate. This work was therefore deferred until the summer of 1900, when a small alternating dynamo, kindly loaned us by Professor Crew, of Northwestern University, and subsequently purchased for the spectroscopic laboratory by Dr. George S. Isham, became available for use with a transformer giving 15,000 or 30,000 volts. With the assistance of Dr. N. A. Kent, I then undertook an investigation of the spectrum of the spark in air at high pressures, and subsequently returned to the work on the spark in liquids. Meanwhile, largely through the generosity of Dr. Isham, the spectroscopic laboratory had been fitted up in the manner described on p. 420. At present it is possible to investigate the spectrum of any element under various conditions of pressure, temperature, etc. The use of a circular table, with apparatus arranged on its circumference for producing a spark or arc in air at atmospheric pressure, in gases at high pressures, in liquids, etc., with a central mirror permitting the light from any source to be brought into instant adjustment on the slit of the spectroscope, has proved to be very convenient in practice.

## CÆLOSTAT REFLECTOR

In planning the Yerkes Observatory a heliostat room about one hundred feet long, with sliding roof at one end, was provided. This room has already proved very valuable in several investigations, the most important of which was Professor Nichols's research on the heat radiation of the stars. A large Fahrenheit heliostat, with mirrors two feet in diameter, was to be erected in the heliostat room for use with a long focus mirror for the photography of nebulae, etc., and for certain spectroscopic investigations. The great excellence of the photographs of the corona and prominences obtained by Professor Barnard and Mr. Ritchey with a cœlostat at the total eclipse of May 28, 1900, and the fact that the field of the cœlostat does not rotate, led me to decide on the construction of a cœlostat reflecting telescope of great focal length, and to defer the construction of the heliostat. It was thought best to erect the new instrument in a separate building on the Observatory grounds, and to reserve the heliostat room for miscellaneous work with the heliostat, which will be constructed later.

The detailed scheme for the cœlostat and other parts of the horizontal telescope, as worked out by Mr. Ritchey, involve the use of a thirty-inch plane cœlostat mirror, a twenty-four-inch plane mirror to give the desired direction to the horizontal beam, and a twenty-four-inch concave mirror of sixty-two feet focal length. The last mirror can be replaced by a twenty-four-inch concave mirror of one hundred and sixty-five feet focal length when the conditions warrant. The image can be received (1) on a plate mounted in a double-slide plate-carrier; (2) on the slit of a concave grating spectrograph of fifteen feet focal length (with collimator lens to obviate astigmatism), mounted in a constant-temperature laboratory for photographing stellar spectra; (3) on the slit of a concave (or plane) grating spectrograph of twenty-one feet (or eighteen feet) focal length, for solar observations; (4) on the slit of a spectroheliograph designed to photograph a solar image seven inches in diameter. The cœlostat and most of the other instruments are ready for use, and will soon be given a trial.

We hope to accomplish two important results with this apparatus: (1) to make a thorough test, both photographic and visual, of a reflecting telescope, mounted in the cœlostat form, in

comparison with the forty-inch refractor, which has nearly the same focal length as one of the reflector mirrors; (2) to take advantage of the excellent conditions of a constant-temperature physical laboratory in both stellar and solar spectroscopic work.

#### CO-OPERATION IN RESEARCH

The benefits which may result from co-operation in research have been clearly illustrated in recent astronomical and astrophysical work, most recently in the international campaign for the determination of the solar parallax from observations of *Eros*. Professor Barnard's long series of micrometric observations of *Eros*, made in conjunction with the general plans of the international congress, are reduced and will soon be published. There can be no doubt that a series of photographs of *Eros*, taken with the forty-inch telescope and color screen, would have proved of great value. At the period of the opposition, however, the color-screen method was undergoing its first tests, and it did not seem advisable under the circumstances to devote to photography time which could be used advantageously in visual work.

A second co-operative research in which the Yerkes Observatory has been glad to take part was inaugurated by Professor Pickering, for the purpose of observing photometrically sets of comparison stars for variables which are very faint at minimum. The telescopes engaged in this work are the fifteen-inch of the Harvard Observatory, the twenty-six-inch of the McCormick Observatory, the thirty-six-inch of the Lick Observatory, and the forty-inch of the Yerkes Observatory. Mr. Parkhurst's report on the observations already made here may be found on p. 419.

I have alluded elsewhere to the co-operative observations of the radial velocities of certain standard stars, in which the Lick, Potsdam, Pulkowa, Cambridge, Meudon, Cape, and Yerkes Observatories are taking part. It is probable that further co-operative work in this field, as well as in other departments of astrophysical research, will prove to be desirable.

#### THE VISITING COMMITTEE

The appointment of a committee to investigate the work of the Observatory and its needs, and to report its conclusions annually to the President and Trustees of the University, has proved to be an event of importance. According to the constitution adopted, the Committee shall consist of at least twelve members, of whom four are to be elected each year to serve for three years. At each annual meeting, which is held at the Observatory in June, an eminent man of science is invited to be present as a member of the Committee for that year. At the first annual meeting, held in June, 1901, Professor E. C. Pickering, Director of the Harvard College Observatory, who was present in this capacity, did much to assist in inaugurating the work of the Committee. Dr. H. S. Pritchett, President of the Massachusetts Institute of Technology, acted in the same capacity in June of the present year. The Committee issued a report in 1901, setting forth the needs of the Observatory, and calling special attention to the importance of securing funds for additional assistants and computers. The present membership of the Committee is as follows: James B. Forgan, Chairman; George S. Isham, Secretary; Henry S. Pritchett, Edward E. Ayer, W. J. Chalmers, H. D. Estabrook, John V. Farwell, Jr., Charles G. Fuller, Frank G. Logan, Ezra B. McCagg, John J. Mitchell, J. S. Runnells, H. G. Selfridge.

#### SPECIAL INVESTIGATORS

The mutual advantage of placing certain of the instrumental facilities of the Observatory at the disposal of investigators from other institutions, when this can be done without interference with the routine work, is well emphasized by such researches as that of Professor Nichols on stellar heat radiation, carried out during the summers of 1898 and 1900. Professor

Nichols will continue this research, as soon as the completion of the five-foot reflector provides the indispensable means of doing so. Professor St. John's recent investigations also afford evidence of the advantage of this policy, which will be continued in the future. Those who come to the Observatory as Volunteer Assistants, after becoming familiar with the work and methods, are encouraged to return in subsequent years with the view of undertaking researches of their own.

#### INSTRUCTION IN ASTRONOMY AND ASTROPHYSICS

On account of the special equipment of the Yerkes Observatory, its work must of necessity be largely that of an institution devoted to research. Nevertheless, thoroughly qualified students have always been made welcome, and every possible facility has been given them to profit by the work of the Observatory. Experience has shown that what such students desire is an opportunity to have some actual part in the Observatory's work rather than to follow a classroom course, such as they might obtain at institutions less thoroughly equipped for research. The only practical difficulty which has been experienced has arisen through the inadequacy of the Students' Observatory on the University campus. Professor Laves and Dr. Moulton are greatly handicapped in their efforts to interest students in astronomical work, and much credit is due to them for the success achieved under unfavorable circumstances. As pointed out in previous reports, it is of the utmost importance that a well-equipped Students' Observatory should be erected on the University campus in the immediate future. Until this is done no adequate body of students in Astronomy can be expected at the University of Chicago. The great distance of the Yerkes Observatory from the University campus limits the use of its facilities to such students as are able to reside at Williams Bay.

#### WORK OF THE OPTICAL LABORATORY AND INSTRUMENT SHOP

On p. 427 a list may be found of the instruments which have been constructed in the optical laboratory and instrument shop. Without well-equipped shops much of the work already accomplished at the Yerkes Observatory could not have been done. It is difficult to overestimate the importance of constructing instruments under the eye of the designer, and of having the means constantly at hand to repair, modify, or reconstruct at will. With the small funds available, such a project as the cœlostast reflector would never have been undertaken, had it not been for the possibility of constructing both the optical and mechanical parts in our own shops. It is therefore essential that the efficiency of the shops be maintained, both in the provision of necessary tools and in the employment of a sufficient working force.

#### ACKNOWLEDGMENTS

The various gifts made to the Observatory from time to time have been duly acknowledged in the President's Quarterly Statements, but I wish to add a further word here, in view of the great importance of the assistance thus received. Mr. Yerkes's continued interest in the work of the Observatory, as manifested by his annual gifts for the employment of assistants and computers, has been most gratifying, and has led to the accomplishment of much work otherwise beyond the reach of our limited staff. Special mention must also be made of the late Miss Catherine W. Bruce, whose numerous contributions have provided for most important needs, which otherwise would have been left unsupplied. Dr. Isham's personal interest and participation in the laboratory and eclipse work, no less than his provision of eclipse apparatus and a large part of the equipment of the spectroscopic laboratory, have been appreciated by every member of the staff. In the construction of instruments, which has of necessity occupied a prominent place in the work of the Observatory, the encouragement and assistance rendered by the Rumford

Committee of the American Academy of Arts and Sciences, and the Draper Committee of the National Academy of Sciences, have been of the greatest value. The celostat reflector, which is the largest instrument hitherto constructed in our instrument shop, was undertaken as the direct results of grants from these Funds. To these friends of the Observatory, and to many others whose aid has been no less important, I desire to repeat our thanks.

## OBSERVATORY STAFF

The staff of the Observatory at present is constituted as follows:

GEORGE E. HALE, Professor of Astrophysics and Director (solar, stellar, and laboratory spectroscopy).

S. W. BURNHAM, Professor of Practical Astronomy (double stars).

E. E. BARNARD, Professor of Practical Astronomy (micrometric observations, stellar photography, etc).

EDWIN B. FROST, Professor of Astrophysics (stellar spectroscopy: velocities in the line of sight).

G. W. RITCHEY, Instructor in Practical Astronomy and Superintendent of Instrument Construction (instrument design; photography of nebulae, star clusters, etc.).

FERDINAND ELLERMAN, Instructor in Astrophysics (solar and stellar spectroscopy, and general photography).

STORRS B. BARRETT, Secretary and Librarian (solar spectroscopy).

WALTER S. ADAMS, Assistant (stellar spectroscopy: velocities in the line of sight).

J. A. PARKHURST, Assistant (photometry and stellar spectroscopy).

N. A. KENT, Assistant (laboratory spectroscopy).

M. C. HOLE, stenographer.

J. A. JOHANNESSEN, Instrument Maker.

O. F. ROMARE, Machinist.

F. R. SULLIVAN, Engineer in charge of Forty-Inch Telescope.

F. G. PEASE, Optician.

## THE FORTY-INCH REFRACTOR

Five years have elapsed since the completion of the forty-inch telescope. During the first few months of this period, owing to the accident to the rising-floor, the telescope could not be used. But since September, 1897, when the reconstruction of the rising-floor was completed, the telescope has been in use throughout practically every clear night. With one slight exception, which has not affected the results obtained with the telescope, its performance has been highly satisfactory. Mr. Carl Lundin, who was with the Clarks for twenty-five years, and is now at the head of the Alvan Clark Corporation, readjusted the objective in its cell on August 29, 1899. This seemed to remove a slight defect which had been noticed in the stellar images. It has since returned, however, and more radical measures may be required to correct it. A distinct triangularity of the image is noticeable in the case of bright stars, and is most easily seen when pointing near the zenith. The angles of the triangle correspond to the three points at which the objective is supported in the cell. Thus the effect is probably due to flexure, and there is reason to hope that a suitable support system for the objective, which Mr. Ritchey is to design, will completely remove it.

From the tests of the objective made before its acceptance by the late Professor Keeler and myself, it appeared that the effect of flexure in so large and heavy an objective would be likely to manifest itself in some positions of the telescope. As explained in Professor Keeler's report,<sup>2</sup> the appearance of flexure at the time of the tests was removed by rotating the flint lens in the cell. When finally put in place on the telescope, the objective gave perfect images, and

<sup>2</sup> *Astrophysical Journal*, Vol. III (1896), p. 154.



met successfully the most severe tests for definition and resolving power. The triangularity of the images did not appear until after the objective had been in use for nearly two years at the Yerkes Observatory.

At the request of Professor Hartmann, a diaphragm pierced with a large number of small holes was placed over the forty-inch objective, and photographs of a bright star both inside and outside of the focus of the telescope were taken by Professor Barnard. The plates were measured by Professor Hartmann, who pronounced the object-glass excellent. This method of testing, which has revealed serious errors in large objectives by the best European opticians, is certain to play an important part in optical work of the future.

#### OBSERVATIONS OF DOUBLE STARS

(PROFESSOR BURNHAM)

Up to the end of 1899 Professor Burnham was engaged in remeasuring all  $\beta$  stars of short period, and those of which recent observations were lacking, for use in his "General Catalogue of 1290 Double Stars," which appeared in 1900 as Vol. I of the *Publications of the Yerkes Observatory*. Since that time his working list has consisted for the most part of stars not likely to be observed elsewhere, selected from the following sources:

1. Long-neglected and little-known pairs, mainly from the catalogues of the two Herschels and Sir James South. Many of these stars have not been measured for from seventy to one hundred and twenty years, so that even in very slow-moving systems the change might be sufficient to be detected.

2. Stars noted as double by meridian circle observers, and included in such catalogues as Weisse, Argelander, Harvard Zones, A. G. Zones, etc.

3. Neglected  $\sigma$  stars, including wide pairs not measured since observed by Dembowski some twenty-five years ago. This part of the work was discontinued on the appearance of Hussey's reobservations of all the Pulkowa stars.

4. Miscellaneous pairs from more recent catalogues. In many of these cases the original observations were incomplete.

About fifteen hundred of these measures, including only pairs which have been measured on at least two nights, will soon appear in Vol. II of the *Publications of the Yerkes Observatory*. From these it will be seen that if the original measures (or estimates) can be relied upon, there are many cases of change in the Herschel and South stars. In the very wide pairs this may in all probability be ascribed to proper motion of one of the components, but among the closer pairs there are some which may prove to be physical systems.

Professor Burnham has made no attempt to discover new pairs; indeed, his system of observing, in which the object is almost immediately found without the necessity of examining neighboring stars, almost precludes the possibility of chance discoveries. In spite of this he has picked up about twenty new pairs.

#### GENERAL MICROMETRIC OBSERVATIONS

(PROFESSOR BARNARD)

The observations have been made mainly with the great telescope, and consist of micrometric measures of stars, planets, satellites, and nebulae.

*Satellite of Neptune.*—Systematic measures have been made of the satellite of *Neptune* from the beginning of the work with the forty-inch. From the fact that isolated observations of this satellite are of little value, the observations were made as continuous as possible in each series and the satellite measured on as many dates as it was observable. Of this satellite the following observations have been obtained:

TABLE I

Season of Observation	Number of Nights of Observation
1897-1898	51
1898-1899	52
1899-1900	69
1900-1901	48
1901-1902	48
Total	268

These consist of five settings each for position angle and four settings on each side of the fixed wire for the double distances; a complete night's measure consisting of thirteen settings of the micrometer wires. The first season's measures of this satellite were used by Professor A. Hall in a new determination of the orbit of the satellite. At present all these measures are being used by Professor Newcomb in an investigation of the motion of the satellite.

*Diameter of Neptune.*—A few measures were obtained, as the conditions permitted, of the diameter of *Neptune*, which were in good agreement with previous measures made by Professor Barnard at the Lick Observatory.

*Fifth satellite of Jupiter.*—During the oppositions of 1898 and 1899 extensive observations were made of the fifth satellite of *Jupiter*, consisting of some eight hundred independent measures of its position. From these measures a new determination of the motion of the line of apsides of the satellite's orbit was made. The motion was found to be 900 degrees per year, or a complete revolution of the orbit in about 4.9 months.

*Satellites of Uranus.*—It was intended to take up a systematic series of measures of the four satellites of *Uranus*, but it was found that the planet was too far south to carry on the work successfully, and it was discontinued after a few measures were obtained.

*Diameters of Juno, Ceres, and Vesta.*—In the year 1900 the asteroid *Juno*—the smallest of the first four discovered—was at one of its nearest approaches to the Earth, at which time only can its diameter be measured. The planet was measured on this occasion and its diameter determined. The diameters of the minor planets *Ceres* and *Vesta* have also been determined with the forty-inch, and are in close accord with the previous measures with the thirty-six-inch at the Lick Observatory.

*Observations of Eros.*—In conjunction with European observatories the planet *Eros* was measured in the fall and winter of 1900-1901 for a redetermination of the solar parallax. One thousand five hundred and six determinations of right ascension and declination (each depending on five measures) were made on seventy-three nights. These observations have all been completely reduced, and in the early spring of this year were forwarded to Paris.

In the fall of 1898, shortly after its discovery, the position of *Eros* was measured on twenty-six nights, and in the summer of 1900, before beginning the parallax observations, *Eros* was measured on thirteen nights.

*Parallax of 61, Cygni.*—In 1900 a series of measures was begun of the star 61, *Cygni* with reference to two faint stars on each side of it, for redetermination of its parallax, and also to test the theory of Wilsing, of Potsdam, as to the probable motion of 61, about an unknown dark body in a period of some twenty-two months. The measures were interrupted in the fall and winter of 1900 by the observations of *Eros*, but were again taken up in the fall and winter of 1901 and the spring of 1902. These stars were measured on seventy-five nights, there being about two hundred and twenty-five measures of thirteen determinations each of 61, and 61, *Cygni* and the two small stars. These measures are now under process of reduction for the parallax of 61, *Cygni*. The indications so far are that the resulting parallax will be not far from 0:37.

*Parallax of B. D. + 37° 4131.*—A long series of measures was made of the star *B. D. + 37° 4131* with reference to four comparison stars for the verification of a large parallax assigned this star by Professor Schur, of Göttingen, from heliometer measures. The resulting observations showed that the star really has no sensible parallax.

*Observations of planetary nebulae.*—Several of the planetary nebulae were measured for parallax, notably *N. G. C. 2392*, which was measured with reference to two stars on twenty-seven nights, but no parallactic displacement showed in the measures.

A longer series of measures was made of the nebula *N. G. C. 404* with four comparison stars, but no satisfactory result was obtained. A test for parallax of the nucleus of the great nebula of *Andromeda* was also made, but with no positive result.

A large number of measures of the position of the central star of the annular nebula of *Lyra (M. 57)* were made with respect to a number of surrounding stars in 1898 and 1899, in an endeavor to determine the motion of the nebula by comparison with similar measures of the nucleus by Professor Burnham in 1891. The results possibly indicate a slight motion, as a difference of 1° in angle and 1' in distance was shown by the measures.

Measures have been made of the dimensions and positions of a number of the other planetary nebulae.

An extensive series of measures of the relative focus of nine of the planetary nebulae was made with reference to the fixed stars. The observations consisted of measuring the focus for the nebula, for its nucleus, and for a fixed star. It was shown that the focus for both nebula and nucleus was farther from the object-glass than that for a star, and that the focus for the nucleus was nearer to that of the star. The nucleus is therefore not so blue in color as the rest of the nebula, perhaps because it is in a later state of development.

*Position of Nova Cygni and Nova Persei.*—In the fall of 1901 a series of measures was made of the position of the new star in *Cygnus* of 1876. An accurate determination of its place showed that the star had not sensibly changed its position in the past quarter of a century, the discrepancy between the present position and the meridian determinations of 1876 being  $-0.06$  in R. A. and  $-0.96$  in declination. The star itself had faded to below the fifteenth magnitude.

Eighty measures of fourteen stars were made in the summer, fall, and winter of 1901 of the new star in *Perseus* to determine motion or parallax. The measures do not show any sensible parallax. The magnitudes of this star were also determined on forty-five nights with five comparison stars.

*Triangulation of star clusters.*—An extensive series of measures was made of a number of the individual stars in the great star clusters *M. 3*, *M. 5*, *M. 13*, and *M. 92*.

A great number of observations of some of the variable stars in *M. 3*, *M. 5*, and *M. 13* have been made, from which their periods, etc., have been determined. A variable in *M. 13* which has a period of five days was found with the forty-inch.

One hundred and twenty measures were made of twenty-nine stars in the cluster *Præsepe* for comparison with photographic measures. The photographs are made, but await a measuring engine for their measurement.

*Double stars, nebulae and comets.*—Micrometrical measures have been continued for several years of the difficult close companion to *Procyon*, discovered in 1896 by Professor Schaeberle, but during the present year the unfavorable weather prevented its being seen again.

A few double stars have been measured, especially  $\beta$  883, and a few new ones found.

Some new nebulae have been found, though no search has been made for such objects.

A series of micrometrical measures was made of Swift's comet of 1899, and the double head of the comet carefully measured also. Several photographs were obtained of the comet.

Micrometrical measures of Perrine's comet of 1898 with several photographs were also obtained.

*Focus of the forty-inch objective.*—Essentially throughout the existence of the great telescope here, a series of measures of *Atlas* and *Pleione* of the *Pleiades* has been kept up. These stars were measured at every opportunity for the detection and determination of the amount of change in the focus of the forty-inch objective due to changes of temperature. In all, measures have been made of these stars on two hundred and sixty-seven nights. They show that the focus of the great object-glass is subject to considerable change in length from summer to winter, amounting in all to about three-fourths of an inch.

In connection with these measures the  $\Delta s$  of *Electra* and *Celæno* of the same group was measured on eighty-six nights as a check on the fixity of *Atlas* and *Pleione*.

*Miscellaneous observations.*—Other and miscellaneous work, such as observations of spots and markings on the planets *Jupiter* and *Mars*, and measures of the diameters of *Venus* and *Mercury*, have been carried on as circumstances have permitted. Regular observations have been made of the November meteors, and also of the aurora, which is finely seen here. Professor Barnard also keeps up his observations of the *Gegenschein*, which is as well seen here as at Mount Hamilton.

#### VELOCITIES OF STARS IN THE LINE OF SIGHT

(PROFESSOR FROST AND MR. ADAMS)

The spectrograph of the "Universal" type originally provided for the great telescope was regularly employed during 1899 and until it was dismantled in April, 1900 to be sent to North Carolina as a part of the outfit of the eclipse expedition.

From July 1, 1899, to April, 1900, the following plates were obtained: (1) with the short camera, of 271 mm. focal length: stellar spectra, 65; planetary, 30; trial plates of sky, Sun, or comparison spectrum, 79; (2) with the camera of 456 mm. focal length: stellar spectra, 148; Moon and planets, 6; trial plates, 33. The spectrograph was used on two, or three, nights per week, the observers being Messrs. Frost, Ellerman or Adams.

The definition of the plates taken during this period was fairly satisfactory, and accordant settings could be made upon the lines, but the stability of the spectrograph was insufficient, and it was not provided with any means for maintaining the constancy of the temperature of the prisms. A comparison of the measures of these plates with other and more recent results indicates that irregular disturbances of an instrumental character seriously affected the accuracy of the determinations, and made possible an uncertainty in some cases as high as 10 km. Several European observers, using a similar type of instrument, had experiences of the same sort. Fortunately the construction of the new spectrograph had already been begun when the inadequacy of the older instrument was thus fully demonstrated.

The three prisms of heavy flint glass from Mantois, to be used in the new spectrograph, were ordered in December, 1899, and were received from Brashear in the following April. They were used in the prismatic camera at the total solar eclipse of May 28, 1900. After our return from the eclipse they were subjected by Professor Frost to an extensive series of tests, which with other experiments in preparation for the new spectrograph, occupied a considerable part of the summer.

As a consequence of the unfavorable results of the tests, new prisms of Jena glass were ordered, which were received in the summer of 1901, some time after the mechanical parts of the spectrograph had been completed in the shops of the Observatory. While not wholly free from the non-homogeneity which so seriously injured the performance of the first set of prisms they yielded much better results, and have been regularly used with their full aperture. Similar difficulties with large prisms for spectrographs have been experienced elsewhere particularly at Cambridge (England), and Pulkowa.

The first tests of the Bruce spectrograph attached to the great refractor were made in February, 1901, the Mantois prisms being used until the arrival of the Jena prisms in July. The spectrograph has been described in detail, together with a statement of the mode of measuring and reducing the plates, in Professor Frost's article in the *Astrophysical Journal* (Vol. XV, No. 1, 1902).

From July 27, 1901, when the instrument was first used in its complete form with the Jena prisms, until July 1, 1902, the records of the observing books may be summarized as follows:

A. Plates of Series A (short camera; aperture = 71 mm., Zeiss anastigmat lens, Catalogue No. 9 of Series II; focal length = 449 mm.): 186 of stellar spectra, 9 of Moon and planets, besides a large number of trial solar and spark plates.

B. Plates of Series B (long camera, triple lens, by Brashear from specifications by Hastings; aperture = 76 mm., focal length = 607 mm.): 189 of stellar spectra, 10 of Moon and planets, besides very numerous trial plates.

The observers were Professor Frost and Mr. Adams, the latter having returned to the Observatory in May, 1901, as Assistant, after a year's absence. Valuable assistance during the exposures is regularly rendered by Mr. Frank Sullivan, engineer in charge of the great refractor, who shares equally in the guiding during the night. This assistance, besides greatly relieving the strain upon the eyes of a single observer, also permits more continuous observing, especially during extremely cold weather, and enables the observer to develop some or all of the plates at night so that they may be dry and ready for measurement in the morning. The guiding arrangement adopted for the instrument has proven very satisfactory, as has the device for maintaining a constant temperature around the prisms.

Cramer's "Crown" and Seed's "Gilt Edge 27" plates have been used. Hydrochinon developer was formerly used, but of late rodinal has commonly been employed.

Drying of the plates has been much expedited by the use of a "dryer" made in 1901. It consists of a large box with projecting funnels covered with muslin, which prevent the entrance of dust. An electric fan, of an ordinary office type, forces a strong current of air past the plates, which stand so as to present the least surface to the fan. With this arrangement, plates can be thoroughly dried in half an hour, which otherwise would require half a day or more. The quality of the grain of the plates is also considered by experts to be improved by rapid drying.

The comparison spectrum regularly employed is the titanium spark. A helium tube is also added when desired. A simple lens has been found more satisfactory for forming the image of the spark upon the slit-plate than the concave mirror chiefly used at first. The induction coil in use for the past year is one by Willyoung, kindly loaned by Dr. George S. Isham. The excellent condenser, regularly used in the secondary circuit, was constructed by Dr. Kent from copper sheets separated by glass, the whole inclosed in paraffin. To suppress the air lines, (particularly disturbing when iron is the comparison spectrum) and to increase the sharpness of the titanium lines, a small coil of self-induction is also introduced in the secondary circuit. This coil was made to order by M. E. Leeds & Co. Its binding posts are arranged so that 50, 100, 200, or 500 (or combinations of these) turns of about two inches diameter may be used.

The lens of Camera B, the Hastings triple of  $\frac{6}{7} = \frac{3}{24}$  inches, has been subject to certain rather peculiar disturbances during the year. On several occasions it has without apparent cause developed a considerable degree of astigmatism. This is assumed to be due to the "pulling" of the Canada balsam of the cemented lens, but it has occurred when there had been no conspicuous change in the atmospheric temperature, and when there has been no strain due

to the lens cell. Sometimes this has been cured by lying still in a horizontal position for a few days. The lens has been several times recemented by Mr. Brashear. It is hoped that it will soon settle to a permanent condition. The short Camera A (Zeiss anastigmat) has been used for about one-half of the plates, with satisfactory results; owing to its constituent lenses, however, its speed is practically the same as that of Camera B. Early in 1902 a collimator lens and a camera lens of Professor Hastings's "isokumatic" (quadruple) construction, which were originally ordered, but not then procurable, were received from the Brashear Company. The collimator showed a slight superiority to the triple system hitherto used, and has been since regularly employed; the field of the isokumatic camera lens was, however, inferior to that of the triple lens, and it has not been used.

During the winter Mr. Adams applied the photographic method for testing the uniformity of illumination of the collimator by the spark, by placing a plate close to the outer surface of the lens. The results were much more satisfactory than by the usual test. As the uniformity of illumination by the source of comparison spectrum is one of the most critical points in connection with the spectrograph, Professor Frost has recently sought to put it beyond question by inserting a small ground glass plate at a slight distance in front of the slit, after the manner successfully applied at Potsdam with the arc comparison. The cone of rays from the spark lens illuminates an area on the ground glass which subtends an angle at the slit several times greater than the angular aperture of the collimator lens. It is hoped that the possibility of unequal illumination from spark and star is now wholly removed.

#### STATISTICS OF MEASUREMENTS OF PLATES

Of the two early series of plates, taken in 1898, 1899, and 1900, about one hundred were measured and reduced by Professor Frost and Mr. Adams. The measurements were made with Zeiss comparators. Most of these results remain unpublished, as they are necessarily much inferior in accuracy to those obtained with the new Bruce spectrograph and with the new types of spectrograph in use elsewhere. Some of the plates have been measured for the sake of experience by the different volunteer assistants who have been at the Observatory during recent summers.

Two new measuring machines with micrometer screws, made by William Gaertner & Co. of Chicago, according to the designs of the Director and Professor Frost, were acquired in 1901. They permit more rapid measurements, and less strain on the eye, than is the case with the Zeiss comparators having one microscope for the spectrum plate and another for the scale. The screws of the new machines are at present being investigated, and periodic errors of considerable magnitude (at a maximum  $4 \mu$ ) have been found.

Of the plates taken with the Bruce spectrograph and Jena prisms, first used on July 27, 1901, 209 have been measured and reduced, the greater number, of course, by Mr. Adams, whose whole time is devoted to the work. The principal item in the program adopted by Professor Frost for the year was the determination of the velocities of certain stars with spectra of the *Orion* type, which will be published in Vol. II of the *Publications of the Yerkes Observatory*. In all, velocities of forty-nine different stars have been measured; twenty-nine of these were of the *Orion* type, the remainder of the solar and first types.

The solar stars were taken for the purpose of testing the capacity of the instrument for exact results. Ten plates of the spectrum of *Sirius* were taken by Mr. Adams in the winter, and his results gave, in combination with those obtained at Potsdam a decade ago, a new, determination of the parallax of *Sirius*, which was published by him in the *Astrophysical Journal*.

The summary of measurements is as follows:

TABLE II

	MEASURED BY FROST		MEASURED BY ADAMS	
	No. of Plates	No. of Stars	No. of Plates	No. of Stars
Spectra of <i>Orion</i> type.....	50	15	125	29
Spectra of Class Ia 2.....	1	1	28	9
Spectra, Solar.....	8	4	21	10
Spectra of Moon and planets.....	2	..	10	..
Total.....	61	20	174	48

The stars  $\alpha$  *Orionis*,  $\beta$  *Cephei*, and  $\delta$  *Ceti* proved to be spectroscopic binaries in the regular course of the measures, and of these stars respectively twenty-one and twenty plates were measured; the variability of velocity of  $\epsilon$  *Persei* and  $\delta$  *Librae* was shown by five and four plates taken and measured by Mr. Adams. The binary character of  $\tau$  *Scorpii* was indicated by our plates before we learned of its prior detection on the Harvard plates.<sup>3</sup> Some other stars on our list are suspected of variable velocity. The proportion of stars whose velocity has been found to vary to the whole number now observed for the first time is about 1 to 6, or about the same as has been found by Professor Campbell in his observations from 1895 to 1900.

The results of the measurements of the plates are very conveniently recorded by the method of the card catalogue. The observations of radial velocities so far published by other observers, and the data as to spectroscopic binaries, are also instantly available in card catalogues.

A most satisfactory and safe provision for the preservation of the negatives of the stellar spectra has been afforded by an oak cabinet, specially constructed in its well known style by the Library Bureau, which is capable of containing two thousand plates.

## SPECTRA OF STARS OF SECCHI'S FOURTH TYPE

(PROFESSOR HALE, MR. ELLERMAN, AND MR. PARKHURST)

The photographic investigation of the spectra of red stars of Secchi's fourth type, which was in progress when my last report was written, is now nearly completed. The long delay in measuring the photographs has been due to eye-afections, which made it necessary for both Mr. Ellerman and myself to give up all work of measurement. With the exception of such plates as had been measured before this difficulty arose, all the spectra have been measured by Mr. Parkhurst. The plates measured include the following spectra taken with three prisms:

TABLE III

Star	No. of Plates	No. of Lines
260 <i>Schjellerup</i> .....	4	211
19 <i>Piscium</i> .....	6	356
318 <i>Birmingham</i> .....	5	336
74 <i>Schjellerup</i> .....	4	278
78 <i>Schjellerup</i> .....	4	334
132 <i>Schjellerup</i> .....	5	478
115 <i>Schjellerup</i> .....	4	279
152 <i>Schjellerup</i> .....	7	333
Total.....	39	2605

<sup>3</sup>H. C. O. *Annals*, Vol. XXVIII, N. 2, p. 178.

Each plate was measured twice, once in each position, involving about 30,000 micrometer settings. The reductions, using the Cornu-Hartmann formula, have been completed, and a card catalogue made, giving the wave-lengths of 473 lines in the different stars, also the mean wave-length for each line. From forty cards the average probable error of the mean for lines occurring in from five to eight stars was found to be  $\pm 0.055$  tenth-meter, the range being from 0.02 to 0.10 tenth-meter. The identification of the lines was greatly facilitated by the use of a catalogue of arc spectra prepared by Professor Crew, who was kind enough to loan it for this purpose. Miss Anne S. Young rendered valuable assistance in this work. Comparisons were also made with Kayser and Runge's iron lines, and with Rowland and Harrison's and Hasselberg's vanadium lines, which are not included in the catalogue. A large number of reasonably close coincidences, especially with iron, titanium, cobalt, chromium, magnesium, and vanadium lines, were found; for example, sixty-two iron lines gave a mean difference of 0.007 tenth-meter from Kayser and Runge's value. Comparisons were also made with lines widened in Sun-spots found in the *Greenwich Observations* and on photographs taken at the Yerkes Observatory. These show a striking agreement with most of the prominent dark lines outside of the carbon flutings in the less refrangible part of the stellar spectra. Comparisons were made of the bright lines in fourth-type spectra with the lines from such sources as the chromosphere, the nebulae, the Wolf-Rayet stars, etc.

The determination of the velocity in the line of sight of these stars has been attended with some difficulty, on account of the uncertainty which existed at first as to the identity of the lines. It has since become possible, however, to determine the velocity by two distinct methods, which yield fairly accordant results. These are in no wise to be compared, of course, with the results obtained with the Bruce spectrograph, which is in every respect far superior to the three-prism spectrograph employed in the present investigation. In view of the fact, however that none of the fourth-type stars had been observed for velocity by either visual or photographic methods prior to this research, it is felt that the results cannot fail to be of considerable value.

As preliminary steps to the discussion of results, widened enlargements of the spectra have been prepared, together with widened enlargements on the same scale from our photographs of the spectra of stars of Secchi's third type. The similarity of the spectra of these two types of stars, except in the region of the yellow and blue carbon flutings, is alluded to elsewhere in this report. Although the discussion is not yet far enough advanced to allow final conclusions to be drawn, it appears probable that the view of Vogel, Dunér, and others that these two types of spectra form co-ordinate branches, will be confirmed.

The complete results, including the wave-lengths of all the lines measured and a discussion of the observations, will soon appear in Vol. II of the *Publications of the Yerkes Observatory*.

Through the kindness of Professor Pickering, a twelve-inch objective prism belonging to the Harvard College Observatory was loaned for use with our twelve-inch refractor in photographing the spectra of some of these stars. The telescope did not prove to be well adapted for the work, and as the spectra were far inferior to those obtained with the spectrograph attached to the forty-inch telescope, the experiments were discontinued.

## SOLAR OBSERVATIONS

(PROFESSOR HALE, MR. ELLERMAN, AND MR. BARRETT)

### SPECTRUM OF THE CHROMOSPHERE

On account of the very quiet state of the Sun during the last few years, the period has been an unfavorable one for observations which cannot be made in the absence of spots or eruptive phenomena at the limb. It was thought advisable to postpone the systematic examination



of the bright lines of the chromosphere until the period of frequent eruptions, though observations of the reversals have been made from time to time. With good seeing a remarkably large number of bright lines can be seen at any point on the limb. In addition to the green fluting of carbon, which is always reversed when the seeing is good, seven or eight lines of the yellow fluting are sometimes visible, though they can be seen only when the atmospheric conditions are excellent. Under such conditions some two hundred bright lines are visible between C and *b* in the undisturbed chromosphere. As but a small fraction of these lines could be seen with the twelve-inch Kenwood refractor, there can be little doubt that the visibility of so many lines is due to the large diameter (seven inches) of the solar image given by the forty-inch refractor. There is reason to hope, therefore, that with the twenty-inch solar image given by the long-focus mirror of the new coelostat reflector, combined with the advantages arising from the use of a grating spectroscop of eighteen feet focal length, we may be able to record a large number of bright lines in the chromospheric spectrum during the spot maximum. It will be difficult to photograph the fainter reversals, on account of the encroachment of photospheric light on the slit, arising from the constant agitation of the solar image. Some of the brighter lines have been photographed with the forty-inch, and their wave-lengths have been measured by Mr. Adams. Accurate wave-length determinations have also been made of the ultra-violet chromospheric lines on the Kenwood plates.

#### SPECTRA OF SUN-SPOTS

Many experiments were tried at the Kenwood Observatory in photographing the widened lines in the spectra of Sun-spots. In some cases the widening of the lines was fairly well shown, but it was evident that the two-inch solar image given by the twelve-inch telescope was too small for work of this character. In the general absence of Sun-spots during the minimum little could be done with the forty-inch telescope, but with the approach of the maximum the work has been taken up systematically. The photographs, which are made with the remodeled Kenwood solar spectrograph, show the more conspicuous widened lines between D and *b* very well. It is evident, however, that a greater linear dispersion will be required to record the smaller lines. For this reason it is expected to transfer the work to the large solar spectroscop of the coelostat reflector as soon as it is ready.

#### REMARKABLE CHANGE IN THE REVERSING LAYER

While making a series of photographs in February, 1894, for the purpose of determining the exposure times required with different orders of spectra, Mr. Ellerman chanced to record two stages of the most remarkable solar spectroscopic phenomenon I have ever encountered. It amounted to nothing less than a complete change in the character of the reversing layer, which extended over a distance of at least one-eighth of the Sun's diameter, and lasted for several minutes. The solar spectrum as recorded on these two photographs would not be recognized by one who is familiar with the normal spectrum. The slit happened to lie on a spot in which the phenomenon seemed to center, but the disturbance extended away to a great distance on either side. The eruptive phenomena on the disk photographed on several occasions with the Kenwood spectroheliograph were characterized by great intensity of the H and K lines. In the present instance the bright H and K lines seen over and near the spot before the disturbance, and also the broad dark bands, have disappeared, giving place at K to a series of fine lines resembling those which Jewell recorded once in the Sun and once in the electric arc. Measures of the photographs by Mr. Adams show that most of the lines of the abnormal spectra correspond well in position with lines in Rowland's solar-spectrum tables, but the

changes in intensity are so great as to render them unrecognizable. The measures of the lines, with reproductions of the photographs, will be published shortly. The long delay in publication has been due to the desire to eliminate every possible doubt as to the truly solar origin of this unique phenomenon. It will be desirable during the coming maximum to make every possible attempt to record other changes of this kind, which must be very infrequent. Photographs of the solar spectrum should be taken whenever possible with an analyzing telescope. As this disturbance seemed to center in a Sun-spot, it would be advisable to seek for similar phenomena in spot regions; but as the length of the disturbed area was at least one-eighth of the Sun's diameter, it is by no means certain that such changes in the spectrum may not be found at any part of the disk.

#### DIRECT PHOTOGRAPHS OF THE SUN

Daily photographs of the Sun are made by Mr. Ellerman with the twelve-inch refractor whenever spots are present. These photographs, which are intended for use in connection with the spectra of Sun-spots, are on a scale of only two inches to the Sun's diameter; they will shortly be replaced by a series of photographs on a scale of seven inches to the Sun's diameter.

#### WORK WITH THE SPECTROHELIOGRAPH

Reference has been made in previous reports to the large spectroheliograph which was constructed in our instrument shop for the forty-inch telescope. In order to photograph the entire seven-inch solar image it was necessary to build a spectroheliograph of six and one-fourth inches aperture (even this involving a small loss of light), and to produce the relative motion of solar image and slit by moving the telescope in declination with the slow-motion motor. The corresponding motion of the plate behind the second slit was affected by a shaft led down the telescope tube from the declination motor. The slits of the spectroheliograph are eight inches long, and the optical train consists of two Voigtländer portrait lenses of six and one-fourth inches aperture for collimator and camera, and two 60° prisms of light flint, giving, in conjunction with a plane mirror, a total deviation of 180° to the K line when at minimum deviation. The great care taken to eliminate diffuse and reflected light, by the use of a very complete system of diaphragms and in other ways, resulted in the production of photographs much superior to those obtained with the Kenwood spectroheliograph. The difficulty of producing a perfectly uniform and synchronous motion of the telescope and photographic plate was largely overcome, but the effect of small irregularities was complicated with that produced by the shaking of the telescope in the wind, and the boiling of the Sun's image. For these reasons most of the images, though they showed the calcium vapor in beautiful contrast both in the polar and equatorial regions, were more or less uneven at the limb. In view of the necessity of attaching the spectroheliograph to the telescope every morning and removing it at night, its great weight (about seven hundred pounds) proved to be a serious disadvantage. As soon as the construction of the coelostat reflector had been arranged for, it was therefore decided to transfer the large spectroheliograph from the forty-inch to this telescope, where it can instantly be moved into or out of place, without interfering with the immediate use of the solar spectroscope or other instruments. This leaves the forty-inch telescope free for spectroscopic or photographic observations with the Kenwood spectroheliograph, which is so constructed that it can be arranged for either class of work in a few moments' time.

The mottling of the entire solar surface, from pole to pole, with a structure characterized by the reversal of the H and K lines, which had been so clearly evident on the Kenwood plates, was found to persist throughout the Sun-spot minimum.

## PHOTOGRAPHY OF THE MOON, NEBULÆ AND STAR CLUSTERS

(MR. RITCHEY)

The objective of the forty-inch refractor was designed by Mr. Clark for visual observations, and it was not thought advisable to provide a third lens, like that employed with the Lick telescope, to adapt it for photography. For photographic work on the more refrangible region of stellar spectra a small correcting lens near the focus, designed by Professor Wadsworth, gave fairly good results with the old spectrograph. This was subsequently replaced by a correcting lens designed by Professor Hastings, which has given perfect satisfaction in conjunction with the Bruce spectrograph. The spectroheliograph, in view of its employment of monochromatic light, permits almost equally good results to be obtained in solar photography with visual or photographic telescopes. It remained, however, to provide a method of making direct photographs of such objects as the Moon, nebulae, and star clusters with the large telescope.

Some experiments with this purpose in view, made by Mr. Ellerman and myself in 1898, were described in the *Vierteljahrsschrift der Astronomischen Gesellschaft*, Jahrgang 34, Heft 2, p. 187. The method employed, which was not essentially new, involved the use of a thin screen of greenish-yellow glass placed immediately in front of an isochromatic plate. This cut out the more refrangible rays, and gave photographs of the Moon which were fairly comparable in quality with those made at the Lick Observatory.

This method had been independently devised by Mr. Ritchey in 1891. In 1900 he undertook experiments with the forty-inch telescope which resulted in the production of photographs of the Moon surpassing in sharpness any previously obtained. The success of his work on the Moon led him to design a double-slide plate-carrier for the application of the same method to the photography of faint objects requiring long exposures. On account of the perfection of guiding rendered possible by the use of a guiding eyepiece magnifying a thousand diameters, and the convenience of manipulation of the double-slide plate-carrier, the photographs of star clusters and of the *Orion* nebula obtained by Mr. Ritchey are remarkably sharp, and are probably not inferior to results such as could be obtained with a forty-inch photographic objective. Indeed, the photographs seem to surpass in sharpness of definition the best that have been obtained with large photographic refractors. This is doubtless due to the employment in the present instance of the double-slide plate-carrier instead of the guiding telescope ordinarily used. It is obvious that such slight motions of the plate as are constantly needed to retain a stellar image at a fixed point can be secured much more readily through the motion of the small carriage which supports the photographic plate than by the motion of the entire instrument, which is necessary when a guiding telescope is employed.

The construction of a two-foot mirror for a reflecting telescope had been undertaken by Mr. Ritchey before he joined the staff of the Yerkes Observatory. This mirror was acquired by the Observatory and used in Professor Nichols's investigations on stellar heat radiation in 1896 and 1900. An equatorial mounting was designed for it in 1896 by Professor Wadsworth, who was then in charge of our instrument shop. At the time of Professor Wadsworth's appointment to the directorship of the Allegheny Observatory, the construction of this mounting, though well advanced, was still not completed. Mr. Ritchey, who succeeded Professor Wadsworth as Superintendent of Instrument Construction, designed many important parts of the mounting, such as the driving clock, skeleton tube with interchangeable ends, and other parts not already provided for, and the mounting was completed under his direction. Special attention was given to the driving clock and worm gear, and the success of the photographs made with this instrument is doubtless due in no small degree to the perfection of this work. The double-slide

plate-carrier used with the two-foot reflector is the one employed in Mr. Ritchey's first experiments in photographing star clusters with the forty-inch refractor.

The use of the two-foot reflector in the photography of nebulae has afforded much valuable experience in the manipulation of reflecting telescopes. The common impression that the reflector is far inferior to the refractor as regards stability of collimation, convenience of manipulation, etc., is not borne out by Mr. Ritchey's experience. Indeed, the first photograph obtained with the instrument was a successful one, and there has never been any practical difficulty in securing good results when the atmosphere was favorable. At present Mr. Ritchey is engaged in photographing certain nebulae with long exposures, and has already been successful in bringing out hitherto invisible details in objects which have been photographed with much larger reflectors. The remarkable sharpness of the photographs obtained with the two-foot mirror, and the intricacy of detail discovered by Mr. Ritchey in certain nebulae, lead to the conviction that a much larger instrument, constructed with the utmost care and embodying the results of experience with the present telescope, would render possible many important advances. Mr. Pease has given valuable aid in the photographic work with the two-foot reflector.

#### PHOTOMETRY

(MR. PARKHURST)

This Observatory having arranged to co-operate with the Harvard, McCormick, and Lick Observatories in the work of determining standards for faint stellar magnitude, a wedge photometer designed by Professor E. C. Pickering was supplied by the Rumford Committee of the American Academy of Arts and Sciences. The photographic wedge (No. II) sent with the instrument was investigated by Mr. Parkhurst by the method of standard stars and also with a wheel photometer. A report of this work, with description of the instrument, was given in the *Astrophysical Journal*, Vol. XIII, No. 4. As the resulting value of the wedge constant, 0.130 mag., differed from that previously found at Harvard, the wedge was returned to the latter observatory, that the measures might be repeated, and a similar investigation was made of Wedge V, sent to replace Wedge II. A preliminary reduction of the latter investigation gave 0.110 as the wedge constant. To adapt the photometer for use with the six-, twelve-, and forty-inch telescopes, the perforated diaphragm for forming the artificial star was replaced with a movable one, carrying five holes varying from 0.1 to 0.3 mm. in diameter. Two absorption glasses supplied by Professor Pickering were arranged to be turned into or out of the field, in order that brighter standard stars might be used. The absorption occasioned by the two combined was found by measurement to be 1.70 mag. During and after this preliminary work sixteenth-magnitude standards in eighteen of the thirty-six fields included in the scheme have been measured on one or more nights, thirty-six complete sets being secured, or about one-third the allotted work. Photographs have been taken of eight of these fields with the two-foot reflector, with exposures of from one to one and one-half hours. Paper prints of these, on the scale of Hagen's charts, and also on the scale of 10' to 1 mm., show stars down to seventeenth magnitude or fainter, and render the identification of the faint standards certain—a work equally important with the photometric measures themselves.

About fifty variable stars have been observed by Mr. Parkhurst, before and during his connection with this Observatory, most of these stars having minima faint enough to require observations with the twelve- or forty-inch telescopes. Preliminary reductions of fifty-one faint minima were published in *Bulletin No. 13 of the Yerkes Observatory and Astrophysical Journal*, Vol. IV, No. 3. In order to reduce these observations to the photometric scale, measures of the comparison stars referred to in the Potsdam and Harvard standards have been made with the above described wedge photometer as follows :

TABLE IV

Aperture	Complete Sets	No. of Settings
Six inches .....	37	1,659
Twelve inches.....	46	1,831
Forty inches .....	59	2,235
Total.....	142	5,725

In all, twenty-nine different fields have been measured, twenty-three of them with the forty-inch. The work of reducing these observations, and drawing the light curves of the variables on the photometric scale, is well advanced.

The minimum magnitude of several of these stars has been found to be very faint, as the following table will show:

TABLE V

Minimum Magnitude	No. of Stars
Between 14 and 15 - - - - -	13
Between 15 and 16 - - - - -	7
Between 16 and 17 - - - - -	5
Fainter than 17 - - - - -	2

## SPECTROSCOPIC LABORATORY

(PROFESSOR HALE AND DR. KENT)

The equipment of the spectroscopic laboratory comprises the following instruments :

Six-inch concave grating spectroscope of twenty-one and one-half feet focal length.

Four-inch and three-inch concave gratings and mountings, for use with the above instrument.

3 K. W. 110-volt alternating dynamo. Presented by Dr. Isham.

1 K. W. transformer, giving 15,000 or 30,000 volts.

Apps induction coil for twelve-inch spark.

High frequency-spark coil, made by the General Electric Co. Presented by Mr. James Lyman.

Large condenser, copper plates with glass and oil insulation; capacity from 0.00073 to 0.064 microfarads. Presented by Dr. Isham.

Self-induction coil, which permits the use of self-inductions from 0.000006 to 0.00043 henry.

Set of volt, watt, and ammeters for 110-volt power-house current. Presented by Dr. Isham.

Fifty-foot standpipe for water pressure. Presented by Dr. Isham.

Apparatus for producing the spark in air at high pressures. Presented by Dr. Isham.

Apparatus for producing the spark between metallic electrodes in air at atmospheric pressure and in liquids.

110 arc.

Apparatus for measuring the electrical conductivity of liquids, etc.

Mercury pump and other miscellaneous apparatus.

The various light sources are arranged on the circumference of a circular table, at the center of which is a plane mirror. By means of this mirror the light from any source can be reflected to a concave mirror of nine and three-eighths inches aperture, at a distance of twenty-two feet, four inches from the spectroscope slit, on which it forms an image magnified about two diameters. By rotating the plane mirror to certain position angles defined by stops, the image of any source, in focus and ready for observation, can be formed on the slit. The circular table is in a room separated from the concave grating room by a partition. The image of the source on the slit can be observed with a telescope in the outer room, and given any necessary position by means of screws attached to the mounting of the concave mirror. The grating is

always filled with light, and it is believed that the danger of displacements of lines, which sometimes occur when an adjustable image lens is used in front of the slit, is wholly obviated by this apparatus.

The investigations conducted in the spectroscopic laboratory have been of great service in connection with our study of the pairs of bright and dark lines in *Nova Persei*, the enhanced lines in the chromosphere and in certain stars, the oxygen lines in stars of the *Orion* type, etc. The results of the investigation of the spectrum of the spark between metallic poles in liquids to which some months have been devoted, may prove of value in the interpretation of certain solar and stellar phenomena. The introduction of a little common salt into water in which a spark is passing between iron poles is sufficient to shift most of the iron lines and to reverse some of them. Changes in the electrical conditions of the spark circuit will produce similar results. It remains to be seen what bearing these phenomena may have on astrophysical investigations. The possibility of controlling the reversal of spectral lines, and of passing by successive steps from a bright-line spectrum to a spectrum in which nearly all of the more refrangible lines are reversed, at least provides a simple method, additional to those afforded by pressure, the magnetic field, etc., of classifying lines on the basis of their relative behavior.

#### NOVA PERSEI

The new star in *Perseus*, which made its appearance on February 22, 1900, has been thoroughly observed at the Yerkes Observatory. A series of photographs of the spectrum of the *Nova*, taken by Mr. Ellerman with the forty-inch telescope, was measured and reduced by Mr. Adams, who has published the results in the *Astrophysical Journal*. Measurements of the position of the *Nova* with the large telescope were made by Professors Burnham and Barnard, and the latter has also made a careful series of measures of the focus of the *Nova* as compared with that of neighboring stars. Prior to August 29, 1902, the *Nova* was found to have the same focus as stars near it. Since that time it has undergone a very perceptible change, and now resembles the planetary nebulae (and *Nova Aurigae* in its later stages) in having a focus considerably outside of that of a star. Photometric observations of the *Nova* have been made regularly by Mr. Parkhurst.

On receipt of the information that Professor Max Wolf had photographed traces of nebosity near the new star, Mr. Ritchey at once proceeded to photograph the *Nova* with the two-foot reflector, then recently put into commission. On September 20, 1901, he obtained a photograph showing the *Nova* to be surrounded by a ring of nebosity, which subsequent photographs made by Perrine with the Crossley reflector and by Ritchey with our own two-foot reflector have indicated to be expanding with a velocity of the order of that of light. Mr. Ritchey has published in the *Astrophysical Journal* a series of drawings from his various negatives of the nebosity. The unique character of the phenomena thus recorded has led to much discussion, but it is still too soon to pronounce a final opinion concerning their cause.

#### BRUCE PHOTOGRAPHIC TELESCOPE

Reference has been made in previous reports to Miss Bruce's gift of \$7,000 to provide for the construction of a photographic telescope with an objective of ten inches aperture of the portrait-lens type. The difficulty of securing a lens which would give an angular field large enough for Professor Barnard's purpose has proved to be very great. Several trial lenses were made by Brashear, but in all cases the field was too small for the proposed work of photographing the Milky way and extended nebulae. In a trip to Europe, made for the express purpose of discussing this question with English and continental opticians, Professor Barnard was unable to obtain assurance that such a lens as he needed could be constructed. Ultimately, however,

a lens made by Brashear was found to be much superior to any other lens previously examined. With a plane plate this lens, which has an aperture of ten inches and a focal length of fifty inches, gives sharply defined star images over a field about six degrees in diameter and the focus can be averaged so as to give fairly good images over a field of eight or nine degrees. By using a curved plate of spherical surface a satisfactory field about ten or twelve degrees in diameter can be obtained. This lens has accordingly been accepted, and the mounting is in process of construction by Warner and Swasey.

## HEAT RADIATION OF ARCTURUS, VEGA, JUPITER, AND SATURN

(PROFESSOR E. F. NICHOLS)

In the *Report of the Director of the Yerkes Observatory* for 1898 an account was given of the measures of the heat radiation of *Arcturus* and *Vega* made by Professor E. F. Nichols, of Dartmouth College, during the summer of that year. In this preliminary investigation the mean deflections of the radiometer, not corrected for atmospheric absorption, were 0.60 mm. for *Arcturus*, and 0.27 mm. for *Vega*. In the summer of 1900 Professor Nichols again visited the Observatory, and continued the investigation with improved apparatus. The old heliostat used in 1898 was replaced by the coelostat built in our shop for the eclipse of May 28, 1900, provided for this investigation with a plate-glass mirror measuring 30 × 36 inches, which reflected the star's rays to a second plate-glass mirror and thence to a concave mirror of 23½ inches aperture and 93 inches focal length (the mirror subsequently used in the two-foot reflector). The image formed by the mirror, after reflection on a small 45° flat mirror, entered the radiometer case through a fluorite window. By moving the coelostat in right ascension the image could be thrown on or off the vane. The entire apparatus was mounted in the heliostat room between the two small domes.

TABLE VI

Date—1898	Vega	Arcturus	Jupiter	Saturn	Arcturus
					Vega
August 3.....	0.55	....	....	....	....
4.....	0.33	0.65	....	....	2.1
5.....	....	1.06	....	....	....
7.....	....	1.60	....	....	....
8.....	0.64	1.30	....	....	2.0
9.....	0.33	0.98	....	....	3.0
11.....	0.60	1.36	....	....	2.3
12.....	0.50	....	....	....	....
13.....	0.68	0.68	....	....	1.0
Means .....	0.52	1.09	....	....	2.1

1900					Jupiter
					Arcturus
August 10.....	....	1.45	....	....	....
13.....	0.99	0.99	0.92	....	0.93
14.....	....	0.70	0.89	....	1.30
15.....	....	....	1.70	....	....
18.....	....	1.08	1.58	0.27	1.50
19.....	....	1.15	1.87	0.18	1.60
28.....	....	....	1.93	0.24	....
Means .....	....	1.07	1.48	0.23	1.33

The preceding table contains the results obtained in 1898 and 1900, reduced to  $10^{-4}$  meter candle with no correction for atmospheric absorption. In the 1900 observations, as compared with those of 1898, there was one additional reflection, for which no correction is here applied.

In order to determine the atmospheric absorption, measures were made of the heat radiated by candles in tents distant 2,000 feet and 4,500 feet respectively from the Observatory. The final values, reduced by this means to the zenith, are as follows:

TABLE VII

<i>Vega</i>	<i>Arcturus</i>	<i>Jupiter</i>	<i>Saturn</i>
0.51	1.14	2.36	0.37

The ratio of the thermal intensities of these objects is therefore:

*Vega*: *Arcturus*: *Jupiter*: *Saturn* = 1:2.2:4.7:0.74.

The ratio of the zenith photometric intensities is:

*Vega*: *Arcturus*: *Jupiter* = 1:1:7.8.

It appears probable from these results that the temperature of the outer envelope of *Jupiter* is comparatively low.

#### TOTAL SOLAR ECLIPSES OF MAY 28, 1900, AND MAY 18, 1901

##### ECLIPSE OF MAY 28, 1900

The observations made by the Yerkes Observatory party at Wadesboro, N. C., were as follows:

1. Photographs of the corona with several small lenses and with a cœlostast telescope of sixty-one and one-half feet focal length, by Professor Barnard and Mr. Ritchey.
2. Photographs of the spectrum of the "flash" with prism and grating spectrographs, by Professor Frost and Dr. Isham.
3. Measurement of the heat radiation of the corona, by the Director and Mr. Ellerman.
4. Observations of contacts, by Professor Flint.

The photographs of the corona were made with the aid of a cœlostast constructed in the instrument shop of the Yerkes Observatory. The same polar axis carried two plane mirrors, one of twelve inches aperture, used by Messrs. Barnard and Ritchey, and one of fifteen inches aperture, used by Messrs. Frost and Isham. Light was reflected from the twelve-inch mirror to a six-inch photographic objective of sixty-one and one-half feet focal length by Brashear, which gave photographs of the corona on a scale of thirteen inches to the degree. The six-inch objective was connected with the photographic house by a long light-tight tube, shielded from direct solar radiation before the eclipse by a white cotton screen and fitted throughout with diaphragms to prevent internal reflections. To facilitate handling, the large photographic plates (three of  $14 \times 17$  inches, four of  $25 \times 30$  inches) were mounted on a wooden carrier fifteen feet long, free to move on ball bearings on a steel track extending at right angles to the tube the entire length of the photographic house. In this carrier the plates were all placed at an angle equal to the latitude, so that the long axis of the plates was parallel to the celestial equator. A catch operated by hand served to stop the carrier at the proper place for each exposure.

With this apparatus seven plates, backed with a mixture of caramel and burnt sienna in a little alcohol, were given the following exposures during totality:  $\frac{1}{2}$ , 2, 8, 30, 14, 4, and 1 second. The resulting photographs offer abundant evidence of the advantage of using long focus objectives for photographing the details of the corona. The polar fans are shown with remarkable



beauty, and the inner corona is full of detail. The greatest extension of the equatorial corona is about 40' from the center of the Moon; to bring out extensions of a degree or more would have required exposures of not less than a minute. Stars as faint as the 6.5 magnitude appear on the plates exposed for fourteen and thirty seconds.

The photographs of the spectrum of the "flash" and the corona were made with a three-prism spectrograph of two inches aperture, and a Rowland concave grating of sixty inches radius, ruled surface  $\frac{7}{8} \times 1\frac{3}{4}$  inches, both used direct, without slit or image lens. A plane grating was used by Professor Frost for visual observations of the flash, to determine the exact moment for the exposures.

In his discussion<sup>4</sup> of the photographs obtained with the above apparatus, Professor Frost reaches some very important conclusions. In all, 882 bright lines were measured on the photographs of the cusp and the first and second flashes. Of these, 319 appeared on the prism plates. Limiting the discussion to that part of the spectrum which was in the best focus, from about  $\lambda 4060$  to  $\lambda 4310$ , he finds 230 bright lines, of which 160, or 70 per cent. are identified with 176 of the dark lines in Rowland's *Table of Solar Spectrum Wave-Lengths*. To make the comparison an entirely fair one, the discussion is further limited to lines in the solar spectrum of intensity 3 or greater, as the fainter lines would not be shown with this spectrograph. Of these stronger dark lines at least 60 per cent. are found to be bright in a stratum not over one second of arc, or 500 miles, in thickness, lying in close contact with the solar photosphere. As there is every reason to believe that the fainter lines would also be shown with sufficiently powerful apparatus, Young's view that the reversing layer is a thin stratum at the base of the chromosphere may be regarded as fully confirmed. Lockyer's argument in favor of his contention that the reversing layer is above the chromosphere is shown by Professor Frost to rest upon a false assumption in the discussion of the former eclipse results. No special relationship was found to exist between "enhanced lines" and lines in the flash. On a photograph of the spectrum of the corona, rings of coronal origin were found at  $\lambda\lambda 4230.4, 4311, \text{ and } 4558$ , and others were suspected, though they were too faint to measure.

The bolometric work on the corona was undertaken in connection with my attempts to observe the corona without an eclipse, which have been in progress since 1892. The experiments made by a photographic method at the Kenwood Observatory in 1892, on Pike's Peak, with the aid of Professor Keeler, in 1893, and on Mount *Ætna*, through the courtesy of Professor Riccò, in 1894, led to the conclusion that no photographic means then available would accomplish the desired result. I accordingly devised a new method, based on the use of a bolometer, which has the advantage of being purely differential in principle, and consequently theoretically capable of determining the form of the corona from measures of the heat radiation of its various parts, almost equally well in full sunlight or during an eclipse. Experiments with various telescopes and bolometric apparatus were made in 1895, 1896, 1898, and 1899, but no certain evidence of differences in radiation from different parts of the corona was obtained. At the eclipse of May 28, 1900, an accident in the bolometer house prevented the heat radiation of the corona from being measured during the total phase. But immediately after totality no decrease could be detected in the radiation of the corona at points where it was covered by the Moon. This proves conclusively that the radiation of the corona is very small, much less in proportion to its light than that of the full Moon. Mr. Abbot's measures at the same eclipse confirm this result, and indicate that the failure of my attempts to detect the corona in sunlight has been largely due to the insufficient sensitiveness of the apparatus. Some further experiments have been made at the Yerkes Observatory since the eclipse with a very sensitive radiometer, but no conclusive results have been obtained. In view of the surprisingly small heat radiation of the corona, it is now evident that results of importance are hardly to be expected.

<sup>4</sup> *Astrophysical Journal*, Vol. XII (1900), pp. 307-51.

## ECLIPSE OF MAY 18, 1901

Through the courtesy of Professor S. J. Brown, then Astronomical Director of the United States Naval Observatory, Professor Barnard was enabled to go to Sumatra to observe the eclipse of May 18, 1901, as a member of the party sent out by the government. On account of the great length of the total phase (five minutes, fifty-two seconds at Solok), this eclipse offered an exceptional opportunity for making long-exposure photographs of the corona. Professor Barnard took with him the coelostat and six-inch objective of sixty-one and one-half feet focal length which had proved so effective in Wadesboro. It was provided with a new tube, made at the Yerkes Observatory, which could be packed in sections. Instead of the sliding plate-carrier previously employed, Professor Barnard decided to use large plate-holders, one for a plate  $40 \times 40$  inches, constructed for this eclipse, two for plates thirty inches square, and five for  $14 \times 17$  plates. All of these, except the first, which was provided by the Naval Observatory, were kindly loaned by Secretary Langley, of the Smithsonian Institution. In order to facilitate the change in the midst of totality from the  $30 \times 30$  plate-holders to the very heavy one of  $40 \times 40$  inches, a vertical sliding frame was constructed, so counterbalanced that it was a simple matter to bring into position the upper section of the frame, in which the large plate-holder was permanently mounted, or the lower section, in which the smaller plate-holders were placed one after another. Exposures from one second up to one hundred and fifty seconds were to be given. To insure perfect following during the long exposures the coelostat clock (which belongs to the twelve-inch Kenwood refractor) was used with its electric control.

In spite of the fact that the long series of meteorological observations made at Solok showed it to be the most promising site available for the eclipse station, the sky was cloudy throughout totality, though at neighboring stations it was clear. In favorable weather the perfect condition of the apparatus and the care with which every adjustment had been made by Professor Barnard would certainly have insured success.

## LATITUDE AND LONGITUDE OF THE YERKES OBSERVATORY

The latitude and longitude of the Yerkes Observatory were first determined by Mr. W. H. Wright, now of the Lick Observatory, in 1897, and the approximate values were given in *Bulletin* No. 2. In the autumn of 1900, through the courtesy of the United States Coast and Geodetic Survey, Assistants C. H. Sinclair (chief of party) and O. B. French were detailed to determine the latitude of the Observatory and the difference in longitude between our transit room and the Coast Survey station at St. Louis. A full description of Zenith Telescope No. 4, and of the methods of observation and reduction employed in the determination of the latitude by Mr. French, may be found in *Report of the United States Geodetic Survey, 1897-98*, Appendix No. 7 (fourth edition), pp. 342, 347-50, 354-63, etc. The resulting value of the latitude was  $42^{\circ} 34' 12.64 \pm 0.038$ .

In the determination of the longitude, Transit No. 18 was mounted on the transit pier of the Yerkes Observatory at a point 264 feet, 5 inches ( $=0.235$ ) east of the forty-inch equatorial pier. At St. Louis, Transit No. 19 was mounted on the brick pier erected by Professor Woodward in the east end of the Observatory of the Washington University. This station is 1.2 feet ( $=0.001$ ) west of the Coast Survey station of 1881. The results obtained from the observations were as follows:

TABLE VIII

St. Louis (1881)—Yerkes Observatory Transit (1900)	-	-	6 <sup>m</sup>	36 <sup>s</sup>	248 ± 0.009
Longitude St. Louis (1881), latest adjustment	-	-	6 <sup>h</sup>	00 <sup>m</sup>	49.256
Longitude Yerkes Observatory Transit	-	-	5	54	13.008
Longitude Yerkes Observatory forty-inch Equatorial	-	-	5	54	13.243

I take pleasure in expressing the thanks of the Yerkes Observatory to Superintendents Pritchett and Tittmann, and to Assistants Sinclair and French, of the Coast and Geodetic Survey, for the important results of this admirably conducted campaign.

#### PUBLICATIONS

Vol. I of the *Publications of the Yerkes Observatory*, entitled "A General Catalogue of 1290 Double Stars Discovered from 1871 to 1899," by S. W. Burnham, was published in 1900. It is hoped that Vol. II will be published in 1903. Its contents will include:

"Measures of Double Stars Made with the Forty-Inch Refractor of the Yerkes Observatory in 1900 and 1901," by S. W. Burnham.

"Micrometrical Observations of *Eros* made with the Forty-Inch Refractor of the Yerkes Observatory during the Opposition of 1900-1901," by E. E. Barnard.

"On Certain Rigorous Methods of Treating Problems in Celestial Mechanics," by F. R. Moulton.

"Radial Velocities of Twenty Stars Having Spectra of the *Orion* type," by Edwin B. Frost and Walter S. Adams.

"The Spectra of Stars of Secchi's Fourth Type," by George E. Hale, Ferdinand Ellerman, and J. A. Parkhurst.

"Astronomical Photography with the Forty-Inch Refractor and the Two-Foot Reflector of the Yerkes Observatory," by G. W. Ritchey.

"The Orbit of the Minor Planet 334," by Kurt Laves.

Most of these papers will be accompanied by reproductions of photographs.

The following *Bulletins* have been issued since the publication of my last report:

*Bulletin* No. 12—"Carbon in the Chromosphere. Some New Forms of Spectroheliographs."

*Bulletin* No. 13—"Variable Star Observations with the Twelve-Inch and Forty-Inch Refractors."

*Bulletin* No. 14—"Observations of the Total Solar Eclipse of May 28, 1900, at Wadesboro, N. C."

*Bulletin* No. 15—"Photographs of the Cluster *M 13 Hercules* with the Forty-Inch Visual Telescope."

*Bulletin* No. 16—"The New Star in *Perseus*."

*Bulletin* No. 17—"Changes in the Spectrum of *Nova Persei*."

*Bulletin* No. 18—"Latitude and Longitude of the Yerkes Observatory."

Hereafter *Bulletins* will be issued rarely, and only to provide for the publication of information which does not naturally find a place in other channels.

A list of the papers contributed by members of the staff to scientific journals and the proceedings of societies has been prepared for publication in one of the *Decennial* Volumes of the University, and need not be repeated here.

#### OBSERVATORY LIBRARY

(S. B. BARRETT, LIBRARIAN)

On July 1, 1902, an approximate determination of the number of books and pamphlets in the library (exclusive of those belonging to the private library of the Director) resulted as follows:

TABLE IX

Number of books, bound	- - - - -	1,320
Number of books, unbound	- - - - -	678
Number of periodicals, unbound volumes	- - - - -	115
Number of pamphlets	- - - - -	1,700

The accessions for the year ending July 1, 1902, were 453, of which 122 are books and 331 are pamphlets. Many books have been bound during the year, and others are now at the binders. Mr. Barrett has devoted much time to the card catalogue.

The thanks of the Observatory are extended to all institutions and individuals who have contributed to the library. Special acknowledgment has been made of the gift of important sets of the proceedings of societies and the publications of observatories and laboratories.

#### OPTICAL LABORATORY AND INSTRUMENT SHOP

Under the effective superintendence of Mr. Ritchey, much work has been done in the optical laboratory and instrument shop since the publication of the last report. Mr. Ritchey's personal work has included the figuring of plane mirrors of thirty inches, twenty-four inches, twelve inches, and eight inches aperture, concave mirrors of twenty-four inches aperture and sixty-two and one-half feet focal length, twenty-four inches aperture and one hundred and sixty-five feet focal length, twenty inches aperture and twenty-seven feet focal length, and a five-inch convex mirror. He has also designed the mechanical parts of most of the following instruments, which have been constructed wholly or in part during the period covered by the present report:

- Driving mechanism for large spectroheliograph.
- Mechanical parts of Bruce spectrograph, and its temperature case.
- Twelve-inch cœlost and sixty-one and one-half foot horizontal telescope for eclipse of May 28, 1900.
- Small ( $3\frac{1}{4} \times 4\frac{1}{4}$  inches) double-slide plate-carrier for forty-inch refractor and two-foot reflector.
- Large ( $8 \times 10$  inches) double-slide plate-carrier for forty-inch refractor.
- Thirty-inch cœlost and one hundred and sixty-five foot horizontal telescope.

Other work done in the instrument shop during this period includes:

- Mounting of six-inch objective of sixty-one and one-half feet focal length on forty-inch refractor.
- Mounting of a six-inch concave grating for the large concave grating spectroscope.
- Apparatus for work on the spectrum of the spark and rotating arc in liquids and on the spark in air at high pressures, together with much auxiliary apparatus required in the spectroscopic laboratory.
- Reconstruction of Kenwood spectroheliograph.
- Large concave grating spectrograph for cœlost reflector.
- Large concave and plane grating spectrograph with rotating slit for cœlost reflector.
- Six-inch comet seeker, the patterns for which were kindly loaned by the J. A. Brashear Co.
- Repairs of power-house engines, and other machinery.

The machine for ruling gratings was practically completed by Mr. Mors in the summer of 1899. At Professor Wadsworth's request, it was sent to him at the Allegheny Observatory for the final experiments required to get it into working order. The driving mechanism was constructed by Brashear, after Professor Wadsworth's designs. On account of the delay in the completion of the new Allegheny Observatory, and the impossibility of maintaining the laboratories of the old Allegheny Observatory at a uniform temperature, Professor Wadsworth has hitherto been unable to do any work on the machine.

#### VISITORS AT THE YERKES OBSERVATORY

Visitors are admitted to the Observatory on Saturday of each week, on presentation of tickets, which are furnished free of charge to those who apply for them. The number of tickets issued since the publication of my last report is as follows:

TABLE X

July, 1899 to July, 1900	- - - - -	4,809
July, 1900 to July, 1901	- - - - -	5,009
July, 1901 to July, 1902	- - - - -	5,288

From these numbers it will be seen that the interest of the public in the Observatory has undergone no diminution with time. The popular lectures which have been given at the Observatory during the summer season have drawn audiences which have outgrown the capacity of the Observatory. In view of the danger of admitting large audiences to the rising-floor, it has been suggested that a lecture-room be constructed on the ground floor of the large tower, where the acoustic properties would be much superior to those in the space under the dome.

Respectfully submitted,

GEORGE E. HALE,

*Director of the Yerkes Observatory.*

## THE HULL ZOÖLOGICAL LABORATORY

*To the President of the University:*

SIR: I submit herewith a sketch of the history of the Department of Zoölogy, from 1892 to June 30, 1902.

In the earliest organization of the work of the University there was but a single Department of Biology. The original members of the Department were: Charles O. Whitman, Ph.D., Head Professor of Biology and Professor of Animal Morphology; Henry Herbert Donaldson, Ph.D., Professor of Neurology; Franklin P. Mall, M.D., Professor of Biology; George Baur, Ph.D., Assistant Professor of Paleontology; Jacques Loeb, M.D., Assistant Professor of Biology; William Morton Wheeler, Ph.D., Instructor in Biology; Edwin O. Jordan, B.S., Tutor in Animal Morphology; Sho Watasé, Ph.D., Reader in Cellular Biology.

The Fellows in Biology during the first year were: Charles L. Bristol, M.S.; A. C. Eycleshymer, B.S.; Herbert P. Johnson, B.S.; Frank R. Lillie, B.A.; A. D. Mead, M.S.; Harry L. Russell, B.S.

The work of the first year was conducted under some difficulties, but with abundance of enthusiasm, in "Science Hall," a flat building that had been hastily erected at the corner of Lexington avenue and Fifty-fifth street for accommodation of World's Fair visitors.

Before the end of the first year the Department of Biology had been divided into five, viz.: Zoölogy, Anatomy and Histology, Physiology, Neurology, and Paleontology.

At the close of the first year of the University the Department of Zoölogy was moved into the Kent Chemical Laboratory, where it enjoyed the hospitality of the Department of Chemistry, until the removal of the Department to its permanent home, the Hull Zoölogical Laboratory, in 1897.

From its foundation the Department of Zoölogy has emphasized the research side of its work. The results of this are evidenced, not only by the list of original contributions to Zoölogy by members of the Department, but also by the national scientific organizations and enterprises with which its members have been connected.

### STAFF OF THE DEPARTMENT

Charles O. Whitman, Ph.D., appointed 1892, Head Professor of Biology and Professor of Animal Morphology; 1893, Head Professor of Zoölogy.

George Baur, Ph.D., appointed 1892, Assistant Professor of Comparative Osteology and Paleontology; 1893, transferred to Department of Paleontology. Deceased.

William M. Wheeler, Ph.D., appointed 1892, Instructor in Embryology; 1894, Assistant Professor of Embryology; 1900, called to the University of Texas as Professor of Biology.

Edwin O. Jordan, Ph.D., appointed 1892, Tutor in Zoölogy; 1893, Instructor in Biology; 1894, Assistant Professor of Zoölogy; 1896, Assistant Professor of Bacteriology; 1900, Associate Professor of Bacteriology; 1901, transferred to the Department of Pathology and Bacteriology.

Sho Watasé, appointed 1892, Tutor in Cellular Biology; 1893, Instructor in Cellular Biology; 1894, Assistant Professor of Cellular Biology; 1900, called to the University of Tokyo as Professor of Cellular Biology.

Frank R. Lillie, Ph.D., appointed 1893, Reader in Embryology; 1894, called to the University of Michigan as Instructor in Zoölogy; 1899, called to Vassar College as Professor of Biology (John P. Giraud Chair of Natural History); 1900, called to the University of Chicago as Assistant Professor of Zoölogy; 1902, Associate Professor of Embryology.

D. G. Elliot, F.R.S.E., appointed 1894, Lecturer in Zoology, to 1896.  
 Norman Wyld, appointed 1894, Docent in Zoology, to 1896.  
 Charles Manning Child, Ph.D., appointed 1896, Associate in Zoology; 1898, Instructor in Zoology.  
 A. L. Smith, Lecturer in Bacteriology, Summer Quarters of 1899 and 1900.  
 Charles B. Davenport, Ph.D., appointed 1899, Assistant Professor of Zoology; 1901, Associate Professor of Zoology and Embryology.  
 Howell E. Davies, Ph.D., appointed 1899, Assistant in Bacteriology; 1901, resigned.  
 Elliott R. Downing, Ph.D., Assistant in Zoology, Summer Quarter, 1901.  
 E. H. Harper, Ph.D., Assistant in Zoology, Summer Quarter, 1901-2.  
 W. L. Tower, 1901, appointed Assistant in Embryology.

## LIST OF FELLOWS

The following have held Fellowships in the Department of Zoology:

1892-1893

Charles L. Bristol, to 1894; Professor of Biology, New York University.  
 A. C. Eycleshymer, Ph.D.; Assistant Professor of Anatomy, University of Chicago.  
 Herbert P. Johnson, Ph.D.; Bussey Institute, Boston, Mass.  
 Frank R. Lillie, Ph.D.; Associate Professor of Embryology, University of Chicago.  
 A. D. Mead, Ph.D., Professor of Comparative Anatomy, Brown University.  
 Harry L. Russell, Ph.D.; Professor of Bacteriology, University of Wisconsin.

1893-1894

Emanuel R. Boyer; deceased.  
 John P. Munson, to 1897.  
 Marcus S. Farr, Ph.D.; Curator, New York State Museum, Albany.  
 O. P. Hay (Hon.); Curator, American Museum of Natural History, New York city.  
 William A. Loey (Hon.), Ph.D., to 1895; Professor of Zoology, Northwestern University, Evanston, Ill.  
 A. L. Treadwell (Hon.), Ph.D., to 1896; Professor of Biology, Vassar College, Poughkeepsie, N. Y.  
 Cornelia M. Clapp (Hon.), Ph.D.; Professor of Zoology, Mount Holyoke College, S. Hadley, Mass.

1894-1895

Howard S. Brode, Ph.D., to 1896; Professor of Biology, University of Washington, Walla Walla, Wash.  
 Charles M. Child, Ph.D., to 1896; Instructor, University of Chicago.  
 Harriett Bell Merrill, to 1896; Teacher, Milwaukee High School.

1895-1896

Agnes M. Claypole.  
 Samuel J. Holmes, Ph.D., to 1897; Instructor in Zoology, University of Michigan.  
 Virgil E. McCaskill, Ph.D.; Professor of Biology, Normal School, Stevens Point, Wis.  
 Wales H. Packard, to 1899; Instructor in Biology, Bradley Polytechnic Institute, Peoria, Ill.

1896-1897

Harry R. Fling; Professor of Biology, Normal School, Oshkosh, Wis.  
 Mary M. Sturges, to 1898.

1897-1898

Fred L. Charles; Teacher of Biology, Lake View High School, Chicago.  
 Emily Ray Gregory, Ph.D., to 1899; Professor of Biology, Wells College, Aurora, N. Y.  
 Michael F. Guyer, Ph.D., to 1900; Assistant Professor of Zoology, University of Cincinnati.  
 George W. Hunter, Jr.; Teacher of Biology, DeWitt Clinton High School Annex, New York city.  
 Howell S. Davies; St. Luke's Hospital, Chicago.

1898-1899

Ralph S. Lillie, Ph.D.; Instructor in Physiology, University of Nebraska.  
 Horatio H. Newman, to 1900.

Anne Moore, Ph.D.

1899-1900

1900-1901

Charles C. Adams, to 1902; Curator, Zoological Museum, University of Michigan.

Elliott R. Downing, Ph.D.; Professor of Biology, State Normal School, Marquette, Mich.

Minnie M. Entemann, Ph.D.

Eugene H. Harper, Ph.D.; Professor of Biology.

William J. Moenkhaus; Assistant Professor of Zoology, University of Indiana, Bloomington, Ind.

Alice Wilcox; Instructor in Zoology, Wellesley College, Mass.

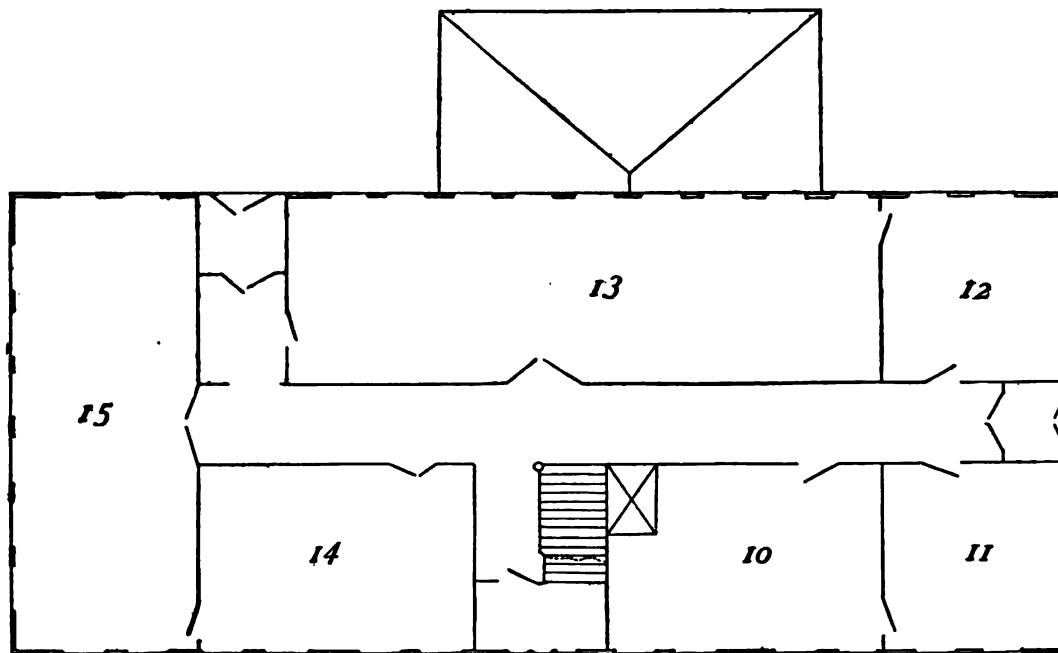
1901-1902

Bennett M. Allen.

Mary Hefferan; Curator, Bacteriological Museum, University of Chicago.

### THE LABORATORY

The Zoological Laboratory is 120 × 50 feet, and four stories high, exclusive of basement. The accompanying plans show the arrangement of the rooms:



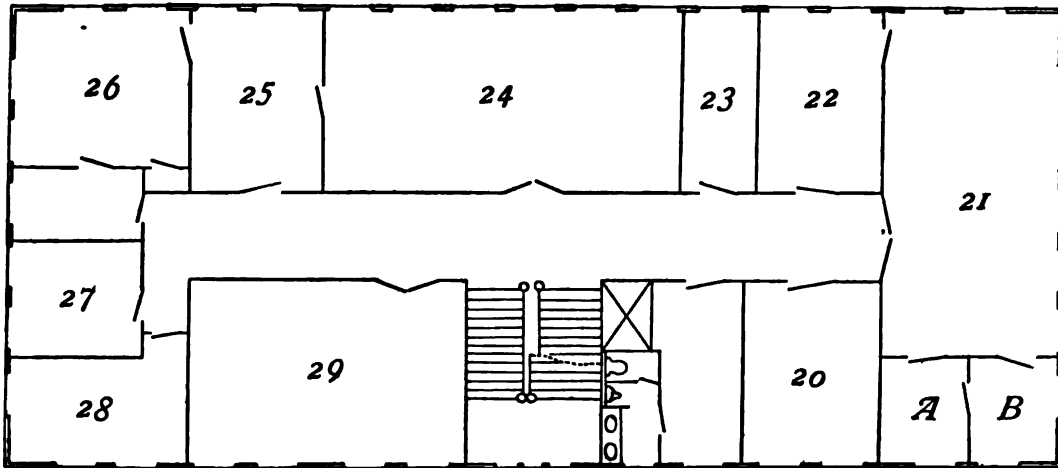
FIRST FLOOR

On the first floor are six rooms, numbered 10 to 15. Rooms 10, 11, 12, and 13 were originally intended for a small museum; Rooms 14 and 15 are laboratories for the elementary work, and are capable of accommodating, when properly furnished, about thirty-five students. Rooms 12 and 13 are at present occupied by the library of the Biological Departments, and Room 10 is used as a research-room for the Department of Pathology and Bacteriology. Room 11 is in use at the present time for a part of the zoological collections. The remainder of the collections is scattered over the building, or stored in the basement. The space in Room 10 is much



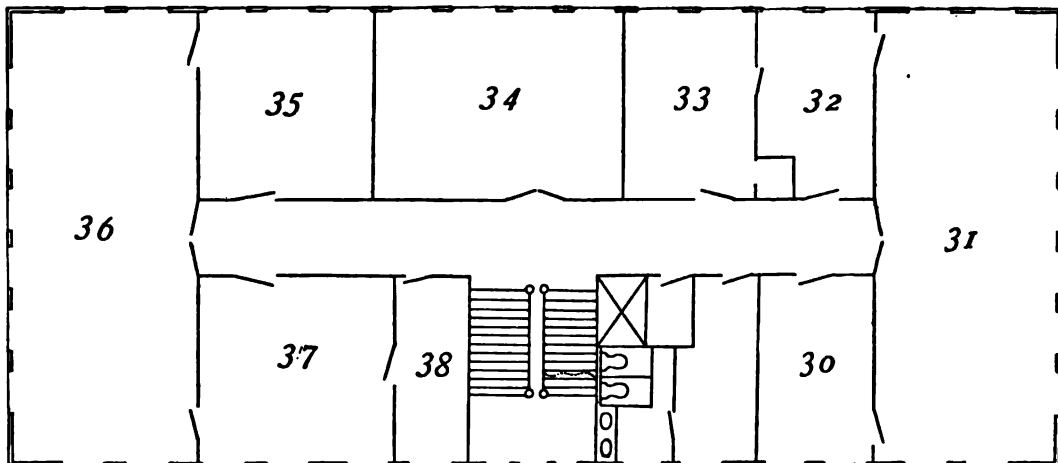
needed for exhibition of the material; and the recent formal establishment of a Museum of Zoölogy will soon make the space of Rooms 12 and 13 necessary.

The second floor is devoted mainly to research. Room 21, at the west end, is a research



SECOND FLOOR

laboratory for advanced students. Two private research-rooms for Fellows of the Department open off this. Rooms 20, 22, and 23 are also research-rooms for members of the staff; 24 is a lecture-room, seating about sixty students. Rooms 25 and 26 are occupied by the Director of



THIRD FLOOR

the Laboratory and the artist; 27 and 28 are research-rooms for Fellows or assistants. Room 29 is a laboratory, used at present both for Bacteriology and Embryology at different times.

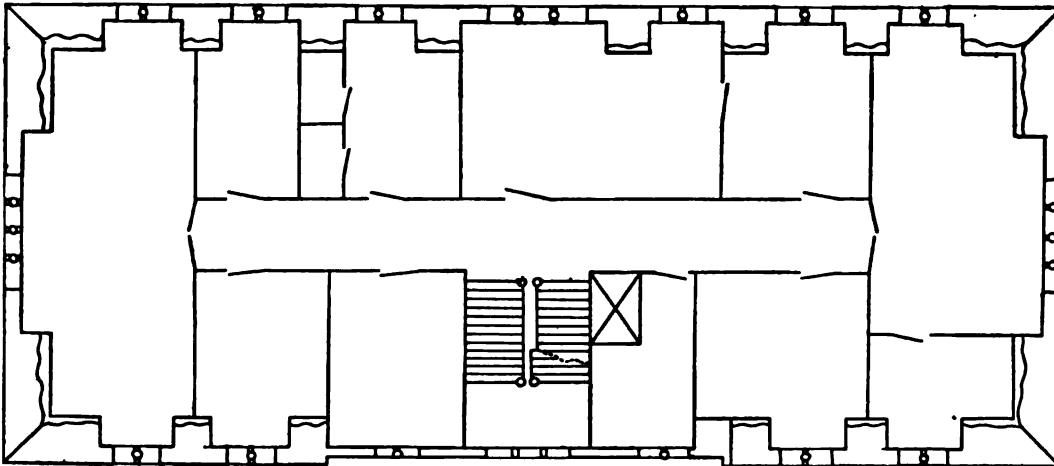
The ends of the third floor are occupied by two large laboratories. Room 31 is used for Comparative Anatomy and Embryology; 36, for Bacteriology and Embryology; 30 is the

embryological preparation-room; 32, 33, and 35 are private rooms for members of the staff; 34 is a research-laboratory for the work in variation and statistical zoölogy; 37 is used both as a lecture-room and general laboratory for the same subjects; 38 is a private research-room.

The fourth floor is at present occupied entirely by the Department of Bacteriology.

In the basement are nine rooms, variously used and fully occupied as storage and animal rooms; and a glass-covered extension for aquaria, 25 × 40 feet.

At present the Department is greatly hampered for lack of sufficient space—a condition that will be improved with the removal of the Department of Pathology and Bacteriology. The fourth floor will then come into use for work in Comparative Anatomy and for the quarters of the preparator, and the room on the ground floor, vacated by Pathology, will be immediately occupied by the museum, at present crowded into one small room.



FOURTH FLOOR

The Department thus needs at the present time the entire space in the building. Even then one considerable drawback will remain: the lack of a lecture-room of adequate size for the largest classes. For this the Department is at present dependent upon the courtesy of the Head of the Department of Botany.

There are still many deficiencies in the furnishing and equipment of the laboratories. The sum of \$11,000 could be well expended in the following ways:

\$2,500 for oak, glass-faced cases for the museum.

500 for adequate equipment of a preparation-room.

5,000 for skeletons, injected materials, and rare specimens for the museum.

2,000 for completing the furnishings of the laboratories, cases, tables, aquaria, etc.

1,000 for a complete photographic outfit and dark room (one of the most pressing needs at present).

#### VIVARIUM

The Department would also recommend the expenditure of about \$175,000 in building and equipping a good vivarium, which should include the best provisions for maintaining all forms of animal life under conditions as nearly normal as possible. The importance of such a provision in the work of all the Biological Departments could hardly be overestimated. It would be possible under these conditions to carry on long series of experiments in the breeding of animals, in the effect of altered conditions on animals, on the laws of inheritance, etc. A very attractive feature of such a vivarium would be the *marine aquarium*, in which all classes

of marine animals could be kept the year around, and many of the advantages of a marine biological laboratory be brought to our own doors. No less important would be a fresh-water aquarium, including one or two small ponds.

Such a vivarium would require at the start a number of trained attendants for the care of the aquaria and animals.

This vivarium would be of the greatest assistance in the work of the three Departments of Zoology, Physiology, and Botany.

#### LIBRARY

Next to its Faculty, the greatest concern of a university should be its collection of books. Since ancient times, at every center of learning where scholars have come together they have sought first to establish a great library. It is natural, therefore, that the Department of Zoology should urge the necessity of doing something to improve the scientific side of the library.

There are two special requirements met by a library in any science like Zoology: first, it is essential that all that has ever been published on any subject of the science should be at once easily accessible; second, it is important for the investigator that the current ideas of his colleagues in whatever field should be early accessible to him, since they afford suggestions and a stimulus.

The first-mentioned function of a library is a consequence of the essential nature of a science. It builds upon recorded facts. If the scientific worker cannot get the recorded facts, he may waste much time in duplicating work already done. Moreover, every worker is bound to show the relation of his facts to those previously known; to bring together all the scattered published data bearing upon his investigation, and to examine them critically in the light of his investigation. All this requires that the complete literature of Zoology, as indexed in the *Record* or *Bericht* of the science, should be available.

At present the Library of the University, including the Biological Group Library, comes far short of reaching the ideal of completeness, and is every year getting more hopelessly behind. At the present time we are regularly receiving only about 15 per cent. of the zoological journals, and probably only about 20 per cent. of the current output in Zoology. We are much more deficient in the literature previous to 1892. Altogether, probably less than 5 per cent. of the books on Zoology are accessible at the University. The chances are thus greatly against a student being able to refer to any article cited. In consequence, any attempt to present a complete critical analysis of the literature on a subject becomes impossible. In fact, the highest type of scholarly work in Zoology cannot be done at the University; and so long as this is so, the best graduate students will tend to eastern universities.

In comparison with other sciences at the University, Zoology has fared very badly. Certain sciences, such as Chemistry, report that they have a nearly complete library. But chemical books cost far less than those of Zoology. It is the lithographic plates that make zoological literature the most expensive of any science. An appropriation for books that would suffice for Chemistry would be meager indeed for Zoology. Moreover, not only is the zoological literature expensive, but it is very great in the number of parts issued. Consequently the work of the Department has been hampered by an insufficient library. There is no single way in which the work of the Zoological Department, as at present limited, could be more effectively strengthened than by an income of \$10,000 a year to be devoted exclusively to zoological books.

#### EQUIPMENT

The Department possesses thirteen Zeiss compound microscopes of the highest grade, and about fifty other compound microscopes, mostly by Leitz; thirty-one dissecting microscopes; sixteen camera lucidas; and other optical apparatus. There are sixteen microtomes, an electrical

projection lantern with attachment for microscopical projection, in addition to a great variety of minor apparatus. The collection of charts includes the complete Leuckart and Nitzsche series, and about one hundred prepared in the Laboratory. The Department also has the complete series of Ziegler Embryological Wax Models, as well as some others.

The museum contains a small synoptic collection composed of typical representatives of the principal groups, and some material prepared for purposes of illustration and demonstration. A collection of North American moths and butterflies, comprising twenty cases, has been purchased by the Department, and, in addition, there is a number of skeletons of vertebrates, mounted and unmounted. Mention should also be made of the Baur Collection of Galapagos vertebrates, including specimens of the famous giant tortoise of these islands.

A collection of microscopic preparations has been begun, which is at present used chiefly in the various courses of instruction, and consists of about three to four thousand slides. It is intended, in the case of the embryological collection, to prepare as complete a series of slides as possible, illustrating the development of different classes of animals, for use by investigators.

#### A LAKE BIOLOGICAL STATION

It is to Mr. Edward Phelps Allis, of Milwaukee, that we owe the first attempt to establish a lake biological station. It was under the auspices of the Allis Lake Laboratory that the *Journal of Morphology* was started. The plan was to locate the station eventually among the smaller lakes of Wisconsin. This part of the scheme is of first importance, for the small lakes are of far greater value than the large ones for biological purposes. The fauna and flora in these small Wisconsin lakes are far richer than those of Lake Michigan, the conditions are more varied, the water pure and transparent. They are connected by streams of convenient size for complete control, and just adapted to feed small ponds made alongside for special purposes.

It would be a mistake, from every point of view, to locate a station on the Great Lakes, for the life in these is greatly inferior in variety and scientific interest, and what there is is less accessible and handled with great difficulty on account of the muddy water.

The ideal place for a lake laboratory is among the smaller lakes. The Great Lakes are great only in body of water; biologically they are incomparably smaller than the small lakes. Even the minute surface forms of life, on which much more has been said than done, are undoubtedly more abundant in the small lakes.

A lake laboratory would miss the mark if it did not provide for studies on living organisms. Here its functions would merge with those of a biological farm, which should certainly be developed in close connection with it. The union of these two projects, liberally supported, would mark an epoch in the history of Biology of unprecedented importance.

#### A BIOLOGICAL FARM

FOR THE EXPERIMENTAL INVESTIGATION OF HEREDITY, VARIATION, AND EVOLUTION, AND FOR THE STUDY OF LIFE-HISTORIES, HABITS, INSTINCTS, AND INTELLIGENCE

The biological laboratories of today, in design, equipment, and staff, are almost exclusively limited to the study of *dead* material. Living organisms may find a place in small aquaria or vivaria, but they are reserved, as a rule, not for study, but for fresh supplies of dead material. It is no disparagement of the laboratory to point out a broad limitation in its ordinary functions and the pressing need of new facilities for observation and experiment on *living* organisms.

The fundamental problems of heredity, variation, adaptation, and evolution cannot be wholly settled in the laboratory. They concern vital processes known only in living organisms — processes which are slow and cumulative in effects, expressing themselves in development, growth, life-histories, species, habits, instincts, intelligence. These problems require, therefore,

to be taken to the field, the pond, the sea, the island, where the forms selected for study can be kept under natural conditions, and where the work can be continued from year to year without interruption. Such a field, combining land and water, stocked with animals and plants, and provided with a staff of naturalists, would have the essentials of a biological farm, now justly considered to be one of the great desiderata of Biology.

This great need (pointed out in all our annual programs since 1892, and named as one of the three leading purposes of the Culver endowment) has been felt ever since Darwin's time, and has been strongly urged by such evolutionists as Romanes, Varigny, Galton, Weismann, and Meldola. Thus far the project has not been realized, except on a small scale through individual effort.

The most notable move in this direction is that of Professor Cossar Ewart, of the University of Edinburgh. *The Penycuik Experiments*—the first product of Professor Ewart's enterprise—form a brilliant illustration of the kind of fruit to be expected from a farm devoted to experimental research. Single-handed, Professor Ewart attacks the problems of heredity, and quickly shows how decisive are direct experiments in dealing with such subjects as telegony, prepotency, reversion, inbreeding, etc.

The plans proposed by Romanes and Varigny had as chief ends in view demonstrative tests of the theory of the origin of species by natural selection. But the contest between the old belief in the immutability of species and the new doctrine of descent has been decided, and the original idea of the farm has consequently ceased to have great influence.

The functions to be fulfilled by a farm are no longer prescribed by the exigencies of theories, but by the deeper and broader needs of pure research on *living* organisms. The problems of heredity and variability are fundamental, and naturally form the center of interest. Variability is the source of new species and the fountain of all progressive development in the organic world. In heredity lies the power of propagation and continuity of species. These are inexhaustible subjects, from the investigation of which must flow rich accessories to knowledge, which will redound to the advancement of human welfare.

These subjects are in some aspects and details amenable to laboratory research; but for the most part they can be effectively dealt with only under conditions represented in the farm. This holds, for example, in that most promising branch of experimental Biology—*hybridization*. Botanical gardens and zoological parks have been utilized to some extent in this work, but they are adapted to show purposes, and of little value for research of this kind. The far-reaching importance of this subject, both for science and practical breeding purposes, is well attested in Mr. Ewart's experiments, in those of Hugo de Vries, as recorded in his monographs on the origin of species in the plant world, and again in Mr. Bateson's *Experimental Studies in the Physiology of Heredity*.

The functions of a biological farm are not all summed up in experimentation. That old and true method of Natural History—*observation*—must ever have a large share in the study of living things. Observation, Experiment, and Reflection are three in one. Together they are omnipotent; disjoined they become impotent fetiches. The Biology of today, as we are beginning to realize, has not too much laboratory, but too little of living nature. The farm will certainly do much to mend this great deficiency. The farm would enable us to work out life-histories, bring us face to face with instinct, put it under control so we could handle it, photograph it, analyze it, read its history, and extort from it an answer to the question: Whence and how came intelligence?

It would enable us to extend the study of development beyond the stages presented in the egg and the embryo to those leading up to mature age, and thus bring within reach vast series of most important data for the study of evolution.

In such data we might expect to see to what extent individual development recapitulates race-development, and to get important clues to the meaning of this so-called biogenetic law. The whole meaning of development and heredity is involved in these phenomena of "recapitulation." That the first step in recapitulation is the germ-cell, we know. The fertilized germ, or egg, passes through a series of form-stages, leading through the morula, blastula, gastrula, embryo, larva, etc. Whether these stages epitomize the ancestral series is a question very difficult to decide, and opinion is much divided. This obscure but fundamental problem of development can probably never be solved by embryological data alone. Paleontology throws much light on the general question, but deals entirely with non-living remains. If there be recapitulation, it should certainly be discoverable in post-embryonic stages, where characteristic features are slowly elaborated and brought to completion in detail quite beyond the possibilities in earlier life. Strange to say, these later stages have been but little studied in living forms, museum morgues having been the chief reliance. It is in these stages that recapitulation may be actually seen as a life-process, successive steps in evolution repeating themselves with sufficient fulness to satisfy the most skeptical. Such sequences are often manifest in the development of instinctive behavior, and even in voice-changes and food-instincts at certain life-epochs corresponding seemingly to evolution-epochs.

Remembering that the distant ancestors of land animals were undoubtedly aquatic, the history of individual development in amphibious forms of today becomes intelligible as an abbreviated and variously modified record of race-evolution. Making all allowance for secondary adaptive changes, it is nevertheless safe to say that race-evolution is sketched in the development of the individual—sketched not only in fundamental features of structure, but also in the accompanying physiological and psychological changes. Reminiscences of aquatic life are seen not only in land animals that return to the water to deposit their eggs, but also in all the higher animals, since they begin life in the unicellular stage and their eggs require for development to be bathed in water or an aqueous fluid.

Sequence in color-patterns, so characteristic of young animals of almost all species, and especially so of birds, furnishes innumerable illustrations of the biogenetic law, and in many cases, where only two extremes of the sequence are present, it is possible by simple experiment to bridge the gap, and thus to show that the two extremes are really two stages of a continuous development. For example, in some wild species of pigeons we find that the color-pattern of the first plumage succeeding the down is so different from that of the second (adult) plumage as to appear to have no direct developmental relation to it. By plucking one or more feathers from the first plumage at different times before the first moult, intermediate stages can be obtained, showing precisely how the first pattern can be progressively converted into the second. Such experiments enable us to force from nature more complete records of her past and present doings.

Work on living organisms, dealing with such subjects as heredity, variation, adaptation, correlation, development, recapitulation, hybridization, origin of species, nature of specific characters, life-histories, habits, instincts, intelligence, etc., requiring uninterrupted continuance from year to year for long periods, under conditions that secure most favorable control for experimentation and study, calls for facilities which have yet to be provided for.

There is no quite satisfactory name for the new plant required for such work, and no one has suggested a practical method of developing it. "Biological Farm," broadly defined, is perhaps the best we can do for a name, as the work would be, so far as possible, upon plants and animals under cultivation. A considerable tract of land, of varied surface, including woods, streams, and ponds, would represent the essentials of the farm headquarters.

In dealing with the problem of heredity and variation, it is of the highest importance to

know the *history of the material* to be investigated. It is this prime essential that is so conspicuously missing in most of the work hitherto done in these lines. Curves and formulæ may be all right mathematically and yet all wrong biologically. Even Galton, the father of the statistical school, warns us that "no pursuit runs between so many pitfalls and unseen traps as that of statistics."<sup>1</sup>

The farm will furnish material with *exact records*, and will thus render a most important service to laboratory workers. A single illustration will suffice. It has been discovered that the paternal and maternal chromosomes in the cross-fertilized egg remain distinct, at least in the earlier stages of development. This seems to account for the fact that hybrids of the first generation between distinct species are generally "intermediates." When these hybrids breed *inter se* or with the parent species, we often get so-called "reversions." Hitherto we have not found any explanation for these "reversions." The solution of this most interesting problem in heredity only waits for the right material with precisely defined origin, and for this the laboratory could look to the farm. But the farm could do more than supply the needed material; its records and experiments would suggest the theory and give the physiological test, while the laboratory work would find the morphological test. The co-operation between laboratory and farm would thus be intimate and of inestimable value in a multitude of ways.

The practical question arises as to how to proceed with the development of a farm. Our limited experience strongly confirms the opinion with which we set out, namely, that the best method is to develop the farm slowly, section by section. Each section should be a group of related species, selected with a view to combining a wide range of problems. It should be developed and directed by an investigator prepared to make it his life-work. This investigator, or director, should have the support of a number of assistants competent to deal with special problems, one or two artists, a photographer, a stenographer, a keeper, and a business superintendent.

Developed in this way, the cost of maintenance would not be heavy at first; \$10,000 a year would support a large and thriving section. The multiplication of sections and the general growth of the work would call for a larger income. A farm of ten large sections would require an endowment of a million.

If the scheme here outlined approaches the ideal which science is waiting to see realized, it will be seen that the farm does not find its chief purpose in demonstrations of the truth of evolution or in testing the theory of natural selection. It is not a project designed simply to turn out curves and formulæ, nor is it the particular pet of any school or fad. Moreover, the prevailing idea that it has something in common with a zoological or botanical park, rests on a total misapprehension. The organization, management, and all the conditions obtaining in the public park are incongruous with those required for a research farm. Heterogeneous collections of animals, exhibited for the amusement of people, are wholly unsuited to the purposes of investigation in time, place, and character. For the kind of work contemplated, the investigator must have forms of his own selection, collected, arranged, and kept for his special purposes. He must have complete and permanent control of his quarters and the forms he is to study, and, above all, complete isolation from the public. Only under such conditions could he have the unbroken quiet required in delicate observation, or expect natural behavior from the forms occupying his attention.

The location of a biological farm should be such as to give command of as many natural advantages as possible. The ideal situation would include plain, ridges, hills, woods, streams, ponds, and a tract of seashore. From fifty to one hundred acres or more would be needed.

<sup>1</sup> *Biometrika*, Vol. I, p. 8.

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The farm should be in close touch with a laboratory, and this need would suggest a combination of the farm project with a marine laboratory or with a lake biological station. In either case the two establishments would work hand in hand in many problems, and accomplish far more together than they could by separate work.

The possibility of first choice in location is now open to the University. The project is already in the minds of the people connected with other institutions, and it seems probable that it will be undertaken somewhere in a very short time. The lead in this important work in this section of the country should be taken at once.

Respectfully submitted,

CHARLES O. WHITMAN.



## THE WALKER MUSEUM

*To the President of the University:*

SIR: I submit herewith my report on the condition of the Walker Museum from its organization to June 30, 1902.

The Walker Museum was founded by a gift of \$130,000 from Mr. George C. Walker, in the spring of 1892. The Museum building, which consists of a fireproof structure of three stories and basement, was formally opened October 1, 1893. The presentation address by Mr. Walker and the President's response, which are given in the historical sketch, printed elsewhere in this volume, set forth the history of the foundation of the Museum

### THE STAFF

The Museum is under the general charge of the following officers of government:  
Thomas Chrowder Chamberlin, Professor of Geology, and Director.

### CURATORS

Rollin D. Salisbury, Professor of Geographic Geology.  
Joseph Paxson Iddings, Professor of Petrology.  
Richard Alexander Fullerton Penrose, Jr., Professor of Economic Geology.  
Samuel Wendell Williston, Professor of Paleontology.  
Frederick Starr, Associate Professor of Anthropology.  
Stuart Weller, Assistant Professor of Paleontologic Geology.  
William F. E. Gurley, Associate Curator in Paleontology.

### SCOPE OF THE MUSEUM

The collections in Anthropology, Geology, Geography, Mineralogy, Petrography, Paleontology, Osteology, Botany, Semitic Archæology, and Comparative Religions were at first accommodated within the building. On the establishment of the Haskell Oriental Museum the collections in Semitic Archæology and Comparative Religions were transferred to it, and on the opening of the Hull Biological Laboratories the collections in Botany, Osteology, and vertebrate Paleontology were removed to these. The Museum, therefore, now embraces the collections in Anthropology, Geology, Geography, Mineralogy, Petrography, and historical Paleontology. The collections at first consisted chiefly of purchases, of gifts from the exhibitors at the World's Fair, and of a few donations made by generous friends. To these, important additions have been made from year to year by purchases, by gifts, and by collections made by members of the University staff, for which provision has been made by University appropriations or by funds provided by friends

### THE GEOLOGICAL COLLECTION

The general geological collection contains a large variety of material illustrating the phenomena of the earth's structure and the modes of action of dynamic agencies. It also embraces a series of models, casts, photographs, and lantern slides illustrating structural and other phenomena. The economic division of the collection embraces a large series of ores, economic minerals, and mining products representing the various phases of industrial Geology. These have been drawn from the leading mining districts of the United States and from among foreign countries.

### THE GEOGRAPHICAL COLLECTION

The collection of illustrative geographic material embraces a large series of models, casts, maps, photographs, and lantern slides illustrating the leading types of topographic expression and the methods by which surface configuration is produced. The relief maps and models represent the actual configuration of the surface of certain selected regions in various parts of the world.

### MINERALOGICAL AND PETROLOGICAL COLLECTIONS

The collection in Mineralogy embraces a systematic series of choice minerals arranged in cases for public exhibition, and a supplementary series arranged in drawers for laboratory study and the illustration of lectures. The petrological collection embraces a systematic series of igneous, sedimentary, and metamorphic rocks, arranged chiefly with reference to laboratory and lecture-room service. These are accompanied by an extensive series of microscopic slides for optical study. There are special collections of volcanic rocks from a number of typical localities in western America.

Two collections of value have recently been added to the mineralogical group: one collection, which was donated by Mr. C. K. G. Billings and exhibited at the Paris Exposition by the University, represents the silicate minerals of America; the other, loaned to the University by W. C. E. Seeböck, is a beautiful collection of crystallized minerals, embracing more than three thousand specimens.

### THE PALEONTOLOGICAL COLLECTION

The collection of fossils includes a systematic series of life relics arranged in stratigraphic order for the purpose of illustrating the successive faunas and floras of the earth's history. It also embraces a much larger collection arranged in drawers for the purpose of laboratory study and class illustration. Besides specimens purchased and gathered from various sources, including many minor donations, the collection embraces the following special collections: The *Gurley Collection*, the most important and valuable collection in the Museum, is of especial interest to the University, as it is particularly rich in the Paleozoic fossils of the Mississippi valley. (This collection contains material which requires fifteen thousand catalogue entries. About six hundred types of species are included in the collection.) The *Washburn Collection* is very rich in Niagara species; the *James Collection*, valuable for its Cincinnati types; the *Kramtz Collection*, a collection of European fossils; the *Barton Collection*, representing the Niagara formation of Chicago; the *Matthew Collection*, containing Cambrian fossils from New Brunswick; the *Squyer Collection*, a small collection of Cretaceous fossils from the Black Hills; the *Ami Collection*, a small collection of Ordovician fossils from Canada; the *Willcox Collection*, a small but choice collection of Tertiary shells from Florida and other eastern localities; the *Weller Collection*, rich in the Carboniferous fossils of southwestern Missouri; the *Sampson Collection*, a valuable collection of the rare Chouteau limestone fossils of central Missouri.

### THE ANTHROPOLOGICAL COLLECTION

The anthropological collection contains a large quantity of ethnographic and archaeological material, which has recently been much extended by the collections of Professor Starr. In addition to these, the following collections are on deposit and furnish material for study: The *Ryerson Collection* in Mexican Archaeology, numbering more than three thousand pieces; the *Ryerson Collection*, from the cliff dwellings and cave houses of Utah, accompanied by a series of photographs which add much to its educational value. These two collections were

deposited by Mr. Martin A. Ryerson. The *Fulcomer Collection*, from the Aleutian Islands and the northwest coast, illustrating the Ethnography of the Eskimos, the Aleuts, and their neighbors; it is deposited by Miss Anna Fulcomer. The *Clement Collection*, from Japan, containing art works in lacquer and porcelain, and an interesting series of articles used in the curious Dolls' Festival; it is deposited by Professor E. W. Clement, of Tokio, Japan. The *Starr Collection* in Mexican Archæology, particularly rich in specimens which have been illustrated in important writings. The *International Folk-Lore Association Collection*, including masks, games, religious objects, and a large series of the wooden dolls made by the Moki Indians of Arizona and described by Dr. J. Walter Fewkes; the collection was made by Mrs. Helen W. Bassett and transferred by her to the association.

#### DONORS

Among the donors to the geological, mineralogical, petrological, paleontological and anthropological divisions of the Museum are the following:

Professor W. C. Alderson; Dr. F. H. Day; C. H. Rose & Co.; Superintendent Sorin, of the Arizona exhibit; Mr. James Douglas; Mr. Adaire, of the Arkansas exhibit; Barber Asphalt Co.; Superintendent Fowler, of the British Columbia exhibit; Superintendent Willmote, of the Canadian exhibit; Superintendent Berlme, of the Cape Colony exhibit; P. M. Harris, of the Chili exhibit; Superintendent Hicks, of the Colorado exhibit; President Jackson, of the Florida exhibit; M. Max Duchonoy, of the French exhibit; Superintendent Marcou, of the Minnesota exhibit; Superintendent Bickford, of the Montana exhibit; Superintendent Carne, of the New South Wales exhibit; Superintendent Brown, of the North Carolina exhibit; Superintendent Boyle, of the Ontario exhibit; Superintendent Ayres, of the Oregon exhibit; Superintendent McIntosh, of the Quebec exhibit; Superintendent Webb, of the South Dakota exhibit; Standard Oil Co.; Superintendent Arthur Teffler, of the Swedish exhibit; Superintendent Meany, of the Washington exhibit; United States government; United States Geological Survey; Dr. and Mrs. Henry D. Sheldon; Miss Annice Butts; Professor R. A. F. Penrose, Jr.; Dr. G. Lindström; Mrs. A. D. Davidson; Mr. J. C. Carr; Mr. A. H. Rudd; Mr. J. A. Bownocker; Mr. D. K. Gregor; Mr. J. W. Macfarland; Professors S. L. Penfield, L. V. Pirsson, T. C. Chamberlin, R. D. Salisbury; Mr. Martin A. Ryerson; Dr. Milton Moss; Dr. Henry S. Washington; Professors J. F. Kemp, George P. Merrill; Field Columbian Museum; Mr. J. W. Yoder; Mr. F. T. Cockerton; Mr. F. W. Cooper; Mr. C. G. Woodall; Mr. H. P. Heizer; Professors W. B. Clark, F. D. Adams, J. P. Iddings; Mr. H. W. Turner; Mr. M. B. Steozynski; Mr. J. H. Shaffner; Mr. Frank Wilder; Professor A. H. Purdue; Mr. D. W. Meade; Mr. Stuart Weller; Mr. H. Backström; Mr. B. Frosterus; Mrs. David Whiteford (books); Mrs. Oliver Hicks; Mr. Robert Howell; Professor J. A. Udden; Mr. L. Howard; Mr. W. C. Knight; Mr. T. H. MacBride; Mrs. Ralph Emerson; Mr. E. E. Teller; Chicago Academy of Sciences; Mr. H. B. Derr; Mr. H. H. Hurley; Miss Mary Marvin; Mr. H. F. Bain; Mr. F. C. Baker; Professor C. R. Eastman; Mr. George C. Morgan; Mr. T. E. Savage; Mr. W. T. Lee; Mr. A. W. Slocum; Mr. John K. Prather; Professor J. J. Stevenson; Mr. George F. Harris; Mr. Frank Springer; Professor Joseph Willcox; Mr. F. W. Sardeson; Mr. C. H. Sternberg; Mr. R. F. Damon; Mr. Frank Hartley; Ward's Natural Science Establishment, Smithsonian Institution; Duc de Loubat; Major W. S. Beebe; Mr. N. S. Boughton; Mr. J. E. Freeman; Mr. W. A. Alexander; Mr. F. H. Reute; Dr. Alexander Bruce; Mrs. Dr. Sheldon.

Respectfully submitted,

THOMAS C. CHAMBERLIN, *Director.*

## THE DEPARTMENT OF GEOLOGY

*To the President of the University:*

SIR: I submit herewith a sketch of the history of the Department of Geology from 1892 to June 30, 1902.

The Department of Geology was organized in 1892 by the appointment of the following instructional staff:

Thomas C. Chamberlin, Ph.D., LL.D., Head Professor of Geology.

Rollin D. Salisbury, A.M., Professor of Geographic Geology.

Joseph P. Iddings, Ph.B., Associate Professor of Petrology.

R. A. F. Penrose, Jr., Ph.D., Associate Professor of Economic Geology.

Charles R. Van Hise, Ph.D., Non-Resident Professor of Pre-Cambrian Geology.

Charles D. Walcott, Non-Resident Professor of Paleontologic Geology.

William H. Holmes, A.B., Non-Resident Professor of Archæologic Geology.

Henry B. Kimmel, A.B., Fellow in Geology.

Twenty-eight courses of study were adopted, entitled as follows: Physiography, Crystallography, Physical Mineralogy, Descriptive Mineralogy, Petrology, Petrography, Petrology (Advanced), Field Petrology, General Geology, Geographic Geology, Laboratory Work in Geographic Geology, Structural Geology and Continental Evolution, Dynamic Geography, Economic Geology, Chemistry of Ore Deposits, Geologic Life-Development, Paleontologic Geology, Paleontology, Pre-Cambrian Geology, Laboratory Course in Pre-Cambrian Geology, Archæologic Geology, Principles and Working Methods of Geology, Special Geology, Local Field Geology, Seminar, Geology in Camp, Professional Geology, Independent Field Work.

The controlling purposes of the Department were set forth as follows:

The Department has been organized with a view to providing systematic training in Geology (embracing, as constituent sciences, Geography, Mineralogy, and Petrology) in such a form as to be serviceable as a part of a liberal education, and, at the same time, to be specifically preparatory to professional and investigative work in the science, either in connection with educational institutions, official surveys, industrial enterprises, or private researches. The first purpose predominates in the earlier courses and the second in the later, but both have a place in all, and find their realization in a common method of treatment. The professional element has been the more controlling in the construction of the courses, and the professional or investigative phase of treatment will find constant expression in their execution. While it is not expected that more than a small percentage of those who take the earlier courses will have such professional or investigative work in view, or will ever engage in it, it is believed that they will derive larger and more distinctive returns because of such shaping of the work than they would under the more common didactic methods, because of the closer contact with the living problems of the science into which they will thus be brought. That special mental and moral discipline which is appropriate to the science, and is distinctive of it, can be secured only by wrestling with its problems as they actually present themselves to the investigator. A radically different discipline is secured from handling the subject in the non-professional, didactic method—a discipline not at all characteristic of the science. It is believed that those who enter upon any of the courses with an intelligent appreciation will desire to come into touch with the working methods and controlling spirit of the science.

The *Journal of Geology*, a semi-quarterly magazine devoted to Geology and the allied sciences, was established by the Department during its first year and has been continued to date. The original editorial staff embraced the members of the geologic Faculty and the following associate editors: Sir Archibald Geikie, Great Britain; H. Rosenbusch, Germany; Charles Barrois, France; Albrecht Penck, Austria; Hans Reusch, Norway; Gerard de Geer,

Sweden; George M. Dawson, Canada; Joseph Le Conte, University of California; G. K. Gilbert, Washington; H. S. Williams, Yale University; J. C. Branner, Leland Stanford Junior University; G. H. Williams, Johns Hopkins University; I. C. Russell, University of Michigan; O. A. Derby, Brazil. Of these Professor G. H. Williams, Dr. George M. Dawson, and Professor Joseph Le Conte have been lost by death; and Professor W. B. Clark, of Johns Hopkins University, has been added.

In 1893-94, the instructional staff was increased by the addition of Edmund C. Quereau, Ph.D., Assistant in Paleontologic Geology, and John C. Merriam, Ph.D., Docent in Paleontologic Geology. Courses in Paleontologic Geology—Paleozoic Life, Paleontologic Geology—Mesozoic Life, and Special Paleontologic Geology were added, and it was found necessary to repeat the course in Physiography under Professor Salisbury. Hon. Charles D. Walcott, having been appointed Director of the United States Geological Survey, retired from the staff.

During the first year the Department had occupied temporary quarters on the corner of Lexington avenue and Fifty-fifth street, but at the opening of the second Quarter of the second year it was transferred to commodious rooms in Walker Museum, which had in the meantime been constructed by funds donated by Mr. George C. Walker, of the Board of Trustees. Through the added generosity of Mr. Walker, the Department was provided with cases for the installation of its collections and the inauguration of its section of the Walker Museum. This, aided by a generous allotment for equipment by the Board of Trustees, and by numerous donations by exhibitors of ores, minerals, rocks, and other geologic material at the World's Fair, enabled the Department to equip itself effectively for instruction and research.

A Geological Club was organized during the year for the discussion of current subjects of geological interest, and this has been maintained to the present date.

In 1894-95 Oliver Cummings Farrington was appointed Professorial Lecturer on Determinative Mineralogy, and Messrs. Quereau and Merriam accepted advanced positions elsewhere. The following Fellows and Graduate Scholars were appointed: Henry Barnard Kimmel, A.M., Honorary Fellow; Thomas Cramer Hopkins, S.M., A.M.; Charles Emerson Peet, S.B.; Charles Henry Gordon, S.M., Fellows; and Elwood Chappell Perisho, S.M., Graduate Scholar.

Large additions to the collections and equipment of the Department were made during the year, notable among which were the Washburn collection of fossils, especially rich in Niagara forms: the collection of the late Professor U. P. James, especially rich in Cincinnati fossils; a brilliant suite of minerals from the Copper Queen mine of Arizona; and a special collection of fossils made by Dr. Quereau for the University. The Department library was also increased to about 2,500 volumes and 3,800 pamphlets, besides a periodical and serial list of fifty-seven leading publications. A course in Determinative Mineralogy was added, and some modifications of other courses were made, the number now offered being thirty-one.

In 1895-96 Harry Fielding Reid, Ph.D., was temporarily engaged in the University Extension Department as Associate Professor of Physical Geology, and Mr. Stuart Weller, S.B., was added to the permanent staff as assistant in Paleontologic Geology. Professor Iddings was promoted from Associate Professor of Petrology to Professor of Petrology. Albert Homer Purdue, A.B., Dexter Putnam Nicholson, S.M., and Henry Chandler Cowles, A.B., were appointed Fellows. Six courses in Paleontologic Geology under Mr. Weller were introduced, and a course in Graphic Geology with Professor Holmes was added, and some modifications of previous courses were made, so that the total list of courses now numbered thirty-seven. The course in Physiography under Professor Salisbury was repeated during the Winter Quarter in addition to the Autumn and Summer Quarters. The Departmental library had now increased to about 3,000 volumes and 5,800 pamphlets.

In 1896-97 the Faculty of the Department remained unchanged. The following were appointed Fellows: Harry Foster Bain, S.M.; John Paul Goode, S.B.; Samuel Weidman, S.B.

The course in General Geology in the Winter Quarter being insufficient to meet the demand for it, a second general course, entitled History of the Earth, under Mr. Chamberlin, was added.

In 1897-98 William Clinton Alden, A.B., Cyrus Fischer Tolman, Jr., S.B., and Claude Ellsworth Siebenthal, A.M., were appointed Fellows. Professor William H. Holmes, who had given courses in Anthropic and Graphic Geology in connection with his duties as Curator of the Field Columbian Museum, having accepted a position in the National Museum, was unable to continue his course in the Department.

In 1898-99 the increased demand for instruction during the Summer Quarter was met by the engagement of John Paul Goode, S.B., and Wallace Walter Atwood, S.B., as Associates in Physiography, and by the addition of a supplementary course in Physiography and a field and laboratory course under the former, and by courses in Glacial Geology and Fundamental Problems in Geology by Mr. Chamberlin. To further meet the increased demands, the course in Physiography was repeated in the Spring Quarter. It had thus grown from a single-Quarter course in 1892 to one repeated each Quarter. The appointees to fellowships were: John Wellington Finch, A.M.; William Newton Logan, A.M.; Russell D. George, A.M.; and Claude Ellsworth Siebenthal, A.M.

In 1899-1900, in addition to the regular instructional staff, John Paul Goode, S.B., assisted with Physiography in the Summer Quarter; and John Wellington Finch, A.M., Wallace Walter Atwood, S.B., and Fred Harvey Hall Calhoun, S.B., assisted in Geology. The following Fellows were appointed: Wallace Walter Atwood, S.B.; Russell D. George, A.M.; Willis Thomas Lee, S.M.; William Newton Logan, A.M.; and William George Tight, S.M. A great addition to the equipment of the Department was made in the acquisition of the Gurley collection of fossils, embracing about 14,000 entries and more than 200,000 specimens, among which 570 are type specimens. The material is exceptionally choice and valuable, and is the product of thirty years' assiduous collecting by Mr. Gurley, to whose generosity the acquisition of the collection is mainly due.

In 1900-1901 the work of the regular instructional staff was supplemented in the Summer Quarter by John Paul Goode, S.B., who gave a course in Elementary Meteorology and a field and laboratory course; by Russell D. George, A.M., who gave a course in Elementary Mineralogy and Petrology; by Fred Harvey Hall Calhoun, who conducted a field course in the First Term of the Summer Quarter; and by Nevin Melancthon Fenneman, who conducted a field course in the Second Term. The appointees to Fellowships for this year were Fred Harvey Hall Calhoun, S.B.; Claude Ellsworth Siebenthal, A.M.; Russell D. George, A.M.; and Nevin Melancthon Fenneman, A.M.

#### FIELD WORK IN GEOLOGY

A limited amount of field work forms a part of the courses in Geology given at the University during the Autumn, Spring, and Summer Quarters. In addition to this local field work, more extended and systematic courses in field work are provided for those who desire to undertake it. These courses, in places more or less distant from Chicago, are given during the Summer Quarter. The actual work in the field is carried on through four, or some multiple of four, weeks. For each four weeks' field work, two weeks are allowed for the preparation of a report on the area studied.

The field courses are grouped in three classes, known as the first, second, and third courses respectively.

*The first course*, taken preferably before the study of Geology has been pursued more than one year, is the detailed study of some selected region presenting a considerable variety of physiographic and geologic phenomena. The course is intended (1) for those who are preparing to teach Physical Geography and Geology in secondary schools; (2) as an introduction to field work for those who contemplate Geology as a profession; and (3) for the general student

who is sufficiently interested in Geology to undertake the severe work which the course demands. The fields selected for this course vary from year to year. Students frequently take two "first courses" in different fields. The first courses have been given (1) in the vicinity of Devil's Lake and the Dalles of the Wisconsin; (2) in the vicinity of Green Lake, Wisconsin; (3) in the upper Illinois valley; and (4) in the Mississippi valley, between the mouth of the Wisconsin river and Muscatine, Iowa.

*The second course*, which is most advantageously undertaken after two years of work in Geology, has often been in a field where the study is less detailed, but where a wide range of phenomena are to be seen. This course has been given in the Yellowstone Park; in the vicinity of the Grand Cañon of the Colorado in northern Arizona; in the mountains of the northwest (Montana and Washington); in the mountains of Utah; and in Wyoming. The course is intended for more advanced students of the classes specified in the preceding paragraph, and is frequently taken twice, in different regions, by the same student. Written reports on the area studied constitute a part of the work.

*The third course* is largely individual work, and is undertaken after the student has advanced sufficiently to undertake independent or semi-independent work. It consists of the detailed, professional study of some area or problem, and is intended for those who take up geologic work in a professional way. Less advanced students may accompany those who are taking the third course, and for such students the course may count as a first or second course.

A field course was first given in 1894. The field was the vicinity of Devil's Lake and the Dalles, Wisconsin, where problems of Stratigraphy, Glacial Geology, and Physiography are well illustrated. The number of students was nine. In 1895 the field was the upper Illinois valley, where the general problems were the same, though more largely stratigraphic. The number of students was thirteen. In 1896 two areas were studied by the same class, viz.: the region about Green Lake, Wisconsin, and that at Devil's Lake. The number of students was thirteen. In 1897 the field was the same as in 1894, and the number of students ten. All courses given to classes up to this time were what are here classed as *first courses*. At the same time, students of advanced standing did individual work in various regions. In 1898 two classes were in the field, one at Devil's Lake, Wisconsin, and the other in the Yellowstone Park. The number of students in the two courses was thirteen. In 1899 three parties were organized, the first course being given twice, once in the earlier and once in the later part of the summer, in Wisconsin. The second course was given in the region of the Grand Cañon of the Colorado. The number of students in the field in 1899 was thirty-eight. In 1900 three classes were in the field, two first courses, as before, being given in Wisconsin, and a second course in the mountains of Montana and Washington. The number of registrations for this year was twenty-nine. In 1901 the first course was given but once, the field being in the Mississippi valley. Four smaller parties of advanced students were in the western mountains, one in Montana, one in Washington, one in Utah, and one in New Mexico. These courses were third courses for some students, and second and first courses for others. The total number of students taking field courses during this year was nineteen. In 1902 the first course was given twice, once in Wisconsin and once in the Mississippi valley. Three parties of advanced students were in the western mountains—one in Utah, one in Wyoming, and one in Montana. The number of students taking field courses was thirty-one, nine of whom were in the field eight weeks, and five twelve weeks.

In 1902 there was, in addition to the above, a field course in Geography from the School of Education. Their work was partly in northern Illinois, partly in eastern Wisconsin, and partly about Marquette, Mich. The number of students taking this course was ten.

Respectfully submitted,

THOMAS C. CHAMBERLIN.

## THE HULL BOTANICAL LABORATORY

*To the President of the University:*

SIR: I submit herewith a sketch of the history of the Department of Botany up to June 30, 1902.

The Department of Botany was not definitely organized until 1896, although some instruction had been given before that date. In 1894 a laboratory was opened in a single room in Kent Chemical Laboratory, in charge of one instructor. In 1895 this laboratory was transferred to two improvised rooms in Walker Museum, where it remained for two years. In the autumn of 1896 the Department of Botany was organized for the first time with a Professor in charge, the teaching staff consisting of three instructors: a Professor, an Assistant, and a Laboratory Assistant. In 1897 Hull Botanical Laboratory was completed and occupied, which provided ten rooms for general laboratory work, sixteen rooms for private research, lecture-rooms, and a roof conservatory. At this time the staff of instruction was increased to six, comprising a Professor, an Associate, an Assistant, and three Laboratory Assistants. At present the staff of instruction consists of two Professors, an Assistant Professor, two Instructors, an Associate, and two Assistants; in addition to which the Fellows of the Department, usually three or four in number, act as laboratory assistants; the available instructors in the Department, therefore, number eleven or twelve.

At first the work of instruction and of research dealt almost exclusively with Morphology, and the first equipment had this subject in view. Nothing further was attempted until the more ample accommodations of the new building permitted some expansion. In 1897, therefore, Cytology was more definitely developed as a subject distinct from Morphology, and was announced for instruction and research. At the same time, the relatively new field of Ecology was taken up and definite courses organized. This subject was almost untouched at that time in America, and this Laboratory happened to be the first in the country to recognize it in definite courses of study, and has remained one of the most influential centers for its development. In 1898 the subject of Plant Physiology was introduced with a Professor in charge; but for a time only opportunities for instruction were offered, and not until 1902 were opportunities for research provided. At the present time, therefore, undergraduate and graduate courses are conducted in Morphology, Cytology, Ecology, and Physiology. Arrangement has been made for beginning instruction in Experimental Morphology in the Spring Quarter of 1903. Private research work in this subject has been carried on in the Department for some time.

The Department is also concerned in botanical work outside of the Laboratory. A member of the staff has charge of the work in Botany each summer at the Marine Biological Laboratory at Wood's Holl; and other members of the staff are engaged during the summer either at Wood's Holl or at the Biological Laboratory at Cold Spring Harbor. In addition to these, field parties for the study of Physiographic Ecology, ranging in number from ten to twenty, have worked in various regions of the United States, among which may be mentioned the northern islands of Lake Michigan, the southern shore of Lake Superior, the mountains of Tennessee, the Gulf coast, the Rocky Mountain region of Montana, and the Mount Katahdin region of Maine.

During the history of the Laboratory forty-one formal papers embodying the results of research have been published under the title "Contributions from the Hull Botanical Laboratory." In addition to these there have been published numerous papers in the regular journals,



as well as books, which will be found enumerated in the Bibliography of the Department. Of the forty-one "Contributions" from the Laboratory twenty-three are morphological, four are cytological, three are morphological and cytological, six are ecological, and five are physiological. The preponderance in morphological output results from the fact that the instruction and equipment of the Laboratory were directed toward this work alone for a considerable time, the other subjects being of comparatively recent development. In this morphological work the first problems attacked were those connected with the seed-plants, the general purpose being an investigation of the phenomena of sexual reproduction and the accompanying structures, and to obtain some light upon the phylogeny of the group. A wide range of plants has been investigated by various members of the staff and students of the Department, and the results obtained have been organized in two volumes: one dealing with the *Special Morphology of the Gymnosperms*, and the other with the *Special Morphology of the Angiosperms*; the former published January, 1901; the latter to appear in January, 1903. Special mention is made of these volumes as they organize in a general way the principal output of the research work of the Department during the first six years of its existence.

The same kind of research among the lower groups of plants has also been undertaken, and each group has had its investigators who have made contributions to the general problems of plant Morphology.

In addition to these morphological problems which are being investigated by the Department, research work is now dealing with such general problems as the cytological features of fertilization and spore-production, the causes that determine changes in form and structure, and the essential factors of plant distribution.

In addition to the four distinct departments of botanical work now provided for in the way of instruction and research, there remain other great fields of botanical activity that need development by the University before it can be said to represent fairly the status of the science. Taxonomy or Classification, which is the oldest phase of Botany, is entirely unrepresented both in instruction and in facilities for research. The large fields of Anatomy, Pathology, and Paleobotany are also unprovided for, and all demand attention.

In addition to the work of instruction and research the Department has taken a strong interest in the work in Botany in secondary and grade schools. This interest has taken the form of the preparation of texts for secondary schools and giving instruction to special classes for teachers.

The Department has been successful in placing a considerable number of its advanced students and graduates in botanical positions, as is shown by the following list:

- Bray, W. L., Professor of Botany, University of Texas, Austin, Tex.  
Caldwell, O. W., Professor of Botany, State Normal School, Charleston, Ill.  
Conrad, A. H., formerly Instructor in Botany, High School, West Superior, Wis.; English High and Normal School, Chicago.  
Coulter, J. G., formerly Instructor in Botany, Syracuse University, Syracuse, N. Y.; Professor of Botany, Government Normal School, Manila, P. I.  
Coulter, S. M., Instructor in Botany, Shaw School of Botany, St. Louis, Mo.  
Holtzman, C. L., Instructor in Botany, Penn College, Oskaloosa, Ia.  
Lawson, A. A., Assistant in Botany, Leland Stanford Junior University, Calif.  
Lawson, H. W. Assistant in Botany, United States Department of Agriculture, Washington, D. C.  
Lee, Grace, Instructor in Botany, High School, Pueblo, Colo.  
Livingston, B. E., Assistant in Botany, University of Chicago.  
Lyon, Florence M., formerly Instructor in Botany, Smith College, Northampton, Mass.; Associate in Botany, University of Chicago.  
McCallum, W. B., formerly Instructor in Biology, Armour Institute, Chicago.

- Merrell, W. D., Instructor in Botany, University of Rochester, N. Y.  
Moore, A. C., Professor of Botany, University of South Carolina, Columbia, S. C.  
Nelson, N. L. T., Instructor in Botany, High and Normal School, St. Louis, Mo.  
Overton, J. B., Professor of Botany, Illinois College, Jacksonville, Ill.  
Roberts, H. F., formerly Instructor in Botany, Washington University, St. Louis, Mo.  
Smith, R. W., Professor of Botany, MacMaster University, Toronto, Can.  
Stevens, F. L., formerly Assistant Sanitary Survey, Chicago; Professor of Botany, College of Agriculture and Mechanic Arts, Raleigh, N. C.  
Transeau, E. N., formerly Instructor in Botany, High School, Colorado Springs, Colo.  
Webb, J. E., formerly Instructor in Biology, Morgan Park Academy, Chicago.  
Whitford, H. N., formerly Instructor in Biology, Armour Institute, Chicago; Assistant in Botany, University of Chicago.

In addition to the work of instruction and research the Department has charge of a monthly journal entitled the *Botanical Gazette*, averaging eighty pages. This journal was established as a private enterprise by the Head of the Department in 1875. In 1882 the present professor of Plant Physiology became the junior editor, and the journal has continued under this editorship ever since, in 1896 becoming one of the publications of the University. Through 1895 one volume was published each year; since that time two annual volumes have been issued, that for the latter half of 1902 being Vol. XXXIV.

Respectfully submitted,  
JOHN M. COULTER.

## THE HULL PHYSIOLOGICAL LABORATORY

*To the President of the University:*

SIR: I submit herewith a sketch of the history of the Department of Physiology from 1892 to June 30, 1902. As far as the first five years are concerned, this is a repetition of the report made five years ago:

"During the first year of the University the Physiological Laboratory was located in an apartment house on Lexington avenue and Fifty-fifth street. Later on, it occupied one, and ultimately two, rooms in the Ryerson Physical Laboratory. On July 1, 1897, it moved into its permanent quarters.

"The Laboratory has tried to develop those lines of research work from which the best results may be expected in the next years. We have made it a special task systematically to substitute Comparative Physiology for the prevailing Vertebrate Physiology. Thus far the Laboratory has given its time chiefly to the building up of the Comparative Physiology of the Central Nervous System. The result of this work has recently been put together in book form.

"A second line of work pursued in the Laboratory has been Physiological Morphology. Among the contributions of the Laboratory to this new branch of Physiology the following may be mentioned: (1) the observation that lack of oxygen and certain poisons liquefy solid cell elements, for instance, the membrane; this accounts for sudden death under these conditions; (2) experiments determining the cause of the hereditary marking in embryos; (3) experiments on the artificial production of twins; (4) experiments on the influence of light on the production of certain organs in animals; (5) experiments on the rôle of water in growth; (6) experiments on the segmentation of the nucleus without the segmentation of protoplasm; (7) further experiments on heteromorphosis and the transformation of tissues, etc.

"In the field of animal irritability the latest addition has been the discovery of animal tropisms. The work done in the Hull Laboratory includes experiments on the artificial transformation of positively heliotropic animals into negatively heliotropic animals, and *vice versa*, and a series of publications on galvanotropism. The latter work resulted in a new theory of galvanotropic effects and the observation that in the central nervous system of many forms there exists a simple relation between the orientation of elements and the direction of movement produced by their activity.

"The experiments on galvanotropism lead to the mention of that new development in Physiology which will be of great importance in years to come; namely, the application of Physical Chemistry. In the experiments on galvanotropism the Laboratory tried to prove that the physiological effects of a galvanic current are in reality due to chemical effects of the ions set free at the limit of two electrolytes. In connection with this, it was possible to show that the apparent physiological effects of electric waves are not due to the oscillatory character of the discharge, but to the rapid disappearance of the potential. The fact that the electric current acts as a universal stimulus led to the idea that ions may be of specific importance for phenomena of contractility as well as for sensations. With this in view, a series of investigations on specific ion effects was undertaken."

Since the publication of the previous statement, the main new departures in our work have occurred in the following direction:

First, work on artificial parthenogenesis has been successfully undertaken. In every form of echinoderms and annelids on which such experiments have been tried we were able to pro-

duce living larvæ from the unfertilized egg, by chemical or physical means. Thus it has been possible to deprive one of the most mysterious of the vital phenomena of its mysticism.

A second field which the Laboratory has opened in that time is the field of anti-toxic effects of ions. It has been shown that any solution of one electrolyte alone, at a certain concentration, is poisonous, but this solution can be rendered harmless through the addition of only a trace of another electrolyte with a bivalent kation.

A third line of work which has been taken up is that of the reversibility of the phenomena of development. It has generally been assumed that the phenomena of development occur only in one direction, inasmuch as an animal develops from a simple stage to a more complicated stage. It was possible to show that in some animals this process can be reversed by physical agencies, and that it is possible to cause certain adult animals, by physical agencies, to return to an undifferentiated embryonic stage, and afterwards to produce at will from this undifferentiated material any desired organ of this form. This, incidentally, may explain the phenomena of regeneration, inasmuch as it is possible that, in cases of regeneration, through the wound that causes regeneration, the injured cells are caused to return to an embryonic condition.

Respectfully submitted,

JACQUES LOEB.

## THE BACTERIOLOGICAL LABORATORY

*To the President of the University:*

SIR: I submit herewith a sketch of the history of the work in Bacteriology from 1895 to June 30, 1902.

Work in Bacteriology at the University was begun in October, 1895. From that date until July, 1897, the work was carried on in Kent Chemical Laboratory in a basement room placed at the disposal of the Department through the courtesy of Professor Nef. The conditions for work were disadvantageous and the equipment was not extensive, so that little else was attempted than the elementary instruction of a limited number of students. The erection of the Hull Biological Laboratories, through the munificence of Miss Helen Culver, made it possible to transfer the work in the summer of 1897 to more suitable and commodious quarters. The Bacteriological Laboratory was first installed in four rooms on the fourth floor of the Hull Zoölogical Laboratory, and, owing to the increase in the number of students, several additional rooms on the same floor were afterwards assigned to the work. In 1901 the inauguration of the first two years' work in Medicine made the acquisition of further space necessary, and one laboratory on the third floor and one on the second floor were generously tendered for the emergency by the Department of Zoölogy. These laboratories were fully equipped in the summer of 1901, and have since been used for the work in Bacteriology and Embryology. The limited space available makes necessary the repetition of courses, and in other ways cramps the work materially. It is hoped that this serious difficulty will be removed by the construction of new buildings for the medical work.

In the spring of 1899 the Laboratory undertook a comprehensive investigation of the Illinois River and its tributaries in behalf of the Chicago Sanitary District. The results of this work are now in press and will soon be published.

The full list of the publications from the Laboratory appears in another Volume of this Report.

The following persons have held Fellowships in Bacteriology:

1897-1900—H. E. Davies; Interne, St. Luke's Hospital, Chicago.

1900-1901—E. E. Irons; Assistant in Bacteriology, University of Chicago.

1901-1902—Mary Hefferan; Curator of the Bacteriological Museum, University of Chicago.

Respectfully submitted,

EDWIN O. JORDAN.

## THE KENT CHEMICAL LABORATORY

*To the President of the University:*

SIR: I submit herewith a sketch of the history of the Department of Chemistry from 1892 to June 30, 1902.

### THE LABORATORY

During the period October 14, 1892, to January 1, 1894, the Department of Chemistry was established in temporary quarters on the southwest corner of Fifty-fifth street and Lexington avenue. The laboratories, lecture- and store-rooms were distributed in three large rooms on the first floor, and the library was in a room on the fourth floor. On January 1, 1894, the Department moved into its present quarters, the Kent Chemical Laboratory. At the opening of the Laboratory on January 1, the donor, the late Mr. Sidney Kent, formally presented the Laboratory to the University, and expressed the hope "that the standard of education will be such as to command the respect, not only of this country, but of the civilized world." In accepting the gift from Mr. Kent on behalf of the University, the President of the University explained how the donation of the Laboratory had formed an important turning-point in the early development of the University by being the first response to the appeal for the support of the citizens of Chicago for the new undertaking of establishing a university of high standards in their very midst. Mr. Kent, as the President pointed out, had also set the highest standard for all future laboratories of the University—a statement the force of which is most appreciated now, eight years after it was made. An address by Professor Nef on "Important Factors in the Development of a Research Laboratory"—a strong plea for the fostering of the spirit of pure scientific research in this country—and a meeting of fifty-eight teachers of chemistry, representing forty-one institutions, closed the dedicatory exercises of the first day. On January 2, the formal address in connection with the opening of the Kent Chemical Laboratory was delivered at the Winter Convocation by Dr. Ira Remsen, Professor of Chemistry in, and now President of, Johns Hopkins University; the address on "The Chemical Laboratory" discussed most ably the questions how chemical laboratories came to be established in universities, what an important part they have played in the advancing of knowledge, and what the possibilities of the chemical laboratory of a university in this country would be. The building cost \$215,000, the original equipment \$20,000; the present equipment in chemicals and apparatus is valued at \$30,000.

In the course of nine years the work of the Department has developed until now all the laboratory space has been occupied. The following is, in the main, the present distribution of laboratory space: two large laboratories for General Chemistry, for 190 students; one large laboratory for Qualitative Analysis and General Organic Chemistry, for 110 students; one large laboratory for Quantitative Analysis, for 30 to 40 students; one large laboratory for Research Work, for 11 to 22 students; seven smaller laboratories for Preparation Work, Physical Chemistry, Furnace Work, Gas Analysis, Spectrum Analysis, Combustions, etc.; five private laboratories for the staff; two balance-rooms, two store-rooms, and a number of storage rooms; a large library room.

Some of the laboratories, notably those for General Chemistry, Quantitative Analysis, and Preparation Work, have already occasionally been crowded to the limit. As the Department is growing (see Tables I and II), provision must be made in the near future for more space and facilities, either by means of a second laboratory, or by moving the undergraduate work into a separate building.

The Chemical Library, which at the opening of the University in 1892 contained 900 volumes, had a total of 1,891 volumes on April 1, 1902.

## THE STAFF

The staff of instructors originally included one Professor (the Head of the Department), two Assistant Professors, a Research Assistant, and two Docents. It now comprises one Professor (the Head of the Department), two Associate Professors, three Instructors (one acting as a Research Assistant), a Laboratory Inspector of the rank of Instructor, and four Assistants. Provision is also made for a considerable number of student assistants. The following have been or are members of the staff of the Department: the names are arranged according to rank during the tenure of office, and the present rank or occupation is given.

- John Ulric Nef, Ph.D. (University of Munich), Professor of Chemistry, and Head of the Department, 1892-.
- Henry Newland Stokes, Ph.D. (Johns Hopkins University), Assistant Professor of General Chemistry, 1892-93; resigned in 1893; chemist of the United States Geological Survey, Washington, D. C.
- Edward F. Schneider, Ph.D. (University of Freiburg i. B.), Assistant Professor of Inorganic Chemistry, 1892-94.
- Alexander Smith, Ph.B. (University of Munich), Associate Professor of General Chemistry, 1894-.
- Felix Lengfeld, Ph.D. (Johns Hopkins University), Assistant Professor of Inorganic Chemistry, 1892-1901; resigned in 1901; chemist, San Francisco, Calif.
- Julius Stieglitz, Ph.D. (University of Berlin), Associate Professor of Chemistry, 1892-.
- Massuo Ikuta, Ph.D. (University of Erlangen), Instructor in Chemistry, 1892-99; resigned in 1899; chemist, Tokio, Japan.
- John C. Hessler, Ph.D. (University of Chicago), Instructor in Chemistry, 1899-.
- Herbert N. McCoy, Ph.D. (University of Chicago), Instructor in Chemistry, 1901-.
- Lauder W. Jones, Ph.D. (University of Chicago), Instructor in Chemistry, 1897-.
- James A. Lyman, Ph.D. (Johns Hopkins University), Docent, 1892-93; Instructor in Chemistry, Portland Academy, Portland, Ore.
- Richard S. Curtiss, Ph.D. (University of Würzburg), Docent, 1893-97; Professor of Chemistry, Union College, Schenectady, N. Y.
- Adolph Bernhard, Ph.D. (University of Chicago), Laboratory Assistant, 1894-97; Research Assistant, 1899-1900; Stone Creek, Ohio.
- Bernard C. Hesse, Ph.D. (University of Chicago), Lecture Assistant, 1896-97; expert chemical adviser Badische Anilin- und Soda-Fabrik, New York.
- James B. Garner, Ph.D. (University of Chicago), Lecture Assistant, 1896-98; Professor of Chemistry, Wabash College, Crawfordsville, Ind.
- James H. Ransom, Ph.D. (University of Chicago), Lecture Assistant, 1896-1900; Associate Professor of Chemistry, Purdue University, La Fayette, Ind.
- Henry C. Biddle, Ph.D. (University of Chicago), Lecture Assistant, 1900-1901; Instructor in Chemistry, University of California, Berkeley, Calif.
- Willis B. Holmes, Ph.D. (Harvard University), Research Assistant, 1900-.
- Ira H. Derby, M.S. (Harvard University), Research Assistant, 1901-1902; Assistant in Analytical Chemistry, 1902-.
- Roy H. Brownlee, A.B. (Monmouth College), Lecture Assistant, 1901-.
- Richard B. Earle, Sc.D. (Harvard University), Research Assistant, 1902-.

## THE INSTRUCTION

## GROWTH OF THE DEPARTMENT

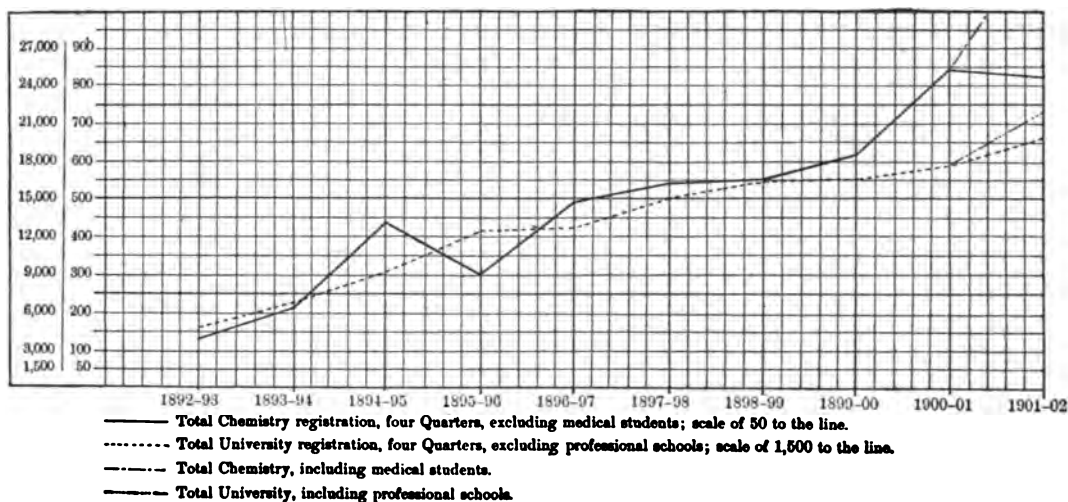
The growth of the Department is shown by the following table which gives (1) the total registration in Chemistry for each year (for the four Quarters); (2) the total registration in the Colleges and Graduate Schools of the University for the same periods, and (3) the percentage of the whole formed by the Chemistry registration.

TABLE I

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-1902	
Chemistry .....	134 <sup>1</sup>	218 <sup>1</sup>	438	303	487	540	548	615	844	827 <sup>2</sup>	1,278 <sup>4</sup>
The University .....	4,679 <sup>1</sup>	6,404 <sup>1</sup>	9,315	12,374	12,617	15,014	16,411	16,482	17,780	19,695 <sup>3</sup>	21,739 <sup>5</sup>
Per cent. in Chemistry	2.9	3.4	4.7	2.4	3.9	3.6	3.3	3.8	4.7	4.2	5.9

The following diagram shows graphically the data given in the table:

DIAGRAM I



The following table and diagram show the total and the relative growth of Chemistry for the ordinary school year by giving (1) the total registration in Chemistry for each year, exclusive of Summer Quarters; (2) the total registration in the Colleges and Graduate Schools of the University for the same periods; and (3) the percentage of the whole in Chemistry:

TABLE II

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-1902	
Chemistry .....	134	218	359	230	369	425	371	417	569	527 <sup>6</sup>	978 <sup>4</sup>
The University .....	4,679	6,404	7,740	9,812	9,830	11,006	12,111	11,631	12,752	13,472 <sup>7</sup>	15,516 <sup>9</sup>
Per cent. in Chemistry	2.9	3.4	4.7	2.3	3.7	3.9	3.1	3.6	4.5	3.9	6.3

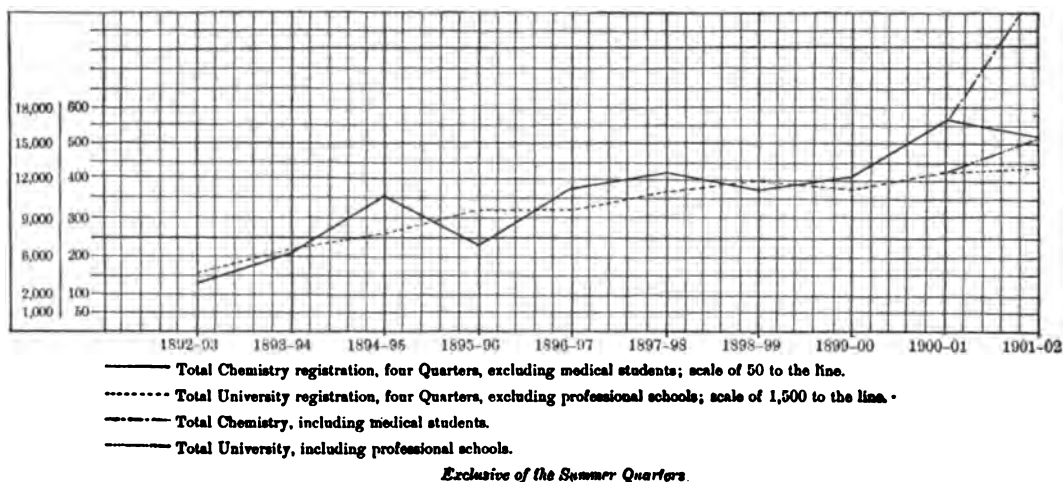
<sup>1</sup> No Summer Quarter sessions were held.  
<sup>2</sup> Exclusive of Medical students.  
<sup>3</sup> Exclusive of Medical, Divinity, and Education students.  
<sup>4</sup> Including Medical students.  
<sup>5</sup> Including the professional schools.

<sup>6</sup> Exclusive of Medical students, eighty-six college registrations for two half-Major courses in General Organic Chemistry were counted as only forty-three registrations (Majors) in Chemistry.  
<sup>7</sup> Including Medical students.  
<sup>8</sup> Exclusive of the professional schools.  
<sup>9</sup> Including the professional schools.



The following diagram shows graphically the results given in the table:

DIAGRAM II



Comparing the average percentage of registrations in Chemistry for the first five years (3.4) with the average percentage (exclusive of registrations of Medical students in 1901-1902) for the last five years (3.8), it is obvious that the Department has grown on the average at a one-tenth faster rate than the University as a whole, great as the latter's growth has been.

## CLASSES OF STUDENTS

The following table shows what classes of students have been taking the work in Chemistry and gives the number of registrations for each year, exclusive of the Summer Quarters, (1) by Graduate students, (2) by Senior College students, (3) by Junior College students, and (4) by Unclassified students:

TABLE III

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Graduate Students .....	118	130	168	102	196	217	177	184	229	231
Senior College .....	8	14	40	33	60	77	66	72	101	154
Junior College .....	8	42	102	67	81	104	95	111	182	187
Unclassified .....	...	30	49	28	32	27	33	50	57	48

The most noteworthy result shown by the table, besides the very large increase in the numbers of College students, is that Graduate students have so far formed the most numerous single body of students in the Department and have even outnumbered the combined registrations of College students until 1900-1901. It is thought that the very large number of Graduate students will continue to exert their excellent influence on the tone of the work in the Department. At the same time, it is considered a most desirable development that the Department should reach as many students at as early an age as possible, and thus have larger opportunities for the selection and development of those showing the greatest ability in its own particular work. These two tendencies, which it is desired to foster, without allowing them to become extreme,

may co-exist readily, as there are numbers of graduates taking the undergraduate courses and, in recent years, appreciable numbers of our undergraduates who have specialized sufficiently in Chemistry to be admitted to graduate courses. The following table for three recent years, chosen at random, shows that neither tendency is likely to become extreme. It gives (1) the number and percentage of graduates in undergraduate courses, and (2) the number and percentage of undergraduates in graduate courses in 1897-98, 1899-1900, and 1900-1901:

TABLE IV

	1897-1898		1899-1900		1900-1901	
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.
Graduates in undergraduate courses .....	58	23	32	14	48	13.5
Undergraduates in graduate courses .....	12	7.5	25	15	24	12

The following statement, for two years chosen at random, shows that the Department has relatively a much larger proportion of Graduate student registrations than the University at large, and relatively a smaller proportion of Junior College students. The table gives percentages of registrations of the various classes for the whole University and for the Department of Chemistry for 1897-98 and 1901-2 for the Autumn, Winter, and Spring Quarters:

TABLE V

	1897-1898				1901-1902			
	Grad.	Sen.	Jun.	Unclass.	Grad.	Sen.	Jun.	Unclass.
The University .....	27	21.3	39.1	12.6	22.6	23	46.7	7.5
Chemistry.....	51.1	18.1	24.5	6.3	37.3	24.8	30.1	7.5

These proportions are largely due to the fact that Chemistry is required of only a small percentage (10 to 12) of the students in the Junior College.

## THE MAIN BRANCHES OF CHEMICAL INSTRUCTION

The following table represents the total and the relative growth of the main branches of chemical instruction given at the University; the total registrations are given for the Autumn, Winter, and Spring Quarters in General Inorganic Chemistry, Analytical Chemistry, Organic Chemistry (General and Special), and "Other Courses," which include, particularly, Physical Chemistry, Advanced Inorganic Chemistry, and all the courses in Research:

TABLE VI

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02 <sup>10 11</sup>	
General Chemistry.....	28	69	120	85	118	167	127	148	249	175 <sup>10</sup>	319 <sup>11</sup>
Analytical Chemistry .....	30	55	83	58	111	104	102	128	143	208	208
Organic Chemistry.....	38	62	67	58	73	74	71	81	97	119 <sup>12</sup>	163 <sup>12 13</sup>
Physical Chemistry and other courses.....	38	30	74	38	67	83	69	63	78	56	56

<sup>10</sup> Exclusive of required medical work.<sup>11</sup> Including medical students.<sup>12</sup> Two registrations of College students for two half-

Major courses in General Organic Chemistry forming one course counted as one.

<sup>13</sup> There were also one hundred and forty-five registrations in Toxicology not included in the above total.

## THE UNDERGRADUATE WORK AND THE UNDERGRADUATE STUDENTS

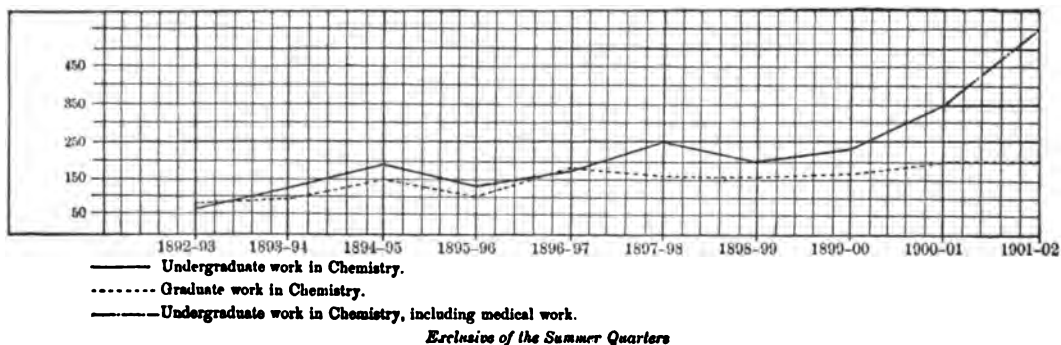
Data concerning the total registration of Undergraduate students and also concerning their attendance in graduate classes have been given above in Tables III-V. The courses intended primarily for Junior and Senior College students are taken largely also by Graduate students. The following table represents, therefore, the amount of undergraduate work done by the Department; it includes the registrations for each year, excepting the summer Quarters, (1) in General Inorganic and General Organic Chemistry (Junior College courses), and (2) in the undergraduate courses in Analytical Chemistry (Senior College courses):

TABLE VII

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	
General Inorg. Chemistry ..	28	69	120	85	118	167	127	148	249	175 <sup>14</sup>	319 <sup>15</sup>
General Organic Chemistry	...	...	...	...	...	...	...	...	...	43 <sup>14</sup>	87 <sup>14</sup>
Undergrad. Anal. Chemistry	ir.	55	70	50	59	86	68	83	107	140	140
Total .....	58	124	190	135	177	253	195	231	356	358 <sup>14</sup>	546 <sup>15</sup>

Diagram III illustrates the rapid growth of this class of work and shows what a tax its pressure must make on the resources of the Department, especially in the way of instruction.

DIAGRAM III



The following students received Senior College Scholarships for excellence in work in Chemistry in the Junior Colleges; their present occupation, as far as known, is given:

- 1895—Joseph Friedman, physician.
- 1896—Robert Elliot Graves, physician.
- 1897—Max Darwin Slimmer, Ph.D. in Chemistry, University of Berlin, 1902.
- 1898—Roberta I. Brotherton, teacher of science.
- 1899—John P. Ritchie, student of medicine.
- 1900—William Luther Goble, teacher of science.
- 1901—Oscar O. Hamilton, teacher of science.
- 1902—George Edmeston Fahr, Senior College student.

The following students received Graduate Scholarships for excellence of work in Chemistry in the Senior Colleges:

- 1897—Hyman E. Goldberg, inventor.
- 1899—Mary Bockes Pardee, teacher of science.

<sup>14</sup>Excluding medical work.<sup>15</sup>Including medical work.<sup>16</sup>See note (12), p. 457.

1900—Howard P. Kirtley, graduate student.  
 1901—Kellogg Speed, medical student.  
 1902—Oscar O. Hamilton, teacher of science.

The following students graduated with Honors in Chemistry:

1897—Maurice J. Rubel, physician.  
 1899—William Hayden Jackson, business man.  
 1899—Mary Bockes Pardee, teacher of science.  
 1899—Hugh J. Polkey, physician.  
 1901—Kellogg Speed, medical student.  
 1902—Grace Bartlett Lincoln, teacher of science.  
 1902—Oscar O. Hamilton, teacher of science.

#### THE GRADUATE WORK AND THE GRADUATE STUDENTS

The Department of Chemistry has always been able to attract large numbers of Graduate students, and as seen from Table III, which gives the registrations for the Autumn, Winter, and Spring Quarters, they have always formed, not only the most important, but also the most numerous single class of the student body in the Department. As seen from Table V, they also form a much larger proportion of the whole constituency of the Department than of the University as a whole. While this arises, as explained before, partly from the fact that Chemistry is a required study for an inconsiderable proportion only of the largest class of students on the campus, the Junior College students, and the amount of elective work of these students is very small, the hold of the Department on Graduate students is shown directly by the growth in the numbers of registrations of such students; the number in 1901-2 (231) is twice as large as in 1892-93 (118), when Graduate students formed 90 per cent. of the enrolment in the Department, and the average number for the last five years (208) is about 40 per cent. larger than the average number in the first five years (143). The Department, as will be explained below, also reaches a very considerable number of Graduate students in the Summer Quarters, when practically the same courses as in any other Quarter are given. The total annual graduate registrations, including those of the Summer Quarters, are as follows:

TABLE VIII

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Graduate registrations . . . . .	118 <sup>17</sup>	130 <sup>17</sup>	207	158	277	289	293	316	388	410

The amount of graduate work done (in graduate courses), exclusive of that of the Summer Quarters, is shown in the following table of total registrations in graduate courses:

TABLE IX

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Graduate course registrations . . . . .	76	92	151	104	184	161	158	167	197	189

Diagram III (p. 458), illustrates these results and shows the relation of the graduate work to the undergraduate work in the Department; whereas during the first five years the graduate

<sup>17</sup> No summer session was held.

work formed but little less than half of the total, now, in spite of the very great increase in undergraduate work, owing to its own growth, it still forms 36 per cent. of the total work.

The danger of injury to the graduate work by the rapid increase in undergraduate work must be always borne in mind. It lies chiefly in the danger of instructors' time and strength being diverted from graduate work by the growing and constant pressure of undergraduate instruction. It can really be averted only by keeping the increase in staff somewhat in advance of the increase in undergraduates; but the college administrations are, perhaps naturally, rather reluctant to follow such a policy. How grave the danger is in our Department of Chemistry is well shown by the rapidly diverging curves in the last diagram.

But the graduate instruction must not only be preserved intact; it must be made to expand and there is special need at present for such expansion by providing larger facilities for instruction and work in Physical Chemistry. Most of the members of the Department have been particularly interested in this important and most modern branch of Chemistry, and have been among the earliest instructors in the country to use its results and methods in their research and class-room work. The elements of Physical Chemistry have always formed a large part of the instruction in General Chemistry and in Analytical Chemistry, and they have been a very important factor in making these courses both efficient and attractive for the student mind. Graduate courses comprising four half-Majors, including laboratory work, have been given annually since 1893 and have always been largely attended, and five or six of the investigations of the Department have been along the lines of strictly physical-chemical work. But there is urgent need and demand for greater opportunities for advanced and research work in this subject. The increasing pressure of the other fundamental courses on the instructors' time and the exceptional importance of the subject require that the undivided attention of a specialist be now given to Physical Chemistry in our Department. It is hoped that our graduate work will be encouraged to make a rapid advance in this branch in the immediate future.

Special attention will be given below to the research work of the Department and the men that have been engaged in it.

The following students have taken the Master's degree in Chemistry at the University:

- 1897—Harriet Stone, S.B., University of Chicago. Thesis: "The Constitution and Synthesis of Uric Acid." Master of Science. Instructor in Chemistry and Physics, Forest Park University, St. Louis, Mo.
- 1899—Warren C. Hawthorne, A.B., University of North Dakota. Thesis: "Hydrogen Peroxide, Ozone, and Processes of Oxidation." Master of Science. Instructor in Chemistry and Physics, Young Men's Christian Association, Chicago, Ill.

The following list gives the names, the academic record, and the present occupations of the Fellows in Chemistry:

- 1892-93—John L. Bridge, B.S., Wesleyan University, 1888; Ph.D., Clark University, 1893. Teacher of Science, High School, Waterbury, Conn.
- 1892-94—Warren Rufus Smith, A.B., Bowdoin College, 1890; Ph.D., University of Chicago, 1894. Instructor in Science, New Bedford High School; Assistant Professor of Chemistry, Lewis Institute, Chicago, Ill.
- 1893-94—Adolph Bernhard, A.B., Johns Hopkins University, 1889; Ph.D., University of Chicago, 1894. Assistant, *ibid.*, 1894-97 and 1899-1900; Instructor in Chemistry, University of Texas, 1897-98.
- 1893-96—Bernard C. Hesse, S.B., University of Michigan, 1892; Ph.D., University of Chicago, 1896. Assistant, *ibid.*, 1896-97; Expert Chemical Adviser, Badische Anilin- und Soda-Fabrik, New York.
- 1893-95—Samuel E. Swartz, A.B., Denison University, 1879; Ph.D., University of Chicago, 1896. Professor of Chemistry, Shurtleff College, Upper Alton, Ill.; Principal, Broadus Classical and Scientific Institute, Clarksburg, W. Va.

- 1893-94—Robert W. Wood (Honorary Fellow), A.B., Harvard University, 1891. Instructor and Assistant Professor of Physics, University of Wisconsin; Professor of Experimental Physics, Johns Hopkins University, Baltimore, Md.
- 1894-96—Frank Burnett Dains, Ph.B., Wesleyan University, 1890; Ph.D., University of Chicago, 1896. Assistant Professor of Chemistry, Northwestern Medical School, Chicago, Ill.; Professor of Chemistry, Washburne College, Topeka, Kan.
- 1894-97—Nellie E. Goldthwaite (Lamson Fellow),<sup>18</sup> B.S., University of Michigan, 1894. Professor of Chemistry, Mount Holyoke College, South Hadley, Mass.
- 1895-96—James Bert Garner, S.B., Wabash College, 1893; Ph.D., University of Chicago, 1897. Assistant, *ibid.*, 1896-97; Assistant Professor of Chemistry, Bradley Polytechnic Institute, Peoria, Ill., Professor of Chemistry, Wabash College, Crawfordsville, Ind.
- 1895-97—Lauder W. Jones. A.B., Williams College, 1892; Ph.D., University of Chicago, 1897. Assistant, Associate, and Instructor in Chemistry, *ibid.*, 1897-.
- 1896-98—Herbert Newby McCoy, S.B., Purdue University, 1892; Ph.D., University of Chicago, 1898. Research Assistant, *ibid.*, 1898-99; Associate Professor of Chemistry, University of Utah, 1899-1901; Instructor in Chemistry, University of Chicago, 1901-.
- 1896-98—Fred Neher, A.B., Princeton University, 1889. Assistant Professor of Chemistry, Princeton University, Princeton, N. J.
- 1896-97—James F. Sellers, A.B., University of Mississippi, 1885. Professor of Chemistry, Mercer University, Macon, Ga.
- 1897-1900—Henry Chalmers Biddle, A.B., Monmouth College, 189-; Ph.D., University of Chicago, 1900. Lecture Assistant, *ibid.*, 1900-1901; Instructor in Chemistry, University of California, Berkeley, Calif.
- 1898-1900—Hyman E. Goldberg, S.B., University of Chicago, 1896. Instructor, Chicago.
- 1898-1900—William McCracken, S.B., University of Michigan, 1886. Professor of Chemistry and Physics, Normal School of Northern Michigan, Marquette, Mich.
- 1898-1901—Solomon Farlee Acree, S.B., University of Texas, 1896; Ph.D., University of Chicago, 1902. Assistant Professor of Chemistry, University of Utah, Salt Lake City, Utah.
- 1898-1900—Max Darwin Slimmer, S.B., University of Chicago, 1897; Ph.D., University of Berlin, 1902.
- 1899-1900—Eugene P. Schoch, C.E., University of Texas, 1894; Ph.D., University of Chicago, 1902. Instructor in Chemistry, University of Texas, Austin, Tex.
- 1900-1902—William McAfee Bruce, A.B., Central College, 1896. Fellow, University of Chicago.
- 1900-1902—Francis W. Bushong, A.B., Franklin and Marshall College, 1885. Professor of Chemistry, Kansas City University, Kansas City, Mo.
- 1900-1901—John Wilkes Shepherd, A.B., University of Indiana, 1896. Assistant, University of Chicago; Professor of Science, Chicago Normal School, Chicago, Ill.
- 1901-2—Wallace Appleton Beatty (Loewenthal Fellow<sup>19</sup>), A.B., Kentucky University, 1896; Ph.D., University of Chicago, 1902; Loewenthal Fellow, 1902-3, *ibid.*
- 1901-2—Roy H. Brownlee, A.B., Monmouth College, 1898. Lecture Assistant, University of Chicago.
- 1901-2—Alfred O. Shaklee, S.B., University of Chicago, 1899. Teacher of Physical Science. High School, Jackson, Miss.

## RESEARCH WORK

From the very opening of the University in 1892 research work in the Department has been carried on with enthusiasm on the part of all of the instructors and the candidates for the Doctorate degree, stimulated always by the untiring exertions and encouragement of the Head of the Department. An excellent equipment and certain liberal University conditions have favored its development; it is, probably, still a unique feature in this country, although by no means so abroad, that it should be thought wise and highly desirable to place the full time and strength of an instructor of advanced rank and salary in the capacity of research assistant

<sup>18</sup>The Lamson Fellowship in Chemistry was endowed for three years by Mr. L. J. Lamson, and yielded \$520 per year.

<sup>19</sup>The Loewenthal Fellowship was endowed in 1901 by Mr. Berthold Loewenthal as a memorial to his son, Joseph B. Loewenthal. It yields an annual income of \$420.

exclusively at the service of a professor of Chemistry, in order to advance his investigations in the field of pure science. The University has, furthermore, wisely guarded the interests of chemical research by not exposing the Head of the Department to the great pressure of providing for the needs of the rapidly growing undergraduate classes. While the burden of this work necessarily seriously handicapped the other instructors in the Department during the last years of greatest growth, until some adjustment to the increasing needs could be secured, the Department has always afforded all its staff at least some opportunities for research work. Candidates for degrees, Fellows and others, have been encouraged by the Head of the Department to undertake their research work for the Doctorate dissertations under any instructor, partly in order to broaden the fields of research in the laboratory, partly as an aid to the work of the whole staff. Full freedom of choice has always been exercised.

As to the quantity of research work done in the Department, reference is made to the long bibliography of papers published by its members during 1892-1902. How successful the policy above described has been in the cause of chemical research, as judged by quality of work, must be decided by outsiders—the Department is satisfied to leave its case in their hands. It believes, more especially, that their verdict must be that Organic Chemistry will always, as now, feel the profound and, in certain respects revolutionizing, influence of the exhaustive studies of the Head of the Department.

Every facility has been afforded for independent research work on the part of Doctors of Philosophy of other institutions. We have been glad to welcome the following colleagues for such work among us:

- James A. Lyman, Ph.D., Johns Hopkins University. Docent, University of Chicago, 1892-93; Instructor of Chemistry, Portland Academy, Portland, Ore.
- Henry L. Wheeler, Ph.D., Assistant Professor of Chemistry, Yale University, 1893-94. Hew Haven, Conn.
- Richard S. Curtiss, Ph.D., University of Würzburg. Docent, University of Chicago, 1893-97; Professor of Chemistry, Hobart College, Geneva, N. Y.; Professor of Chemistry, Union College, Schenectady, N. Y.
- William E. Henderson, Ph.D., Johns Hopkins University. Summer Quarter, 1898. Associate Professor of Chemistry, University of Ohio, Columbus, O.
- Howard H. Higbee, Ph.D., Johns Hopkins University. Summer Quarter, 1898. Professor of Chemistry, Hamilton College, N. Y.
- Emmet E. Reid, Ph.D., Johns Hopkins University. Summer Quarter, 1900. Professor of Chemistry, Baylor University, Waco, Tex.
- H. G. Byers, Ph.D., Johns Hopkins University. Summer Quarters, 1900 and 1902. Professor of Chemistry, University of Washington.
- Anthony M. Muckenfuss, Ph.D., Johns Hopkins University. Professor of Chemistry, University of Arkansas.
- Walther G. Dilthey, Ph.D., University of Erlangen. Autumn, Winter, and Spring Quarters, 1900-1901. Privat-Docent, University of Zürich.

The degree of Doctor of Philosophy in Chemistry has been conferred by the University on the following persons in the period between October 1, 1892, and July 1, 1902:

- 1894—Warren Rufus Smith, A.B., Bowdoin College. Thesis: "On the Addition Products of the Isocyanides." Professor of Chemistry, Lewis Institute, Chicago.
- 1894—Adolph Bernhard, A.B., Johns Hopkins University. Thesis: "Ueber die Einführung von Acylen in den Benzoylessigaether." Stone Creek, O.
- 1896—Bernard C. Hesse, S.B., University of Michigan. Thesis: "On Malonic Nitrile and Some of its Derivatives." Expert Chemical Adviser, Badische Anilin- und Soda-Fabrik, New York.
- 1896—Samuel Ellis Swartz, A.B., Denison University. Thesis: "The Action of Sodium Ethylate on Bromamides."

- 1897—James B. Garner, S.B., Wabash College. Thesis: "Condensations with Benzoin by Means of Sodium Ethylate." Professor of Chemistry, Wabash College, Crawfordsville, Ind.
- 1897—Lauder W. Jones, A.B., Williams College. Thesis: "On Salts of Nitroparaffines and Acylated Derivatives of Hydroxylamine." Instructor in Chemistry, University of Chicago.
- 1898—Frank Burnett Dains, Ph.B., Wesleyan University. Thesis: "On the Isourea Ethers and Other Derivatives of the Ureas." Professor of Chemistry, Washburne College, Topeka, Kan.
- 1898—Otto Knute Folin, S.B., University of Minnesota. Thesis: "On Urethanes." Chemist and Physiologist, McLean Hospital, Waverly, Mass.
- 1898—Elizabeth Jeffreys, Ph.B., Oberlin College. Thesis: "On the Preparation of the Higher Aliphatic Amines: Undecyl and Pentadecyl Amine." Teacher of Science, Clyde High School, Clyde, Ill.
- 1898—Herbert N. McCoy, S.B., Purdue University. Thesis: "On the Hydrochlorides of Carbo-Phenylimido Derivatives." Associate Professor of Chemistry, University of Utah; Instructor in Chemistry, University of Chicago.
- 1899—John C. Hessler, A.B., University of Chicago. Thesis: "On Alkyl Malonic Nitriles and Their Derivatives." Instructor in Chemistry, University of Chicago.
- 1899—William McPherson, A.B., Ohio State University. Thesis: "On the Nature of the Oxy-azo Compounds." Professor of Chemistry, Ohio State University, Columbus, O.
- 1899—James H. Ransom, S.B., Wabash College. Thesis: "On the Molecular Rearrangement of o-Aminophenylethyl Carbonate to o-Oxyphenyl Urethane." Associate Professor in Chemistry, Purdue University.
- 1900—Henry C. Biddle, A.B., Monmouth College. Thesis: "Ueber Derivate des Isuretins der Formhydroxamsäure und ihre Beziehungen zur Knallsäure." Instructor in Chemistry, University of California, Berkeley, Calif.
- 1901—Ralph Harper McKee, A.B., University of Wooster. Thesis: "On the Oxygen Ethers of the Ureas: Methyl- and Ethylisourea." Associate Professor of Chemistry, Lake Forest University, Lake Forest, Ill.
- 1902—Wallace Appleton Beatty, A.B., Kentucky University. Thesis: "The Action of Sodium Alcohulates on Salts of the Fatty Acids."

The research work of the following additional candidates for the Doctorate degree was satisfactorily completed before July 1, 1902:

- John L. Bridge,<sup>20</sup> B.S., Wesleyan University. Thesis: "On the Ethers of Quinone-Oxines (Nitroso-Phenoles)."
- Nellie E. Goldthwaite, B.S., University of Michigan. Thesis: "On Benzhydrol Derivatives." Professor of Chemistry, Mount Holyoke College, South Hadley, Mass.
- Maxwell Adams, A.B., Leland Stanford Junior University. Thesis: "On Derivatives of Hydroxylamine." Professor of Chemistry, Normal School, Chico, Calif.
- Solomon F. Acree,<sup>21</sup> S.B., University of Texas. Thesis: "On Sodium Phenyl and the Action of Sodium on Ketones." Assistant Professor of Chemistry, University of Utah, Salt Lake City, Utah.
- Eugene P. Schoch,<sup>21</sup> C.E., University of Texas. Thesis: "On the Red and the Yellow Oxides of Mercury and the Mercuric Oxychlorides." Instructor in Chemistry, University of Texas, Austin, Tex.
- Edward E. Slosson,<sup>21</sup> S.B., University of Kansas. Thesis: "On Acyl Alkyl (Alphyl) Halogen Amines and the Beckmann Rearrangement." Professor of Chemistry, University of Wyoming, Laramie, Wyo.

Two of the above number, Dr. McPherson and Dr. Slosson, carried out their research work in Summer Quarters only. Of the above number (twenty-two) eleven worked under the direction, and in the field of work, of Professor Nef, one in the same way with Associate

<sup>20</sup>The work was done 1891-93 under the direction of Professor Nef, partly at Clark University and partly at this University. Mr. Bridge received the degree of Doctor of Philosophy from Clark University in 1893 on the basis of this work.

<sup>21</sup>These candidates received the Doctor's degree from the University at the end of the Summer Quarter, 1902.



Professor Smith, three with Assistant Professor Lengfeld, and seven with Associate Professor Stieglitz.

In the course of the ten years, 1892-1902, eleven candidates discontinued their work without completing it. In one case, that of Mr. Lawrence S. Williams, Instructor in Chemistry at Armour Institute, Chicago, death put an end to a career that was full of promise. In the following nine cases election to a chair of Chemistry, or some other promising opening in the profession, induced the candidate to give up or postpone the completion of his work: F. E. Goodell, Professor of Chemistry, Des Moines College, Des Moines, Ia.; Fred Neher, Professor of Chemistry, Princeton University; William McCracken, Chair of Chemistry and Physics, Normal School of Northern Michigan, Marquette, Mich.; Hyman E. Goldberg, Inventor, Chicago; William Dehn, Instructor in Chemistry, University of Illinois; Oscar R. Flynn, Teacher of Science, Hyde Park High School, Chicago; John W. Shepherd, Chair of Science, Chicago Normal School, Chicago; Alfred O. Shaklee, Teacher of Science, High School, Jackson, Mich; Herbert C. Gore, Assistant Chemist, United States Agricultural Bureau, Washington, D. C. In only one case, complicated by ill-health, the work was discontinued, and the degree afterward taken at a foreign University.

In 1896 the Department of Chemistry had the honor of welcoming one of the most eminent inorganic chemists in the world, Dr. Henri H. Moissan, of the University of Paris, and it had the pleasure of listening to an address in which he discussed the artificial preparation of the diamond, and applications of the electric furnace. In June, 1901, the Department had the honor of receiving the visit of one of the most distinguished living chemists, eminent notably in the field of Physical Chemistry, Dr. Jacobus H. van 't Hoff, of the University of Berlin. Dr. van 't Hoff gave a series of eight lectures on the applications of Physical Chemistry in the natural sciences, which were enjoyed by the Faculty, the student body, and many visitors from other universities. Professor van 't Hoff received the honorary degree of LL.D. from the University at its decennial celebration in June, 1901.

#### THE SUMMER QUARTER

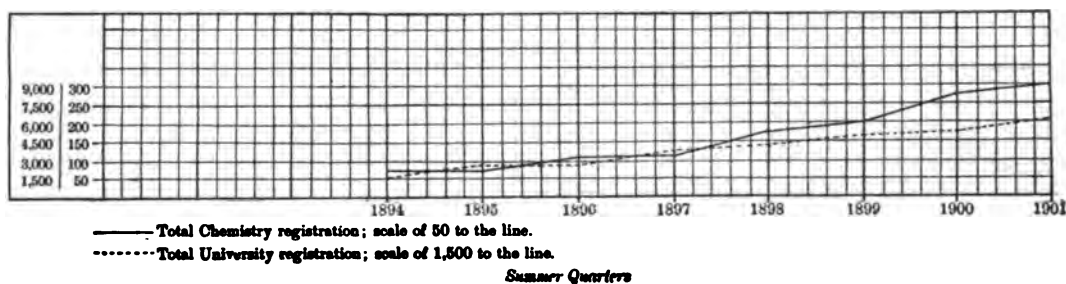
The Summer Quarters have not differed essentially from the other Quarters in the class of work done, but they have differed considerably in the constituency of the student body working in the Department. As in other Departments of the University, the student body in these Summer Quarters has consisted for the most part of Graduate students, teachers from universities, colleges, high schools, and academies, with a very much smaller proportion of undergraduates (see Table XIII, below). The maturity of this class of students and their widespread influence, exercised through their schools throughout the country, have made them a most desirable class of students to reach and teach. Ready for enthusiastic work and inspiration, appreciating thoroughness of work and method, they form a far more stimulating body of students for the instructors than do the undergraduates. The instructors in the Department are encouraged through them to aid in raising the standards of teaching in their Department to higher levels, and in modernizing their work throughout the West, Northwest, Southwest, and South.

It was thought wisest to make the courses offered these students almost the same, as regards content and method, and exactly the same as regards requirements and standards, as those offered during the other three Quarters of the year. The greater maturity of the classes influenced the results chiefly in the average quality of the work and the depth of insight gained. To a considerable extent the courses were given by the same instructors as in the other Quarters, or by instructors equal in rank to them; in only one branch, that of General Organic Chemistry, younger instructors were always called upon to give the courses. Professor Nef has been in residence five Terms of the Summer Quarters; Assistant Professor Lengfeld, fourteen Terms;

Associate Professor Stieglitz, thirteen Terms; Associate Professor Smith's first Term of Summer residence was in 1902.

In order to offer complete courses in a subject in a single quarterly session, the majority of the courses have always been offered as double courses (double Major and double Minor courses), twice as many lectures being given and twice as much laboratory work being required per week as in the ordinary course, the students concentrating their time and effort on one or two courses only. The method has worked to the perfect satisfaction of instructors and students, and this raises the query, whether more opportunities for such concentrated effort might not be offered in the other Quarters. The Department has also always made it a special point to offer in every Summer Quarter nearly the equivalent of all its Junior College work, all of its Senior College courses, and the main graduate courses, and in alternate years, as far as possible, all of its special graduate courses. In this way almost the complete annual work of the Department has been duplicated every summer for the benefit of a vast body of students who could attend no other Quarter, but who could, without any change in the order of their courses, take all the main courses in succession by attending during a sufficient number of Summer Quarters. The result of this policy has been that many students have been just as regular attendants in the Summer Quarters for five or six years as ordinary students have been for as many Quarters of the usual school year. A characteristic feature has been that two candidates for the Doctorate degree completed their research work altogether in Summer Quarters. A somewhat larger total time was required, perhaps, for the completion of the research work than would have been found necessary in the case of uninterrupted work at cooler periods of the year. But untiring courage and self-sacrifice on the part of the students overcame all the difficulties of the situation. The Summer Quarters have also been a favorite period for research work on the part of Doctors of other universities, who have come great distances for the sake of the laboratory facilities and the stimulus of intercourse with men of their own profession. It must be stated, however, that the carrying on of research work under the trying conditions of summer time is a great strain on staff and student alike; but for men of sound health it has proved to be a practical and valuable opportunity.

DIAGRAM IV



The curve which illustrates Table X below, not only shows the rapid growth of the work in Chemistry in the Summer Quarters, but also brings out the fact that its rate of growth has been larger the last few years than that of the University as a whole, great as the latter has been; the total attendance in the last four summers (950) shows a gain of 150 per cent. over the attendance in the first four summers (385), as against 100 per cent. for the University as a whole. During all this time only the regular courses of the Department have been given; there have been no "open" courses.

The following table shows the total registrations for the Summer Quarters in Chemistry and in the University as a whole:

TABLE X

	1894	1895	1896	1897	1898	1899	1900	1901
Chemistry .....	79	73	118	115	177	198	275	300
The University .....	1,575	2,565	2,787	4,008	4,300	4,851	5,028	6,223

The following table compares the total Chemistry in *Majors* in the Summer Quarters with the average total Chemistry registrations for the Autumn, Winter, and Spring Quarters of the same year. It shows that the work done and the increase is almost exactly the same in both cases:

TABLE XI

	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Summer Quarter .....	97	87	128	105	185	142	185	199
Average Quarter .....	120	77	123	142	124	139	190	176 <sup>22</sup>

The following table gives the amount of work (in *Majors*) in the main branches of instruction in the Department, and shows the development of each:

TABLE XII

	1894	1895	1896	1897	1898	1899	1900	1901
General Chemistry ....	45	26	47	46	54	42	45	63
Analytical Chemistry ..	28	37	32	31	63	54	74	64
Organic Chemistry .....	22	18	28	19	29	38	37	47
"Other" courses <sup>23</sup> .....	3	6	20	10	21	8	29	27

The next table, a particularly important one, compares the total work (in *Majors*) in graduate courses in the Summer Quarters with the average registrations for such courses for the three other Quarters. It shows that the former has been exceeding the average graduate work in other Quarters since 1898. As a number of the registrations in ordinary Quarters are for *half-Major* special courses, the real balance in favor of the Summer Quarters is still greater.

TABLE XIII

	1894	1895	1896	1897	1898	1899	1900	1901
Summer Quarter .....	25	24	55	36	63	57	80	89
Average Quarter .....	50	34	61	54	53	56	66	63

The last table, giving the registrations of Graduate, Senior College, Junior College, and Unclassified students, expresses clearly the mature character of the summer student body. The registrations of Graduate students, in all but the first year, have easily outnumbered those of all the other students combined.

TABLE XIV

	1894	1895	1896	1897	1898	1899	1900	1901
Graduates .....	39	56	81	72	116	132	159	179
Senior College .....	2	3	8	7	11	17	39	28
Junior College .....	1	..	8	22	11	8	11	19
Unclassified .....	37	14	21	14	39	41	54	74

<sup>22</sup> Without Medical student registrations.<sup>23</sup> Research courses, Advanced Inorganic and Physical Chemistry.

## POSITIONS FILLED BY GRADUATES AND STUDENTS OF THE DEPARTMENT

The various classes of students who have worked in the Department, Fellows, candidates for the Degrees of Doctor, Master, or Bachelor, have been largely called upon to fill positions in Chemistry in the universities and colleges of the country, or positions to teach the physical sciences in high schools and academies. The nature and the location of the positions filled by the most advanced classes of students—our Doctors, Fellows, and Masters—appear from the tables on pp. 460 and 463 of the preceding statement. They include eighteen professorships and five instructorships in universities, colleges, and normal schools, and five positions as teachers of Physical Science in high schools or academies (besides two positions as expert advisers, the one in a great technical house, the other, a research position, in a large eastern hospital).

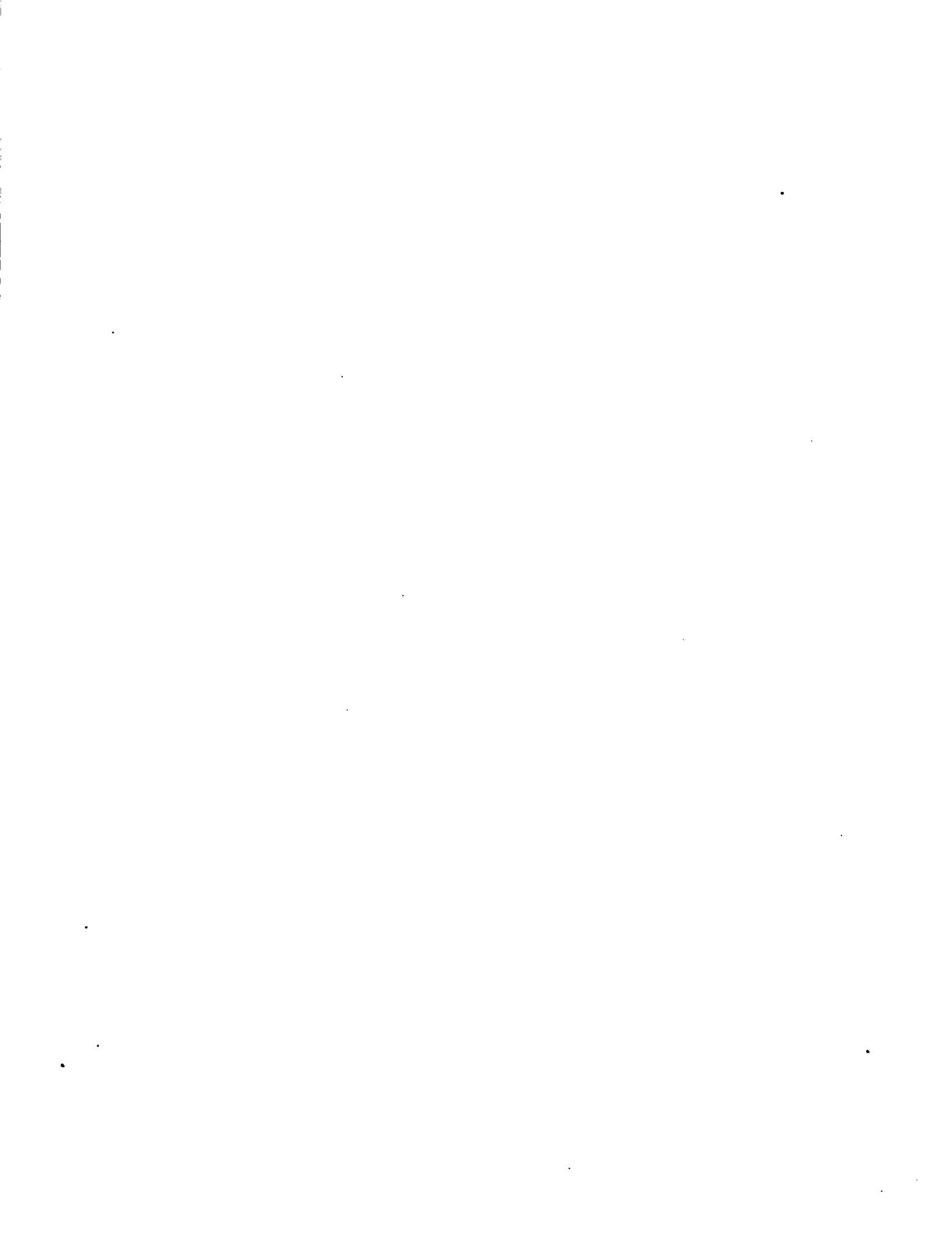
Unfortunately, no record has been kept of the numbers of graduating Bachelors and Graduate students who have specialized in the Department and, on its recommendation, have received appointments to teach Chemistry in high schools and academies. In the last three years the supply of candidates for such positions, whom the Department was willing to recommend, and who had asked for its support, has been exhausted in the early summer, and the Department has been unable to supply candidates for many later urgent and direct applications. There has also been an increasing demand from technical sources for men trained in the Department, largely from the city, but also from more distant localities. Its supply of such men, seeking technical positions, necessarily rather small in the absence of a complete school of technology, has also been exhausted at early dates after graduation, and many requests for men have had to remain unfilled because of the lack of further candidates. Undoubtedly the general prosperity of the country has made the large demand in recent years possible, but the satisfactory work of those who have gone out before has been the most important factor, as shown by the nature of the requests received.

In view of the lack of statistics for most of the preceding years, it may be of interest to state that in the present season (1902) sixteen positions (university, college, and school) and ten technical positions (two temporary ones) have been filled on the basis of recommendations by the Department, and about fifteen requests have had to be refused, up to the present date, after the list had been exhausted.

The only difficulty the Department has met in this matter is in the placing of its women graduates. Superintendents of schools have shown an unfounded prejudice in favor of men teachers of Science, which does not seem to exist in regard to other subjects. The discrimination has gone to the extent of favoring men of only average ability, recommended only with qualifications, as against women candidates of superior ability and intelligence who have been given unqualified recommendations. It has been found, moreover, that the few women teachers sent out by the Department have in nearly every instance given satisfaction, and have been completely successful in handling classes in Chemistry. Such a prejudice does not seem to exist in the East, and it need not exist in the West.

Respectfully submitted,

JULIUS STIEGLITZ.



**REPORTS OF OTHER OFFICERS**



## THE BUSINESS MANAGER

*To the President of the University:*

**SIR:** The business history of the University from the date of its organization to June 30, 1902, as appearing upon the recurring annual periods of its fiscal years, is reflected by the exhibits of the hereinafter following Financial and Statistical Tables, viz.:

- Table I. General Balance Sheet, June 30, 1902.
- Table II. Budget Expenditures: by years covering period 1894-1902 (eight fiscal years).
- Table III. Budget Income: by years covering the period 1894-1902 (eight fiscal years).
- Table IV. Budget Income and Expenditures by Departments and Years, covering the period 1894-1902 (eight fiscal years).
- Table V. Income and Expenditures—Gross, Summarized: covering the period 1894-1902 (eight fiscal years).
- Table VI. Budget Income—Sources Analyzed: by years covering the period 1894-1902 (eight fiscal years).
- Table VII. Seven Departments: Receipts and Expenditures, covering the period 1893-1902 (nine fiscal years).
- Table VIII. Budget Expenditures—Analyzed: covering the period 1894-1902 (eight fiscal years).
- Table IX. Assets—June 30: 1893-1902 (ten years).
- Table X. Budget Expenditures: Per Capita (apportioned), fiscal year ending 1901-1902.

TABLES XI, XII, XIII—THE UNIVERSITY OF CHICAGO PRESS

(Departmental Statements 1901-1902)

- Table XI. Book Store.
- Table XII. Printing Office.
- Table XIII. Publication.
- Table XIV. Gifts: In Gross—annually by fiscal years 1889-1902 (thirteen years).
- Table XV. Endowment Funds—Consolidated Statement: Amounts, Classification of Investments, Interest, Income, etc. (eight fiscal years).

TABLE I  
GENERAL BALANCE SHEET, JUNE 30, 1902

<i>Dr.</i>		
Investments (see p. 2)	-	\$8,674,962.12
Buildings (see p. 3)	-	2,812,032.60
Grounds (see p. 3)	-	1,297,003.19
Cash and current assets (see p. 4)	-	490,164.02
Cash	\$ 385,774.62	
Bills receivable	9,940.06	
Due from University officers and agents	23,964.75	
Miscellaneous	70,584.59	
Books (page 5)	-	314,949.78
Scientific equipment " "	-	440,993.48
Furniture " "	-	63,904.54
<i>Carried Forward</i>	-	\$14,086,909.73



## THE PRESIDENT'S REPORT

<i>Brought Forward</i>			
Material and supplies	" "		\$14,096,909.73
Printing office plant	" "	36,569.28	
Real estate	" "	10,521.77	
		984,375.17	
<b>Total</b>			<b>\$15,128,375.95</b>

		<i>Cr.</i>	
Capital	(see p. 6)		\$3,975,633.79
Endowments	" "	8,739,194.38	
Building funds	" "	798,297.25	
Land Purchase Fund	" "	1,229,416.03	
Special funds	" 7	73,673.55	
Current liabilities	" "	312,160.95	
<b>Total</b>			<b>\$15,128,375.95</b>
<b>Total June 30, 1901</b>			<b>12,364,216.58</b>
<b>Increase</b>			<b>\$2,764,159.37</b>

		<b>INVESTMENTS</b>	
Rockefeller ("A")		\$ 571,648.07	
Rockefeller ("B")		903,063.95	
Rockefeller ("C")		526,467.38	
Rockefeller ("D")		689,486.86	
Rockefeller ("E")		1,027,185.51	
Rockefeller ("F")		499,399.80	
Rockefeller ("G")		989,045.16	
Rockefeller ("H")		998,713.68	
Ogden		317,027.97	
Culver		852,853.60	
Reynolds		113,053.58	
Haskell No. 1		23,688.05	
Haskell No. 2		20,000.00	
School of Education		788,020.14	
Security Building (mortgage)		180,000.00	
Gallup Fund investment		30,000.00	
Hitchcock Fund investment		50,000.00	
Woman's Building Fund investment		23,380.00	
1223 Michigan avenue (Kelly gift)		15,777.13	
Miscellaneous investments		56,171.24	
<b>Total</b>			<b>\$8,674,962.12</b>

		<b>ANALYSIS OF INVESTMENTS</b>	
<i>Real estate</i>			\$4,285,000.30
Fees		\$ 3,398,450.30	
Chicago loans		703,050.00	
Farm mortgages		193,500.00	
<i>Bonds</i>			4,024,846.68
Railway		2,573,020.13	
Street railway		144,763.75	
Elevated railway		221,837.80	
Miscellaneous		1,085,225.00	
<i>Stocks</i>			310,427.09
Railway		119,275.00	
<i>Carried Forward</i>			<b>\$8,630,274.07</b>

<i>Brought Forward</i> - - - - -		\$8,630,274.07
Street railway - - - - -	88,401.28	
Elevated railway - - - - -	102,750.83	
<i>Miscellaneous</i> - - - - -		44,688.05
Total - - - - -		8,674,962.12
Total June 30, 1901 - - - - -		7,603,691.55
Increase - - - - -		1,071,270.57

## UNIVERSITY BUILDINGS AND GROUNDS

<i>Buildings</i> - - - - -		\$ 2,812,032.60
(a) Complete - - - - -		\$2,220,865.19
Cobb Hall - - - - -	\$ 221,956.03	
Graduate and Divinity Halls - - - - -	172,805.72	
Snell Hall - - - - -	53,586.41	
Kelly Hall - - - - -	62,149.21	
Beecher Hall - - - - -	62,126.05	
Foster Hall - - - - -	62,966.86	
Foster Hall addition - - - - -	20,466.04	
Green Hall - - - - -	72,000.00	
Kent Laboratory - - - - -	202,270.19	
Ryerson Laboratory - - - - -	200,371.41	
Walker Museum - - - - -	109,275.11	
Haskell Museum - - - - -	103,017.49	
Hull Biological Laboratories - - - - -	325,000.00	
Temporary Library and Gymnasium - - - - -	25,207.88	
Power and oil storage plants (old) - - - - -	19,636.35	
Electric light plant and wiring - - - - -	13,965.03	
Yerkes Observatory and Telescope - - - - -	39,699.05	
Morgan Park Academy - - - - -	30,000.00	
West Hall, Morgan Park, - - - - -	35,000.00	
East Hall, Morgan Park, - - - - -	43,667.47	
Gymnasium, Morgan Park, - - - - -	20,715.00	
School of Education, Temporary Building - - - - -	24,983.89	
(b) Under construction - - - - -		591,167.41
School of Education - - - - -	50,192.52	
Charles Hitchcock Hall - - - - -	117,076.96	
Frank Bartlett Gymnasium - - - - -	40,642.93	
Central light, heat, water, and power plant - - - - -	221,702.33	
Group - - - - -	89,286.84	
Press Building - - - - -	72,265.83	
<i>Grounds</i> - - - - -		\$1,297,003.19
Campus - - - - -	528,038.73	
Scammon Court - - - - -	132,368.65	
Athletic Field - - - - -	335,000.00	
Yerkes Observatory - - - - -	25,300.00	
Morgan Park Academy - - - - -	22,000.00	
Morgan Park Library - - - - -	3,000.00	
Block 16 - - - - -	111,117.40	
Block 9 - - - - -	140,178.41	
Total, buildings and grounds - - - - -		\$4,109,035.79
Total June 30, 1901 - - - - -		3,451,434.24
Increase - - - - -		\$657,601.55

CASH AND CURRENT ASSETS		
<i>Cash</i>		\$385,774.62
<i>Bills receivable</i>		9,940.06
<i>Due from University officers and agents</i>		23,864.75
Registrar	\$ 1,681.55	
Registrar Academy	390.52	
University Press Division	16,694.53	
Cash	\$ 1,330.73	
Individuals	15,383.80	
Charles Hull Ewing	2,516.31	
Trotter & Kimball	2,282.57	
A. H. Parker	299.27	
<i>Miscellaneous</i>		70,584.59
University College	\$ 8,928.15	
Elementary School	7,031.98	
School of Education budgets	13,164.77	
Course of study	532.75	
Catherine M. White Income	603.98	
Bruce Telescope Fund (certificate of deposit)	6,125.00	
Thaw Illustrations	83.54	
Bruce Astronomical Fund investment	3,000.00	
Russian Lecture Fund expense	2,000.00	
President's Fund investment	130.00	
Baptist Theological Union	28.51	
Real estate investment expense	4,823.60	
University Lecture Association	1,228.30	
Temporary advances	1,426.40	
Income accrued	19,877.60	
Chicago Manual Training School	1,000.00	
Miscellaneous	604.01	
Total		\$490,164.02
Total June 30, 1901		482,761.36
Increase		\$7,402.66
<i>Books</i>		\$314,949.78
<i>Scientific equipment</i>		440,993.48
General	\$405,989.86	
School of Education	32,184.73	
Bruce Spectrograph	2,085.17	
Bruce Photographic Telescope	733.72	
<i>Furniture</i>		66,804.54
General	38,235.25	
Kelly Hall	2,601.67	
Beecher Hall	2,977.40	
Foster Hall	2,978.34	
Graduate Hall	1,519.91	
Snell Hall	2,251.28	
Commons	4,963.58	
Academy Commons	1,998.95	
Women's Commons	4,803.29	
Academy	4,472.12	
Hitchcock Hall	4.75	
Carried Forward		\$622,747.80

<i>Brought Forward</i>		\$822,747.80
<i>Material and supplies</i>		36,569.28
Bookstore	\$14,505.95	
Printing office	8,829.27	
Publications	11,578.35	
Laboratory Supply Store	1,318.28	
Postage	229.08	
Academy Commons	58.39	
Commons	50.00	
<i>Printing office plant</i>		10,521.77
<i>Real estate</i>		984,375.17
Block 3, Fernwood addition	\$204,653.99	
Block 1, Fernwood addition	151,686.75	
Block 5, Marshall Field's addition	147,150.69	
Block 13, Mason & McKichan's subdivision	200,286.39	
Block 14, Mason & McKichan's subdivision	144,084.43	
Block 15, Mason & McKichan's subdivision	134,702.92	
Irving Park lots	1,000.00	
Ellis county, Kansas	600.00	
Tallahassee, Florida	200.00	
Total		\$1,854,214.02
Total June 30, 1901		826,329.43
Increase		\$1,027,884.59
<i>Endowment</i>		\$8,739,194.38
Rockefeller ("A")	\$ 573,324.50	
Rockefeller ("B")	905,546.90	
Rockefeller ("C")	527,293.75	
Rockefeller ("D")	690,117.00	
Rockefeller ("E")	1,027,500.00	
Rockefeller ("F")	500,465.22	
Rockefeller ("G")	1,000,000.00	
Rockefeller ("H")	1,000,000.00	
Ogden	318,419.89	
Culver	853,100.00	
Reynolds	113,089.07	
Haskell No. 1 and No. 2	43,688.05	
Colby	5,000.00	
Tilton	1,000.00	
Howe	1,000.00	
Pillsbury	5,000.00	
Scammon Memorial	61,050.00	
School of Education	975,000.00	
Gearhart and Hannah Foreman Fund	2,000.00	
Gallup Memorial	30,000.00	
Charles Hitchcock Memorial	50,000.00	
University Scholarship	3,000.00	
Joseph B. Lowenthal Fellowship	10,000.00	
Lillian Gertrude Selz Scholarship	5,000.00	
Enos M. Barton Scholarship	3,000.00	
Zuinglius Grover Scholarship	3,000.00	
Henry C. Lytton Scholarship	3,000.00	
<i>Carried Forward</i>		\$8,739,194.38

<i>Brought Forward</i>		\$8,739,194.38
Divinity (Atkins) Scholarship	2,500.00	
Andrew McLeish Scholarship	3,000.00	
Catherine M. White Scholarship	9,000.00	
Olson Memorial	100.00	
Elbert H. Shirk Scholarship	3,000.00	
Wm. A. Talcott Fellowships	12,000.00	
<i>Capital</i>		\$3,975,633.79
<i>Land purchase fund</i>		1,229,416.03
<i>Building funds</i>		798,297.25
Central light, heat, water and power plant	\$215,000.00	
Frank Bartlett Gymnasium	130,000.00	
Charles Hitchcock Hall	150,000.00	
Group	147,500.00	
University Press	105,608.00	
Women's Building	24,688.66	
Electric wiring	10,000.00	
Foster Hall furnishings	252.59	
Press Building furnishings	15,250.00	
Total		\$14,742,541.45
Total June 30, 1901		11,967,605.21
Increase		\$2,774,936.24
<i>Special funds</i>		\$73,673.55
Culver Income	\$31,085.62	
Elizabeth Kelly Donation	15,000.00	
Campus Improvement	10,000.00	
Bruce Instruction Fund	3,309.86	
Bruce Spectrograph Fund	2,088.27	
Crane Lectureship	2,000.00	
Scammon Scholarship	482.84	
Thaw Illustration Fund	100.00	
Yerkes Computer's Fund	322.99	
Yerkes Librarian	11.29	
Astronomy Houses Sinking Fund	796.49	
Ancient Records Fund	75.00	
President's Fund	285.00	
Haskell Bequest Income	200.40	
Bruce Photographic Telescope	7,896.19	
<i>Current liabilities</i>		\$312,160.95
Bills payable	\$218,000.00	
Vouchers	61,045.01	
Budget balances reappropriated	16,334.01	
School of Education Income	5,275.67	
Petrographical Fund	16.99	
Women's Commons	3,298.72	
Laboratory School	2,003.30	
Budgets, 1902-1905	5,298.02	
Alliance Française	538.28	
Miscellaneous	350.95	
Total		\$385,834.50

TABLE II  
BUDGET EXPENDITURES, BY YEARS, COVERING PERIOD 1894-1902 (EIGHT FISCAL YEARS)

	1894-1895	1895-1896	1896-1897	1897-1898
<b>I. General Administration and Expense:</b>				
Administrative offices .....	\$ 25,639.54	\$ 27,514.50	\$ 29,964.45	\$ 31,266.59
General .....	8,466.73	9,928.51	12,779.13	13,052.74
Music and Chapel .....	2,774.39	3,181.91	2,735.90	2,775.09
Convocations .....	2,066.62	1,545.44	4,756.95	1,783.77
Interest .....	23,055.54	17,362.96	17,609.23	14,434.24
<b>II. Faculty of Arts, Literature, and Science:</b>				
Dean's office expense .....	2,479.71	4,487.97	5,438.81	4,183.63
Instruction .....	217,989.60	250,436.44	274,914.87	285,958.23
Fellowships and Scholarships .....	21,666.61	30,336.66	29,420.00	38,425.08
<b>III. Divinity School:</b>				
Administration and general expense .....	1,714.23	2,066.72	2,014.49	2,200.49
Instruction .....	34,399.70	33,112.57	33,968.01	34,924.90
Halls expense .....	4,107.93	3,128.13	4,433.85	4,842.17
Books .....	950.23	2,218.42	1,272.20	951.30
Fellowships and Scholarships .....	937.50	960.00	1,106.25	937.50
Journal of Theology .....			2,942.01	5,365.78
<b>IV. Morgan Park Academy:</b>				
Administration and general expense .....	6,844.89	6,680.62	8,297.65	6,228.70
Instruction .....	13,325.92	16,002.32	16,974.71	15,642.15
Buildings and grounds .....	20,195.30	13,797.47	11,374.88	8,874.85
Books and equipment .....	2,718.77	2,419.04	948.57	1,354.55
Scholarships .....		2,541.25	2,375.00	2,215.63
<b>V. University Extension:</b>				
Lecture-study instruction .....	17,994.27	17,867.87	22,559.70	20,848.76
Correspondence instruction .....	2,602.65	3,119.56	2,703.87	4,903.94
Class-work instruction .....	5,895.65	3,481.50	4,318.51	4,981.29
Lecture-study expense .....		4,322.21	6,435.51	6,149.16
Correspondence expense .....	6,422.02	1,847.40	1,249.36	1,927.16
Class-work expense .....		2,628.32	2,528.70	2,234.86
<b>VI. Libraries, Laboratories and Museums:</b>				
Administration .....	9,426.18	14,347.30	16,229.13	16,982.92
Books .....	13,234.52	20,164.78	15,363.07	10,492.61
Equipment .....	17,125.32	17,928.19	16,363.06	5,694.47
Supplies and expense .....	5,091.76	9,184.85	13,614.61	11,349.80
<b>VII. Printing and Publishing:</b>				
Official documents .....	7,603.59	7,192.94	9,840.26	6,124.33
University journals .....				
Departmental printing .....	18,526.43	30,420.59	33,228.52	37,689.04
<b>VIII. Physical Culture:</b>				
Instruction .....	5,299.92	5,475.01	6,316.68	6,483.24
Expense .....	566.25	703.58	504.78	360.01
<b>IX. Affiliated Work:</b>				
Administration .....	263.79	1,061.28	4,930.32	1,318.48
Examinations .....		84.07	150.80	621.69
<b>X. Buildings and Grounds:</b>				
Campus improvement .....	4,544.31	9,042.64	3,875.82	4,964.39
Furniture .....				
Buildings, expense and repairs .....	37,047.48	34,537.11	28,853.57	35,828.43
General repairs and supplies .....		5,950.67	4,589.37	4,792.48
Taxes and insurance .....	3,012.00	8,857.55	20,580.42	5,032.25
Payment on Campus .....		11,000.00	11,000.00	11,000.00
Yerkes Observatory .....			3,726.03	3,312.15
<b>XI. Medical Department:</b>				
Dean's office expense .....				
Initial equipment .....				
Instruction .....				
Equipment .....				
Books .....				
Supplies and expense .....				
Buildings and grounds .....				
<b>Total .....</b>	<b>\$543,989.35</b>	<b>\$636,996.35</b>	<b>\$692,329.07</b>	<b>\$678,399.75</b>

TABLE II—Continued  
 BUDGET EXPENDITURES, BY YEARS, COVERING PERIOD 1894-1902 (EIGHT FISCAL YEARS)

	1896-1899	1899-1900	1900-1901	1901-1902
<b>I. General Administration and Expense:</b>				
Administrative offices.....	\$ 31,895.01	\$ 31,591.27	\$ 32,536.94	\$ 38,197.84
General.....	13,103.68	18,526.87	26,664.02	35,178.59
Music and chapel.....	2,765.88	2,593.27	2,746.48	6,617.24
Convocations.....	1,855.49	1,496.43	1,747.12	2,016.84
Interest.....	6,320.00	19,290.93	10,596.93	21,724.39
<b>II. Faculty of Arts, Literature, and Science:</b>				
Dean's office expense.....	5,337.90	6,506.31	6,612.78	7,591.42
Instruction.....	301,793.40	305,872.15	328,069.16	341,653.73
Fellowships and Scholarships.....	46,432.46	51,037.95	51,897.85	56,596.28
<b>III. Divinity School:</b>				
Administration and general expense.....	2,156.80	2,950.94	2,878.54	3,085.06
Instruction.....	35,841.64	38,050.08	35,894.22	34,652.07
Halls expense.....	7,069.51	5,699.06	6,140.37	6,630.38
Books.....	1,033.42	673.27	1,735.16	1,100.00
Fellowships.....	11,982.50	14,340.00	15,160.00	13,582.50
Journal of Theology.....	4,577.97	4,500.58	4,203.50	4,327.59
<b>IV. Morgan Park Academy:</b>				
Administration and general expense.....	5,917.25	6,414.38	7,529.60	6,978.58
Instruction.....	17,551.43	15,175.85	14,100.00	14,393.64
Buildings and grounds.....	12,408.28	10,097.49	10,021.45	11,276.45
Books and equipment.....	1,299.93	464.56	1,550.47	595.01
Scholarships.....	2,763.75	2,502.50	2,500.00	2,500.00
<b>V. University Extension:</b>				
Lecture-study instruction.....	19,975.79	18,280.29	19,017.46	27,142.83
Correspondence instruction.....	4,525.92	5,506.87	5,601.89	6,862.55
Class-work instruction.....	6,811.61	5,533.22	667.77	.....
Lecture-study expense.....	6,301.37	6,944.93	7,129.72	12,336.02
Correspondence expense.....	2,442.45	3,205.88	4,693.57	6,069.88
Class-work expense.....	2,354.18	2,803.71	303.93	.....
<b>VI. Libraries, Laboratories and Museums:</b>				
Administration.....	16,461.68	16,388.76	16,638.71	20,064.84
Books.....	12,277.87	10,460.79	24,840.37	23,939.55
Equipment.....	8,324.50	8,071.75	14,554.13	9,885.74
Supplies and expense.....	11,069.93	12,210.89	13,162.57	13,710.83
<b>VII. Printing and Publishing:</b>				
Official documents.....	8,761.87	9,060.44	.....	.....
University journals.....	.....	31,872.82	33,051.32	33,104.06
Departmental printing.....	35,177.63	2,000.56	3,842.10	3,371.75
<b>VIII. Physical Culture:</b>				
Instruction.....	6,987.56	6,996.76	7,400.00	8,159.39
Expense.....	323.03	393.17	299.05	1,800.00
<b>IX. Affiliated Work:</b>				
Administration.....	1,776.19	3,192.87	3,301.35	4,035.37
Examinations.....	1,121.95	1,266.42	1,199.96	1,285.75
<b>X. Buildings and Grounds:</b>				
Campus improvement.....	5,788.47	3,940.78	3,145.59	3,574.41
Furniture.....	.....	1,397.69	2,008.43	4,820.47
Buildings, expense and repairs.....	35,503.36	39,426.01	42,894.02	50,729.48
General repairs and supplies.....	6,173.83	4,876.84	6,363.58	7,291.72
Taxes and insurance.....	1,671.55	3,459.39	3,975.94	4,190.06
Payment on Campus.....	11,000.00	11,000.00	11,000.00	.....
Yerkes Observatory.....	2,968.48	3,111.89	3,107.63	3,543.39
<b>XI. Medical Department:</b>				
Dean's office expense.....	.....	.....	.....	2,000.00
Initial equipment.....	.....	.....	.....	49,000.00
Instruction.....	.....	.....	.....	25,485.78
Equipment.....	.....	.....	.....	3,080.00
Books.....	.....	.....	.....	1,015.00
Supplies and expense.....	.....	.....	.....	7,745.00
Buildings and grounds.....	.....	.....	.....	1,371.80
<b>Total.....</b>	<b>\$719,923.52</b>	<b>\$747,186.62</b>	<b>\$790,583.68</b>	<b>\$944,348.26</b>

TABLE III  
BUDGET INCOME, BY YEARS, COVERING PERIOD 1894-1902 (EIGHT FISCAL YEARS)

	1894-1895	1895-1896	1896-1897	1897-1898
<b>I. General Administration:</b>				
Exams., Matriculations, and Diploma Fees	\$ 6,000.00	\$ 6,480.00	\$ 7,840.15	\$ 8,015.00
Prizes.....	.....	.....	.....	500.00
<b>II. Faculty of Arts, Literature, and Science:</b>				
Rockefeller investments	108,607.87	143,323.19	190,490.99	198,125.91
Ogden investments	15,758.28	15,034.59	16,274.15	14,930.32
Reynolds investments	.....	.....	3,650.00	11,250.00
Colby, Howe, Tilton, Pillsbury investments	341.68	390.00	390.00	255.00
Haskell investments	.....	2,264.50	1,086.92	1,468.64
Culver investments	.....	3,384.44	15,848.80	.....
Fellowships and Scholarships	3,334.50	2,490.00	1,795.00	2,655.00
Graduate tuition	.....	31,440.58	37,718.67	36,915.65
College tuition	58,511.61	49,591.92	66,018.75	72,779.43
Miscellaneous	.....	705.00	5,427.16	1,343.89
Hitchcock investments	.....	.....	.....	.....
Grover investments	.....	.....	.....	.....
<b>III. Divinity School:</b>				
Rockefeller investments	9,273.35	10,199.68	17,480.75	19,207.88
Theological Union	11,782.35	24,800.00	8,400.00	10,000.00
Rockefeller subscription	10,000.00	15,000.00	8,500.00	10,000.00
Fees and room rents	5,707.99	6,284.44	8,528.68	8,642.47
American Journal of Theology	.....	.....	1,474.04	2,100.61
Fellowship donations	.....	505.70	420.00	540.00
Assistant theological instruction	.....	.....	.....	.....
<b>IV. Morgan Park Academy:</b>				
Tuition fees	10,884.26	14,593.96	12,532.92	11,500.39
Room rents	4,160.91	4,219.41	3,672.00	4,208.37
Other fees	2,306.92	417.39	257.00	229.03
Theological Union	.....	500.00	500.00	500.00
Insurance	.....	1,400.00	.....	.....
<b>V. University Extension:</b>				
Lecture Study	18,012.52	14,025.03	18,033.05	20,521.33
Correspondence Study	5,664.03	5,443.27	4,425.53	7,057.02
Class work	2,345.45	5,202.82	7,312.15	6,760.10
Miscellaneous	395.00	862.89	1,342.13	1,165.28
Syllabi receipts	.....	.....	.....	.....
<b>VI. Libraries, Laboratories, and Museums:</b>				
Library fees and fines	5,167.05	6,428.05	8,103.21	8,005.35
Laboratory fees and fines	3,536.58	3,676.79	3,978.50	4,318.21
Miscellaneous	30.00	2,965.46	1,403.75	350.97
History books, special appropriation	.....	.....	.....	.....
<b>VII. Printing and Publishing:</b>				
Publications	.....	13,234.98	14,143.68	12,849.56
Advertising	9,803.16	750.00	3,994.55	5,885.92
Miscellaneous	.....	.....	671.05	268.40
<b>VIII. Physical Culture</b>	No receipts	No receipts	No receipts	No receipts
<b>IX. Affiliated Work:</b>				
Examinations	70.87	256.46	453.28	620.55
<b>X. Buildings and Grounds:</b>				
Room rents	16,244.74	18,474.63	21,856.86	22,813.44
Fees	5,955.43	6,915.50	7,935.58	7,875.26
Miscellaneous	.....	5,550.37	.....	.....
<b>XI. General Funds:</b>				
Rockefeller subscriptions	165,000.00	160,000.00	91,500.00	190,000.00
Old subscriptions	11,781.30	4,407.35	1,461.03	3,284.75
Miscellaneous	.....	8,700.00	.....	.....
<b>XII. Medical Department:</b>				
Rockefeller subscription	.....	.....	.....	.....
Fees	.....	.....	.....	.....
<b>Total</b>	<b>\$490,675.65</b>	<b>\$589,898.40</b>	<b>\$594,918.33</b>	<b>\$708,973.73</b>



TABLE III—Continued  
 BUDGET INCOME, BY YEARS, COVERING PERIOD 1894-1902 (EIGHT FISCAL YEARS)

	1898-1899	1899-1900	1900-1901	1901-1902
<b>I. General Administration:</b>				
Exams., matriculations, and diploma fees	\$ 9,522.00	\$ 10,296.50	\$ 9,201.50	\$ 11,311.34
Prizes	70.00	.....	.....	.....
<b>II. Faculty of Arts, Literature, and Science:</b>				
Rockefeller investments	185,973.43	160,269.62	172,295.02	213,280.59
Ogden investments	14,888.34	16,935.62	14,785.67	14,402.40
Reynolds investments	11,250.00	11,250.00	6,221.33	4,298.14
Colby, Howe, Tilton, Pillsbury investments	354.17	412.01	2,217.00	6,142.88
Haskell investments	1,748.61	1,343.72	1,229.40	888.97
Culver investments	.....	.....	.....	.....
Fellowships and Scholarships	1,510.00	1,440.00	460.00	670.00
Graduate tuition	45,709.30	45,953.57	42,743.69	47,119.20
College tuition	91,635.93	101,994.49	113,487.37	118,292.38
Miscellaneous	714.50	1,363.67	329.01	1,714.76
Hitchcock investments	.....	1,793.34	.....	.....
Grover investments	.....	79.38	.....	.....
<b>III. Divinity School:</b>				
Rockefeller investments	15,741.51	15,536.31	16,697.16	19,194.44
Theological Union	7,100.00	9,700.00	2,700.00	8,800.00
Rockefeller subscription	10,000.00	12,000.00	19,953.00	20,000.00
Fees and room rents	18,928.10	22,992.45	22,615.95	21,636.26
American Journal of Theology	1,549.81	1,331.51	1,712.16	1,406.39
Fellowship donations	420.00	542.90	549.70	552.00
Assistant theological instruction	.....	.....	115.00	.....
<b>IV. Morgan Park Academy:</b>				
Tuition fees	11,349.08	14,426.37	10,535.51	12,738.36
Room rents	4,893.05	4,444.48	3,401.85	3,586.75
Other fees	325.35	277.75	313.99	645.10
Theological Union	500.00	500.00	500.00	500.00
Insurance	.....	.....	.....	.....
<b>V. University Extension:</b>				
Lecture study	• 19,335.05	18,112.59	18,242.17	32,445.04
Correspondence study	7,919.93	9,909.50	11,221.35	13,782.11
Class work	8,463.30	6,799.19	45.00	.....
Miscellaneous	705.81	528.01	.....	.....
Syllabi receipts	.....	.....	524.91	705.85
<b>VI. Libraries, Laboratories and Museums:</b>				
Library fees and fines	10,731.36	10,881.99	11,388.08	12,322.87
Laboratory fees and fines	5,039.14	5,843.28	6,585.83	8,137.25
Miscellaneous	3,296.55	1,416.94	774.07	359.34
History books, special appropriation	.....	.....	10,000.00	7,500.00
<b>VII. Printing and Publishing:</b>				
Publications	12,548.56	11,553.88	13,510.26	13,756.55
Advertising	3,717.05	4,784.62	8,573.40	6,524.97
Miscellaneous	611.26	1,271.18	1.05	1,495.00
<b>VIII. Physical Culture:</b>	No receipts	No receipts	No receipts	No receipts
<b>IX. Affiliated Work:</b>				
Examinations	351.43	705.59	1,828.72	2,166.26
<b>X. Buildings and Grounds:</b>				
Room rents	26,294.46	30,162.62	32,367.97	37,160.09
Fees	10,154.67	10,717.35	11,219.87	12,239.85
Miscellaneous	.....	.....	.....	.....
<b>XI. General Funds:</b>				
Rockefeller subscriptions	190,000.00	188,000.00	205,047.00	233,144.00
Old subscriptions	2,487.41	4,170.63	1,212.60	1,063.18
Miscellaneous	6,249.85	1,213.89	1,048.39	977.94
<b>XII. Medical Department:</b>				
Rockefeller subscription	.....	.....	.....	50,000.00
Fees	.....	.....	.....	36,828.07
<b>Total</b>	<b>\$723,083.01</b>	<b>\$740,954.93</b>	<b>\$775,654.98</b>	<b>\$977,828.33</b>

TABLE IV

BUDGET: INCOME AND EXPENDITURES BY DEPARTMENTS, AND BY YEARS, COVERING THE PERIOD 1894-1902 (EIGHT YEARS)

	1894-1895	1895-1896	1896-1897	1897-1898
<i>Income:</i>				
I. General administration .....	\$ 6,000.00	\$ 6,460.00	\$ 7,840.15	\$ 8,515.00
II. Faculty of Arts, Literature, and Science .....	186,553.94	248,624.22	338,698.44	339,723.84
III. Divinity School .....	36,763.69	56,789.82	44,803.47	50,490.96
IV. Morgan Park Academy .....	17,352.09	21,130.76	16,961.92	16,437.79
V. University Extension .....	26,417.00	25,534.01	31,112.86	35,503.73
VI. Libraries, Laboratories, and Museums .....	8,733.63	13,070.30	13,485.46	12,674.53
VII. Printing and publishing .....	9,803.16	13,984.98	18,809.28	19,033.78
VIII. Physical Culture .....	No receipts	No receipts	No receipts	No receipts
IX. Affiliated Work .....	70.67	256.46	453.28	620.55
X. Buildings and grounds .....	22,200.17	30,940.50	29,792.44	30,688.70
XI. General funds .....	176,781.30	173,107.35	92,961.03	193,284.75
XII. Medical Department .....	.....	.....	.....	.....
Excess of expenditures over income..	53,313.70	47,097.95	97,410.74	.....
<b>Total .....</b>	<b>\$543,989.35</b>	<b>\$636,996.35</b>	<b>\$692,329.07</b>	<b>\$706,973.63</b>
<i>Expenditures:</i>				
I. General administration .....	\$ 62,002.82	\$ 59,553.32	\$ 67,845.66	\$ 63,302.43
II. Faculty of Arts, Literature, and Science .....	242,135.92	285,261.07	309,773.68	328,566.94
III. Divinity School .....	42,109.59	41,505.84	45,756.81	49,222.14
IV. Morgan Park Academy .....	43,084.88	41,440.70	39,970.81	34,315.88
V. University Extension .....	32,914.59	33,266.86	39,795.65	40,945.17
VI. Libraries, Laboratories, and Museums .....	44,877.78	61,623.12	61,589.89	44,509.80
VII. Printing and publishing .....	26,130.02	37,613.53	43,068.78	43,813.37
VIII. Physical Culture .....	5,866.17	6,178.59	6,821.46	6,844.15
IX. Affiliated Work .....	263.79	1,165.35	5,061.12	1,940.17
X. Buildings and grounds .....	44,608.79	69,387.97	72,625.21	64,929.70
XII. Medical Department .....	.....	.....	.....	.....
Excess of income over expenditures..	.....	.....	.....	28,573.88
<b>Total .....</b>	<b>\$543,989.35</b>	<b>\$636,996.35</b>	<b>\$692,329.07</b>	<b>\$706,973.63</b>

	1898-1899	1899-1900	1900-1901	1901-1902
<i>Income:</i>				
I. General administration .....	\$ 9,592.00	\$ 10,296.50	\$ 9,201.50	\$ 11,311.34
II. Faculty of Arts, Literature, and Science .....	333,780.28	342,835.40	353,768.49	406,789.32
III. Divinity School .....	54,737.42	62,103.17	64,342.97	71,589.09
IV. Morgan Park Academy .....	17,067.48	19,648.60	14,751.35	17,470.21
V. University Extension .....	36,424.09	35,349.29	30,033.43	46,993.00
VI. Libraries, Laboratories, and Museums .....	19,067.05	18,142.21	28,747.98	28,319.46
VII. Printing and publishing .....	16,876.87	17,609.68	22,084.71	21,776.52
VIII. Physical Culture .....	No receipts	No receipts	No receipts	No receipts
IX. Affiliated Work .....	351.43	705.59	1,828.72	2,166.26
X. Buildings and grounds .....	36,449.13	40,879.97	43,587.84	49,399.94
XI. General funds .....	198,737.26	193,384.52	207,307.99	235,185.12
XII. Medical Department .....	.....	.....	.....	86,828.07
Excess of expenditures over income..	.....	6,231.69	14,928.70	.....
<b>Total .....</b>	<b>\$723,083.01</b>	<b>\$747,186.62</b>	<b>\$790,583.68</b>	<b>\$977,828.33</b>
<i>Expenditures:</i>				
I. General administration .....	\$ 55,940.06	\$ 73,498.77	\$ 74,291.49	\$103,734.90
II. Faculty of Arts, Literature, and Science .....	353,563.76	363,416.41	386,379.79	405,846.43
III. Divinity School .....	62,661.84	64,213.93	66,011.79	63,387.60
VI. Morgan Park Academy .....	39,940.64	34,654.78	35,701.52	35,743.68
V. University Extension .....	42,411.32	42,274.90	37,414.34	52,411.26

TABLE IV—Continued

	1898-1899	1899-1900	1900-1901	1901-1902
VI. Libraries, Laboratories, and Museums	48,153.98	47,132.19	69,195.78	67,600.96
VII. Printing and publishing.....	43,939.50	42,933.82	36,893.42	36,475.81
VIII. Physical Culture.....	7,310.59	7,389.93	7,699.05	9,959.39
IX. Affiliated Work.....	2,898.14	4,459.29	4,501.31	5,331.12
X. Buildings and grounds.....	63,103.69	67,212.60	72,495.19	74,149.53
XII. Medical Department.....	.....	.....	.....	89,707.58
Excess of income over expenditures..	3,159.49	.....	.....	33,430.07
<b>Total.....</b>	<b>\$723,063.01</b>	<b>\$747,186.62</b>	<b>\$790,583.68</b>	<b>\$977,828.33</b>

TABLE V  
INCOME AND EXPENDITURES, GROSS; COVERING THE LAST EIGHT FISCAL YEARS—SUMMARIZED

	1894-1895	1895-1896	1896-1897	1897-1898
<i>Income:</i>				
Cash on hand July 1.....	\$ 26,158.80	\$ 114,611.22	\$ 4,053.47	\$ 49,500.13
Endowment funds.....	1,695,873.79	2,543,698.90	252,838.25	368,568.00
Special funds.....	2,399.39	102,938.10	337,208.22	307,721.74
Building funds.....	.....	.....	.....	.....
General funds.....	742,669.55	186,742.90	341,522.39	352,638.70
Budget.....	490,675.65	589,898.40	594,918.33	606,973.63
<b>Total.....</b>	<b>\$2,957,777.18</b>	<b>\$3,537,875.52</b>	<b>\$1,530,538.66</b>	<b>\$1,685,402.20</b>
<i>Expenditures:</i>				
Endowment funds.....	\$1,783,065.66	\$2,615,339.25	\$ 250,152.27	\$ 363,278.91
Special funds.....	1,547.25	101,257.84	332,691.67	298,457.55
Building funds.....	.....	.....	.....	.....
General funds.....	514,563.70	180,228.61	205,865.52	270,321.69
Budget.....	543,969.35	636,906.35	692,329.07	678,399.75
Cash on hand June 30.....	114,611.22	4,053.47	49,500.13	74,944.30
<b>Total.....</b>	<b>\$2,957,777.17</b>	<b>\$3,537,875.52</b>	<b>\$1,530,538.66</b>	<b>\$1,685,402.20</b>

	1898-1899	1899-1900	1900-1901	1901-1902
<i>Income:</i>				
Cash on hand July 1.....	\$ 74,944.30	\$ 281,811.46	\$ 3,678.58	\$ 388,640.57
Endowment funds.....	734,722.35	2,279,492.12	2,069,449.92	1,715,656.70
Special funds.....	119,059.19	69,768.03	1,324,508.59	1,187,158.39
Building funds.....	.....	43,390.00	97,810.56	728,639.15
General funds.....	779,312.15	1,209,258.81	510,804.24	435,391.79
Budget.....	723,063.01	740,954.93	775,654.98	977,828.33
<b>Total.....</b>	<b>\$2,431,121.00</b>	<b>\$4,624,635.35</b>	<b>\$4,801,904.87</b>	<b>\$5,431,312.93</b>
<i>Expenditures:</i>				
Endowment funds.....	\$ 500,531.33	\$2,557,164.25	\$2,073,469.73	\$1,763,928.73
Special funds.....	124,492.91	81,247.03	989,923.48	1,337,861.47
Building funds.....	.....	43,646.00	64,374.23	541,396.55
General funds.....	804,361.78	1,191,712.87	494,913.18	458,005.30
Budget.....	719,923.52	747,186.62	790,583.68	944,348.26
Cash on hand June 30.....	281,811.46	3,678.58	388,640.57	385,774.62
<b>Total.....</b>	<b>\$2,431,121.00</b>	<b>\$4,624,635.35</b>	<b>\$4,801,904.87</b>	<b>\$5,431,312.93</b>

TABLE VI  
BUDGET INCOME (BY YEARS)—SOURCES ANALYZED

FROM	1894-1895		1895-1896		1896-1897		1897-1898	
	Amount	Per Cent.	Amount	Per Cent.	Amount	Per Cent.	Amount	Per Cent.
Endow. Fund inv'stm'ts	\$133,981.18	27.3	\$174,596.40	29.6	\$245,219.61	35.3	\$245,237.75	34.7
Students .....	144,993.16	29.5	182,808.97	31.0	211,412.21	30.4	221,605.49	31.3
Publication.....	9,803.16	1.9	13,984.98	2.3	20,283.32	2.9	22,650.64	3.2
Theological Union.....	11,782.35	2.5	25,300.00	4.3	8,900.00	1.2	10,500.00	1.5
Donations, old subs., etc.	15,115.80	3.5	18,208.05	3.1	9,103.19	1.3	6,979.75	1.0
John D. Rockefeller....	175,000.00	35.3	175,000.00	29.7	200,000.00	28.9	200,000.00	28.3
Total.....	\$490,675.65	100.0	\$589,898.40	100.0	\$694,918.33	100.0	\$706,973.63	100.0

FROM	1898-1899		1899-1900		1900-1901		1901-1902	
	Amount	Per Cent.	Amount	Per Cent.	Amount	Per Cent.	Amount	Per Cent.
Endow. Fund inv'stm'ts	\$209,952.06	29.1	\$207,619.98	28.0	\$213,445.58	27.5	\$258,187.42	28.4
Students .....	270,058.73	37.3	294,402.19	39.8	295,854.86	38.1	371,536.12	38.0
Publication.....	19,132.49	2.6	18,941.19	2.6	23,796.87	3.1	23,182.91	2.3
Theological Union.....	7,600.00	1.0	10,200.00	1.4	3,200.00	0.4	9,300.00	0.9
Donations, old subs., etc.	16,339.73	2.3	9,791.57	1.3	14,357.67	1.9	4,977.88	0.5
John D. Rockefeller....	200,000.00	27.7	200,000.00	26.9	225,000.00	29.0	310,644.00	31.9
Total.....	\$723,083.01	100.0	\$740,954.93	100.0	\$775,654.98	100.0	\$977,828.33	100.0

TABLE VII  
SEVEN DEPARTMENTS: RECEIPTS AND EXPENDITURES COVERING A PERIOD 1893-1902 (NINE FISCAL YEARS)

	1893-1894	1894-1895	1895-1896	1896-1897	1897-1898
<b>Receipts</b>					
Divinity School.....	\$36,763.69	\$36,763.69	\$56,789.82	\$44,803.47	50,490.96
Morgan Park Academy..	17,352.09	17,352.09	21,130.76	16,961.92	16,437.79
University Extension ...	26,417.00	26,417.00	25,534.01	31,112.86	35,503.73
University College .....	.....	.....	.....	.....	12,091.24
School of Education .....	.....	.....	.....	.....	.....
Laboratory School .....	.....	.....	.....	.....	.....
South Side Academy.....	.....	.....	.....	.....	.....
<b>Expenditures</b>					
Divinity School.....	.....	42,109.59	41,505.84	45,756.81	49,222.14
Morgan Park Academy..	.....	43,064.88	41,440.70	39,970.81	34,315.88
University Extension ...	.....	32,914.59	33,266.86	39,795.65	40,945.17
University College .....	.....	.....	.....	.....	.....
School of Education .....	.....	.....	.....	.....	.....
Laboratory School .....	.....	.....	.....	.....	.....
South Side Academy.....	.....	.....	.....	.....	.....

TABLE VII—Continued

	1898-1899	1899-1900	1900-1901	1901-1902
<b>Receipts</b>				
Divinity School.....	\$54,737.42	\$62,103.17	\$64,342.97	\$71,589.09
Morgan Park Academy.....	17,067.48	19,648.60	14,751.35	17,470.21
University Extension.....	36,424.09	35,349.29	30,033.43	46,993.00
University College.....	12,091.24	12,361.16	15,022.66	12,272.35
School of Education.....	.....	.....	.....	46,411.10
Laboratory School.....	.....	.....	.....	13,454.00
South Side Academy.....	.....	.....	.....	20,944.01
<b>Expenditures</b>				
Divinity School.....	62,661.84	64,213.93	66,011.79	63,387.60
Morgan Park Academy.....	39,940.64	34,654.78	35,701.52	35,743.68
University Extension.....	42,411.32	42,274.90	37,414.34	52,411.26
University College.....	12,739.72	12,072.09	15,968.21	17,793.54
School of Education.....	.....	.....	.....	58,958.82
Laboratory School.....	.....	.....	.....	14,045.54
South Side Academy.....	.....	.....	.....	19,063.56

TABLE VIII

## BUDGET EXPENDITURES—EIGHT YEARS: ANALYSIS

	1894-1895	1895-1896	1896-1897	1897-1898
Instruction.....	\$297,507.71	\$329,495.27	\$361,776.35	\$373,642.51
Administration expense.....	47,720.10	51,835.06	61,280.36	55,925.60
General expense.....	41,999.79	45,967.73	54,344.85	49,594.83
Buildings and grounds.....	68,907.02	86,313.57	88,433.94	78,646.72
Fellowships and Scholarships.....	22,604.11	33,857.91	32,901.25	41,578.21
Printing and publishing.....	26,130.02	37,613.53	46,010.79	49,179.15
Supplies and expense, departmental.....	5,091.76	9,184.85	13,614.61	11,349.80
Books.....	14,484.75	22,783.20	16,955.27	11,843.91
Scientific equipment.....	19,544.09	19,945.23	17,011.65	6,639.02
<b>Total.....</b>	<b>\$543,989.35</b>	<b>\$636,996.35</b>	<b>\$692,329.07</b>	<b>\$678,399.75</b>

	1898-1899	1899-1900	1900-1901	1901-1902
Instruction.....	\$393,487.35	\$393,415.22	\$410,750.50	\$458,353.99
Administration expense.....	53,873.10	65,142.53	66,547.88	82,320.96
General expense.....	47,005.21	58,423.61	58,330.82	73,001.62
Buildings and grounds.....	82,581.48	83,009.15	88,657.01	93,323.64
Fellowships and Scholarships.....	61,178.71	67,890.45	69,357.85	72,678.78
Printing and publishing.....	48,517.47	47,434.40	41,096.92	50,995.49
Supplies and expense, departmental.....	11,069.93	12,210.89	13,162.57	39,151.61
Books.....	13,611.29	11,394.59	26,915.00	26,354.55
Scientific equipment.....	8,578.98	8,275.78	15,765.13	48,167.62
<b>Total.....</b>	<b>\$719,923.52</b>	<b>\$747,186.62</b>	<b>\$790,583.68</b>	<b>\$944,348.26</b>

TABLE IX  
ASSETS: JUNE 30 (TEN YEARS)

	1893	1894	1895	1896	1897
Investments .....	\$1,465,250.00	\$2,123,071.18	\$3,129,969.48	\$5,330,948.73	\$5,570,564.75
Buildings.....	1,415,434.00	1,781,252.98	1,934,476.71	1,897,249.95	2,219,496.14
Grounds.....					
Books .....	100,000.00	172,955.57	187,906.17	207,052.18	223,219.49
Scientific equipment .....	51,699.05	89,129.99	127,960.93	142,928.19	158,379.32
Furniture .....	30,000.00	47,775.08	52,479.80	53,321.21	54,726.51
Materials and supplies .....	3,948.21	11,743.24	12,816.64	13,433.63	15,600.23
Press plant .....		12,752.48	13,247.31	14,832.97	16,347.34
Cash and current assets..	105,235.11	33,466.56	127,403.61	72,859.20	53,306.82
<b>Total .....</b>	<b>\$3,171,596.37</b>	<b>\$4,272,147.06</b>	<b>\$5,586,160.65</b>	<b>\$7,732,626.06</b>	<b>\$8,311,642.60</b>

	1898	1899	1900	1901	1902
Investments .....	\$5,690,349.96	\$5,192,583.69	\$6,033,551.17	\$7,003,691.55	\$8,674,962.12
Buildings.....	2,653,736.71	2,147,383.28	2,144,309.93	2,207,366.71	2,812,032.60
Grounds.....					
Books .....	234,041.50	254,138.42	288,820.52	292,507.51	314,949.78
Scientific equipment .....	179,383.79	210,516.09	344,998.02	391,700.81	440,993.48
Furniture .....	57,289.85	60,425.15	65,622.69	66,228.09	66,804.54
Materials and supplies .....	17,849.38	19,366.39	26,601.20	66,137.22	36,569.28
Press plant .....	17,409.43	18,123.35	15,083.89	9,755.80	10,521.77
Cash and current assets..	87,718.79	320,211.10	46,716.07	462,761.36	490,164.02
<b>Total .....</b>	<b>\$8,937,759.41</b>	<b>\$9,157,721.50</b>	<b>\$9,880,777.52</b>	<b>\$12,364,216.58</b>	<b>\$15,128,375.95</b>

TABLE X  
BUDGET EXPENDITURES, PER CAPITA, 1902

<b>Total Budget expenditures:</b>		\$944,348.26
Deduct—		
Divinity School	\$63,387.60	
Morgan Park Academy	35,743.68	
University Extension	52,411.26	
Printing and publishing	36,475.81	
Affiliated work	5,331.12	
		<u>193,349.47</u>
<b>Total cost</b>		<b>\$750,998.79</b>
<b>Attendance on three-Quarter basis:</b>		
Graduate Schools of Arts, Literature, and Science	567 1/2	
The Senior Colleges	365 1/2	
The Junior Colleges	622 1/2	
The Unclassified Students	284 1/2	
The Medical Students	217	
		<u>2,057 1/2</u>
<b>Total attendance</b>		
<b>Cost per capita</b>		<b>\$365.03</b>
<b>Divinity School:</b>		
Expenditures	\$63,387.60	
Attendance on three-Quarter basis	225	
<b>Cost per capita</b>		<b>\$281.72</b>

<i>Morgan Park Academy:</i>		
Expenditures		\$35,743.68
Attendance		148
Cost per capita		\$241.51
<i>University College:</i>		
Expenditures		\$17,793.54
Attendance on three-Quarter basis		316
Cost per capita		\$56.30
<i>School of Education:</i>		
Expenditures		\$63,643.08
Attendance on three-Quarter basis		290½
Cost per capita		\$236.41
<i>Laboratory School:</i>		
Expenditures		\$11,411.20
Attendance average		115
Cost per capita		\$99.23

TABLE XI

THE UNIVERSITY OF CHICAGO PRESS — BOOKSTORE  
For the Year ending June 30, 1902

Inventory, July 1, 1901, less 5 per cent. depreciation	\$ 9,907.07	
Merchandise purchased	63,384.51	
General expense	5,138.82	
Pay-roll	3,835.88	
Rent	210.00	
Repairs	5.00	
Heat	51.10	
Gain	1,718.76	
		\$84,251.14
General Sales		\$34,273.93
Departmental Sales		36,269.00
Inventory, July 1, 1902, less 5 per cent. depreciation		13,708.21
		\$84,251.14

TABLE XII

THE UNIVERSITY OF CHICAGO PRESS — PRINTING OFFICE  
For the Year ending June 30, 1902

Inventory, stock, July 1, 1901	\$ 2,428.60	
Work in progress, July 1, 1901	2,844.36	
Stock purchases	18,547.20	
Pay-roll	29,147.76	
General expense	34,494.91	
Plant depreciation	1,169.08	
General rent	190.14	
Special rent	225.00	
Repairs	135.00	
Heat, one-sixth of \$1,230.00	205.00	
Gain	1,156.88	
		\$90,543.93
Printing for University Journals		\$36,978.72
Printing for Departments		22,151.06
Printing for individuals		22,429.25
Inventory of stock, July 1, 1902		2,621.99
Work in progress, July 1, 1902		6,332.89
		\$90,543.93

TABLE XIII  
THE UNIVERSITY OF CHICAGO PRESS—PUBLICATION DEPARTMENT  
For the Year ending June 30, 1902

Inventory, July 1, 1901 - - - - -	\$4,442.91	
Inventory of additional goods on hand June 1, 1901 - - - - -	2,995.00	
Printing and purchases - - - - -	6,270.12	
Pay-roll - - - - -	1,134.09	
General expense - - - - -	1,993.23	
Royalties - - - - -	588.03	
Gain - - - - -	439.24	
		\$17,862.62
General sales - - - - -	\$ 5,297.27	
Sales to Retail Department - - - - -	971.88	
Sales to Departments - - - - -	15.12	
Inventory, July 1, 1902 - - - - -	11,578.35	
		\$17,862.62

TABLE XIV  
GIFTS IN GROSS, ANNUAL  
(From all sources, covering entire period of the University's history; with last fiscal year apportioned as per application thereof)

Gifts in gross, by fiscal years:	Fiscal year 1901-1902:
1889-1890 - - - - - \$ 55,773.80	For Special Fund - - - - - \$1,053,978.28
1890-1891 - - - - - 476,130.62	Endowment Fund - - - - - 1,001,087.69
1891-1892 - - - - - 393,908.66	Building Fund - - - - - 578,356.00
1892-1893 - - - - - 2,241,278.98	Current expense - - - - - 253,144.00
1893-1894 - - - - - 772,850.11	Department of Medicine - - - - - 50,000.00
1894-1895 - - - - - 2,124,003.68	History books - - - - - 17,500.00
1895-1896 - - - - - 2,558,132.30	Fellowships and Scholarships - - - - - 5,667.50
1896-1897 - - - - - 405,629.27	Laboratory School - - - - - 5,055.00
1897-1898 - - - - - 660,558.01	Russian Lectureship - - - - - 2,000.00
1898-1899 - - - - - 681,297.40	Gerhard and Hannah Fore-
1899-1900 - - - - - 1,488,615.59	man Fund - - - - - 2,000.00
1900-1901 - - - - - 2,575,742.07	Astronomy computers - - - - - 2,233.30
1901-1902 - - - - - 2,983,354.95	Miscellaneous - - - - - 12,333.18
\$17,417,275.44	\$2,983,354.95

TABLE XV  
ENDOWMENT FUNDS AND THEIR INVESTMENT: CONSOLIDATED STATEMENT

DATE	CLASSIFICATION				
	Real Estate Fees and Mortgages	Bonds and Stocks	Miscellaneous	Cash	Totals
June 30, 1895.....	\$1,478,449.73	\$1,299,034.75	\$ 6,250.00	\$112,590.87	\$2,896,325.35
“ “ 1896.....	2,089,037.23	2,169,441.50	54,250.00	37,993.52	4,350,742.25
“ “ 1897.....	2,220,023.25	2,279,991.50	45,550.00	40,877.50	4,586,242.25
“ “ 1898.....	2,065,948.32	2,735,751.64	45,550.00	45,741.59	4,892,991.35
“ “ 1899.....	2,113,120.04	2,230,338.65	6,250.00	279,932.61	4,629,641.30
“ “ 1900.....	2,251,789.73	2,187,315.14	385,938.05	2,207.48	4,827,250.40
“ “ 1901.....	2,328,267.42	3,353,569.58	46,938.05	15,913.92	5,744,688.97
June 30, 1902.....	3,444,783.80	4,332,636.67	44,688.05	21,093.13	7,843,201.65
Culver.....	852,853.60	.....	.....	246.40	853,100.00
Total, June 30, 1902	\$4,297,637.40	\$4,332,636.67	\$44,688.05	\$21,339.53	\$8,696,301.65



TABLE XV—Continued

DATE	INTEREST—AVERAGE RATE PER CENT.				ANNUAL INCOME			
	Real Estate	Bonds and Stocks	Mis- cella- neous	Gen- eral Average	Real Estate, Fees and Mortgages	Bonds and Stocks	Miscella- neous	Total
June 30, 1895.....	5.53	5.10	6.00	5.30	\$ 71,575.25	\$ 63,341.00	\$ 375.00	\$135,291.25
" " 1896.....	5.47	5.03	4.23	5.22	103,986.12	109,083.80	2,295.00	215,364.92
" " 1897.....	5.42	5.02	4.28	5.20	110,283.67	114,532.49	1,947.00	226,743.16
" " 1898.....	5.38	4.85	4.27	5.05	101,016.27	89,124.00	1,947.00	192,087.27
" " 1899.....	5.36	4.68	6.00	5.03	102,914.62	85,820.00	375.00	189,109.62
" " 1900.....	5.10	4.49	3.25	4.66	105,494.19	96,367.00	12,559.40	216,420.59
" " 1901.....	4.77	4.22	5.03	4.44	103,033.19	141,205.50	2,359.40	246,598.09
" " 1902.....	4.48	4.24	3.30	4.32	108,126.67	183,630.00	1,470.64	293,227.31

## LAND AND BUILDINGS

## LAND

The University Campus now practically comprises fifteen city blocks, all located between Fifty-eighth street upon the north and Fifty-ninth street (Midway Plaisance) upon the south, Madison avenue upon the east and Cottage Grove avenue upon the west, with a continuous, unbroken south frontage upon the Midway Plaisance between Madison avenue (adjacent to Jackson Park) upon the east and Cottage Grove avenue (the eastern boundary of Washington Park) upon the west, a distance of approximately four thousand lineal feet—four-fifths of a mile.

This body of land, with an area of approximately seventy-five acres, has been secured to the University mainly from its founder, as also from Mr. Marshall Field; the initial acquirement was in 1891, to which additions have been made to some extent upon subsequent dates. The larger body of the land, however, has been acquired and its title vested in the University during the last two years.

## BUILDINGS

The buildings constructed and now occupied are the following named, dates of construction being as stated:

Cobb Lecture Hall	-	-	-	-	1892	Ryerson Physical Laboratory	-	-	-	1893	
Graduate Hall	-	-	-	-	1892	Walker Museum (Geological)	-	-	-	1896	
Middle Divinity Hall	-	-	-	-	1892	Haskell Museum (Oriental)	-	-	-	1896	
South Divinity Hall	-	-	-	-	1892	Anatomy	} Hull Biological	-	-	1897	
Snell Hall—undergraduate dormitory	-	-	-	-	1893	Botany		-	-	1897	
Hitchcock Hall—undergraduate dormitory	-	-	-	-	1901	Physiology		-	-	1897	
Foster Hall	} women's dormitory	-	-	-	1893	Zoology		-	-	-	1897
Beecher Hall		-	-	-		1893	Press Building	-	-	-	1901
Kelly Hall		-	-	-		1893	School of Education (temporary building)	-	-	-	1901
Green Hall		-	-	-		1893	Power house and plant	-	-	-	1901
Kent Chemical Laboratory	-	-	-	-	1893						

The buildings now under construction are as follows:

Tower Group	}	Reynolds Club House.
		Hutchinson Hall (men's commons).
		Leon Mandel Assembly Hall.
		Founder's Tower.

(In the tower is to be a chime of bells, and in the Assembly Hall an organ.)

Frank Dickinson Bartlett Gymnasium.

School of Education.

The cost or value of this improved realty is indicated in Table I.

## YERKES OBSERVATORY

The University Observatory is located upon the shore of Lake Geneva, at Williams Bay, Wis., upon land approximately sixty-five acres in area, donated to the University by Mr. John Johnson.

The Observatory was built by Mr. Charles T. Yerkes, under his own direction, and, together with its telescope and other implements, donated to the University.

## MORGAN PARK ACADEMY

## LAND

The University for Boys is located at Morgan Park, Cook county, Ill., a distance of approximately ten miles from the University Campus and seventeen miles from the City Hall, Chicago.

The land upon which the Academy buildings are situated is upon the ridge, fronting upon several of the more central and important streets of the village, and in area is approximately twelve acres.

## BUILDINGS

The various buildings constituting the Academy group are as follows, viz.:

Morgan Hall—dormitory.

Blake Hall—lecture hall.

East Hall }  
West Hall } dormitories.

Science Laboratory.

Library.

Gymnasium.

(The Gymnasium and East and West halls are new buildings.)

Divinity School: Scandinavian Department.

The Danish-Norwegian and the Swedish Divinity Departments of the University Divinity School are located at Morgan Park, occupying land and a building not far removed from the Academy.

Respectfully submitted,

H. A. Rust,  
*Business Manager.*

## THE REGISTRAR

To the President of the University:

SIR: I herewith submit a report of the work of the Registrar's office for the ten years from the opening of the University to June 30, 1902. The report includes the following items:

1. *University Fees* collected, exclusive of those of the Extension Division, which are reported in another place.

2. *Divinity School Fees*.—It should be explained that tuition fees began to be required in the Divinity School in 1898-99.

3. *The Student Deposit Account*.—The office receives deposits from students, gives them a depositor's book, and allows them to draw against their deposits at their pleasure.

4. *The Student Service*.—Students are permitted to earn a part, ordinarily two-thirds, of their tuition by various kinds of daily service.

TABLE I  
UNIVERSITY FEES, ETC., OCTOBER 1, 1892, TO JULY 1, 1902

Fiscal Year	Examination Fees	Matriculation Fees	Incidental Fees	Tuition Fees	Room Rents	Library Fees and Fines	Laboratory Fees	Diploma Fees	Totals
1892-93.....	\$1,605.00	\$2,345.00	\$3,559.35	\$20,165.76	\$14,159.52	\$2,799.55	\$233.40	.....	\$44,867.58
1893-94.....	1,530.00	2,055.00	3,946.87	34,209.09	17,628.40	3,926.68	612.57	.....	63,708.61
1894-95.....	1,280.00	3,985.00	5,061.75	58,511.61	16,244.74	5,064.25	3,566.58	\$755.00	\$4,448.93
1895-96.....	1,125.00	4,100.00	6,292.00	81,032.50	18,474.63	6,428.06	3,676.79	1,235.00	122,363.97
1896-97.....	925.00	4,240.00	7,955.58	103,737.42	21,640.36	8,103.21	3,978.50	2,675.00	153,235.07
1897-98.....	770.00	4,885.00	7,875.26	109,695.08	22,813.44	8,006.35	4,518.21	2,360.00	160,722.34
1898-99.....	1,055.00	6,140.00	10,154.67	137,345.23	28,294.46	10,368.34	5,039.14	2,347.00	198,723.84
1899-00.....	755.00	6,761.50	10,717.35	147,948.06	30,162.62	10,381.99	5,843.28	2,780.00	215,849.80
1900-01.....	980.00	6,206.50	11,219.87	156,231.06	32,367.97	11,368.06	6,585.83	2,993.00	227,974.31
1901-02.....	1,525.00	7,550.00	12,239.85	202,239.65	37,160.09	12,322.87	8,582.25	3,761.64	285,381.35
<b>Total.....</b>	<b>\$11,530.00</b>	<b>\$48,250.00</b>	<b>\$79,002.55</b>	<b>\$1,051,115.46</b>	<b>\$236,946.23</b>	<b>\$79,288.37</b>	<b>\$42,436.55</b>	<b>\$18,906.64</b>	<b>\$1,567,275.80</b>

TABLE II  
THE DIVINITY SCHOOL

Fiscal Year	Incidental Fees	Matriculation Fees	Tuition Fees	Heat, Light, and Care of Rooms	Library Fees and Fines	Totals
1892-93.....	\$263.75	\$755.00	.....	\$1,276.54	\$1,150.00	\$3,445.29
1893-94.....	787.50	750.00	.....	1,667.34	787.50	3,992.34
1894-95.....	1,087.50	690.00	.....	2,696.50	915.00	5,389.00
1895-96.....	1,250.36	605.00	.....	3,063.94	1,259.14	6,178.44
1896-97.....	1,527.25	505.00	.....	4,705.60	1,527.25	8,265.10
1897-98.....	1,545.63	575.00	.....	4,715.61	1,545.62	8,381.86
1898-99.....	1,278.34	500.00	\$11,664.53	5,072.98	1,275.88	19,791.73
1899-00.....	1,362.53	735.00	13,393.43	6,138.95	1,362.54	22,992.45
1900-01.....	1,352.55	610.00	13,666.41	5,634.45	1,352.54	22,615.95
1901-02.....	1,368.26	725.00	12,552.24	5,617.51	1,373.25	21,636.26
<b>Total.....</b>	<b>\$11,783.67</b>	<b>\$6,450.00</b>	<b>\$51,276.61</b>	<b>\$40,589.42</b>	<b>\$12,523.72</b>	<b>\$122,623.42</b>

TABLE III  
STUDENT DEPOSIT ACCOUNT—BALANCES AT CLOSE OF FISCAL YEARS

Year	Number of Depositors	Total Deposits	Average per Depositor
1894 .....	53	\$3,884.98	\$73.30
1895 .....	76	5,432.87	71.49
1896 .....	137	9,782.29	71.40
1897 .....	163	11,518.54	70.67
1898 .....	192	16,570.45	86.30
1899 .....	181	13,414.78	74.11
1900 .....	138	12,810.84	92.83
1901 .....	331	30,926.52	81.17
1902 .....	385	27,769.13	72.13

#### THE STUDENT SERVICE

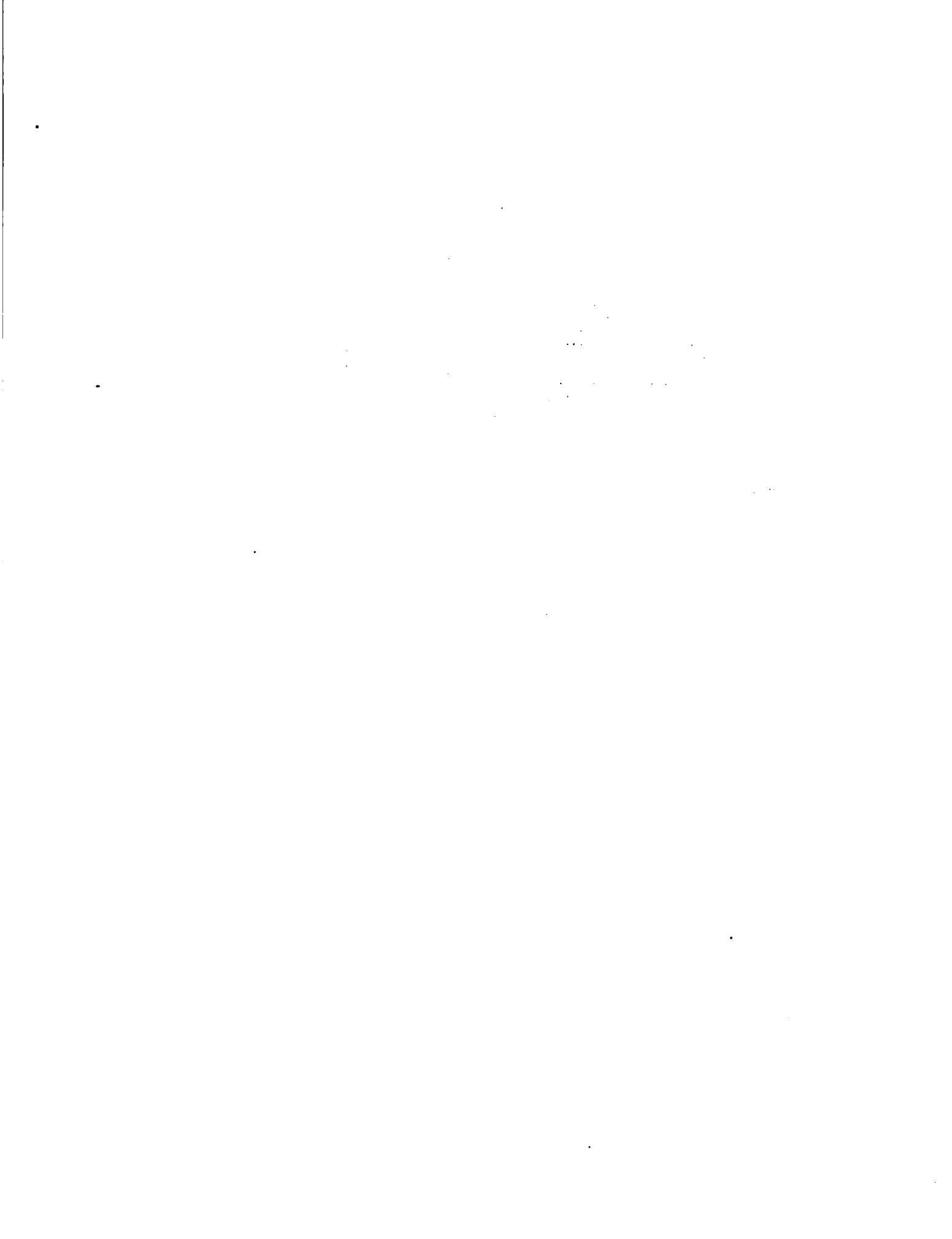
The undersigned was appointed Registrar in the spring of 1898, and is able to report on the Student Service for the past four years only. It has been thought that the appointments to the service in the Autumn Quarter of each year would sufficiently indicate the extent and development of the work.

The appointments for the Autumn Quarter for the past four years have been as follows: 1898, 86; 1899, 90; 1900, 144; 1901, 176. Approximately the same number of appointments is made in each Quarter.

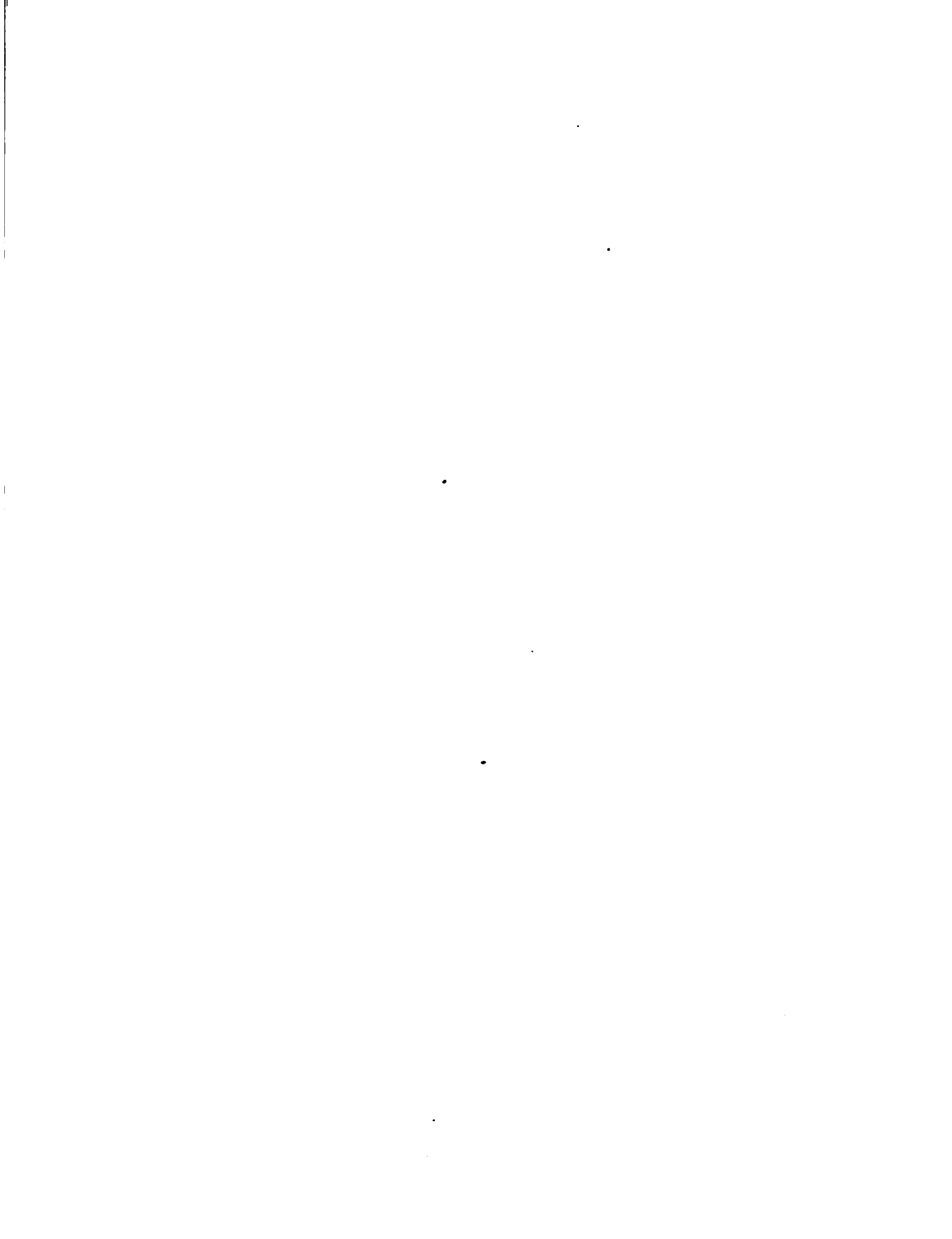
The rapid increase in appointments after 1899 was due to the organization and growth of the University Band, the establishment in connection with the University of the School of Education, the Department of Medicine, the Law School, and the general growth of the institution.

Respectfully submitted,

T. W. GOODSPEED, *Registrar.*



**AN HISTORICAL SKETCH**



## AN HISTORICAL SKETCH

*To the President of the University:*

SIR: I submit herewith the sketch which, at your request, I have prepared in the form of a documentary history to show the development of the University of Chicago.

In 1855 Hon. Stephen Arnold Douglas received a visit from a number of citizens of Chicago, who asked his co-operation in the establishment in this city of an institution for higher education. As a result of this visit, Mr. Douglas gave a tract of ten acres for a campus, and in 1857 the University of Chicago opened its doors for work, Rev. John C. Burroughs being the first President. A stately stone structure was erected on the block bounded by College place, University place, Cottage Grove avenue, and Rhodes avenue. The financial history of the institution was always troubled, the climax being reached in 1886, when the property was seized by an insurance company under foreclosure proceedings. The death of the first University of Chicago was closely associated with the birth of the second.

The regular weekly meeting of Baptist ministers of Chicago which was held February 8, 1886, was largely taken up with a discussion of the affairs of the University. It was then evident that there was no way to relieve the institution from its hopeless indebtedness. Dr. George W. Northrup, President of the Baptist Union Theological Seminary, declared:

It will not pay to go on with the institution under the circumstances. Better get some fresh place—a few rooms, say—retain the same Faculty, and get the best man you can for principal. Raise \$10,000 a year for three years to run it on this plan, and in the meantime try to secure an endowment fund of \$250,000. The fearful trouble and humiliation we have suffered will tend to give a fresh impetus to moneyed Baptists, who will give us aid liberally, and in ten years we can have a splendid institution.

Another speaker was Dr. Thomas W. Goodspeed, who said, among other cheering words:

Chicago is growing southerly, and if we could secure a site ten miles south of the present limits, we should in a few years have a valuable property; for in ten years there will be over a quarter of a million of people south of the present limits. Get a new charter and a new Board of Trustees. The time for us to act is now.

After much discussion, the following resolutions, introduced by Rev. P. S. Henson, pastor of the First Baptist Church, were adopted:

WHEREAS, The Board of Trustees of the University of Chicago have requested the advice of this body; therefore,

*Resolved*, That in our judgment it is impracticable to raise the sum demanded by the Mutual Union Life Insurance Company for the property, and we recommend that the Committee of Fifteen, appointed by the Education Convention held last year at Farwell Hall, should be empowered to take such steps as in their judgment may seem possible for the founding of a new university.

During the next two years there was much consultation and correspondence among prominent Baptists of Chicago and other parts of the country. The time seemed ripe for a great educational movement. What actually resulted is best told in the reports made to the first meeting of the Board of Trustees of the University of Chicago, July 9, 1890, by Dr. Thomas W. Goodspeed, Financial Secretary, *pro tem.*, and by Rev. Fred. T. Gates, Corresponding Secretary of the American Baptist Education Society.



## REPORT OF T. W. GOODSPEED

*To the Trustees of the University of Chicago:*

GENTLEMEN: In calling you together to assume charge of the affairs of the new University, it seems proper for those who have sustained the preliminary official relations to the movement to present to you some brief introductory statements.

That this city is the proper location for a great seat of learning has been felt by the Christian denomination under whose auspices the enterprise has taken shape for many years. No sooner did the former university close its doors than interest began to be manifested in the founding of a new one. Happily for the practical outcome of this interest, it was felt by men whose means were commensurate with their views and sympathies.

In the fall of 1888 Mr. John D. Rockefeller sought opportunities of conference with Dr. W. R. Harper regarding the establishment of an institution of learning in this city. In considering what the denomination owed to the country and to itself, he had come to the conclusion that it ought to re-establish its educational work in Chicago under new auspices and on a broader foundation. He was so strongly encouraged in this view by Dr. Harper that in November of the same year he said to Dr. Harper and the writer of this paper: "I am prepared to say that I am ready to put several hundred thousand dollars into an institution in Chicago." He continued for some months to seek the opinions of intelligent friends, and finally entered into communication with Rev. Fred. T. Gates, Secretary of the American Baptist Education Society.

This society was formed in Washington in May, 1888, and Mr. Gates was elected its corresponding secretary. On looking over his wide field, the first conviction forced upon him was the importance of founding a strong institution in Chicago. In the summer and fall of 1888 he spent some months in this city, conferring on the subject with pastors and laymen. He had several conferences with Mr. F. E. Hinckley, who felt much interested in seeing an institution established, providing it should be of a high character.

In December, 1888, Mr. Gates, on behalf of the friends of the enterprise in Chicago, and Dr. Harper, on behalf of Mr. Rockefeller, laid the matter before the Board of the Education Society where it was fully discussed, and the Board, by a unanimous vote, approved the effort to establish a thoroughly equipped institution in Chicago, pledged its hearty co-operation, and directed the corresponding secretary "to use every means in his power to originate or encourage such a movement." From that day to this Mr. Gates has given himself with untiring devotion to securing the establishment of this institution. Early in 1889 he entered into communication with Mr. Rockefeller on the subject, and, as a result of several conferences, secured the appointment of nine prominent men, who made an elaborate report on the scope of the institution, the location, the funds required for a substantial foundation, the extent to which the Education Society could wisely co-operate in the undertaking, and other points. These nine men were Dr. William R. Harper, Professor of Semitic and Biblical Literature in Yale University; Dr. Samuel W. Duncan; Dr. Henry L. Morehouse; Dr. Alvah Hovey, President of Newton Theological Institution; Dr. J. M. Taylor, President of Vassar College; Dr. H. G. Weston, President of Crozer Theological Seminary; Dr. E. Benjamin Andrews, Professor of History in Cornell University; Rev. J. F. Elder, and Hon. C. L. Colby.

Early in 1889 Mr. Gates sent the following letter to the members of the committee:

*To the Committee of Inquiry on the Proposed Institution of Learning in Chicago:*

DEAR BRETHREN: The following line of inquiry, together with the explanatory statement which precedes it, the Executive Committee directs me to submit for your consideration:

At its meeting in December last the Executive Board of the Education Society adopted a series of resolutions strongly advocating the establishment of a "well-equipped institution of learning" in Chicago, and directing the Corresponding Secretary to use "every means in his power" to bring about such a result.

Whether the institution proposed shall be a university, or a college perhaps ultimately to become a university, the resolutions do not state. On the question of scale of work to be attempted the Board is not committed. It is necessary, however, to decide at least on the initial scope of the institution to be undertaken, to ascertain its probable cost, to outline a general plan of organization, and to learn as nearly as possible the annual expenditure required to develop the institution as speedily as prudence and economy will admit, to the limits determined upon. The Society must clearly define the character and limits of the enterprise, and outline a method of procedure, in order to enlist the practical interest of patrons. It is in this work that your assistance is invited.

We recognize the difficulty of fixing the limits of wise expenditure where there is so much to invite limitless expansion. But the claims of other sections of the country are manifold and pressing. The funds of the denomination available for educational purposes are limited. In considering what the Society may justly undertake for Chicago and the West, due regard must be had for other needy educational interests. The plan to be desired is one which, providing for the strength, efficiency, and perpetuity of the institution, will invite the largest possible local assistance with the least outlay on the part of the Society. Nor ought the Society to undertake anything in the development of the institution which may be left with safety, and without serious loss, to time and local interest.

The judgment of the committee is invited specially in the following particulars :

1. What present need there may be, if any, for technical or professional schools in Chicago under Baptist control, and whether the agency of the Society may be wisely limited to assistance in founding a well-equipped college, leaving any desirable further development to the natural growth of time.

2. Should a college of the liberal arts and sciences, designed prospectively to be associated in one corporate body with technical and professional schools, be located within the city, or may it more wisely be placed in a suburban village?

3. For such an institution, how much land would be required as a suitable site?

4. What buildings would be required? The question of dormitories, gymnasium, etc., will here need consideration.

5. What would be the probable cost of each, due regard being had to economy, convenience, and solidity of construction?

6. What endowment at 5 per cent. would be required to sustain the annual cost of accumulating and supporting necessary illustrative apparatus, including library (departments conveniently itemized)?

7. Designate the officers and chairs of instruction required for a thorough and liberal course in the arts and sciences as now organized in the best Baptist institutions, with endowment at 5 per cent. required to support each.

8. Estimate the time required for the development of such an institution without premature expenditure, on the one hand, or serious loss from delay in furnishing resources, on the other.

9. Estimate, if possible, the sum required each year in such development.

10. Should such an institution have a preparatory department?

11. Should this department, if provided, be located on the college site?

12. Should such an institution be coeducative?

13. How much may Chicago and the West be expected to give for such an institution during the period chosen for development? The difficulty of securing data for an approximate estimate at this stage of the enterprise constrains us to suggest that you use your own discretion as to making the question of local aid a subject of inquiry.

The above suggestions are designed to guide the inquiries of the committee, not to limit them. Additional points of inquiry will suggest themselves to the committee in the course of their labors. It is earnestly desired that the committee report at our meeting in May next, if possible. Any expense incurred will be cheerfully borne by the Society.

In behalf of the Executive Committee,

FRED. T. GATES,  
*Corresponding Secretary.*

At the anniversary of the Society, held in Boston in May, 1889, the Board took final action in the adoption of the series of resolutions which form the basis on which the movement has thus far been conducted. (See Report of F. T. Gates following.)

These resolutions had been agreed upon by Mr. Rockefeller and Mr. Gates in advance of their adoption, and the secretary carried to Boston the pledge of Mr. Rockefeller, with instructions to make it public only after the Board had formally decided to enter on the undertaking. After this had been done and the Society had unanimously indorsed the action, Mr. Gates publicly announced the pledge of Mr. Rockefeller, as made in the following letter:

26 BROADWAY, NEW YORK, May 15, 1889.

*Rev. Fred. T. Gates, Corresponding Secretary American Baptist Education Society:*

MY DEAR SIR: I will contribute six hundred thousand dollars (\$600,000) toward an endowment fund for a college to be established at Chicago, the income only of which may be used for current expenses, but not for land, buildings, or repairs, providing four hundred thousand dollars (\$400,000) more be pledged by good and responsible parties, satisfactory to the Board of the American Baptist Education Society and myself, on or before June 1, 1890, said four hundred thousand dollars, or as much of it as shall be required, to be used for the purpose of purchasing land and erecting buildings, the remainder of the same to be added to the above six hundred thousand dollars as endowment.

I will pay the same to the American Baptist Education Society in five years, beginning within ninety days after the completion of the subscription as above, and pay 5 per cent. each ninety days thereafter until all is paid, providing not less than a proportionate amount is so paid by the other subscribers to the four hundred thousand dollars; otherwise this pledge to be null and void.

Yours very truly,

JOHN D. ROCKEFELLER.

Immediately after this action in Boston, early in June, 1889, a meeting was held in Chicago at the Grand Pacific Hotel, Wednesday afternoon, June 5, 1889, seventy persons being present, fifteen of them pastors and the other fifty-five business men. Mr. E. Nelson Blake was chosen chairman, and, after prayer by Rev. J. Wolfenden of the Fourth Baptist Church, Mr. Gates gave a brief history of the movement to re-establish university work in Chicago, noting the negotiations with Mr. Rockefeller, recognizing the agency and influence of Drs. Henson, Lorimer, Goodspeed, and Northrup, of Chicago, Dr. Harper, of Yale, and Dr. Taylor, of Vassar, and sketching the course of events culminating in Mr. Rockefeller's generous proposal, seconded by that of Mr. F. E. Hinckley. Dr. Goodspeed followed with a series of suggestions in the nature of resolutions to undertake the work, to appoint a college committee of thirty-six, and to convey expressions of appreciation to Mr. Rockefeller.

The committee of thirty-six consisted of the following: in Chicago—E. Nelson Blake, F. E. Hinckley, J. A. Reichelt, C. P. Packer, H. H. Kohlsaat, P. S. Henson, George C. Lorimer, W. M. Lawrence, T. B. Thames, J. F. Gillette, J. F. Peters, O. S. Lyford, Andrew McLeish, J. K. Burtis, O. W. Barrett, F. A. Smith, G. J. Titus, L. Everingham, W. W. Wait, H. E. Patrick, A. L. Sweet, H. A. Rust, C. R. Williams, George C. Walker, J. H. Chapman, E. E. Wise, D. G. Hamilton, C. C. Kohlsaat, C. W. Needham; in Ottawa—L. B. Merrifield; in Elgin—W. E. Bosworth; in Hyde Park—A. McIntosh; in Englewood—J. Badenoch, Jr.; in Blue Island—W. B. Brayton; in Oak Park—Ira H. Owen; in Morgan Park—Thomas W. Goodspeed.

This committee organized immediately by the election of E. Nelson Blake, chairman, and Dr. T. W. Goodspeed, secretary. The following form for subscription was prepared:

WHEREAS, The American Baptist Education Society has undertaken to raise the full sum of one million dollars for the purpose of establishing a college in the city of Chicago, Illinois; and

WHEREAS, John D. Rockefeller, of the city of New York, has subscribed the sum of \$600,000 of said sum, upon condition, among others, that the whole amount of one million dollars is subscribed;

Now therefore, in consideration of these premises and each and every subscription to said object, we the undersigned agree to pay to the American Baptist Education Society, for the purpose aforesaid and upon the condition that the full sum of one million dollars is subscribed therefor, the sums set opposite our respective names on the first day of June, 1890, provided that each subscriber may pay 5 per cent. of this subscription in cash on the first day of June, 1890, and the balance as follows: 5 per cent. of said subscription every ninety days, or 10 per cent. of said subscription every six months, or 20 per cent. of said subscription yearly, said deferred payments to be evidenced by promissory notes and draw interest from June 1, 1890, at the rate of 6 per cent. per annum.

At this meeting Dr. Goodspeed was chosen financial secretary and Mr. O. W. Barrett treasurer. Mr. Gates proposed that the work of securing subscriptions be begun in the committee meeting at once. His suggestion was adopted, and fifty thousand dollars was added to the like amount pledged by Mr. Hinckley, one-fourth of the needed amount being thus secured before the committee of thirty-six left the room where it was organized. Dr. William M. Lawrence closed the first committee meeting with an earnest prayer for God's aid in the great undertaking.

The work has been successfully accomplished, and at the recent annual meeting of the Board the committee appointed to examine the subscriptions made a report, which is embodied in the following telegram:

CHICAGO, May 23, 1890.

*John D. Rockefeller, No. 26 Broadway, New York:*

We are directed by the Executive Board of the Education Society to wire you as follows: The Board through a committee consisting of E. Nelson Blake, C. C. Bowen, and J. A. Hoyt, have personally examined every pledge of the \$400,000 and find what they believe to be good and satisfactory pledges amounting to \$402,083. Further funds are promised and are coming in at the rate of \$1,000 per day. The Board find that in addition to the above sum gifts of libraries and apparatus have been made valued at \$15,000. Mr. Marshall Field's pledge is not included in the above. The Board certify that your terms are fulfilled to their satisfaction. Your certificate that pledges are satisfactory is desired at once to announce here to subscribers and to secure a site. Shall we send a messenger to you with pledges for examination? Please wire your wishes to the Auditorium Hotel.

F. T. GATES, *Secretary.*

GEORGE DANA BOARDMAN, *Chairman.*

ALBERT G. LAWSON, *Recording Secretary.*

To this telegram the following answer was received:

NEW YORK, May 24, 1890.

*Rev. Fred. T. Gates, Corresponding Secretary, Rev. George Dana Boardman, D.D., Chairman American Baptist Education Society:*

Your telegram received, stating that the Executive Board of the American Baptist Education Society have carefully examined the pledges for the Chicago University, and that the conditions of my pledge of May 15, 1889, to give \$600,000 for the same, have been complied with. I accept the statement of this committee and will cheerfully carry out my covenant in the said pledge. I rejoice with you and our many other friends in your remarkable success in securing this fund, and hope our most sanguine expectations for the University will be fully realized.

JOHN D. ROCKEFELLER.

Mr. Field, who had promised a site on condition that the \$400,000 should be secured, also gave his approval in the following letter:

CHICAGO, May 26, 1890.

*F. T. Gates, Corresponding Secretary:*

DEAR SIR: Satisfied that the conditions attached to the noble pledge of Mr. John D. Rockefeller to give \$600,000 as an endowment for a new institution of learning to be located in this city have been fulfilled, I take great pleasure in notifying you that I am prepared to carry out my covenant of January, 1890, to give a site for the new institution and to furnish further land on the terms suggested. In common with all citizens of this city I appreciate the splendid benefaction of Mr. Rockefeller to Chicago. I congratulate the people of this city and the entire West on the success achieved, and with all friends of culture I rejoice that another noble institution of higher learning is to be formed and founded in the heart of the continent.

Yours very truly,  
MARSHALL FIELD.

The work of collecting the subscriptions having been for the time being committed to the writer of this paper, it may be interesting for him to state that up to this date the sum of \$75,000 has been paid in, and every day adds to that amount. Further statements will properly be made by the corresponding secretary of the Education Society, Mr. Gates.

T. W. GOODSPEED,  
*Financial Secretary, pro tem.*

## REPORT OF REV. F. T. GATES

*To the Board of Trustees of the University of Chicago:*

GENTLEMEN: Dr. Goodspeed has presented to you a brief account of the origin of the present enterprise of re-establishing the work of higher education in the city of Chicago, and has traced the progress of the undertaking under the auspices of the American Baptist Education Society up to the completion of the initial fund. It remains to lay before you the engagements and obligations which the Education Society entered into with the subscribers to this fund; to show how in the main particulars these obligations have already been discharged by the Society. This it falls to the lot of a committee to do, consisting of Mr. Blake, Mr. Bowen, and myself, appointed by our Executive Board for this purpose.

The engagements entered into by the Society with its subscribers are embodied in the series of resolutions adopted by our Executive Board and indorsed by the Society when the work of raising funds was undertaken. These may be found on pp. 16 and 17 of our first annual report, now in the hands of you each. These resolutions the Society regards as covenants with the subscribers to the fund. They are based upon the report of a committee of nine eminent educators, but written under the eye of Mr. Rockefeller on the day in which he made his great pledge. On these resolutions the pledge was based. Dated May 15, 1889, the pledge was by stipulation of Mr. Rockefeller held in escrow by the corresponding secretary until the Executive Board at its appointed meeting, two days later, should pass these resolutions. If the resolutions should fail of adoption without material change, Mr. Rockefeller's pledge was to be returned to his hand. These resolutions were unanimously adopted by the Executive Board, May 17, 1889, and the following day were indorsed by the Society with equal unanimity, the Society thus assuming the obligations the resolutions impose. Mr. Rockefeller's pledge was released from escrow and publicly announced. As with Mr. Rockefeller, so with every later subscriber. The resolutions formed a contract on the part of the Society with the subscriber. The Society announced in its official report that on the basis of these resolutions it would seek subscriptions. The resolutions were published for this purpose in the secular and religious press of Chicago; they were embodied in circulars and scattered in the pews of the churches, or sent broadcast by mail over the land. The gentlemen charged with raising

the fund have made the resolutions the basis of their public and private appeals, and everywhere in the name of the Society have guaranteed the full discharge of the obligations and duties which they impose. The resolutions, therefore, are a contract not only with Mr. Rockefeller, but with every one of the twelve or thirteen hundred subscribers to the fund. All the acts of the Education Society in relation to the institution have been in pursuance of these resolutions.

The first resolution reads as follows :

(1) *Resolved*, That this society take immediate steps toward the founding of a well-equipped college in the city of Chicago.

It need only be remarked here that it has never been the purpose of the Society to seek to limit the institution to the work of a college. It has been hoped and believed that a good college located in this city would naturally and inevitably develop into a great university. Legal provision for such development is made in your articles of incorporation. But from the first it has been believed that the enlargement would be effected naturally by the inherent life of the institution and would by no means require the fostering care of the Society. The Society undertook only so much as seemed indispensable for it to do; that was, to found a college on a solid basis. It is for a college pure and simple, therefore, that the funds have been subscribed. Mr. Rockefeller made his pledge "toward an endowment fund for a college to be established in Chicago." The other subscriptions are limited likewise. They can properly be used only for a college. For this purpose alone the appeal has been made throughout the canvass. We have announced that other departments of instruction, if founded, would be supported by other funds. In considering the question of founding preparatory departments or academies in Chicago, it will be necessary to decide whether current usage in the West recognizes these as integral parts of a college.

The second resolution is :

(2) *Resolved*, That the institution be located in the city of Chicago, and not in a suburban village.

In accordance with this resolution the Executive Board has secured a site within the corporate limits of the city.

The articles of incorporation embody the obligation of the third resolution :

(3) *Resolved*, That the privileges of the institution be extended to persons of both sexes on equal terms.

The fourth resolution reads :

(4) *Resolved*, That for a suitable site for the proposed institution there be provided at least ten acres of land.

This obligation has been discharged by the Board in securing twenty acres of land. The site consists of three blocks of six and two-thirds acres each, lying between Fifty-sixth and Fifty-ninth streets and Ellis and Greenwood avenues.<sup>1</sup> The north half of this tract is a gift from Mr. Marshall Field. The south half, extending to the Midway Plaisance, the Board has purchased from Mr. Field at a cost of \$132,500. The terms of this purchase are as follows : Mr. Field, on his part, makes two deeds to us, one for the north half, with consideration fixed at one dollar, and requiring that the property be devoted to no other than educational purposes

<sup>1</sup> This original site was subsequently modified by substitution of the block bounded by Fifty-seventh and Fifty-eighth streets and Greenwood and Lexington avenues for the north block described above. The Trustees then purchased the block bounded by Fifty-eighth and Fifty-ninth

streets and Greenwood and Lexington avenues, paying for it the sum of \$150,000. By act of the City Council (September, 1891), those portions of Fifty-eighth street and Greenwood avenue running through the campus were vacated, thus leaving a solid square site for the University.

for the term of one hundred years ; the other for the south half, with consideration of \$132,500, without limitations as to use. We, on our part, agree to pay the whole sum of \$132,500 within one year from June 1, 1890, in sums of \$1,000 or multiples thereof, as collected, and to pay interest from June 1, 1890, at 6 per cent., interest to be stopped on payments as made. We agree to use all our collections in these payments, except so much as may be required for current expenses, until all is paid. The deeds are in escrow with the Merchants' Loan and Trust Co. Failure to pay the whole within the year operates to restore to us our money paid and to Mr. Field his deeds.

The fifth resolution refers to finances :

(5) *Resolved*, That the Board proceed to raise one million dollars as a financial foundation for the proposed institution.

The total sum raised in pledges and land approximates \$1,200,000.

The sixth resolution refers to conditions of subscription :

(6) *Resolved*, That subscriptions secured for this fund shall be subject to the following conditions :

First Condition, That the whole sum of one million dollars be subscribed before June 1, 1890.

Second Condition, That all subscriptions for lands and buildings bear interest from June 1, 1890, until maturity, at 6 per cent.

Third Condition, That all subscriptions shall be payable in equal quarterly instalments, and shall in no case extend beyond five years from June 1, 1890.

The three conditions of the sixth resolution have been more than fulfilled ; the first by completing the full sum of one million dollars before June 1, 1890 ; the second and third by securing better terms, on the whole, than are therein required, as shown by our subscriptions and the payments already made, amounting to nearly four instalments in thirty days.

The seventh resolution reads :

(7) *Resolved*, That at least \$600,000, and as much more as possible of the million or more subscribed, shall be an endowment fund, the principal of which shall remain invested, and the income used only so far as shall be necessary for the expenses of conducting the institution, and shall not be used in the purchase of lands or in erecting or repairing buildings.

The Society has here discharged its obligation in securing Mr. Rockefeller's pledge of \$600,000, the uses of which are legally limited to the purpose set forth in the resolution. It only remains for us to call your attention, as we now do, to the use to which this fund is limited by its terms, viz., an endowment fund for a college to be established in Chicago.

The eighth resolution is :

(8) *Resolved*, That the Board shall secure the incorporation of the proposed institution as early as practicable ; that the Board of Trustees shall consist of twenty-one members, divided into three equal classes, with terms of service expiring respectively in one, two, and three years ; that the choice of persons for the first Board of Trustees shall be subject to the approval of the Executive Board of this Society ; and that the President of the institution, and two-thirds of the Board of Trustees of the same, shall always be members of Baptist churches.

In securing the incorporation of the institution the Society has acted as promptly as possible. Work on the articles was begun before our success was fully assured. They were sent to the Secretary of State, July 5. The Society desires here to express its gratitude for the very able and painstaking service rendered by two gentlemen, now members of your honorable body, in preparing the articles of incorporation — Mr. Needham and Judge Bailey. It is believed that when your incorporation is legally perfected in every particular, the very extensive privileges and powers granted in the instrument will be found ample for every purpose in the coming years. The Articles of Incorporation read as follows :

## THE ARTICLES OF INCORPORATION

STATE OF ILLINOIS, }  
DEPARTMENT OF STATE. }

ISAAC N. PEARSON, *Secretary of State.*

*To all to whom these presents shall come, Greeting:*

WHEREAS, A certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 10th day of September, A. D., 1890, for the organization of *The University of Chicago* under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which is hereto attached;

Now therefore I, Isaac N. Pearson, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said "The University of Chicago" is a legally organized corporation under the laws of this State.

In testimony whereof, I hereto set my hand and cause to be affixed the Great Seal of State.

Done at the City of Springfield this tenth day of September, in the year of our Lord one thousand eight hundred and ninety, and of the Independence of the United States the one hundred and fifteenth.

[SEAL]

I. N. PEARSON,  
*Secretary of State.*

STATE OF ILLINOIS, }  
COUNTY OF COOK. } ss.

*To the Honorable Isaac N. Pearson, Secretary of State:*

We, the undersigned, John D. Rockefeller, E. Nelson Blake, Marshall Field, Fred. T. Gates, Francis E. Hinckley, and Thomas W. Goodspeed, citizens of the United States, desiring to associate ourselves for the lawful purposes hereinafter stated, and for the purpose of forming a corporation (not for pecuniary profit) under the provisions of the Act of the General Assembly of the State of Illinois entitled "An Act Concerning Corporations," approved April 18, 1872, and of the several Acts amendatory thereof, do hereby state and certify as follows, to wit:

1. The name by which said corporation shall be known in law is "~~The University of Chicago~~."<sup>2</sup>

2. The particular objects for which said corporation is formed are, to provide, impart, and furnish opportunities for all departments of higher education to persons of both sexes on equal terms; to establish, conduct, and maintain one or more academies, preparatory schools, or departments, such academies, preparatory schools, or departments to be located in the city of Chicago or elsewhere, as may be deemed advisable; to establish, maintain, and conduct manual-training schools in connection with such preparatory departments; to establish and maintain one or more colleges, and to provide

<sup>2</sup>To avoid any legal complications arising from the fact that a former institution in the city had been known by the name "The University of Chicago," and had been forced to close its doors because of financial difficulties, a meeting of the Board of Trustees of that institution was held at the Grand Pacific Hotel, Chicago, on Saturday, June 14, 1890, Mr. C. W. Needham, president of the Board, in the chair. There were present also the secretary, Mr. O. W. Barrett, Hon. J. R. Doolittle, Mr. Fernando Jones, Hon. C. C. Kohlsaat, Mr. W. E. Bosworth, Mr. Henry A. Rust, Mr. L. Everingham, Rev. George C. Lorimer, Mr. G. C. Walker, Dr. J. A. Smith, Hon. D. Dibbell, Mr. C. V. L. Peters, Mr. E. B. Felsenthal, Mr. J. E. Bush, and Mr. Newman.

At this meeting the following preamble and resolution were unanimously adopted:

"WHEREAS, There is about to be organized under the general laws of the state of Illinois, by John D. Rockefeller and others as incorporators, a corporation to establish and maintain a university at Chicago; and,

"WHEREAS, This corporation, for want of financial aid has discontinued the work of maintaining a university; and,

"WHEREAS, It is requested by the alumni of the old university that the new institution shall bear the name of the old; now, therefore, be it,

"Resolved, That permission and authority be, and the same is hereby, given to the new corporation about to be organized as aforesaid, to take and use the name, 'The University of Chicago,' and the Secretary of State is hereby requested to issue a license to the new corporation aforesaid, with the name of 'The University of Chicago.'"

At a second meeting, held September 8, 1890, the name of the old corporation was formally changed to "The Old University of Chicago." At the same time it was directed that the books and records of the old university should be turned over to the new institution, this latter action being to facilitate relations of the old alumni with the new, and to secure the preservation of the records of degrees conferred in former years.



instruction in all collegiate studies; to establish and maintain a university in which may be taught all branches of higher learning, and which may comprise and embrace separate departments for literature, law, medicine, music, technology, the various branches of science, both abstract and applied, the cultivation of the fine arts, and all other branches of professional or technical education which may properly be included within the purposes and objects of a university, and to provide and maintain courses of instruction in each and all of said departments; to prescribe the courses of study, employ professors, instructors and teachers, and to maintain and control the government and discipline in said university, and in each of the several academies, preparatory schools, or other institutions subordinate thereto, and to fix the rates of tuition and the qualifications of admission to the university and its various departments; to receive, hold, invest, and disburse all moneys or property, or the income thereof, which may be vested in or intrusted to the care of the said corporation, whether by gift, grant, bequest, devise, or otherwise, for educational purposes; to act as trustee for persons desiring to give or provide moneys or property, or the income thereof, for any one or more of the departments of said university, and for any of the objects aforesaid, or for any educational purposes; to grant such literary honors and degrees as are usually granted by like institutions, and to give suitable diplomas; and generally to pursue and promote all or any of the objects above named and to do all and every of the things necessary or pertaining to the accomplishment of said objects, or either of them.

3. The management of said corporation shall be vested in a Board of twenty-one Trustees, who shall be elected as follows:

At the first annual meeting there shall be elected by ballot twenty-one Trustees. The Trustees so elected shall, at their first meeting, classify themselves by lot into three classes of equal number, which classes shall be designated as the first, second, and third class; and the term of office of the first class shall expire at the second annual meeting, and the terms of office of the other classes shall expire annually thereafter in the order of their numbers. At each annual meeting succeeding the first, seven Trustees shall be elected by the Trustees by ballot. Vacancies occurring by death, resignation, removal, or otherwise shall be filled for the unexpired term by the Board at its first meeting after the vacancy occurs, and the member elected shall belong to the class in which the vacancy occurred.

The qualifications of the Trustees and President of the University and of its College, which shall constitute its literary or undergraduate department, shall be as follows:

At all times two-thirds of the Trustees, and also the President of the University and of its said College, shall be members of regular Baptist churches—that is to say, members of churches of that denomination of Protestant Christians now usually known and recognized under the name of the regular Baptist denomination; and as contributions of money and property have been and are being solicited and have been and are being made upon the conditions last named, this charter shall not be amended or changed at any time hereafter so as to abrogate or modify the qualifications of two-thirds of the Trustees and the President above mentioned, but in this particular this charter shall be forever unalterable.

No other test or particular religious profession shall ever be held as a requisite for election to said Board, or for admission to said University, or to any department belonging thereto, or which shall be under the supervision or control of this corporation, or for election to any professorship, or any place of honor or emolument in said corporation, or in any of its departments or institutions of learning.

The membership of this corporation shall consist of the several persons who for the time being shall be acting as Trustees, and they shall annually elect Trustees to fill the places of those whose terms of office shall expire at the annual meeting. Persons not members of the corporation shall be eligible to election, subject only to the qualifications hereinbefore mentioned.

The Board of Trustees may make by-laws not inconsistent with the terms of this charter, or with the laws of this state, or of the United States, for the government and control of said corporation, and of its several departments, and of the several institutions of learning under its care and control, and for the proper management of the educational, fiscal, and other affairs of said corporation, and for the care and investment of all moneys and property belonging to it, or given or intrusted to the said corporation for educational purposes. Said by-laws shall provide for annual meetings, the first of which shall be held within one year from the date of these Articles of Incorporation.

4. The location of the University and of the College of Arts to be established by said corporation shall be in Chicago, in the county of Cook, and state of Illinois.

5. The following persons are hereby selected as Trustees to control and manage said corporation for the first year of its corporate existence, to wit:

E. Nelson Blake, Ferd. W. Peck, Judge Joseph M. Bailey, Herman H. Kohlsaas, Francis E. Hinckley, Charles L. Hutchinson, Professor Wm. R. Harper, Eli B. Felsenthal, Hon. George A. Pillsbury, Martin A. Ryerson, Edward Goodman, Judge Daniel L. Shorey, Alonzo K. Parker, D.D., George C. Walker, J. W. Midgeley, C. C. Bowen, Andrew McLeish, Elmer L. Corthell, Fred A. Smith, Henry A. Rust, Charles W. Needham.

In testimony whereof we, the incorporators first above named, hereunto set our hands and affix our seals, this 18th day of June, in the year of our Lord one thousand eight hundred and ninety.

JOHN D. ROCKEFELDER.  
E. NELSON BLAKE.  
MARSHALL FIELD.  
FRANCIS E. HINCKLEY.  
FRED. T. GATES.  
THOMAS W. GOODSPEED.

Returning now to the eighth resolution: You perceive that the provisions of the resolution regarding the number and qualifications of Trustees, their terms of office, the qualification of the President, have been embodied in the articles. The prosperity of the institution, no less than its obligations to that denomination under whose auspices it has been created, and which has given by far the larger portion of the funds, require that the qualification of the President and two-thirds of the Trustees shall be secured beyond the possibility of violation at any time. As a further safeguard, therefore, this qualification will be inserted in the title deed transferring to you the real estate of the institution. The College, however, being of a purely literary and scientific character, is not designed to be sectarian. We have therefore provided in the Articles of Incorporation that no religious tests shall be required for election to any professorship or other place of honor or emolument.

The eighth resolution further requires that the choice of the first Board of Trustees shall be subject to the approval of our Executive Board. The nominees presented to our Board represent the choice of the subscribers to the fund. The list of names approved by our Executive Board, and, as so approved, named by the incorporators according to the statutes of Illinois in the Articles of Incorporation, were the nominees of persons representing more than nine hundred thousand dollars of the fund. They have since been cordially accepted by persons representing some two hundred thousand dollars more. Your right and title to be Trustees of this institution is, therefore, assured from the standpoint of the law, and by the nomination of the subscribers, and by the approval of the Society.

The ninth resolution reads:

(9) *Resolved*, That the Society shall collect all funds for the proposed institution, and shall pay the same over to the Trustees at such times and in such amounts as shall be approved by the Board, it being understood that the Society shall exercise no control over the financial affairs of the institution beyond the time when, in the judgment of the Board, the institution is solidly founded.

It will be seen that the first part of this resolution, regarding collection of funds, is modified by the second part, regarding cessation of control. Nearly \$1,200,000 have been pledged to the institution, the site has been purchased, Articles of Incorporation have been filed, a Board of Trustees has been chosen in every way qualified to discharge their high trust, and commanding the universal confidence of the public. With your legal incorporation the time will fairly have arrived when the Education Society need exercise no further control over the affairs of the institution beyond discharging the obligations already assumed. Accordingly Dr. Goodspeed

has been employed as financial secretary only until such time as you shall legally organize. His relationship with the Education Society will cease on that day. It will then be one of your first duties to employ a financial secretary. In his hands the pledges will be placed. The funds as collected have been deposited with the Illinois Trust and Savings Bank. They are now subject to the orders of our treasurer, Mr. Joshua Levering, countersigned by the corresponding secretary. It is desired to continue this arrangement until the payments on the site have been completed, after which it is expected all funds will be deposited with your treasurer. Meanwhile, our treasurer will be directed to pay the bills and expenses of this Board on the order of your President and Secretary, and to turn over the endowment fund as paid in by Mr. Rockefeller to your finance committee for investment on your order.

The tenth resolution reads :

(10) *Resolved*, That the Society shall take the title to the real estate of the institution and convey the same to the trustees of said institution, subject to a reversionary clause, providing that in case the trustees shall ever mortgage the same, or any part of it, or any portion of the property thereon, the whole shall revert to the Society.

When, therefore, the Education Society shall have secured the deeds to the real estate, the transfers indicated in the tenth resolution will be made as soon as the necessary legal steps can be taken.

There is a certain obligation of honor which we have gladly assumed, the full charge of which we desire to commit to you. The Trustees of the University of Chicago, founded in 1857, the work of which was discontinued some years since, have unanimously and heartily bequeathed to you the name "The University of Chicago," and with the name they bequeath also their alumni. The new University of Chicago rises out of the ruins of the old. The thread of legal life is broken. Technicalities difficult or impossible to be removed have prevented our use of the charter of 1857. The new University of Chicago, with a new site, a new management, new and greatly improved resources, and free from all embarrassing complications, nevertheless bears the name of the old, is located in the same community, under the same general denominational auspices, will enter on the same educational work, and will aim to realize the highest hopes of all who were disappointed in the old. A generation hence the break in legal life will have lapsed from the memory of men. In the congeries of interests, affections, aspirations, endeavors, which do in fact form the real life of an institution of learning—in these there has been no break. The alumni of the institution in its older form are the true sons of the new, and as such we bespeak for them such appropriate and early recognition as your thoughtful courtesy may suggest.

We now commit to you this high trust; the erection of buildings, the organization of the institution, the expenditure and investment of its funds, and all that pertains to its work, its growth, and its prosperity, is placed absolutely without any reserve under your control. The Education Society has strictly limited its agency to discharging the engagements into which it entered with the subscribers, engagements on the basis of which all the funds were subscribed. The Society has made no appropriations from the funds except those required in securing and collecting the funds up to this day, incorporating the institution, and securing the site. So soon as sufficient funds are collected to meet these engagements, the official relationship of the Education Society with the institution will cease. Sixty-one thousand dollars have now been paid upon the site. Fervently do we pray that the blessing of God, which has been so signally bestowed on this great undertaking from its earliest beginnings up to the present hour, may continue to prosper it, and still more richly in your hands, until it shall become a mighty educational power in this city and throughout the land.

FRED. T. GATES,  
*Corresponding Secretary.*

## ORGANIZATION OF THE BOARD OF TRUSTEES

Following the presentation of these complete statements from the two gentlemen who had been so active in the preliminary stages of the work, the Board of Trustees organized by the election of E. Nelson Blake, President; Martin A. Ryerson, Vice-President; Charles L. Hutchinson, Treasurer, and Alonzo K. Parker, Recording Secretary.<sup>3</sup> The following important committees were chosen, Mr. Blake being a member of each one:

To complete the incorporation: Judge J. M. Bailey, C. W. Needham, E. B. Felsenthal.

To prepare a code of by-laws: J. M. Bailey, William R. Harper, C. L. Hutchinson, E. B. Felsenthal, E. L. Corthell.

On Buildings and Grounds: F. E. Hinckley, George C. Walker, Martin A. Ryerson, H. A. Rust, Andrew McLeish, E. B. Felsenthal, and E. L. Corthell.

On Finance: E. Nelson Blake, Charles L. Hutchinson, F. W. Peck, C. W. Needham, H. H. Kohlsaas, and J. W. Midgley.

On the Organization of the University and to nominate a President: Judge D. L. Shorey, William R. Harper, F. A. Smith, Edward Goodman, A. K. Parker, and E. Nelson Blake.

Mr. H. H. Kohlsaas was appointed a special trustee to hold any new funds contributed to the University, and Dr. Goodspeed was continued as Financial Secretary.

The question of establishing an academy at Morgan Park was discussed at some length, and referred to a committee for further consideration.

On motion of Judge Shorey, the following preamble and resolutions were unanimously adopted:

**WHEREAS**, The members of the Board here assembled, having been appointed as Trustees to organize a university under the laws of Illinois, upon foundation established by John D. Rockefeller, Marshall Field, and others; and

**WHEREAS**, The corporation known as the University of Chicago has ceased to exercise educational functions, and this Board desires to organize a university under the name used by the old University of Chicago; therefore, be it

*Resolved*, That upon the surrender of said corporation of its corporate name, the Board will organize under the corporate name of "The University of Chicago," and that upon such organization it will recognize the alumni of the former university as the alumni of the new university.<sup>4</sup>

The two months following the adjournment of this first meeting of the Board of Trustees were important ones for the University. The several committees of the Trustees gave earnest thought to the problems involved, as the interest manifested in the founding of the proposed college showed no sign of abating. This interest was so great, and the possibilities in the situation seemed so unlimited, that it was only natural that a desire should develop to broaden the scope of the new institution, and make it a university in fact as well as in name. Such a change, however, required additional funds, and, after conference with Mr. Gates and Professor Harper, the founder determined to make a large addition to his gift of \$600,000.

## A MILLION-DOLLAR PLEDGE

The incorporation of the University being completed on the tenth day of September, 1890, on the eighteenth the Board of Trustees held the second meeting. The following letter was presented:

<sup>3</sup>Dr. Parker served as secretary for two meetings, when Dr. J. A. Smith was chosen. After a short period he resigned, and Dr. T. W. Goodspeed was appointed.

<sup>4</sup>At a meeting of the Board of Trustees held February 2, 1891, on motion of Dr. William R. Harper, seconded by Mr. Ferd. W. Peck, the following resolution was adopted:

"*Resolved*, That in view of the relation of the new Uni-

versity of Chicago to the institution that formerly bore that name, we hereby confirm and re-enact the degrees of B.A. and B.S. conferred by the former University of Chicago, and we invite the graduates to consider themselves the alumni of the University, and to co-operate with us in building it up to greatness."

CLEVELAND, OHIO, September 16, 1890.

*To the Board of Trustees of the University of Chicago:*

GENTLEMEN: I will contribute \$1,000,000 to the University of Chicago, as follows:

Eight hundred thousand dollars, the income only of which shall be used for non-professional graduate instruction and fellowships, and not for land, buildings, or repairs.

One hundred thousand dollars, the income only of which shall be used for theological instruction in the Divinity School of said University, and not for land, buildings, or repairs.

One hundred thousand dollars for the construction of buildings for said Divinity School.

I will pay the same to the said University in seven years, beginning October 1, 1890, and pay one twenty-eighth each three months thereafter, in cash or approved securities at a fair market value, until the whole is paid, it being understood that a certain pledge made July 15, 1890, for \$56,500 to the Baptist Union Theological Seminary of Chicago shall be included in the above million dollars; and also that the said seminary is to become an organic part of the said University; and also that the transfer of said seminary to the grounds of the University shall be made within two years from this date; and also that a thoroughly equipped academy shall be established in the buildings hitherto occupied by the said seminary, on or before October 1, 1892.

Yours truly,

JOHN D. ROCKEFELLER.

This magnificent gift was hailed with profound rejoicing by the Trustees, and a committee, consisting of W. R. Harper, C. L. Hutchinson, E. B. Felsenthal, A. K. Parker, and F. A. Smith, was appointed to see that the wishes expressed in the communication were faithfully realized.

This gift provided for a graduate school, for a divinity school, and for an academy, to supplement the colleges already planned.

#### THE ELECTION OF PRESIDENT HARPER

Just before the letter from Mr. Rockefeller was read to the Trustees, the committee to nominate a President reported, recommending the selection of Professor William Rainey Harper, of Yale University. The report was unanimously and enthusiastically adopted by a rising vote, and a committee was selected to inform Dr. Harper and present him to the Board. On entering, he expressed his appreciation of the honor conferred, and asked for six months' time for consideration of the important offer.

During these months the several committees gave much time to work for the University, provisional reports being made from time to time until April 11, 1891, when two important matters were settled, the coming of President Harper and the union of the Baptist Theological Seminary with the University.

A letter from Dr. Harper, read informally at a meeting in February, when a few Trustees gathered, was formally presented:

NEW HAVEN, CONN., February 16, 1891.

*To the Trustees of the University of Chicago:*

After having considered the proffer of the presidency of the University of Chicago, with which you honored me in September, 1890, I beg herewith to indicate my acceptance of the same. With your permission, I will not enter upon the work of the position until July 1, 1891.

I believe that under your wise and liberal management, and with the co-operation of the citizens of Chicago, the institution will fulfil the generous hopes of its friends and founders. It is with this conviction that I unreservedly place myself at your service. Trusting that the same Divine Providence which has guided this undertaking in the past will continue to foster it through the future, I remain,

Yours sincerely,

WILLIAM R. HARPER.

## UNION OF SEMINARY AND UNIVERSITY

The second item of important business of the meeting provided for the union of the Theological Seminary and the University under the provisions of the following contract :

In consideration of the mutual covenants and agreements herein expressed, the Baptist Theological Union, located at Chicago, hereinafter styled the Union, for convenience, and the University of Chicago, hereinafter styled the University, do hereby agree as follows :

1. The Union agrees to lease to the University for the term of nine hundred and ninety-nine (999) years its seminary grounds and buildings at Morgan Park, at a rental of one dollar (\$1) per year, the University to pay all assessments which shall be levied or assessed against said premises during the life of said lease, to keep insured and in repair all buildings now standing thereon, and to use the same for the purposes of an academy or high school.

2. The University agrees to erect upon its grounds in the county of Cook a dormitory building, to cost not less than one hundred thousand dollars (\$100,000), to be used as a dormitory for the Seminary of the Union, to be cared for, kept insured and in repair by the Union ; also to provide grounds on its campus, at the cost of said University, for additional buildings for the school of the Union, when and as the same shall be reasonably required. The said University also agrees to furnish, at its own cost and charges, and maintain adequate lecture rooms for the use of the instructors in said School. A lease shall be drawn which shall contain such provision as counsel may reasonably devise for the purpose of carrying into effect the provisions of this agreement hereinbefore mentioned.

3. The library of said Seminary shall be located in a building of the University, and shall be cared for and managed by said University in substantially the same manner as the remainder of the library of the said University shall be managed ; it being understood that the students of the said Seminary or School shall have reasonable access to the same.

4. The Seminary of the Union shall be taken and considered to be the sole Divinity School of the University, and shall have accommodations upon the University campus as hereinbefore and hereinafter provided.

5. The treasurer of the Union shall pay over to the treasurer of the University on the last day of each month the net income of the Union for the current month, to be used by the treasurer of the University in the payment of the salaries of the professors and ordinary expenses of the Seminary or Divinity School, all of said expenses being a charge upon the funds of the Union.

6. The treasurer of the University shall likewise be entitled to receive the incidental fees of the Seminary students, and the rentals arising from rooms in the Divinity dormitory unoccupied by professors or students of the Divinity School, provided that the same shall be credited and applied toward the incidental expenses of the Divinity School.

7. The first one hundred thousand dollars received from Mr. Rockefeller, upon his pledge of one million dollars, shall be set apart for the erection of the building hereinbefore provided for by Art. 2, to be used by said Divinity School ; it being understood that any income which may accrue from the same before the date of payment of the contracts for the erection of said building shall be applied to liquidate debts which the Seminary may have contracted before the final location upon the campus of the University of the Union, and that, of the remaining payments to be made by Mr. Rockefeller, the income of one ninth ( $\frac{1}{9}$ ) shall be applied for the purposes of said Divinity School.

8. That the President of the University shall be the President of the Divinity School, and sustain the same relation to the Faculty thereof as to the other Faculties of the University, provided that nothing shall be required by this clause inconsistent with the charter of the Union.

9. That in the supervision and direction of matters pertaining to instruction in the Divinity School the Union shall act in accordance with the general regulations of the University.

10. That the Union will not hereafter confer degrees.

11. That the Union shall cease to conduct the Department of Old Testament and Semitic studies; but this article shall not be understood as debarring the establishment by the Union in the Divinity School of a chair of Biblical Theology of the Old and New Testaments.

12. That the Union shall cease to confer annual memberships, and shall fix the fee of life-memberships at not less than one hundred dollars (\$100).

13. That the income of moneys contributed to the University for theological instruction shall be applied to the support and maintenance of the Divinity School.

14. That all students in the Divinity School shall have free tuition in all studies pertaining to the course of the Divinity School, and free room rent, so far as the dormitory of the Divinity School will suffice, while engaged in such studies.

15. That the University will confer degrees upon graduates of the Divinity School in accordance with the regulations of the University.

16. That instruction in the Old Testament and Semitic Department shall be provided by the University; that is, the instructors of this Department shall be members of the faculty of the Graduate school, and shall receive their salaries from said school; but this provision shall not be considered to prevent any change in said Department which may hereafter be made in accordance with the mutual action of the University and the Union.

17. The University shall confirm the election of all professors and instructors in the Divinity School, when and to the extent that the funds available for the Divinity School shall admit.

18. That all resignations and removals of the Faculty of the Divinity School shall be presented to and acted upon by the board of the Theological Union, and they shall have the supervision and direction of matters pertaining to instruction in the Divinity School.

It is mutually understood and agreed that the co-operative action contemplated by this contract shall be deemed to have become initiated as soon as this agreement shall have been executed, and that this agreement shall go into effect by the first day of July, A. D. 1892.

In witness whereof, the said Union and the University have in accordance with resolutions of its Board of Trustees duly passed, caused these presents to be signed by its presidents and attested by its secretaries, and the corporate seals of said corporations to be hereto attached this thirteenth day of July, A. D. 1891.<sup>5</sup>

Signed :

Attest :

FREDERICK A. SMITH,  
*Secretary.*

T. W. GOODSPEED,  
*Secretary.*

The Baptist Theological Union, located at Chicago, by

F. E. HINCKLEY,  
*President of the Board of Trustees.*

The University of Chicago, by

E. NELSON BLAKE,  
*President of the Board of Trustees.*

This contract was approved by Mr. Rockefeller in a communication, dated at Forest Hill, Cleveland, O., June 20, 1891, as follows :

I hereby approve the foregoing contract between the Baptist Theological Union and the University of Chicago, and accept and adopt the same, when executed and acted upon by the contracting parties according to its terms, as a satisfactory compliance with those portions of my letter to the Board of Trustees of the University of Chicago, dated September 16, 1890, making a contribution of one million dollars to said University, in which it is provided that the Baptist Union Theological Seminary in Chicago should become an organic part of said University and its Divinity School, and that the grounds of said seminary should be transferred to said University.

JOHN D. ROCKEFELLER.

The Theological Union which thus furnished the Divinity School for the University of Chicago had its origin in a meeting of a small company in the lecture room of the First Baptist Church of Chicago in 1860. Its history up to the time of the union with the University is presented in another place.<sup>6</sup>

<sup>5</sup>The date of ratification was inserted after the acceptance of the contract by the Board of Trustees.

<sup>6</sup>See Report of Eri B. Hulbert, Dean of the Divinity School.

## PRELIMINARY ANNOUNCEMENTS OF THE UNIVERSITY

Before the letter announcing the acceptance by Professor Harper of the presidency of the University was received, the first formal bulletin regarding the work of the new institution was published. Seven bulletins were planned, the first of which was a general account, including statements about the history of the movement, the Board of Trustees, the charter, the site, the election of the President, the opening of the colleges, the work of the University, the organization of the University, the general regulations, and remarks upon these general regulations.<sup>7</sup> Before the publication the plan of the University was submitted to the criticism of officials of more than fifty American universities and colleges, and an examination of its principal features in the light of the experience of the years since the organization of the University will be convincing evidence of the carefulness of preparation on the part of those who planned for the institution in its formative days.

VII. THE WORK OF THE UNIVERSITY<sup>8</sup>

The work of the University shall be arranged under three general divisions, viz., The University Proper, The University Extension Work, The University Publication Work.

## 1. THE UNIVERSITY PROPER will include—

a) *Academies*: The first Academy of the University will be established, in accordance with the terms of the gift of Mr. John D. Rockefeller, at Morgan Park, Ill. Others will be organized or affiliated as rapidly as favorable opportunities are presented.

b) *Colleges*: Of these there will be organized—

(1) The College of Liberal Arts, in which the curriculum will be arranged with a view to the degree of B.A.

(2) The College of Science, in which the curriculum will be arranged with a view to the degree of B.S.

(3) The College of Literature, in which the curriculum will be arranged with special view to the study of Modern Languages and Literature, History, etc., with a view, likewise, to the degree of B.S.

(4) The College of Practical Arts, in which the curriculum will be arranged with greater reference than in the other Colleges to the practical departments of business and of professional life, with a view to the degree of B.S.

c) *Affiliated Colleges*: The character of affiliation will be determined by existing circumstances in particular cases.

d) *Schools*: Of these there will be organized—

(1) The Graduate School, which will include all graduate work of a non-professional character.

(2) The Divinity School, which will include the curriculum of study ordinarily presented by Divinity Schools.

As soon as the funds of the University permit, there will also be established—

(3) The Law School.

(4) The Medical School.

(5) The School of Engineering, which will include Civil, Mechanical, and Electrical Engineering.

(6) The School of Pedagogy.

(7) The School of Fine Art.

(8) The School of Music.

<sup>7</sup> Six of the seven bulletins were published as follows: Bulletin 1, January, 1891: General Announcements; Bulletin 2, April, 1891: The Colleges of the University; Bulletin 3, June, 1891: The Academies of the University; Bulletin 4, April, 1892: The Graduate Schools of the University; Bulletin 5, March, 1892: The Divinity School of the Univer-

sity; Bulletin 6, May, 1892: The University Extension Division; Bulletin 7, (not published): The University Press Division.

<sup>8</sup> These sections, numbered VII, VIII, IX, and X, are reprinted from *Bulletin No. 1*.



2. **THE UNIVERSITY EXTENSION WORK**, which will include—
- a) *Regular courses of lectures*, delivered at points in and about the city of Chicago, in accordance with the best developed plans of University Extension.
  - b) *Evening courses* in college and university subjects, in and about the city of Chicago, for men and women whose daily occupation will not permit them to take advantage of the regular college and university courses.
  - c) *Correspondence courses* in college and university subjects for students residing in all parts of the country whose circumstances do not permit them to reside at an institution of learning during all of the year.
  - d) *Special courses* in a scientific study of the Bible in its original languages and in its translations, to be conducted by University instructors at the University at times which shall not conflict with University work.
  - e) *Library Extension*, in connection with the preceding forms of University Extension work.
3. **THE UNIVERSITY PUBLICATION WORK**, which will include—
- a) The printing and publishing of University bulletins, catalogues, and other official documents.
  - b) The printing and publishing of special papers, journals, or reviews of a scientific character, prepared or edited by instructors in the various Departments of the University.
  - c) The printing and publishing of books prepared or edited by University instructors.
  - d) The collecting, by way of exchange, of papers, journals, reviews, and books similar to those published by the University.
  - e) The purchase and sale of books for students, professors, and the University Library.

#### VIII. THE ORGANIZATION OF THE UNIVERSITY

1. *General and special regulations.*—For the administration of the University there shall be a body of "general regulations," and for the administration of each Academy, College, and School of the University, as well as of each department of the University Extension Work, and of the University Publication Work, there shall be a body of "special regulations."

2. *Faculties.*—The officers of the University who give instruction in any Academy, College, or School of the University shall constitute the Faculty of that Academy, College, or School, and shall hold at least one meeting each month. At this meeting the President or Dean of the Faculty shall preside, and the University Recorder or a Deputy University Recorder shall serve as Secretary. The powers of the several Faculties shall be prescribed by the Board of Trustees. For convenience, the Faculties of the several Colleges may meet together when there is no special reason for separate meeting.

3. *The University Council.*—The President of the University, the Dean of each College and School, with one instructor of the same, to be elected by the Faculty thereof, the Dean of each Academy of the University, the University Examiner, the University Recorder, the University Registrar, the University Extension Secretary, and the University Librarian shall constitute the University Council. This Council shall meet at least once a month during the year to consider matters which relate to the general interests of the University or which have been designated by the Board of Trustees as the proper work of the Council. The decisions of the Council shall be carried into effect only when approved by the President.

#### 4. EXECUTIVE OFFICERS AND INSTRUCTORS.

- a) *The President.*
- b) *The University Examiner*, who shall—
  - (1) Arrange and superintend all entrance examinations.
  - (2) Arrange and superintend all Term and Quarter examinations, whether regular or special.
  - (3) Preserve the record of the courses offered by each instructor in the University, and of the courses taken by each student, and of the rank attained in each course, however determined.
  - (4) Preserve the record of vacations, regular and special, taken by instructors and students.
  - (5) Prepare and distribute all diplomas, certificates of work, and letters of dismissal.

- (6) Furnish a statement of the record of each student whenever it may be called for by the proper officer.
- (7) Assist the University Recorder in the preparation of the schedule of courses from Quarter to Quarter.
- c) *The University Recorder*, who shall—
- (1) Serve as Secretary of the Faculties of the University and of the *University Council*.
  - (2) Communicate the action of Faculty meetings and Council meetings to those to whom such action should be made known.
  - (3) Preserve a copy of every University Report, whether of an individual, of a committee, or of a Faculty.
  - (4) Edit the University catalogues and bulletins.
  - (5) Prepare from Quarter to Quarter, with the aid of the Deans and the Heads of the Departments, the schedule of courses of instruction offered in the University.
  - (6) Keep the University Calendar, which shall contain a record of all important events in the history of the University.
- d) *The University Registrar*, who shall—
- (1) Matriculate the students in all Departments of the University.
  - (2) Collect all fees, fines, charges, and rents due the University from students, and report and pay over the same to the Treasurer.
  - (3) Conduct an "exchange" for the convenience of students and instructors.
  - (4) Assign rooms to University students.
  - (5) Superintend the buildings and grounds.
  - (6) Superintend the system of lighting and heating.
  - (7) Conduct a "bureau of inquiry" at which visitors may receive needed information concerning the University.
- e) *The University Extension Secretary*, who shall, under the direction of the *University Council*—
- (1) Arrange for courses of University Extension lectures to be delivered at suitable places.
  - (2) Superintend all such courses, receive the fees paid for the same, to be turned over to the University Registrar, and issue orders, countersigned by the President, for the payment of the lecturer.
  - (3) Arrange and superintend the Evening College and University courses offered.
  - (4) Arrange and superintend all courses of instruction offered by correspondence.
  - (5) Assist the University Examiner in all examinations of correspondence students.
  - (6) Arrange and superintend all special biblical courses offered in the Extension work of the University.
- f) *The University Librarian*, who shall—
- (1) Conduct, under the direction of the *University Council*, the University Library.
  - (2) Superintend the work in all Departmental, Laboratory, Class-Room, and Extension Libraries.
- g) *The University Publisher*, who shall conduct, under the direction of the *University Council*, the entire work in the Publication Department.
- h) *The University Steward*, who shall—
- (1) Conduct, under the direction of the *University Council*, an employment bureau for the aid of students desiring to earn money to assist them in defraying their expenses while attending the University.
  - (2) Serve as Steward of the University Commons, purchasing provisions, engaging service, collecting the charges for board.
- REMARK.**—The University officers, including the President, but not the University Publisher or the University Steward, shall give instruction in the University.
- i) *Deans of Colleges and Schools*, who shall be appointed by the Board of Trustees, and, in their respective Colleges or Schools shall—
- (1) Conduct the special correspondence of that College or School.
  - (2) Have the oversight of the discipline of the students in that College or School.

- (3) Arrange with the Heads of Departments and the University Recorder the courses of study to be offered from Quarter to Quarter.
  - (4) Present business for the action of the Faculty of the College or School.
  - (5) Preside at the Faculty meetings in the absence of the President.
  - (6) Represent the Faculty with one other professor in the *University Council*.
  - (7) Assist the University Examiner in all examinations.
  - (8) Personally meet all students entering the College or School, approve their choice of courses, and give them an entrance card to such courses.
  - (9) Consult with instructors in Majors as to the work and conduct of each student.
  - (10) Conduct all correspondence with parents in reference to the work or conduct of students.
- j) Heads of Departments, who shall in each case—*
- (1) Supervise, in general, the entire work of the Department.
  - (2) Prepare all entrance and prize examination papers, and approve all course examination papers prepared by other instructors.
  - (3) Arrange, in consultation with the Dean and with other instructors in the Department, the particular courses of instruction to be offered from Quarter to Quarter.
  - (4) Examine all theses offered in the Department.
  - (5) Determine, in consultation with the instructors, the text-books to be used in the Department.
  - (6) Edit any papers or journals which may be published by the University on subjects in the Department.
  - (7) Conduct the Club or Seminar of the Department.
  - (8) Consult with the Librarian as to books and periodicals in the Department needed in the University and Departmental Libraries.
  - (9) Consult with the President as to the appointment of instructors in the Department.
  - (10) Countersign the course certificates in the Department.

**REMARK.**—In the absence of the Head of a Department, the instructor next in rank will assume his duties.

*k) Lecturers and Teachers, who shall be classified as follows:*

- (1) The Head Professor.
- (2) The Professor.
- (3) The Professor, Non-Resident.
- (4) The Associate Professor.
- (5) The Assistant Professor.
- (6) The Instructor.
- (7) The Tutor.
- (8) The Docent.
- (9) The Reader.
- (10) The Lecturer.
- (11) The Fellow.
- (12) The Scholar.

#### IX. GENERAL REGULATIONS.<sup>9</sup>

1. *Quarters and Terms.*—The year shall be divided into four Quarters, beginning respectively on the first day of October, January, April, and July, and continuing twelve weeks each, thus leaving a week between the close of one Quarter and the beginning of the next. Each Quarter shall be divided into two equal Terms of six weeks each.

2. *Classification of courses.*—All courses of instruction given in the University shall be classified as Majors and Minors. The Major will call for ten, eleven, or twelve hours of class-room work each week; the Minor for four five, or six hours of class-room work each week. All courses shall continue six weeks, but the same subject may be continued through two or more successive Terms either as a Major or a Minor.

<sup>9</sup>It is understood that the "special regulations" of the various Colleges and Schools may vary considerably from the "general regulations" herewith announced.

3. *The work of professors and teachers.*—Each resident professor or teacher shall lecture thirty-six weeks of the year, ten to twelve hours a week; no instructor shall be required to lecture more than this amount.

4. *The vacations of professors and teachers.*—A professor or teacher may take as vacation any one of the four Quarters, according as it may be arranged; or, he may take two vacations of six weeks each at different periods of the year.

5. *Substitution and extra work.*—A professor or teacher, if he desire, may teach two Quarters six hours a week, instead of one Quarter twelve hours a week. For every Quarter or Term in the year he may teach beyond the three Quarters required, and for every extra Minor in the Quarter or Term he may teach in addition to the twelve hours a week required, he shall receive either an extra two-thirds *pro rata* salary or an extra full *pro rata* vacation. A teacher who has taught three years of forty-eight weeks each, or six years of forty-two weeks each, will thus be entitled to a year's vacation on full salary.

6. *Adjustment of vacations.*—No work will be credited for extra vacation or extra salary except that which may have been accepted by the Dean of the College or School and the President. All vacations, whether extra or regular, shall be adjusted to the demands of the situation, in order that there may always be on hand a working force.

7. *Discipline.*—Each teacher conducting a Major course shall assume, with the Dean of the College or School, the responsibility of the work and of the conduct of all students in that course. Cases of serious discipline shall be presented by the Dean to the Faculty. Appeal may be made from a Faculty to the University Council.

8. *Conditions of entrance.*—The requirements for admission to any College or School shall be as high as those of any similar College or School in America. Applicants for a degree shall be *examined* upon all required subjects. Certificates will not be accepted. In general, arrangements will be made by which students in any part of the country shall be given an examination for admission with the least possible inconvenience and expense.

9. *Method of admission:*

- a) In entering for the first time a College or School of the University, a student shall (1) obtain from the University Examiner a certificate that he has passed the necessary examinations, and (2) deposit with the University Registrar this certificate, together with a guarantee for the payment of all fees and charges, and, upon the payment of a matriculation fee of five dollars, receive from him a card of matriculation; (3) obtain the indorsement on this card of the Dean of the College or School to which entrance is desired, and an entrance card for the courses which the student desires to undertake.
- b) In passing from one College or School to another, certificates or diplomas must be exhibited to the Registrar and Dean, as above.
- c) In entering any course of study, a student must present to the professor or teacher the entrance card of the Dean of the College or School.

10. *Tuition fee.*—The fee for instruction shall be \$25 a Quarter, with such modifications as may be made in the special regulations of any School or College. Besides the tuition fee there shall also be an incidental fee of \$2.50 a Quarter and a library fee of \$2.50 a Quarter. To students entering the College for the first time there will be a charge of \$5 as a matriculation fee.

11. *Full and partial work of a student.*—Each student doing full work shall be required to take one Major and one Minor during each Term of a Quarter, but a student by a special request may, for good and sufficient reasons, be permitted to take one Major or two Minors, in which case he must furnish satisfactory evidence that he is making a proper use of all his time.

12. *Standing and examinations.*—The standing of a student in any course will be determined from his Term grade, from an examination taken immediately at the completion of the course, and from a second examination taken twelve weeks after the date of the first examination. But the student whose Term grade has been sufficiently high will not be required to pass the first examination and may, if he desire, substitute for a second examination new material in the same Department of study equal in amount to one-quarter of that included in the work of the Term. Upon the completion of each six Majors and six Minors, the student will be advanced to the next higher class.

13. *Vacation of students.*—A student may take as his vacation any one of the four Quarters or, if he desire, two Terms of six weeks in different parts of the year.

14. *Required and elective courses.*—In general, the proportion of required and elective courses necessary for a degree shall be equal. The order of arrangement will be indicated under the special regulations for any given degree.

15. *Residence and non-residence.*—Non-residence work will be accepted on the following terms: (1) Applicants for advanced standing will be examined on the work which the class to which entrance is desired has accomplished; (2) after acceptance the student will be permitted to substitute for residence work non-residence work, provided that (a) the non-residence work shall have been performed under the direction of a professor or teacher in the University Extension Division of the University, and is a full equivalent in amount and character for that for which it is substituted; (b) a satisfactory examination shall have been passed upon the same at the University; (c) the amount of non-residence work shall not exceed in quantity or equivalent of time the amount of residence work performed.

16. *Rotation of courses.*—The courses of instruction shall be so arranged that a student may enter any class of a College or School at the beginning of any Quarter without disadvantage to himself or to the subject.

17. *Students not candidates for a degree.*—Students not candidates for a degree may be admitted to the courses of instruction offered in the University without examination, provided that (1) they may show good reason for not entering one of the regular classes; (2) they can give evidence to the Dean and to the particular instructor under whom they desire to study that they are prepared to undertake the proposed subject or subjects; (3) they agree to adjust themselves to all the regulations of the University; (4) they, having been admitted, maintain a standing which will warrant their continuance.

18. *Scholarships and Fellowships.*—Scholarships and Fellowships will be granted solely on the ground of merit. In order to cultivate independence on the part of a student and at the same time to obtain for him the advantage which proceeds from practical work, each student on a Scholarship or Fellowship, whether graduate or undergraduate, shall be expected to render assistance of some kind in connection with the work of the University, the duty in each case to be adjusted, so far as possible, to the desires of the Scholar or Fellow.

19. *Chapel service and public worship.*—(1) Every undergraduate student shall be required, and every graduate student requested, to attend the daily Chapel service. This service shall be held upon week days at 12:30 P.M. and upon Sunday at 9:30 A.M. (2) The Faculty of any College or School may, by a vote of said Faculty and the approval of the Board, conduct a special Chapel service for the members of that School, at such hour as may be chosen, provided it does not conflict with the hour of general service. (3) The University makes no requirement in reference to attendance upon public worship on Sunday, except it requires all undergraduate students residing in dormitories of the University to attend the University Chapel service conducted Sunday morning at 9:30.

20. *Degrees.*—The degree of B.A. will be conferred by the Board of Trustees upon the recommendation of the Faculty of the College of Liberal Arts, confirmed by the University Council; the degree of B.S., upon the recommendation of the College of Science, or Literature, or Practical Arts, confirmed by the University Council; the degrees of M.A. and Ph.D., upon the recommendation of the Graduate School, confirmed by the University Council; the degree of LL.D. (for work done), upon the joint recommendation of the Faculties of the Law and Graduate Schools, confirmed by the University Council; the degree of B.D., upon the recommendation of the Divinity School, confirmed by the University Council; the degree of D.D. (for work done), upon the joint recommendation of the Faculties of the Divinity and Graduate Schools, confirmed by the University Council. Other degrees (LL.B., M.D., etc.) will be given in accordance with the same principles. No honorary degrees will be conferred by the University.

#### X. REMARKS UPON THE GENERAL REGULATIONS

It is believed by those who have studied the plan—and the number includes many of the leading educators of the country—that it will—

1. Secure concentration on the part of the student, since it provides that he shall not have too

many subjects for study at the same time; and that this in turn will secure broader knowledge and better discipline of mind.

2. Permit the admission of students to the University at several times in the course of the year rather than at one time only.

3. Provide for the loss of time of students who become sick, without either injury to their health or detriment to the subject studied.

4. Make it possible for the summer months to be employed in study by those who are physically able to carry on intellectual work throughout the year and are inclined so to do.

5. Provide against the present method of passing all men, the good and poor alike, through the same course within the same time; in other words, make it possible for good men to take the College course in three years, and for others to have more than four years in which to do it.

6. Raise the standard of work, especially for men doing poor work, by requiring them to take a smaller number of hours, unless a certain high standard is reached.

7. Permit men to be absent from the University during those portions of the year in which they can to the best advantage occupy themselves in securing means with which to continue their course.

8. Mitigate the evils of the present method of examinations.

9. Furnish greater stimulus and incentive than now exist toward original investigation.

10. Make it possible for students to take, besides the regular subjects of the College curriculum, such practical subjects as bookkeeping, stenography, etc.

11. Secure a greater degree of intimacy between instructors and students than can be obtained by the present systems.

12. Provide against instructors teaching too many subjects at the same time.

13. Provide for a year or two-year vacation for instructors at regular periods with full salary.

14. Make it possible to avoid the necessity of retaining instructors in the institution when they have shown themselves unfit.

15. Make it possible for the University to use, besides its own corps of teachers, the best men of other institutions both in this country and in Europe.

16. Permit greater freedom on the part of both students and instructors in the matter of vacations.

17. Furnish relief from the complications now existing in the arrangement of the work of the various electives.

18. Provide for the use of the University plant during the entire year, rather than through three-quarters of it.

19. Provide an opportunity for professors in smaller institutions, teachers in academies and high schools, ministers and others, who, under the existing system, cannot attend a college or university, to avail themselves of the opportunity of University residence.

20. Secure to the institution the advantages which accrue from the adoption of the correspondence system as an organic part of the University, a system which long trial has demonstrated to be in the strictest sense practical and thorough.

21. Secure a harmonious relationship between the various departments of the University.

22. Make it possible to use advantageously in the academic department many courses of the professional and graduate departments.

23. Encourage an independent feeling on the part of all men who share the advantages of the University.

24. Allow large freedom in the choice of subjects, and yet so control this choice as to prevent fatal mistakes on the part of students.

25. Surround undergraduate students with all the restraining influences possible.

26. Provide for the administration of the institution in accordance with a truly American and a truly university spirit.

From this time history was made rapidly. The growth of the University being assured, a committee was authorized to buy additional ground for campus purposes. A number of architects were asked to submit plans for University buildings, and as a result of the competition

Mr. Henry Ives Cobb was selected as architect, in June, 1891, and the erection of three buildings was ordered. The first annual meeting was held June 23, 1891, the several reports indicating the extent of progress which had been made in the twelve busy months.<sup>10</sup>

#### FIRST APPOINTMENTS TO THE FACULTY

On the eighth of July the first appointment of a Professor was made, Mr. Frank Frost Abbott, of Yale University, being chosen University Examiner and Associate Professor of Latin, the appointment dating from July 1, 1891. At the same meeting Mrs. Zella Allen Dixon, the librarian of the Baptist Union Theological Seminary, was made Assistant Librarian of the University, the appointment to date from October 1, 1891.

A third appointment of great importance was that of Mr. Harry Pratt Judson, of the University of Minnesota, who was elected Professor of History and Dean of the Undergraduate Department, January 26, 1892, and began his active work June 1, 1892.

July 9 was the date of decision for the organization of the Morgan Park Academy, to open October 1, 1892, in the building formerly occupied by the Theological Seminary. At the same meeting the gift from the Ogden estate was formally accepted.

#### THE OGDEN GIFT

The heirs of William B. Ogden, who served the city of Chicago as its first mayor, being attracted by the possibilities in the plans of the University, opened correspondence with President Harper and held conferences with him, as a result of which the Ogden (Graduate) School of Science was established. The purpose of the gift to the University is clearly set forth in the following correspondence:

NEW YORK, June 30, 1891.

*W. R. Harper, Ph.D., University of Chicago, Chicago, Ill.:*

DEAR SIR; It is with much pleasure that I am able to inform you that the executors and trustees under the will of the late William B. Ogden have decided to select the University of Chicago, of which you are the honored president, as the recipient of seventy per cent. of the moneys to be devoted to charities under the terms of Mr. Ogden's will. In making this selection, as you are aware, the executors have been guided by the correspondence which has passed between you and myself as to the uses to be made of the moneys which may be realized to the University under this appointment for the founding and endowing a school for original scientific research, to be known as The Ogden Scientific School of the University of Chicago. As the formal instrument of designation, however, can be executed only after the acceptance on the part of the University of the gift for these purposes, it seems not improper at this juncture to review briefly the general scope and plans for such a school as discussed in our conversations and correspondence heretofore.

Viewed from the standpoint of the executors, the school is to be a monument to the name of their testator, the late William B. Ogden, for so many years a resident of the city of Chicago, and the first mayor of that city. From this standpoint it is desirable, therefore, that the school should be a separate department of the University, and should bear the name already stated, The Ogden Scientific School. Its purpose is to be the furnishing to graduate students the best facilities possible for

<sup>10</sup> The early meetings of the Trustees were held at the Grand Pacific Hotel, or in the Directors' Room of the Corn Exchange Bank. In the spring of 1891, the need of permanent quarters being felt, offices were secured in the Chamber of Commerce Building. The first meeting in the new rooms was April 3, 1891, and from this time the address "1212 Chamber of Commerce Building" became familiar to all those interested in the University. These offices were

retained by the University Trustees for some time. Later, room 310 in the Western Union Building was secured, and was the down-town home of the University Trustees until 1896, when offices were fitted up in connection with the University of Chicago College for Teachers on the fourth floor of the Fine Arts Building on Michigan avenue. In April, 1902, the present offices in the Merchants' Loan and Trust Building were occupied.

scientific investigation, both by courses of lectures which shall be provided, and the laboratory practice afforded. To these ends the income of the moneys appropriated from the estate is to be devoted and shall be used for the payment of salaries and fellowships and the maintenance of laboratories in physics, chemistry, biology, geology, and astronomy, with the subdivisions of the departments. It is also to be understood that a large share of the time of professors in the school should be given to original investigation, and that encouragement of every kind should be furnished them to publish the result of their investigations, a portion of the funds being set apart for the purpose of such publication.

Of course, it is to be understood that this school is to include all the graduate work of the University on the subjects mentioned, and that further appropriations or donations which may be made toward these objects should be added to the original foundation and not devoted to new schools doing similar or parallel work. It is also proposed that some portion, though perhaps an inconsiderable one, shall be set apart for the purchase of books, not to be placed in the general library of the University, but in the special departmental and laboratory libraries of the proposed school.

As you are already aware, the exact amount of the moneys which may become applicable to the foundation of this school under the designation is not now ascertainable. An unfortunate litigation is now pending over the clause in Mr. Ogden's will under which the appropriation will be made; but, though no decision has as yet been reached in that litigation, it is the confident expectation of the executors that the amount which will finally become applicable to the purpose of the proposed scientific school will certainly not be less than three hundred thousand dollars, and may reach a sum considerably in excess of half a million. With the broad foundation on which it is proposed that this school should be based, it will be necessary that the sum originally given from the estate funds should not be less than the first-named sum of three hundred thousand dollars; but the trustees desire it to be understood that the University in accepting this gift will pledge itself to erect the contemplated school under the suggested name of The Ogden Scientific School on the receipt of this sum, whether or not the wish and expectation of the trustees be realized in the final receipt from the charity fund of a much larger sum. In the event, however, of any unforeseen circumstances preventing the moneys designated from reaching the above-mentioned sum of three hundred thousand dollars, it is further understood that the moneys which may be received shall be used for the endowing of one or more professorships in the said University, to be severally known as the Ogden professorships.

It is also the wish of the trustees that they should be allowed some voice in the development of this plan, and to that end I would suggest that at least one of the Board of Trustees of the University should be the nominee of the executors and trustees of Mr. Ogden's estate, in order that in the formation and development of the scientific school proposed the wishes of the trustees may be voiced by at least one member of the governing body of the University.

There is one further point upon which the executors desire that a distinct understanding should be had, namely, the absolute freedom of the admission to the proposed school of students and professors alike, without reference to their particular religious beliefs. The assurance which you have already given me upon this point is, of course, sufficient to my own mind, but it is the desire of the trustees that in this announcement of their intention to make the contemplated designation this point should be clearly stated, that at no subsequent date any misapprehension in relation to it should possibly arise.

I may say that in the course of the business with relation to this gift to the University I have talked the matter over with Rev. Leighton Williams, a friend of your own as of mine, and the present statement of the plan is one which I believe will be consonant with your own views as well as with the wishes of the executors.

In conclusion it may be well to state that, whether or not it be thought best in the future to execute a formal deed of gift by which the exact lines of the proposed school shall be determined, the designation which the executors contemplate executing upon the acceptance of this gift, on the terms stated, will be sufficient to assure to the University the final application of such moneys as may vest in the trustees for charitable purposes to the amount of seventy per cent. thereof.

Yours very respectfully,

ANDREW H. GREEN.



The assurance that the Board of Trustees of the University would accept the proffered gift, and would heartily co-operate with the trustees and executors of the will of Mr. Ogden, was conveyed to Mr. Green by President Harper in the following letter :

CHICAGO, ILL., July 1, 1891.

*Andrew H. Green, New York city:*

MY DEAR SIR: I beg to acknowledge with much pleasure the receipt of your letter of June 30, announcing the decision of the executors of the estate of the late William B. Ogden to designate to the University of Chicago a portion of the funds of that estate devoted to charitable uses under the terms of Mr. Ogden's will.

You will permit me, on behalf of the Trustees of the University, to express our deep appreciation of the spirit which has prompted this magnificent gift, and to assure you that we shall join with the executors most heartily in seeking thus to do honor to one whose memory is kindly cherished in the city with the early history of which he was so closely connected. In view of Mr. Ogden's personal interest in the cause of education, and of the official relation which at one time he sustained to the old University of Chicago, the appropriateness of the designation will be universally conceded.

As President of the University I feel free to pledge the Trustees not only to an acceptance of the gift so kindly bestowed, but also to an administration of the funds thus designated in strict accord with the terms which you have so definitely and, as it seems to me, so wisely indicated.

It has been our chief desire to be able to encourage, in connection with the University, the work of original investigation in the several fields of natural science. The income of the funds which you have designated, together with that which may be drawn from other funds already pledged, will enable us to do, at least in part, the work of this character which should be expected of a university so centrally and so peculiarly located.

At present the membership of the Board of Trustees is full, but in a manner which, I think, will be entirely satisfactory to the executors of the Ogden estate arrangements will be made for the proper representation of the donors of the fund upon the Board.

In closing, I desire to express to you the feeling that the gift, great and munificent as it is, carries with it a significance not to be measured merely by the income of the fund. It speaks, as you have yourself informed me, an interest in an educational work in which the directors have indicated their purpose not to be restricted by the traditions of the past, but rather to move forward in accordance with what they conceive to be the true American spirit.

I remain, very sincerely yours,

WILLIAM R. HARPER.<sup>11</sup>

#### BERLIN LIBRARY

The next important forward step taken by the University was the purchase of a great library in Berlin, Germany. While in that city, President Harper had his attention drawn to a collection of books called the "Calvary Library," which had been gathered during forty years by the brothers Simon. As one of the brothers had recently died and the survivor wished to sell out, owing to his advanced age, a favorable proposition was made to the University, and, the opinion of experts being taken, the purchase was made, the money needed for it being guaranteed by Henry A. Rust, Martin A. Ryerson, Charles L. Hutchinson, and H. H. Kohlsaas.

Having secured the library of the Baptist Union Theological Seminary, comprising 40,000 volumes, and the library of the old University, comprising 10,000, this purchase, first estimated to contain 280,000 books and 120,000 pamphlets, many of them rare and costly, placed the Library of the University at once among the largest and best in the country. The purchase was authorized by the Trustees on October 27, 1891.

<sup>11</sup> Up to January 2, 1902, there has been paid on the Ogden bequest the amount of \$318,402.00.

## PLAN FOR BUILDINGS

At the next meeting, November 16, 1891, the need of buildings being discussed, a proposition gained favor that an effort be made to secure one million dollars to be used for the erection of the necessary structures. The plans of the buildings already determined upon were presented, and after careful consideration it was decided that all permanent buildings of the University should be erected of blue stone from Bedford, Ind., and that work should begin at once upon the recitation building and the Dormitory for the Divinity School. How the committee on buildings answered the order was shown at the Board meeting a few days later, when it was reported that the foundations were laid and all was in readiness for the superstructure. At this first November meeting of 1891, the first Head Professor was elected in the person of William Gardner Hale, of Cornell University, who was made Head of the Department of Latin. Another action by the Board provided for the award of a Scholarship to each of the high schools of Chicago, and to each of twelve academies to be designated later. At the second November meeting James Laurence Laughlin, of Cornell University, was chosen Head Professor of Political Economy.

Ground was broken for the first building on November 26, 1891. Before this time a general plan was prepared for the entire group of buildings, as they would appear after all were erected. This plan shows four Quadrangles for dormitories, with the public buildings, such as library, recitation halls, laboratories, and museums, as central features.

The year 1892 was early marked by announcements of great interest to the University. A large number of professors and instructors of lower rank found places in the incipient Faculty. A plan for the affiliation of colleges and secondary schools was elaborated.

## GIFT OF THE KENT CHEMICAL LABORATORY

At the meeting of the Trustees held March 19, the following communication was presented:

CHICAGO, March 17, 1892.

*To the Board of Trustees of the University of Chicago:*

GENTLEMEN: Mr. Sydney A. Kent, of this city has decided to erect and furnish a building to be located on the University grounds, and to be known as the "Kent Chemical Hall," and to cost not to exceed one hundred and fifty thousand dollars (\$150,000). The general design has been prepared by the architect and approved by Mr. Kent. Detail drawings will be made at once and the erection of the building commenced as soon as possible. He will provide the means to pay for same as the work progresses. The gift is made on the condition that the corporation shall give him a written guarantee that in case the building is ever destroyed it shall be rebuilt and the name retained.

GEORGE C. WALKER.

## THE SECOND MILLION-DOLLAR GIFT

At the same time the following letter from Mr. Rockefeller was read:

NEW YORK, February 23, 1892.

*To the Trustees of the University of Chicago, Thomas W. Goodspeed, Secretary, Chicago, Ill.:*

GENTLEMEN: I will give to the University of Chicago one thousand 5 per cent. bonds of the par value of one million dollars, principal and interest payable in gold. The principal of this fund is to remain forever a further endowment for the University, the income to be used only for the current expenses and not for lands, buildings or repairs. I reserve the right to designate at my option the expenses to which this income shall be applied. I will deliver these bonds March 1, 1892, bearing accrued interest from December 1, 1891. I make this gift as a special thank-offering to Almighty God for returning health.

Sincerely yours,

JOHN D. ROCKEFELLER.

## MARSHALL FIELD'S PROPOSITION

These two great gifts coming so close together were followed by a stimulating communication from Mr. Marshall Field, of Chicago, who wrote:

CHICAGO, April 8, 1892.

*To the Trustees of the University of Chicago:*

GENTLEMEN: In order to assist the University of Chicago in securing the funds it needs for the first buildings and the contingent expenses incident to the organization of a great institution, I will give to the University one hundred thousand dollars on condition that, including Mr. Kent's recent subscription of one hundred and fifty thousand, the sum of one million dollars be secured by the tenth day of July next, in subscriptions which I am satisfied can be promptly met on the same terms as my own pledge. The conditions being fulfilled, I will pay the subscription in one year in four equal quarterly payments, beginning July 15, 1892.

Yours truly,

MARSHALL FIELD.

Encouraged by this princely offer of Mr. Field, the Board of Trustees, ordered a subscription form prepared, and entered upon the canvass to secure a million dollars for buildings within ninety days.

This communication was presented to the Trustees at a meeting held April 11, 1892. At the same time there was read a letter from George C. Walker, of Chicago, also a member of the Board, responding to a suggestion in a letter from President Harper.

CHICAGO, April 9, 1892.

*To the University of Chicago, Chicago, Ill.:*

Your communication of the eighth instant is before me and its contents carefully noted. I appreciate fully the importance of establishing at Morgan Park a thoroughly first-class school as a part of the great work of the University of Chicago, and as the plan you indicate, when carried out, will undoubtedly accomplish the result, I have decided to donate Lots 1 and 2 of the resubdivision of 1 to 7, Block H, and the school building thereon (the present Female Academy) to the University of Chicago for the purpose of assisting in the establishment of such school, upon the condition that it shall be established and maintained by the said University of Chicago for a period of not less than fifteen years, and that this building shall be used for one of the departments of the said preparatory school. The two lots contain nearly two acres of ground, as will appear by the recorded plat, and there is ample room for the erection of other buildings as the wants of the institution may require. I think the building cost us over twenty thousand dollars, and it is admirably arranged for school purposes.

With our best wishes,

GEORGE C. WALKER, *Trustee.*

The deed for this property was submitted to the Board on May 3, and approved.

On May 17, 1892, the Board decided that no formal exercises of a public character should be provided for the opening of the University on October 1. At the same meeting an arrangement was approved by which D. C. Heath & Co., of Boston, took charge of the University Press. In accordance with this plan a corporation was to be formed, distinct from the publishing house of D. C. Heath & Co., of Boston, which was to undertake all the work of printing and publishing connected with the University. The business of the University now increased so rapidly that weekly meetings of the Trustees were held. On June 7 temporary buildings were ordered rented for the Departments of Chemistry, Physics, Geology, and Biology, a large flat building on the corner of Fifty-fifth street and Lexington avenue being secured. Two days later the following letter was received:

## THE GIFT OF COBB HALL

CHICAGO, June 9, 1892.

*To the Board of Trustees of the University of Chicago:*

GENTLEMEN: I have watched with growing interest the progress of the institution, the care of which has been intrusted to you. As my years increase, the desire grows upon me to do something for the city which has been my home for nearly sixty years. I am persuaded that there is no more important public enterprise than the University of Chicago. It seems to me to deserve the most liberal support of our citizens, and especially does it seem important that the University should, just at this juncture, be enabled to secure the million dollars it is seeking for its buildings and equipment. I therefore hereby subscribe one hundred and fifty thousand dollars on the conditions of the million-dollar subscription, and put my proposed gift in this form that the securing of the full million dollars may be more certainly assured. The particular designation of the gift I will make later.

Yours sincerely,

S. B. COBB.

In a short time Mr. Cobb expressed his wish that the money be used to pay for the recitation building then in process of erection. Since that time Cobb Hall has been the center of the life of the University.

## A MILLION DOLLARS FOR BUILDINGS AND EQUIPMENT

The time set by Mr. Field for the raising of the million dollars for buildings and equipment was rapidly drawing near. There was much anxiety on the part of those who were engaged in the work. The story of the wonderful triumph is best told in the words of one who wrote while his heart was full:

"The impossible has been accomplished. The incredible has come to pass. A million dollars has been raised for education in ninety days. And Chicago has done it alone. Fifty-three dollars represents the full amount received from sources outside of Chicago. We respectfully challenge any other city in the world to raise for its university one million dollars in ninety days. We shall rejoice to see this done, and when it has been done we will ask Chicago to undertake to surpass the achievement. So far as we have any knowledge, a million dollars was never before raised by popular subscription in a single city for education in so short a time.

"President Harper deserves the greatest credit for his sublime faith, his practical skill, and his unwearied efforts, but he is himself the most enthusiastic in his praise for the cheerful and ready generosity of those who have made this magnificent contribution to the new University. We cannot adequately describe the quick and enthusiastic and gracious benevolence of those who have subscribed this great fund. There has been much hard work that was discouraging and unproductive. As was to be expected, many have refused to respond to our appeals. But those who have responded have done it so readily, so kindly, and so generously that the entire subscription has been secured almost without effort. The givers only needed to be asked, and gave royally. And already we begin to hear of some who complain that they were overlooked. They were ready to give, but felt that if their gifts were worth having, they were worth asking for, and they feel that they have been neglected. The only apology we have to offer is that in seventy-five working days it was physically impossible to call personally on all the friends of the University. We did the best we could, but it was the busy season with us, more than two thousand visitors having called at the University office during these three months. When it is said that during this time there have been sixteen meetings of the Board of Trustees, nearly forty meetings of committees, that a large part of the different Faculties have been appointed, involving journeys, interviews, and correspondence, that the most difficult and intricate work in the organization of the University has been done during these three months, some idea

can be gained of the burden Dr. Harper has been carrying and the amount of work he has accomplished. With work enough to employ two or three men, work that must be done, and could be done only by himself, he addressed himself with unequalled courage to this unparalleled undertaking of raising a million dollars in ninety days. The great task has been done, and it has been done well.

"The subscription is gilt-edged. Not only has the million dollars been secured, but we have \$12,000 to spare, and not only so, but we have a guarantee of \$100,000 signed by twenty of the leading business men of Chicago. Nor is this all. One man, in addition, has promised \$1,500 a year for five years for books and publication expenses for the Department of Political Economy. And, in addition to this, a scholarship in the Divinity School has been endowed with \$2,500, and the money has been pledged for furnishing several students' rooms in the Divinity dormitory. And, lastly, the Secretary had on the last day \$12,000 of additional subscriptions in reserve for an emergency. We have, therefore, not only succeeded; we have succeeded abundantly. 'The Lord hath done great things for us, whereof we are glad.'

"Marshall Field made his subscription of \$100,000 on the tenth of April, conditioned on the securing of \$1,000,000 by the tenth of July, the subscriptions to be paid in full within nine months from the fifteenth of July. The subscription of S. A. Kent for the chemical laboratory was to be included. This subscription has been increased by Mr. Kent to \$235,000, that the Kent Chemical Hall may be made as complete and beautiful as possible. On the very day of Mr. Field's subscription George C. Walker came to the University office with the proffer of the Chicago Female College building and grounds at Morgan Park. This property, worth \$30,000, is now a part of the Academy plant. A few days later Mr. Walker, in a meeting of the Board, assured the Trustees that, if they would see that the balance of the million dollars was raised, he would see that a fire-proof museum worth \$100,000 was provided, and at the meeting of July 9 gave his personal subscription for the entire sum.

"Much quiet effort was made during May, but the event of the month was the address of President Harper before the Chicago Woman's Club, when the club appointed a committee to raise the funds for the halls for women students. This was followed by the contribution of \$50,000 by Mrs. Elizabeth Kelly and the subscription of nearly \$18,000 by other ladies. Early in June came the great subscription of \$150,000 by S. B. Cobb, followed immediately by that of Martin A. Ryerson, now president of the Board, for the same amount. These subscriptions gave us the first real assurance of final success. They were quickly followed by a cash subscription of \$50,000 from Mrs. N. S. Foster, and hope ran high in all hearts.

"But time was now slipping away very fast, and much remained to be done. As the days went on, a few small pledges were secured, but no more large ones were so much as in sight. The time came when but one week remained, and \$140,000 must still be found. Dr. Harper, Professor Laughlin, and the Secretary were sitting in the University office in a somewhat subdued frame of mind. It was about 4 o'clock in the afternoon of Saturday, and we were saying that, as Sunday was the next day and Monday the Fourth of July, we had only five working days left. At this moment Mr. Benjamin Dodson came in and said that Mrs. Jerome Beecher had sent him to announce that we might depend on her for \$50,000. Seldom have three men been so relieved and uplifted. New hope was kindled and new purposes awakened, and Dr. Harper went at once and called on Mrs. A. J. Snell, who, it was thought, might possibly help us. His appeal was so favorably received that on the succeeding Tuesday he went again, and Mrs. Snell at once subscribed \$50,000 for a young men's dormitory.

"But here, with \$40,000 yet to find, our progress stopped again, and only \$2,000 could be found up to the morning of the last day. The Trustees had appointed a meeting for 11 A. M., Saturday, July 9, to consider the situation. When it was reported that we were short \$38,000,

President Harper announced that the Vice-President of the Board had just authorized him to say that he would give the University \$50,000. This was an entire surprise to the members of the Board, and they broke out into enthusiastic and long-continued applause. It was a never-to-be-forgotten moment. It had been feared that we should succeed only in a lame and incomplete way. This gift crowned the entire enterprise with a large and abundant success, and gave it all the inspiration of a great triumph. By a rising vote the Trustees expressed their sense of obligation to the Vice-President for giving to the ninety days' campaign this splendid ending.

"No sooner had they taken their seats than Mr. Charles L. Hutchinson presented the following paper, which will explain itself:

WHEREAS, Certain subscriptions have been made to the building fund of the University of Chicago, conditioned that they would not be valid unless the sum of \$1,000,000 be raised on or before July 10, 1892, including said conditioned subscriptions;

Now, therefore, the condition of this instrument is that the signers pledge — themselves, executors, administrators, and assigns — their *pro rata* share of such portion of said \$1,000,000, not exceeding \$100,000 in the aggregate, as shall not be otherwise subscribed for or pledged to said University on the tenth day of July, 1892.

H. N. HIGINBOTHAM.

CHARLES L. HUTCHINSON.

H. H. KOHLISAAT.

HENRY H. GETTY.

FERD. W. PECK.

CLARENCE J. PECK.

CHARLES COUNSELLMAN.

E. BUCKINGHAM.

HENRY BOTSFORD.

ERNEST A. HAMILL.

BYRON L. SMITH.

EDWIN G. FOREMAN.

WILLIAM T. BAKER.

T. J. LEFENS.

JOHN J. MITCHELL.

A. A. SPRAGUE.

O. S. A. SPRAGUE.

A. C. BARTLETT.

JOHN R. WALSH.

HENRY A. RUST.

CHICAGO, July 9, 1892.

"To anyone acquainted in Chicago these are familiar names. They are twenty of the leading business men of the city. This paper had been prepared and circulated without the knowledge of Dr. Harper and the Secretary, and only two or three of the members of the Board knew of its existence. It was with the full knowledge that any deficiency to the amount of \$100,000 was guaranteed that the Vice-President made his subscription, thus practically relieving the guarantors and himself assuming not only the deficit, but \$12,000 in addition. The University is happy, however, in knowing that the leading business men of the city took this practical interest in its fortunes and stood ready to come to its relief.

"Thus was this unprecedented undertaking accomplished by unexampled offerings, and with a final demonstration of profound interest by the most prominent citizens of Chicago.<sup>12</sup>

The letter from Mr. George C. Walker referred to in the foregoing account was as follows:

CHICAGO, July 7, 1892.

*To the Board of Trustees of the University of Chicago:*

As heretofore informally suggested, I will furnish the means to erect the Museum building in accordance with plans to be approved by your Board and myself, said building to be of fireproof construction and to cost one hundred thousand dollars. This gift is made on the condition that in case the building is ever destroyed it shall be rebuilt by the corporation, and known by the same name, and used for the same purpose.

Respectfully yours,

GEORGE C. WALKER.

<sup>12</sup> T. W. GOODSPEED, in the *Standard*, July 14, 1892.

Some months later Mr. Martin A. Ryerson addressed a letter to the Board regarding his contribution to this fund :

CHICAGO, November 7, 1892.

*To the Board of Trustees of the University of Chicago:*

GENTLEMEN: In making my subscription of one hundred and fifty thousand dollars to the million-dollar fund for the buildings and equipment of the University, I reserved the right to designate among the purposes for which the fund was raised the purpose to which my subscription be applied. I desire it applied to the erection of a building to be used as a physical laboratory, and to be known as "The Ryerson Physical Laboratory," in memory of my father, the late Martin Ryerson, said building to be situated on the north side and fronting south on the central Quadrangle, east of the Kent Chemical Hall. Trusting that this designation will meet with your approval, I have the honor to remain,

Very respectfully yours,

MARTIN A. RYERSON.

On June 7, 1892, the Harvard School was affiliated, this being the first example of completed affiliation, although the matter had been considered by other institutions.

A parcel of ground 120 feet by 130, on the corner of Ellis avenue and Fifty-eighth street, was added to the property of the University by vote of June 21, 1892. This was designed for the general power-house and heating plant for the various buildings.

During the summer a large amount of work had to be done on the University campus. The records tell of industrious committees looking after streets, lamps, sewers, gas- and water-pipes, the grading around the new buildings, the leasing of a large flat building near the corner of Madison avenue and Fifty-seventh street to be used as a dormitory for women, the furnishing of this and other temporary buildings, and many other details connected with the opening of the University. Yet the appropriation on June 21, 1891, of \$250 for the work of the American School of Classical Studies at Athens, a vote taken three months before there was a student on the campus, indicated the purpose toward which all were working.

Official action was taken requiring the use of the cap and gown on all public occasions.<sup>13</sup> An official color for the University was considered, orange being chosen.<sup>14</sup> At each meeting of the Board—and meetings were held frequently during the summer—new members of the Faculty were elected, so that a large staff of instructors was ready for work on the day set for the opening of the University.

#### THE UNIVERSITY OPENS ITS DOORS

On October 1, 1892, the real life of the University began. The recitation building was not fully completed, and students passed under scaffolding to enter the recitation rooms. Instruction was given by the various teachers as if that were a matter of course. The only exercises approaching a public nature were those of the first Chapel Assembly. Members of the University, with some friends, assembled in the chapel-room at 12:30 o'clock, where the following program was presented:

Doxology.

The Lord's Prayer in concert, led by President Harper.

Hymn, "Nearer, My God, to Thee."

Responsive reading of Psalm 95, led by President Harper.

Hymn, "O Could I Speak the Matchless Worth."

Scripture reading—Genesis, chap. 1; John, chap. 1; and Philippians, chap. 4, vs. 8 and 9—by

Dean Harry Pratt Judson.

Prayer, by Head Professor Galusha Anderson.

Hymn, "Hail to the Lord's Anointed."

Benediction, by Dean Eri B. Hulbert.

<sup>13</sup> See Statute 26, p. 12, *Annual Register*, 1901-2.

<sup>14</sup> This was afterward changed to maroon.

On the same day the Trustees held their meeting in Cobb Hall, several matters of importance being considered.

On November 8, 1892, it was unanimously voted that, as a slight recognition of the indebtedness to Mr. Rockefeller, the words "Founded by John D. Rockefeller" be used in connection with the name of the University in all official reports, publications, and correspondence. At the same meeting it was decided that Scientific Department buildings should be designated as "Laboratory," "Museum," "Observatory," according to the nature of the work to be done in them, while dormitories should be distinguished by the name of the donor, followed by the word "Hall." It was also determined that Quarterly Convocations should be held, the first one on January 1, 1893.

#### THIRD MILLION-DOLLAR PLEDGE

At the meeting of the Trustees held December 27, 1892, the following letter was read:

NEW YORK, December 23, 1892.

*To the Trustees of the University of Chicago, Chicago, Ill.:*

GENTLEMEN: I will give to the University of Chicago one thousand 5 per cent. bonds of the par value of one million dollars, principal and interest payable in gold. The principal of this sum is to remain forever a further endowment for the University, the income to be used only for the compensation of instructors. I reserve the right to designate at my option the instruction to which the income shall be applied. I will deliver these bonds December 2, 1893.

Sincerely yours,

JOHN D. ROCKEFELLER.

This gift by Mr. Rockefeller was enthusiastically received by the Trustees, who indicated its value, not alone as material aid to the University, but also as the greatest possible encouragement to them in the performance of their important and difficult task.

The First Quarterly Convocation of the University was held in Central Music Hall January 1, 1893. After a scholarly address by Head Professor von Holst on "The Need of Universities in the United States," the President made his first Quarterly Statement on the condition of the University, in which, among other things, he said:

In the holding of this Convocation we have in mind three things:

1. To furnish an opportunity to bestow the proper awards for work accomplished, and to dismiss with all the honor which the University can confer those who have shown themselves worthy of such honor; and, on the other hand, to receive into the privileges of the University those who have shown themselves prepared to take advantage of these privileges.

2. To look back for a moment over the months of work completed, in order that an estimate may be formed of the progress made, or, if such it be, of ground lost; and, on the other hand, to look forward to the opportunities and the necessities of the future, to note and select for effort those opportunities which seem most promising.

3. To bind together into a unity the many complex and diverging forms of activity which constitute our university life and work, and, thus united, to stand before the public in a way to show our appreciation of its good-will, and at the same time to show, if it can be shown, that we in turn are deserving of this same good-will.

After this statement of the purpose of the Convocation as a University institution, the President gave a brief summary containing the following interesting points:

A year ago the foundations of the first buildings had just been placed. Only two buildings had at that time been provided for, a dormitory and a lecture hall.

A year ago the grounds were a desolation and a waste, and the proposition to make them ready by October 1 was by many thought impracticable.



A year ago a university had been announced, and the announcement had gone to every corner of the earth; but the University was still on paper, and the funds in hand, as recognized most clearly by those especially interested, were entirely inadequate. The funds at that time included the first great gift of Mr. Rockefeller, \$600,000, the \$400,000 of general subscription, the gift of land by Mr. Field, Mr. Rockefeller's second gift of \$1,000,000, the property and endowment coming to the University in its union with the Theological Seminary; in all, about \$3,000,000.

A year ago only two men had received appointments to the Faculty and entered upon their work; and in all not ten men had indicated their consent to serve the University as instructors. As we look upon the situation, we see that a beginning had been made, but only a beginning. What is, tonight, the condition of the University?

The dormitory for men has been completed, and every room is occupied. The lecture hall provided for by Mr. Silas B. Cobb is finished and crowded to overflowing with instructors and students. Temporary buildings of a most convenient character have been erected for the library and for the work of physical culture. A chemical laboratory, the gift of Mr. S. A. Kent, to be the largest and best equipped in the country, is almost ready for the roof. A museum, the gift of Mr. George C. Walker, is under way. Dormitory buildings for women, the gifts of Mrs. Kelly, Mrs. Foster, and Mrs. Beecher, are rapidly approaching completion. A new dormitory for men, the gift of Mrs. Snell, is under roof. The plans have been made and bids received for the erection of a physical laboratory, the gift of Mr. Martin A. Ryerson, and the work on it will begin at once. Within a few months buildings to cost at least a million and a half will be completed. The grounds are being graded, a large part of the necessary work having been accomplished.

Some facts concerning the constitution of the Faculty are worthy of note:

1. There are thirty-one Professors, sixteen Associate Professors, twenty-six Assistant Professors, twelve Instructors, nine Tutors, three Assistants, six Readers, eight Docents, and sixty-one Fellows.

2. The number giving instruction in Philosophy is four; in Political Economy, six; Political Science, two; History, twelve; Social Science and Anthropology, four; Comparative Religion, one; Semitic Languages, five; Biblical and Patristic Greek, two; Sanskrit, one; Greek, six; Latin, seven; Romance Languages, three; Germanic Languages, four; English, nine; Biblical Literature, eight; Mathematics, six; Astronomy, two; Physics, three; Chemistry, seven; Geology, six; Biology, eight; Physical Culture, two; Elocution, one.

3. The number engaged in University Extension work is fourteen regular instructors and forty-two who represent the University Departments, but do partial work in this Department.

4. The instructors represent, so far as concerns their academic training: Amherst, four; Beloit, three; University of Berlin, one; Brown, seven; Cambridge, England, three; the old University of Chicago, three; Colby, two; Denison, five; University of California, two; University of Edinburgh, one; Göttingen, two; Harvard, six; Heidelberg, one; Johns Hopkins, one; Michigan, five; Rochester, four; University of Pennsylvania, two; Williams, three; Yale, eleven; and almost every important college of this country and many of the foreign universities are represented by one or more men.

The facts regarding students are of interest. The total enrolment has been 594; of these 166 are pursuing studies for the advanced degrees in the Graduate School; 182 are in the Divinity School, and 276 are doing undergraduate work. Nearly one-half of the total enrolment consists of men and women who have already received the Bachelor's degree; these have come to us from ninety institutions; this number includes, among others, Harvard, Yale, Columbia, Johns Hopkins, Princeton, Amherst, Brown, Williams, Bowdoin, Dartmouth, Oberlin, Denison, Rochester, Bucknell, De Pauw, Vassar, Wellesley, the Universities of Michigan, Illinois, Indiana, Wisconsin, and Nebraska. Thirty-three states and thirteen foreign countries are represented. Every state in New England has sent a representative, Maine heading the list, with Massachusetts, Rhode Island, and Connecticut closely following; while California sends one more man than Maine. We may say with literal accuracy that our constituency extends from Maine to California. Five per cent. comes from foreign countries; Ontario standing first, Nova Scotia and Norway next; with England, Scotland, Sweden, Denmark, Russia, Silesia, Burmah, Japan, and Asia Minor also represented. Of the total enrolment 23½ per cent. are women.

## A FUND FOR NEEDED EQUIPMENT

At the meeting of the Board of Trustees held January 24, 1893, Mr. Martin A. Ryerson, President of the Board, presented the following letter:

CHICAGO, January 24, 1893.

*To the Board of Trustees of the University of Chicago:*

GENTLEMEN: Recognizing the University's need of a large fund with which to meet the exceptional expenses of its organization, and the pressing demands for general improvements, and for an equipment in keeping with its endowment, I propose, in order to assist it in securing such a fund, to give to the University One Hundred Thousand Dollars, on condition that an additional sum of Four Hundred Thousand Dollars be subscribed by responsible persons before the first day of May, 1893, and that all subscriptions be made without other conditions than those herein contained, and be payable, one-half on the first day of May, 1893, and the balance on the first day of August, 1893.

Respectfully yours,

MARTIN A. RYERSON.

The Board accepted this generous gift under the condition attached and resolved to attempt to raise the four hundred thousand dollars at once, each member being urged to make every effort to secure subscriptions in view of the great need of funds for the purpose mentioned.

It was found impossible to raise the amount proposed by May 1, 1893, and Mr. Ryerson indicated his willingness to allow further time for the subscription, in a letter dated September 18, 1893, proposing July 1, 1894, as the time for the completion of the fund. Great encouragement was given by the following letter from Mr. Rockefeller:

28 BROADWAY, NEW YORK, October 31, 1893.

*To the Trustees of the University of Chicago, T. W. Goodspeed, D.D., Secretary:*

GENTLEMEN: I will contribute to the University of Chicago the sum of five hundred thousand dollars (\$500,000) payable in four equal quarterly instalments beginning July 1, 1894. Of this contribution so much as may be found necessary, not exceeding one hundred and seventy-five thousand dollars (\$175,000), should be employed in the current expenses of the institution for the fiscal year beginning July 1, 1894, and the remainder should be devoted to the general purposes of the institution.

I make this contribution on condition that the terms and conditions of Mr. Martin A. Ryerson's pledge of one hundred thousand dollars (\$100,000), drawn up September 18, 1893, should be complied with by the University on or before July 1, 1894.

Sincerely yours,

JOHN D. ROCKEFELLER.

## THE HASKELL LECTURESHIPS ESTABLISHED

In May, 1894, the following letter was received from Mrs. Caroline Haskell:

CHICAGO, May 5, 1894.

*President William R. Harper, D.D.:*

MY DEAR SIR: I have been informed that Professor G. S. Goodspeed, and others, associated with the University of Chicago, have expressed the earnest hope that the friends of the University, recognizing the great interest aroused by the Parliament of Religions, would endow a Lectureship on the Relations of Christianity to the Other Faiths of the World. I take pleasure in now offering to the Trustees of the University of Chicago the sum of Twenty Thousand Dollars, to establish and perpetuate a Lectureship of Comparative Religion, by which at least six lectures shall be delivered annually, before the students, teachers, and friends of the University, under such conditions and specifications as shall be determined by Professor G. S. Goodspeed and yourself.

I am in hearty agreement with the conviction that the immense interest awakened by the wonderful Parliament of Religions held in Chicago in September, 1893, makes it eminently desirable that

the students in the university, and the people generally, shall be given wise instruction on the most important of all subjects; and I learn with satisfaction of your strong desire that this lectureship should be held first by Rev. John Henry Barrows, D.D., whose energy, tolerance, and catholicity of spirit and prolonged laborious devotion gave to the Parliament of Religions, in so large a measure, its remarkable success.

I remain, yours faithfully,

CAROLINE E. HASKELL.

At a meeting of the Board of Trustees held Monday, July 2, 1894, the President announced the successful completion of this subscription. The following telegrams were read:

LAKE GENEVA, June 30, 1894.

*William R. Harper, University of Chicago:*

I will contribute \$15,000 to the University of Chicago, provided that amount will secure the million dollars.

S. B. COBB.

NEW YORK, June 30, 1894.

*President W. R. Harper and Charles L. Hutchinson, University of Chicago:*

Telegram received. Please accept hearty congratulations. Mr. Ryerson's acceptance will carry mine with it.

J. D. ROCKEFELLER.

The full list of subscribers to this fund is as follows:

Cash - - - - \$1.00	Wm. H. Moore - - - 500.00	G. F. Swift - - - \$1,000.00
Milo Putney - - - 5.00	E. B. Felsenthal - - 500.00	Edson Keith - - - 1,000.00
Mrs. Horace E. Burt - 5.00	A. H. Wolfe - - - 500.00	Miss A. S. Cook - - 1,000.00
J. M. Edson - - - 5.00	Wm. T. Brown - - - 500.00	Franklin MacVeagh 1,000.00
D. L. Harris - - - 10.00	Edward Morris - - - 500.00	C. C. Bowen - - - 1,000.00
M. McGinnis - - - 10.00	W. H. Alsip - - - 500.00	Michael Brand - - 1,000.00
I. B. Burgess - - - 15.00	F. A. Smith - - - 500.00	C. W. Fullerton - 1,000.00
Henry Jayne - - - 20.00	G. W. Henry - - - 500.00	Schlesinger & Mayer 1,000.00
C. R. Henderson - - 20.00	Wm. R. Page - - - 500.00	E. L. Hedstrom - 1,000.00
Clinton, Wis., Bapt. Ch. 30.00	D. G. Hamilton - - 500.00	Andrew McLeish - 2,000.00
Plainfield Bapt. Church 30.00	Leon Mandel - - - 500.00	George A. Fuller - 2,500.00
Mrs. Jane E. Salisbury 50.00	C. R. Corwith - - - 500.00	A. A. Sprague - - 5,000.00
L. P. Scrogin - - - 100.00	E. R. Bliss - - - 500.00	A Friend - - - 5,000.00
H. M. Robinson - - 100.00	R. O. Waller & Co. - 500.00	Knickerbocker Ice
H. P. Taylor - - - 100.00	Siegel & Cooper - - 500.00	Co. - - - 5,000.00
Mrs. E. O. Van Husan 100.00	Mrs. E. G. Kelly - - 500.00	C. L. Hutchinson - 5,400.00
The Old University - 118.00	Walter N. Nash - - 575.00	H. H. Kohlsaat - 10,000.00
W. H. Holden - - - 250.00	E. G. Hirsch - - - 600.00	S. B. Cobb - - - 15,000.00
Women of Chicago - 400.00	Walter H. Wilson - 700.00	George C. Walker - 17,500.00
Abby Leach, Treasurer 400.00	W. B. Brayton - - 1,000.00	Mrs. C. E. Haskell 20,000.00
Mrs. Ralph Emerson - 400.00	O. W. Potter - - - 1,000.00	S. A. Kent - - - 35,000.00
Friends, by Mrs. Brai-	R. R. Donnelley - - 1,000.00	Mrs. C. E. Haskell 100,000.00
nerd - - - - 400.00	Chas. Miller - - - 1,000.00	Martin A. Ryerson - 100,000.00
L. J. Lamsen - - - 420.00	Wm. Borden - - - 1,000.00	John D. Rockefeller 651,000.00

#### DEDICATION OF THE WALKER MUSEUM

The fourth Convocation, held October 2, 1903, was attended by the formal dedication of the Walker Museum. In presenting the building, the donor, Mr. George C. Walker, said:

*Trustees of the University of Chicago, Ladies, and Gentlemen:*

The President has asked me to tell you how this building came to be erected, and in order to do so I must in a very brief form give you a little idea of some past events. In 1848 my father was selected to make the address of welcome for the city of Chicago to the assembled delegates, from all

parts of the United States, at the opening of the Illinois and Michigan Canal. One idea he expressed was this: "That portion of the earth's surface which can support the most human life will, in the end, have the most human life, and nowhere on the earth's surface is there so much good land and so little waste land as in the territory known as the Mississippi valley of the Northwest."

This made a deep impression on my young mind, and I have lived to see our city grow from a little over fifteen thousand then to over fifteen hundred thousand now; and to-day the evidences are stronger than ever of the final and full realization of my father's confident predictions.

It first took on material growth, and men waxed strong in moneyed wealth, which must always be the first form of human progress; for the means to do must of necessity be the basis of all that follows. Without means when should we have academies, colleges, universities, art schools and art palaces, scientific schools and scientific museums? As time progressed it was very evident that that same energy which had settled the Northwest and built up its business would in due time achieve just as marked success in all that goes to improve and elevate man.

Thirty years ago my warm personal friend, Robert Kennicott, came back from the Arctic Ocean full of zeal and enthusiasm for the establishment of a grand museum for the Northwest in Chicago. He had spent four very successful years in that far northern country, under the auspices of the Smithsonian Institution and the Chicago Audubon Club, making scientific collections and establishing a system in connection with all the agencies and employees of the great North American fur companies, from whom many things have since been received. His friends were fully imbued with the importance of prompt action, resulting in Chicago's first scientific museum. Its success and misfortunes, its struggles and triumphs, and final dormant condition need not here be detailed. It is all well known to the older earnest citizens of Chicago.

During all those years I never could relinquish the idea that here in our city was the best location, west of the Allegheny Mountains, for a great museum of natural history, and from the sad experience of many years it seemed evident that it would be of the most value in connection with some great institution of learning, whose professors and teachers would take a warm and active interest in its welfare, making it attractive and popular, and whose students would carry the knowledge of its existence and scientific value to all parts of the country. It would thus have the largest field of usefulness and be of the greatest benefit to mankind. No museum not so connected could by any possibility ever hope to bless so large a clientage. These facts would influence owners of valuable scientific collections to make such an institution their permanent depository, and in the end all that was of a scientific interest would find a home under its roof.

When this University was first thought of, it seemed as though the time for successful action had come, and I resolved that, if in any way it could be accomplished, there should be a suitable fireproof building erected for this purpose wherever this institution should finally locate. After these grounds were selected, another and very important reason was presented why the University should have a museum building at once. The great Columbian Fair was going to be held here, and of necessity there would be a large amount of scientific material which could be retained here if there was a suitable fireproof home provided and the proper effort made to secure it.

With this in my mind, the building was undertaken and has been completed; and I now, Mr. President, tender it to the Board of Trustees, and with it go my warmest good wishes for the most perfect triumph of the University of Chicago.

In accepting the gift, President Harper said:

We receive tonight from the hands of its donor, for the future use of the University, this magnificent building, and in assembling, under these circumstances, we celebrate its formal opening. By the generous gift of one man the University in this earliest period of its history possesses a museum building. The heart of every member of the University, of every friend of the University, of every friend of scientific research acquainted with the facts, is filled with feelings of gratitude to the man who has rendered this inestimable service to the University, thus placing at its disposal a building so large, so beautiful, and above all, so well adapted to the purpose for which it has been erected. Our friend, the hero of the evening, will pardon me, I am sure, if, under the circumstances, for the information of some who are strangers among us here tonight, I recall one or two items

which perhaps now belong to the realm of the past, but which throw light upon the event we are celebrating.

Years ago an important suburb of the city of Chicago was to be established. A leading spirit in the building of this new village, realizing the importance of educational influence, erected in the village a large and convenient building to be used as an academy or seminary for young women. A little later, largely through his influence, there was established in this same village an academy for boys, and a building was erected for the work. Still later, through the same influence, a large and commodious building was provided for the Theological Seminary—an institution which, during its history under these auspices, sent out hundreds of preachers to carry the message of light and life to the men of every country. Again in this same village there was established, by this same man, a village library; the building, a beautiful building of stone; the shelves of the building amply provided with books. The village of which I have spoken is Morgan Park; the man, our friend who tonight gives us this building as an indication of his interest in sound learning. Still further, all these buildings, except one, together with the land which surrounds them, in part by the direct gift and in part through the direct influence of our friend, have come into the possession of the University, and are today occupied by the academy of the University.

I may be pardoned if I mention another fact. Many years ago, in the earliest history of the city of Chicago, certain men of broad sympathies, with a desire to encourage research, established what is now known as the Chicago Academy of Science. These men had much to contend with. The great fire destroyed everything which up to that time had been collected; but the work went on. Publications were issued by the Academy. Money was freely furnished by the men interested. The work was encouraged, indeed carried, by these few men. But for them the Academy would have died long ago. The interest and the work of these few men saved it, and today it is about to occupy new quarters in Lincoln Park. The man of all men to whom the Academy is indebted, the man who served as its President for many years, who contributed from his private purse on many occasions in order to continue its existence, was our friend who has indicated his interest in scientific work by providing for the University this building which will be in a true sense a scientific laboratory. Nothing daunted by the misfortune which befell the old Academy, believing that the city of Chicago should have a museum building to which its citizens might offer collections made from time to time, he has erected this building, has given it to the University, and by this act has invited those who, like himself, sympathize with the work of scientific research, by their gifts to carry on the work which he has thus magnificently begun.

You will pardon me if I add still a third reminiscence. There was an old University of Chicago. Of its great work and of its great misfortunes I need not speak. One of the men closely connected with its work through many years, contributing continually toward its support, was the friend to whom tonight we would, if possible, do honor. When the old University ceased to be, this same friend came forward with the generous proposition to give land and money for a college which should be built near the city of Chicago. Providence ordered that the institution should be established in the city, and the propositions made by Mr. Walker were not accepted; but from the first day of the history of the new University he has shown himself its friend. In its councils he has at all times taken a leading part, and when the time came for the citizens of Chicago to indicate to the world whether or not they would receive and make their own an institution so generously founded by a citizen of another state, Mr. Walker was one of the first to place his name on the subscription list to an amount exceeding \$120,000.

The educational property of Morgan Park has become a part of the University. The college which he proposed to establish at Morgan Park is there, not a college, but what in this great western territory of ours is of far greater value—an academy of the highest order, manned by instructors trained in the best academic institutions in the land. The museum which was originally intended for the Academy of Science has been built, but built for the University. The many separate educational efforts undertaken by Mr. Walker have become unified and centralized in the University of which he is an honored Trustee.

These facts show the long-continued, deep, and earnest interest which he has exhibited in the cause of education. For one I rejoice that the building for a museum has come to us before a library

building. It is possible, especially under the departmental system which we have adopted, to make good use of books without a large and excellent library building. Books must be purchased, and books will be contributed even if we lack a building; but collections are never given to an institution that has no convenient and safe depository for them. At a time when the city is so full of valuable collections, collections which are so soon to be distributed, it is opportune indeed that the University should be able to say to those who own these collections that it possesses a fireproof structure in which they may be preserved and displayed. I may be mistaken, but I venture to make the assertion that within the next twelve months this building will bring to the University material which would have cost the University three or four times the cost of the building itself. For all such material received we shall be indirectly indebted to Mr. Walker. Tonight we take possession of the building. Tomorrow morning the scientific collections of various kinds belonging to the University will be placed within its walls. Tomorrow morning the work of research and investigation in connection with the lectures and class work of the Department of Geology and Mineralogy will begin. The building is finished, but none too soon.

And now, with these few and inadequate words of introduction, representing the Trustees of the University and its Faculties, I accept the building from its donor, Mr. Walker, and pledge him that it will be sacredly devoted to the interests he has had at heart. Time will show him, as no words of mine tonight could show, our appreciation of his noble gift, and the gratitude which fills our hearts.

#### DEDICATION OF THE KENT CHEMICAL LABORATORY

The Fifth Convocation was attended by the formal opening of the Kent Chemical Laboratory. Special exercises were held in the laboratory on Monday evening, January 1, 1894. In presenting the building President Harper said:

*Ladies and Gentlemen:*

As the most fitting introduction to the exercises of the evening, I read to you the contents of the letter which I hold in my hand:

*"Mr. William R. Harper, President of the University of Chicago:*

"MY DEAR SIR: I hereby give this building, fully furnished and completely equipped, to the University of Chicago as a chemical laboratory, for the use of this and future generations.

"Trusting that the standard of education will be such as to command the respect, not only of this country, but of the civilized world, I am,

"Very truly yours,

"Chicago, January 1, 1894."

"S. A. KENT."

Mr. Kent in his modesty prefers in this simple way, rather than by a personal address, to conclude a transaction the magnitude and significance of which it is difficult for us to appreciate. With a stroke of the pen he has devoted to the cause of science, to the cause of one among many sciences, the sum of nearly a quarter of a million dollars. The most significant thing in connection with this magnificent gift is the time at which it was made. Two millions of dollars had been donated for endowment and land. For only one building, and that a dormitory, had at that time provision been made. The University in very truth was still on paper. Not a few good people, east and west, had given utterance to the opinion that perhaps, after all, the University of Chicago must begin as other institutions had begun, and secure only after many years the facilities for work of a university character. For five months there had been sowing of seed. Some of us had expected results at a date much earlier. The situation was fast becoming a painful one, and the question not infrequently arose: Will Chicago accept this University in the spirit in which it has been established, and rally to its support? Will the citizens of Chicago show their appreciation of the generous act performed for their city by a man living far away? One must believe that if the answer to these questions had been much longer delayed, it would have been a negative answer. It was just at this time of painful suspense that Mr. Kent came forward with his munificent proposal, and in a moment the question was answered. The University was to be the University of Chicago. Within a month another

million of dollars was given by Mr. Rockefeller for endowment, and within ninety days the citizens of Chicago had contributed more than a million of dollars for additional buildings. In other words, within four months the resources of the University had been doubled. The connection between all this and the gift of Mr. Kent is so close as not to require explanation.

Hardly less significant were the growth and development of Mr. Kent's idea. The first \$100,000 had been considered a sum sufficient for the purpose. Before a definite conclusion had been reached, the sum was fixed at \$150,000. When the contracts were made for the erection of the building, the sum designated was \$182,000. When the bills came to be paid, including furnishings, the sum was \$215,000, and to this Mr. Kent most generously added an additional \$20,000 for equipment, making in all \$235,000. Everything was planned, and it was necessary to plan it, upon a large scale. Mr. Kent would not in any case consent to the use of material that was not the best. A system of ventilation, the most perfect ever introduced into a building, was provided, and so from month to month the work went on until today we have a finished and, let us hope, a perfect laboratory. In all this the standard was fixed for the other laboratories of the University. Had the Chemical Laboratory cost \$100,000, the Physical Laboratory likewise would have cost \$100,000. The Chemical Laboratory, however, cost \$235,000, and so the Physical Laboratory, when finished, will cost its donor \$230,000. With such provision for the Departments of Physics and Chemistry, it followed naturally that Astronomy, when the subject was taken up, should be treated in a manner equally magnificent, and a sum even greater has been provided by another friend of the University for this, the oldest of the sciences. Shall now the Biological Department be less munificently equipped? The necessity under the circumstances of doing a large thing may, to be sure, postpone for a time the building of Biological Laboratories, but in the end it is clear that, when built, the standard will be that already fixed by Mr. Kent.

I may be pardoned if, in this connection, I speak of the spirit and the purpose which have prompted this gift. I shall never forget the Sunday afternoon, just two years ago, when I first met Mr. Kent and first talked of this matter. He had already thought about it, but was still uncertain as to the particular thing which it would be wise to undertake. Several possibilities were mentioned and discussed. It was clear from the discussion that the purpose of Mr. Kent was a most noble one. It was with him simply a question of accomplishing good for his fellow-men. And yet he was able to take so broad and high a view of the situation as to see the importance of making ample provision at the outstart for the work of investigation and research. It was this ideal kind of university work which appealed to him, and which led him to decide, after considering other suggestions in which the more practical element formed a larger part, in favor of establishing a laboratory, the work of which should be done in the interests of pure science. The time, therefore, of the gift, the breadth of view, and the ideal purpose which inspired the giver, were alike significant.

The arrangement of the building is as follows:

The basement contains a furnace-room, with a set of gas furnaces with air blast of the most modern construction, for crucible work, muffle work, tube-heating, and other purposes; a constant-temperature-room, a room fitted with steam and other appliances for work on a large scale, a mechanical workshop, and storage-rooms.

On the first floor are one small and two large lecture-rooms, and a large lecture-hall seating three hundred persons, fitted for use as a chemical lecture-room if desired. This floor also contains a chemical museum, a large private laboratory, a room with northern exposure, especially fitted for use as a gas-analysis laboratory, and also apparatus and preparation-rooms connected with the lecture-rooms.

On the second floor are two large laboratories intended for research and advanced work; three private laboratories for the professors; balance, combustion, air furnace, and store-rooms; a balcony for out-of-door work, and a chemical library, which contains full sets of the most important journals, as well as the most important text-books, and other works relating to chemistry.

On the third floor are three large laboratories for general and analytical chemistry, a store-room, a preparation-room, a room especially fitted for optical and photographic work, a balance-room, and a private laboratory.

The most modern system of ventilation has been adopted, air of constant temperature being forced in by fans from below, and withdrawn by a fan above. The building will be lighted through-

out by electric lights, and the laboratories will be provided with electricity adapted to every kind of electro-chemical work.

Reference has already been made to the purpose of the donor in its relations to the work of research and investigation. I cannot forego this opportunity to say still another word in respect to it. Mr. Kent shares the hope, and the University joins with him, that this Laboratory, formally opened tonight, may do great work in preparing men for practical work along lines within the realm of the science to which the use of the building is dedicated. But, in addition to this, the founder of the Laboratory and the Trustees of the University, for all of whom I may now be permitted to speak, sincerely hope that in this building there may be worked out results in Chemistry not yet obtained, that the heart of every worker, whether student or instructor, may be fired with a desire to contribute something of value to the knowledge of men in this important department. We believe that additions made to our knowledge of the great laws which underlie the structure of the universe in all its elements is an addition to our knowledge of God, for God is ever all and in all.

It is my duty, and I esteem it also my privilege, on behalf of the University, to thank most heartily our friends in other institutions of learning who have shown so deep an interest in this particular undertaking of the University of Chicago. Letters of congratulation have been received from many friends. I hold in my hand more than a hundred such letters from the leading professors of Chemistry in this country and Canada. These are not simply letters of regret. Many of them contain courteous and generous words concerning the good fortune of the University in having a friend able and willing to do for it so good and so great a thing.

We are especially grateful to the professors of Chemistry from our sister-institutions who have done us the honor to be present in person at this time. We are sure that they rejoice with us in our good fortune, and that they join with us in the hopes which have already been expressed. Of our debt to Professor Ira Remsen, of the Johns Hopkins University, and to Professor Nef of our University, I shall have occasion to speak later. To others who have given time and thought to the details of the Laboratory, among whom may be mentioned Professor Freer, of the University of Michigan, and Professor Stokes, late Assistant Professor in the University of Chicago, the University expresses its thanks. To Mr. Hutchinson, Mr. Kohlsaas, and Mr. Walker, of the Board of Trustees, for the special interest taken by them in the work completed tonight, acknowledgment is due. We are under obligations in particular to Mr. Walker, who throughout has acted as representative of Mr. Kent, and who, as such, has served most efficiently both Mr. Kent and the University.

And now, representing the Trustees and Faculties of the University, I accept from Mr. Kent this magnificent gift for the promotion of the cause of science, and I pledge him that every effort will be put forth to fulfil his wishes and to advance the interests of the cause to which he has made so noble a contribution.

#### GIFT OF THE KENWOOD OBSERVATORY

At a Board meeting held July 2, 1894, the following letter was presented:

126 STATE ST., CHICAGO, JUNE 30, 1894.

*President W. R. Harper, University of Chicago, City:*

DEAR SIR: It gives me pleasure to offer to give to the University of Chicago the Astronomical, Physical, Photographical, and Mechanical equipments of the Kenwood Observatory, to be taken by you from where it is now located on Forty-sixth street at such time as your observatory building is prepared to receive it. These equipments consist of a twelve-inch equatorial telescope with visual lens and twelve-inch lens for photographic work, including pier and dome; also a spectro-heliograph and other attachments for solar and stellar observations and photographs; also other Physical, Electrical, Photographical, and Astronomical apparatus and equipment, together with the machine shop for fine mechanical work, all of which I value at \$30,000. You are at liberty to use the apparatus and the building in which it stands until such time as your new observatory is ready to receive it.

Yours very truly,

WILLIAM E. HALE.



## PRESENTATION OF MR. ROCKEFELLER'S PORTRAIT

After the regular Convocation exercises on July 2, 1894, the large audience repaired to the Chapel in Cobb Hall, where the full-length portrait of Mr. Rockefeller, painted by the celebrated artist, Eastman Johnson, was unveiled. This was the graceful gift of a number of Chicago gentlemen, the idea being suggested by that lover of art, Mr. Charles L. Hutchinson, of the Board of Trustees. The portrait is an admirable one, the coloring being soft and pleasing. Mr. Rockefeller is seated by a table, his face giving a partially side view; yet looking directly at the beholder. The pose is natural and the likeness most excellent. The services in connection with the unveiling were very simple, President Harper explaining the nature of the gift, and Mr. Ryerson accepting it on behalf of the Board of Trustees.

President Harper said:

The founder of our University has not yet visited us. We have his assurance that at an early date he will comply with the request so frequently and so urgently made to come to the University. But although he will come, he must of course go away again. Is anything more necessary than that we should have at the University a representation to the eyes of the features and the form of the man who had a heart so large and a head so clear as to lead him to do for the cause of education what he has done? The life-size portrait of Mr. Rockefeller, painted by Eastman Johnson, will now be presented to the University. This portrait is a gift of the following gentlemen: Messrs. Ed. E. Ayer, William T. Baker, T. B. Blackstone, H. Botsford, Cyrus H. McCormick, Charles Counselman, H. H. Getty, D. G. Hamilton, H. N. Higinbotham, Charles L. Hutchinson, H. H. Kohlsaet, L. Z. Leiter, Andrew McLeish, Franklin MacVeagh, Thomas Murdoch, George A. Pillsbury, George M. Pullman, Martin A. Ryerson, Byron L. Smith, A. A. Sprague, George C. Walker. The University appreciates the spirit which has led these men, leading citizens of Chicago, to secure the painting of the portrait of our honored founder, and the courtesy which is implied in the gift of the same to the University. It will be possible now for every student and every friend of the University to study and to know the face of him to whom we are so greatly indebted.

Mr. Ryerson, President of the Board of Trustees, in accepting the gift, said:

*Ladies and Gentlemen:*

On all the official publications of the University of Chicago you will find, associated with its corporate name, the words "Founded by John D. Rockefeller." Never was the word "founded" more appropriately used, for we all realize that without Mr. Rockefeller's initiation and generous encouragement this University would not have come into existence.

It is a significant and important fact that the man who so clearly saw the advantages and possibilities of this city as the seat of a great university should have been the resident of another and a distant community. This fact was well calculated to give additional weight to his opinion, and awaken an admirable and valuable local enthusiasm. Mr. Rockefeller's judgment came to us as that of a man unbiased by prejudices which we might naturally feel, and we accepted it with confidence. How frequently we have been inspired and encouraged in our work by his liberality those who are present here need not be told.

It is not often that to such great abilities, displaying themselves in a useful industrial and business career, is added such a broad, intelligent love of one's fellow-men as Mr. Rockefeller has shown. The man who devotes his intelligence and his energies to building up and managing a great business or industry is a useful and worthy citizen, and the fortune which he acquires is both the badge and the reward of his usefulness. The man who adds to abilities so displayed the sentiments of a philanthropist, and to whom wealth so acquired means only opportunity for well-doing, commands our admiration.

On behalf of the Board of Trustees of the University of Chicago, I accept the gift of this portrait of the founder of the University, John D. Rockefeller; and I add, with full assurance that I express the sentiments of every member of the Board, that no gift could appeal more strongly to their

gratitude. The placing upon the walls of the University of this admirable work by Eastman Johnson, the faithful likeness of one whose personality will always be closely linked with the history of the institution, appeals to the sentiments of every member of the Board as a most appropriate action.

I thank the donors of this portrait for a gift which shows a just appreciation, not only of Mr. Rockefeller's relation to the University, but also of the esteem and affection in which he is held by us all.

#### DEDICATION OF THE RYERSON PHYSICAL LABORATORY

The Seventh Convocation, held in the University Quadrangles, July 2, 1894, was attended by the formal dedication of the Ryerson Physical Laboratory, erected to the memory of Martin Ryerson by his son, Martin A. Ryerson. In presenting the building Mr. Ryerson said :

##### *Ladies and Gentlemen :*

The dedication to science of a new building is not in these days a rare event. We frequently receive from centers of education the news that some great building has for the first time opened its doors to become the home of new educational activities. While the frequency of such ceremonies may lessen in a measure the interest which they excite, we continue to recognize in each and every one an event of some importance, not so much on account of what it may express of benevolent purpose in individuals or institutions, as on account of the increased opportunities which are offered to the world of science. We are living in an age of marvels, and the marvels of the science of today outstrip the marvels of the imagination of yesterday. We all feel that in the years to come there will be developments beyond our present comprehension. Hence when we see opened the doors of an institution equipped for high scientific investigation, we feel this sense of opportunity, and our interest is aroused, not so much by what strikes the vision or hearing as by the hope and expectancy with which, in imagination, we look forward. We know that, in the presence of the great social and industrial problems of the day, we cannot afford to leave concealed any part of the truth which the human intellect is capable of grasping, and that this truth must be sought in the domain of natural science as well as in the domains of religion, ethics, and political science. We therefore welcome with interest and expectancy each addition to the material equipment which is so necessary for its researches.

The University of Chicago naturally desires to be one of the leaders in the scientific progress of the world. It recognizes the importance of natural science as a field, not only for the instruction of its students, but also for the efforts of its investigators—hence this branch will always hold a high place in the institution. Of this the public must feel assured, for it has so happened that within a year three large buildings have been erected for the study of natural science. Some of our friends may have even come to believe that this scientific work is receiving more than its share of encouragement. Those who have carefully studied the organization, the history, and the publications of the University do not need to be reassured on that subject. They must know that, while natural science may find at present more outward material expression by reason of the material equipment necessary to its instruction and researches, the other departments of the University are receiving their full share of attention and rendering their full share of valuable results. And not only does this apply to those departments of learning which deal with facts ascertainable through investigation of the laws of nature or study of the recorded experience of mankind; it applies also, and should apply above all, to those subjects which deal with the ideal.

As President of the Board of Trustees of the University, I have had occasion to learn that there prevails within that body a full appreciation of the opportunities and responsibilities of the future, and I have the utmost confidence in that future; at the same time, having by the erection of this building shown a special interest, which I deeply feel, in the cause of science, I may be permitted to still further show that interest by expressing the confident hope that the University of Chicago will always fully recognize the fact that all its instruction and all its investigation will be of little value unless they keep in view and tend to enlarge the higher ideals of life. It is even to this end that science should be cultivated. The utilitarian side of the researches of science, of course, appeals to all. We know also that there is a certain connection between well-being and well-doing,

and that there is therefore a moral as well as an economic value to those developments of science which tend to add to the material welfare and comfort of mankind; from this standpoint alone natural science stands justified in its most minute researches, for who can predict the ultimate consequences of even the least striking of its discoveries? At the same time we must feel that this increase of material welfare and comfort is not all there is for the accomplishment of science. That branch of human learning which deals with the great truths of nature should hold a much higher place in our estimation and receive its fullest opportunity for higher reasons. It must be encouraged to go beyond the immediately utilitarian field and be numbered with those subjects which are cultivated for their intellectual and moral value. The laws of nature are a part of the great final truth which the human mind is seeking, and we should recognize in them the will of a superior Being whose will it is our duty to ascertain in its most minute regulations, just as we find in the human intellect a divine gift which it is our duty to cultivate and to adorn.

It would be a poor service to mankind to render it incapable of fully appreciating the value of the imagination, to take out of life its poetry and its art. It would be a calamity to lessen its capacity for faith in the fundamental teachings of religion. Science will do neither. It will correct our errors and elevate, not destroy, our ideals. It will sweep away our unreasoning superstitions, but it will at the same time increase our admiration and veneration for the great first cause of all the wonders it discloses, and, by doing its important part in the development of the human intellect, add to the capacity of the human race for a higher moral and intellectual life.

Let us this evening, in considering the opportunities granted by the opening of this new building, allow our minds to dwell not only on the great, the admirable utilitarian service we may reasonably expect from the science of physics, but also on the higher service which is demanded of it by mankind.

Gentlemen of the Board of Trustees of the University of Chicago, I now tender to you the Ryerson Physical Laboratory, to be the property of the University of Chicago and to be used for the purposes which its name indicates. It is my intention to place upon its walls a tablet suitably recording the fact that it was erected in memory of my father, Martin Ryerson, a man who, in the struggle to overcome the material difficulties of life, found intellectual growth, and developed a tender thoughtfulness for the welfare of his fellow-man. I hope this Laboratory will make a record worthy of his honorable and useful career.

I desire here to express my high appreciation of the intelligent services of the architect of the building, Mr. Henry Ives Cobb, who spared no effort to make it worthy of its surroundings and suited to its purposes. I desire also to thank Head Professor Michelson and Professor Stratton, to whom is due the credit of the scientific arrangement and equipment of the Laboratory, and who watched over its completion with a zeal that augurs well for its future usefulness.

I have only to add that I value highly the opportunity which I have had to aid in the advancement of the great science of Physics, and at the same time erect a useful and lasting monument to one whose memory I cherish.

In accepting the Laboratory on behalf of the University, President Harper said:

*Mr. Ryerson and Friends of the University:*

On behalf of the Trustees of the University I accept the magnificent gift which you now formally transfer to us. On behalf of the Trustees, the Department of Physics, the University in all of its Departments, I thank you for a gift which will advance the cause of science and thereby uplift the human race. Representing the authorities of the University, I publicly promise you that the building provided by your generosity shall be devoted to the uses which you have designated, and to these uses only. I further pledge you that, in view of the possibilities placed within our reach by this magnificent act on your part, the University will in every way cherish the Department of Physics, and most earnestly seek to develop it for the purposes of research and instruction.

It is the duty of every section of this great country to make its contribution toward the work of scientific investigation — a work which goes hand in hand with the prosperity and development of the country itself. The West has hitherto been unable to do its part. You, sir, have now made it possible for us to stand side by side with the greatest institutions in this country and abroad, and in

this companionship to feel that in the future at least we may hope to share with them the great glory of giving to the world newly discovered truth. Again I thank you, and may you have the satisfaction which every man who has performed such an act deserves to have.

Our friends will permit me to say a few words concerning the history of the Laboratory and its construction. In this statement I make use of the description which has been given in the official program of the department. As was said yesterday, the gift of Mr. Ryerson formed a part of the first million secured for buildings and equipment. The Laboratory was completed January 1, 1894. In the design and construction of this building no element of utility has been omitted, and every effort has been made to include all the desirable features of a first-class Physical Laboratory. The walls and floor are strong and heavy; the laboratories on the first floor are provided with piers of masonry in addition to the heavy slate wall-shelves which are found throughout the building. Every laboratory is provided with gas for light or fuel, electricity for light and power, water, compressed air, and vacuum pipes. The laboratories are also equipped with a system of heating apparatus which may be used as a direct or an indirect system, and is controlled automatically by the most improved form of temperature regulators. Ducts and channels have been provided between the walls and in the floors, so that pipes or wires may be laid from one part of the building to another without difficulty.

The space in the building has been utilized as follows: rooms for special purposes, small laboratories for work of investigation, large laboratories for general instruction, lecture-rooms, class-rooms, library, and offices. The first floor is devoted to laboratories for research work, two large constant-temperature rooms, and the mechanician's room, which is fitted up with all the tools and appliances necessary in the construction and repair of physical apparatus. The rooms of the west wing are free from iron, and are devoted to the work in electricity and magnetism. On the second floor there are a large general laboratory for advanced undergraduate work, optical laboratories, a chemical laboratory, a large dark room, two developing-rooms, and the large lecture hall with its adjoining apparatus and preparation-rooms. The offices of the Director and Faculty are also on this floor. The third floor is devoted to a general laboratory for the undergraduate work in general Physics, which with its adjoining apparatus and preparation-rooms occupies the entire third floor of the east wing.

Every effort has been made to provide the undergraduate laboratory with all the conveniences found in the laboratory built for advanced work. It has its workshop in order that the apparatus may be kept in repair, and that the students may learn how to keep apparatus in repair as well as how to use it. Upon no laboratory in the building have more thought and care been expended than upon the undergraduate one. On the same floor are found two general laboratories and the rooms designed as the class-rooms, library, and reading-rooms, which are temporarily used by other Departments. The central part of the fourth floor forms a hall for experiments requiring a large space. The roof above this portion is flat and suitable for observations in the open air.

The natural location of the Laboratory left it with a few feet of space beneath the ground floor. This space has not been filled in, but utilized for steam pipes, ventilating ducts, and heavy work. The piers of the ground floor are exceedingly heavy, and extend through this space to the solid earth below. This leaves the first floor with all of the advantages of a ground floor, and at the same time dry and comfortable, and without a square foot of waste space.

There may be larger laboratories. There may be one or two that have cost more money; but there is not one which contains as little waste room or as much working space, or that is provided with as many useful conveniences as the Ryerson Physical Laboratory. It is intended that the Laboratory and its equipment shall be for work and not for exhibition purposes.

The one thing that made this result possible was the desire on the part of Mr. Ryerson that no element of usefulness should be sacrificed for beauty, and that the building as a physical laboratory should be perfect in design. It may be said, on the part of those who have had in charge the planning of the building, that this desire of Mr. Ryerson has made the duty a pleasure rather than a task. If the building possesses faults, those who have had it in charge, and not Mr. Ryerson, must take the responsibility.

It will be noticed by those who have inspected the apparatus and equipment of the laboratory that, while we have but a beginning, it has been selected with especial reference to usefulness, and

the elevation of laboratory work to a higher standard than has hitherto been attained. The apparatus put in the hand of the beginning student is made for quantitative work and he is expected and required to get good results. The best equipped room in the building is the mechanic's room, for it is here that the investigator must go for much of his apparatus. It must be constructed under his personal supervision, and when completed needs often to be changed and perfected as the experiment in hand progresses. Most of the fund for equipment has of necessity been spent for the set pieces of apparatus used in general work, such as galvanometers, chronographs, balances, standards of length and mass, clocks, and general laboratory appliances. In the future it will be possible to set apart a larger proportion of the fund for apparatus used in work of investigation.

The University desires at this time to make special mention of its indebtedness to Mr. Michelson and Mr. Stratton for the service rendered by them in planning and superintending the construction of the building. It was proper that the men who were to work in the building should have the privilege of determining its character. The exercise of such a privilege always carries with it the assuming of responsibility. The shortcomings of the Laboratory, if any such appear, will be charged to these gentlemen. But it is also true that they must receive the credit, so far as technical matters are concerned, for all its excellences, and these, as our visiting physicists will testify, are not a few.

It is due Professor Stratton to make particular acknowledgment of the satisfaction felt by all, and especially by the Head of his Department, in respect to the laborious, conscientious, and successful service rendered by him. I take pleasure in announcing that at a meeting of the Trustees held this afternoon he was promoted from an Assistant Professorship to an Associate Professorship in the University.

I am sure that I speak for everyone who loves beautiful things when I express my thanks to the architect, Mr. Henry Ives Cobb, for a piece of work unexcelled in the educational architecture of America.

If the Laboratory were the only thing Mr. Ryerson had given the University, he would have placed us under obligations from which we could never have released ourselves; but he has given us much more—not only an additional sum of money amounting to nearly \$150,000, but also time and thought, advice and direction which no money could have purchased. For all this I wish, at this time, from the bottom of my heart to thank him. No man can estimate what he has done for the University, what he has been to the University.

Mr. Ryerson has tonight given the Laboratory to the University; the University accepts the trust committed to it, and through the Department for which it has been erected, will make honest effort to accomplish everything which the friends of science may reasonably expect. May the God who controls the universe bless most richly the man who has so richly blessed us!

#### THE BARROWS LECTURESHIP ESTABLISHED

Early in October the following letter was received from Mrs. Caroline E. Haskell:

CHICAGO, October 12, 1894.

*President William R. Harper:*

MY DEAR SIR: I take pleasure in offering to the University of Chicago the sum of \$20,000 for the founding of a second Lectureship on the relations of Christianity and the other religions. These lectures, six or more in number, are to be given in Calcutta, India, and, if deemed best, in Bombay, Madras, or some other of the chief cities of Hindustan, where large numbers of the educated Hindus are familiar with the English language. The wish, so earnestly expressed by Mr. P. C. Mozoomdar, that a Lectureship, like that which I had the privilege of founding last summer might be provided for India, has led me to consider the desirability of establishing in some great collegiate center, like Calcutta, a course of lectures to be given either annually or, as may seem better, biennially, by leading Christian scholars of Europe, Asia, and America, in which, in a friendly, temperate, conciliatory way, and in the fraternal spirit which pervaded the Parliament of Religions, the great questions of the truths of Christianity, its harmonies with the truths of other religions, its rightful claims and the best methods of setting them forth, should be presented to the scholarly and thoughtful people of India.

It is my purpose to identify this work, which I believe will be a work of enlightenment and fraternity, with the University Extension Department of the University of Chicago, and it is my desire that the management of this Lectureship should lie with yourself, as President of all the Departments of the University; with Rev. John Henry Barrows, D.D., the Professorial Lecturer on Comparative Religion, with Professor George S. Goodspeed, the Associate Professor of Comparative Religion; and with those who shall be your and their successors in these positions. It is my request that this Lectureship shall bear the name of John Henry Barrows, who has identified himself with the work of promoting friendly relations between Christian America and the people of India. The committee having the management of these lectures shall also have the authority to determine whether any of the courses shall be given in Asiatic or other cities outside of India.

In reading the proceedings of the Parliament of Religions, I have been struck with the many points of harmony between the different faiths and by the possibility of so presenting Christianity to others as to win their favorable interest in its truths. If the committee shall decide to utilize this Lectureship still further in calling forth the views of scholarly representatives of the non-Christian faiths, I authorize and shall approve such a decision. Only good will grow out of such a comparison of views. Europe and America wish to hear and ponder the best that Asia can give them, and the world of Asia would gladly listen to the words of such Christian scholars as Archdeacon Farrar, of London; Dr. Fairbairn, of Oxford; Professor Henry Drummond and Professor A. B. Bruce, of Glasgow; Professor George P. Fisher, of Yale; Professor Francis G. Peabody, of Harvard; Bishop H. C. Potter and Dr. Lyman Abbott, of New York; and of several others who might be named from the University of Chicago. It is my wish that, accepting the offer I now make, the committee of the University will correspond with the leaders of religious thought in India and secure from them such helpful suggestions as they may readily give. I cherish the expectation that the Barrows Lectures will prove, in the years that shall come, a new golden bond between the East and the West. In the belief that this foundation will be blessed by our Heavenly Father to the extension of the benign influence of our great University, to the promotion of the highest interests of humanity, and to the enlargement of the Kingdom of Truth and Love on earth, I remain, with much regard,

Yours sincerely,

CAROLINE E. HASKELL.

On October 16, 1895, Judge Joseph M. Bailey, of Freeport, Ill., a member of the Board of Trustees, died. This was the first break made by death in the ranks of the Board since its organization. Judge Bailey wrote the charter of the University and rendered very valuable service in the organizing days.

#### MR. ROCKEFELLER'S THREE-MILLION-DOLLAR GIFT

At a Board meeting held November 2, 1895, Mr. F. T. Gates read the following letter from Mr. Rockefeller:

26 BROADWAY, NEW YORK, October 30, 1895.

*To the Trustees of the University of Chicago, T. W. Goodspeed, D.D., Secretary:*

GENTLEMEN: I will contribute to the University of Chicago One Million Dollars for endowment, payable January 1, 1896, in cash, or, at my option, in approved interest-bearing securities, at their fair market value.

I will contribute in addition Two Million Dollars for endowment, or otherwise, as I may designate, payable in cash, or, at my option, in approved interest-bearing securities, at their fair market value, but only in amounts equal to the contributions of others in cash, or its equivalent, not hitherto promised, as the same shall be received by the University. This pledge shall be void as to any portion of the same herein promised, which shall prove not to be payable on the above terms, on or before January 1, 1900.

Yours very truly,

JOHN D. ROCKEFELLER.

This wonderful gift, with its suggested possibilities, was received with great enthusiasm by the University, officials and students joining in a celebration which was held in Kent Theater and was attended by more evidences of genuine college spirit than had yet been manifested at the University.

#### THE CULVER GIFT

At a meeting of the Board of Trustees held December 19, 1895, the following communication was presented:

CHICAGO, December 14, 1895.

*To the Trustees of the University of Chicago:*

GENTLEMEN: It has long been my purpose to set aside a portion of my estate to be used in perpetuity for the benefit of humanity. The most serious hindrance to the fulfillment of the purpose was the difficulty of selecting an agency to which I could intrust the execution of my wishes. After careful consideration, I concluded that the strongest guarantees of permanent and efficient administration would be assured if the property were intrusted to the University of Chicago.

Having reached this decision without consulting the University authorities, I communicated it to President Harper, with the request that he would call on me to confer concerning the details of my plan. After further consideration, I now wish to present to the University of Chicago property valued at \$1,000,000, an inventory of which is herewith transmitted, to be applied as follows:

The whole gift shall be devoted to the increase and spread of knowledge within the field of the Biological Sciences.

By this I mean to provide (1) that the gift shall develop the work now represented in the several biological departments of the University of Chicago by the expansion of their present resources; (2) that it shall be applied in part to an inland experimental station and to a marine biological laboratory; (3) that a portion of the instruction supported by this gift shall take the form of University Extension lectures to be delivered by recognized authorities at suitable points on the West Side of Chicago. The lectures shall communicate, in a form as free from technicalities as possible, the results of biological research. One purpose of these lectures shall be to make public the advance of science in sanitation and hygiene.

To secure the above ends, a portion, not to exceed one-half the capital sum thus given, may be used for the purchase of land, for equipment, and for the erection of buildings.

The remainder, or not less than one-half of the capital sum, shall be invested, and the income therefrom shall constitute a fund for the support of research, instruction, and publication.

Among the motives prompting this gift is the desire to carry out the ideas and to honor the memory of Mr. Charles J. Hull, who was for a considerable time a member of the Board of Trustees of the old University of Chicago. I think it appropriate, therefore, to add the condition that, wherever it is suitable, the name of Mr. Hull shall be used in designation of buildings erected, and of endowments set apart in accordance with the terms of this gift.

Yours very truly,

HELEN CULVER.

#### THE QUINQUENNIAL CELEBRATION

The year 1896 marked the completion of five years of the existence of the University. The Quinquennial Celebration took place during the first five days of July, the most important feature being the presence of the founder of the University, Mr. Rockefeller, who was received with great enthusiasm by Trustees, Faculties, students, and friends of the institution. The steady progress was shown by the formal dedication of the Haskell Oriental Museum and the laying of the corner-stones of the four Hull Biological Laboratories. In connection with the former there was held a series of interesting conferences, and a unique reproduction of the synagogue service in the time of Christ by twenty men in oriental costume using the Hebrew language and old Hebrew chants. In connection with the latter there was an address by Professor George Lincoln Goodale, M.D., LL.D., of Harvard University, and briefer addresses were made by the Professors at the head of the particular Departments interested.

On Wednesday July 1, the exercises included the presentation of the synagogue service of the times of Christ, and the Fifteenth University Convocation. This was held in a large tent in the center of the Quadrangles. After a prayer by Rev. William H. P. Faunce, there were brief addresses by Andrew McLeish, Vice-President of the Board of Trustees; George W. Northrup, representing the Divinity Faculty; Harry Pratt Judson, representing the Faculties of Arts, Literature, and Science; and Henry Love Clarke, representing the students of the University. To these greetings Mr. Rockefeller responded briefly. After the singing of a Latin hymn, "Ad Universitatem," composed for the occasion by Mr. Frank Justus Miller, of the Department of Latin, the convocation address was delivered by Rev. Professor George Adam Smith, D.D., of the Free Church College of Glasgow, Scotland, upon the subject, "The Part Which the Old Testament Has Played in the Education of the Race, and How Far its Power to Educate and Inspire is Affected by Modern Criticism." The President's Quarterly Statement for the Spring Quarter of 1896 and the President's Quinquennial Statement followed. The events of the day were completed by the Convocation Reception in the evening.

On Thursday, July 2, the exercises centered around the Haskell Oriental Museum. In the morning there was an Archæological Conference, with an address by Professor David Lyon, of Harvard University; a Conference on Comparative Religions, with an address by Professor A. V. Williams Jackson, of Columbia University; and a Biblical Conference, with an address by Professor George Adam Smith, of the Free Church College of Glasgow. In the afternoon the formal dedicatory exercises were held, including a presentation address by Professor George S. Goodspeed, with acceptance by the President; the Dedicatory Address, by Professor Emil G. Hirsch; and the Dedicatory Prayer, by Rev. William H. P. Faunce. The day closed with a reception to visiting oriental scholars held in Haskell Oriental Museum.

As Mrs. Haskell's representative in presenting the building, Professor Goodspeed said:

It is two years ago today since the President of the University made the first announcement, in his Quarterly Statement, of the gift of one hundred thousand dollars by Mrs. Caroline E. Haskell for the building which we dedicate today. Last year at this time the corner-stone was laid with appropriate ceremony. On that occasion we were honored with the presence of that gracious lady whose beneficent thought has ripened into the building of which, at this hour, we are so proud. It were a most appropriate thing that she should be here with us today, and with her own hands deliver over to the University, to which she has intrusted so much hitherto, this new pledge of her confidence and regard. In her absence, our minds turn naturally to another, the orator of that former occasion, and it were fitting that he, the brilliant preacher and scholar, the friend of the generous donor—he who has watched over the growth of this enterprise and encouraged it, who has followed this beautiful structure with constant interest, and who has appropriately called it, by reason of its graceful lines and beautiful proportions, "the lady among the buildings of the University"—it were fitting, I say, that he should be present on this culminating day to proffer to the University, on behalf of Mrs. Haskell, the completed structure. But Professor Barrows has left us for a season in fulfilling a mission which the same generous friend has initiated, and which, we believe, he will bring to splendid fruition. In his absence, the duty has fallen to me, and I am deeply sensible of the honor which is thus conferred upon me.

At the time when the gift of Mrs. Haskell was announced, there was dedicated another splendid building, the gift of a generous patron of the University, to be devoted to the cause of physical science. It is a long step from the brilliant, modern, and intensely practical work of physics to what, to some, may seem the much more remote, scholastic, theoretical, and less immediately useful department of oriental study. But such was not the thought of the benefactor to whom we owe this building. To her, the "light from the East" shines still with undiminished brightness upon our western science. It has seemed to her to be a service, not only to the cause of sound learning, but also to the present-day life and work, to provide here a temple for the service of that universal goddess of Truth whose footprints may be followed and whose instructions sought in the Orient youth of the world as well as



in the maturer and more complicated life of the Occident. In providing this building it is the thought of Mrs. Haskell that oriental studies, important as they are in themselves, should find their center and their greatest utility in their contributions to the better knowledge of the divine revelation contained in the Jewish and Christian Scriptures. How well and wisely has she discerned the signs of the times! The Bible is a new book in the light of our new studies in oriental life, oriental philology, oriental history, oriental archaeology, and oriental religion. And who can deny that what contributes to our better understanding of the divine truth of the Holy Scriptures contributes in the most immediate and practical way to the progress of the world?

Mrs. Haskell presents this building to the University of Chicago in honor and in memory of her husband, Frederick Haskell, in token of which it is to bear the name, The Haskell Oriental Museum. Mr. Haskell was for years a resident of Chicago and was identified with its business interests. It is appropriate, therefore that the University of the city in which he lived should preserve a memorial of his useful life. And in this gift of the wife on behalf of her husband may we not see a further touch of beauty crowning this structure; memories of the past, beautiful self-sacrifice, loyal affection reaching beyond the grave, coming to gather about this shrine of learning, adding to it the grace of hallowed association?

I have the honor, Mr. President, to add that Mrs. Haskell has felt a constantly growing enjoyment in the contemplation of this gift, as she has realized the care, the liberality, the ability, and the success which have characterized the University in the administration of the trust which she has committed to it; and I, therefore, in her name, present to you at this time the keys of The Haskell Oriental Museum, expressing the earnest and sincere expectation of the giver that there will go forth from these halls enlightenment, inspiration, and guidance in that learning which has come from the East and which, culminating in the Book of books and in the teachings and life of the Son of Man, will ever abide as our most precious possession.

The President of the University accepted the gift in the following words:

We have come together as Trustees, colleagues, students of the University of Chicago, and as friends of oriental and religious learning, in order to perform the last act in a course of events which has extended over two years.

The building which today is to be formally accepted, dedicated to the cause for which it was intended, and opened to the public, as has been said, is devoted to the cause of oriental and religious work. For the present the rooms on the lower floor have been set apart, with the consent of the donor, for general purposes. But in the near future the entire building will be used for the purpose for which it has been given. The north room on the first floor will be an Egyptological museum; the south room, an Assyriological museum. The second floor includes two large museum-rooms which will be used for material which shall specially illustrate the writings of sacred Scriptures; in other words, a Palestinian museum. On this floor are located three lecture-rooms and three offices. The north room of the third floor will be the library-room, while the south room will serve as a museum of Comparative Religion. This floor includes also two lecture-rooms and three offices. The building, with the museum materials which have now been arranged in it, has cost, in round figures, \$100,000.

The circumstances connected with the giving of this money were most interesting. An effort was being made, at the time, to secure the sum of one million dollars before July 1, 1894, in order that the gifts pledged conditionally by Martin A. Ryerson and John D. Rockefeller might be secured. While progress had been made, the result was very uncertain. The summer season was coming on, and many whom we might have counted on had left the city. There still remained nearly \$200,000 to complete the sum required. I remember distinctly a warm day, about the first of June, which the Secretary of the Board of Trustees and myself had spent in the city from early morning until late in the afternoon without meeting success of any kind. No person upon whom we called was found at home. As we were returning home, it was suggested that perhaps our friend, Mrs. Caroline E. Haskell, who had before expressed great interest in the cause, might be willing to assist in the work we were trying to accomplish. It was found that she had been considering very seriously the question of erecting a building upon the grounds of the University in memory of her husband, and in a few minutes expressed her willingness to furnish the money for the erection of such a building. It was

this gift that made certain the securing of the million dollars. The building, therefore, important as it is in itself, means more than at first would appear. In securing this building the University at the same time secured \$900,000, which, so far as one can see, would have been lost to the University but for Mrs. Haskell's timely help.

It is a source of keen regret to all of us that the gracious and noble woman who places in our possession this important addition to the equipment of the University is not present at these ceremonies. If she were here, we should make an effort to express to her the feelings of gratitude which fill our hearts. In her absence we cannot do less than express as best we can these same feelings.

In the many interviews which she has kindly accorded me I have come to understand, I think, the motive which prompted the gift. Her heart is full of love to God who has so providentially guided her life. Her mind is so occupied with the thought that men and women everywhere should know more about the revelation vouchsafed by this God to humanity, her whole soul is so aglow with the contents of divine truth itself, that she makes this contribution to further the interests of a true understanding of the true religion. She realizes, moreover, that this thought of relationship to God is universal; that in the minds of men everywhere there has been an effort to find God, whom we, the disciples of Jesus Christ, have learned to know from our Master. She would have all such efforts studied and analyzed in order that their contribution may be placed side by side with the great contribution of Christianity. Few women, I make bold to affirm, ever indicated a broader comprehension of modern truth and modern methods than has the woman whose name we desire to honor today. The gift has been prompted by an honest and sincere desire to benefit the human race, and the method of giving was as gracious as the thought which prompted it was broad. It came without restrictions of any kind. There have been many contributions to the cause of religion, but no single contribution was ever made with purer motive or deeper purpose.

On behalf of the Trustees of the University, I accept from Mr. Goodspeed, whom she has chosen to represent her on this occasion, the keys of Haskell Oriental Museum, and I promise, on behalf of the University, that the building shall be sacredly set apart for the purpose indicated.

On Friday afternoon, July 3, the corner-stones of the Hull Biological Laboratories were laid. The principal address was by Professor George Lincoln Goodale, of Harvard University, upon the theme, "Some of the Relations of the New Natural History to Modern Thought and Modern Life." After the address the President made a brief statement, and the corner-stones of the several laboratories were laid, short addresses being made by Charles O. Whitman, representing Zoölogy; by John M. Coulter, representing Botany; by Jacques Loeb, representing Physiology; and by Henry H. Donaldson, representing Anatomy.

The articles deposited in the corner-stones were as follows:

I. Articles deposited in each of the corner-stones: (1) the *Annual Register* of the University; (2) the last *Quarterly Calendar*; (3) the *University Record*; (4) *Circular of Information*, Summer Quarter; (5) the *University of Chicago Weekly*; (6) programs of the Quinquennial Celebration; (7) the President's Quarterly Statement; (8) the President's Quarterly Statement containing notices of the gift of Miss Culver; (9) the President's Quinquennial Statement; (10) the Chicago morning papers; (11) programs of the Biological Departments; (12) a copy of Miss Culver's letter of gift; (13) photographs of the Culver Quadrangle; (14) photograph of the Hull Laboratories; (15) engravings of Charles J. Hull; (16) photographs of Miss Culver; (17) University journals.

II. Additional articles deposited in the corner-stone of the Hull Botanical Laboratory: (1) the *Botanical Gazette* for June, 1896; (2) pamphlet, published by the United States Department of Agriculture, *Preliminary Revision of the North American Species of Echinocactus, Cereus, and Opuntis*, by Head Professor John M. Coulter; (3) pamphlet, *The Embryo-Sac of Aster Novae Angliae*, by Assistant Charles J. Chamberlain; (4) pamphlet, *The Development of the Cystocarp of Champiaparoida Haro*, by Associate Bradley Moore Davis; (5) pamphlet, *The Fertilization of Batrachospermum*, by Associate Bradley Moore Davis.

III. Additional articles deposited in the corner-stone of the Hull Physiological Laboratory: (1) pamphlet, published by the University of Chicago, entitled, *Physiological Archives, Hull Physiological Laboratory, No. 1*; (2) pamphlet, *Ueber den Einfluss des Lichtes auf die Organbildung bei*

*Thieren*, von Jacques Loeb, Associate Professor; (3) pamphlet, *Zur Theorie des Galvanotropismus*, von Jacques Loeb and S. S. Maxwell; (4) Part I of the laboratory notes used by the class in Introductory Physiology, University of Chicago, 1896, instructor, D. J. Lingle.

IV. Additional article deposited in the corner-stone of the Hull Anatomical Laboratory: *Magazine of Western History* for October, 1891, containing a biographical sketch of Mr. Hull.

V. Additional article deposited in the corner-stone of the Hull Zoological Laboratory: bound volume, *Reflections*, by Charles J. Hull, in whose memory these buildings are erected.

On Saturday morning, July 4, a religious meeting was held in the chapel, where addresses were made by Rev. William H. P. Faunce and Rev. George Adam Smith. After this the national colors were presented to the University by the First Regiment of Infantry of the Illinois National Guard, the address being made by Colonel H. L. Turner, with response by the President. The oration of the day was then delivered by Professor Bernard Moses, of the University of California, upon the subject, "The Condition and Prospects of Democracy."

The final day of the celebration, Sunday, July 5, was marked by sermons by Rev. George Adam Smith and Rev. W. H. P. Faunce.

The social features of the celebration included the reception already mentioned and several dinners, one by the Trustees to the founder of the University and one by the representatives of the Science Departments to visiting scientists. At the former Mr. Andrew McLeish acted as toastmaster and introduced Mr. A. K. Parker, who spoke on behalf of the Trustees, and Edward G. Mason, Esq., who represented the city of Chicago. On this occasion Mr. Rockefeller said:

It gives me pleasure that it is impossible to express, just to look into your faces. Before I came on, having heard of what wonderful things you had accomplished in all the great business undertakings and affairs with which you have had to do, I was afraid to meet you. You know, I feel very much at home here. From my coming you have just simply overwhelmed me with your kind attentions. President Harper told me when I came that I should never be expected to speak here at all, and then I did say a few words, and he told me surely I must not say any more. He repeated that again today, and I want to have the President understand that he cannot put me down. I do feel very grateful to you, gentlemen; I do feel great confidence in you. I said to some of your number since I came that I trembled for you in view of this great responsibility which you have so cheerfully taken upon you. It carries me back to my first experience as a young man in business. As the success began to come, I seldom put my head on the pillow at night without speaking a few words to myself in this wise: "Now, a little success; soon you will fall down, soon you will be overthrown." And I was constantly trembling lest this should come to pass. I have nothing of that feeling with respect to you, now that I know you. I had none of that feeling before—not with the body of gentlemen who made up this committee; I have never had any hesitancy with reference to their ability, to their honesty, to their fidelity, to their abiding interest in this work and their appreciation of what it meant. It means far more than I supposed in the beginning. I am amazed at what I see here; I am delighted beyond measure. In common with yourselves, I am full of hopes for the future of this institution, your institution, your Chicago University. I rejoice with you in its promising beginning, and I trust that the work which has begun so auspiciously will be continued, and that the generations to come, when we all sleep quietly in the churchyard, shall continue to be blessed all down the ages.

#### THE ESTABLISHMENT OF THE UNIVERSITY CONGREGATION

The first meeting of the University Congregation, established under the provisions of Statute 18 of the University, was held in the Haskell Oriental Museum on Saturday, January 2, 1897. This was followed by a dinner, at which Mr. Martin A. Ryerson, President of the Board of Trustees, made an address upon "The University Congregation and the Board of Trustees of the University," showing the ideas behind the organization:

*Mr. President, Ladies and Gentlemen:*

It gives me great pleasure to be present at this first dinner of the University Congregation in an official capacity, and with personal sentiments which enable me to unite to an official expression of welcome to the new organization an expression of satisfaction in its creation which is, I am sure, shared by every member of the Board of Trustees.

We feel that the existence of the University Congregation is the promise of the introduction into the direction of university affairs of elements of very great importance; we feel that the policy of our University to give to its work the broadest influence and outward expression is reinforced by a step which not only provides for a union of the Faculties which will interest in questions pertaining to the general welfare of the University those who, by reason of their special duties, now have their attention confined to particular phases of university management, but also provides for that reaction upon university work which is necessary to keep it in close touch with the demands of modern life.

Much of the spirit which in the Middle Ages kept universities apart from, and frequently in conflict with, the community, survived until quite recently in a certain scholastic exclusiveness, which only slowly admitted the idea that education, even in its highest forms, must measure its value by the influence, direct or indirect, with which it penetrates and permeates every stratum of society; but I think that all now feel that education may be considered to deserve the title of higher only inasmuch that it shapes its aims and methods with the broadest conception of the preparation of mankind for the duties, the trials, and the pleasures of life; only inasmuch that it is possessed of the idea that, however advanced and special may be its work, it must find ultimate and permanent justification in the depth and wholesomeness of its influence to that end.

It follows from this measuring of methods by results that while the problems of education, must be solved by educators, those problems must be stated and the solutions verified by life itself, not alone the life of the scholar, nor that of any class of a community, but human life in its broadest sense. And so the experiences and educational needs of all should be brought to the knowledge of educators; the practical as well as the intellectual and spiritual requirements of mankind should be made known by contact with the world which will test theories by practice and direct educational energies in useful channels.

The value and influence of a university are, therefore, dependent upon a reaction upon it of the life of the community. The chief magistrate of our nation has recently, at the celebration of the Princeton Sesquicentennial, entered a plea for the interest of college men in public affairs. Should not special stress be laid upon a plea for the interest of all educated men in education, in our public schools, our academies, our colleges, and our universities? Is it not through these institutions that we must eventually reach the remedy for political and social ills?

I think I may say for the Board of Trustees that, if we found satisfaction in creating, with the advice of the Faculty, this new organization, it was because we felt that by so doing we were taking a step toward bringing the University into closer relation with the community and thus allowing an opportunity for that complete adjustment of action and reaction which is necessary to progress. We see beyond the desirable union of the Faculties for which it provides the provision which looks toward enlisting in University affairs the continued interest of our growing body of graduates; we trust that the field of advice and criticism open to this body will be carefully cultivated by them, and that they will take a vigilant and friendly interest in all that the University is doing and trying to do. A close succession of business and academic control will promote the continuous and systematic progress of an institution, but that control can retain its vitality and usefulness only by keeping in contact, not only with the progress of modern thought, but also with the changes in modern life; and that very continuity and that concentration of management make it the more necessary that such management should be kept open to outside advice and criticism. We shall welcome through this body, which we hope will contain a constantly increasing circle of men and women who have gone forth from the University into the different walks of life, such advice and criticism. But may we not expect even more from these reunions? May we not hope that they will come to have for the graduates who form a part of this body a sentimental interest of great value? We know that, deeper and often more valuable than the direct influence which the activities of trained men exert in a community is the indirect influence exerted by character and ideals. If university training tends to

the creation of character and ideals, may we not say that they will be better maintained in presence of the experiences of life by renewal from time to time at one of the sources of their strength? It is no idle sentiment which makes the college man's mind revert with affection to his *alma mater*; it is the valuable manifestation of a real tie; it is another phase of the sentiment which makes him revert with uplifting tenderness to the home of his youth, with its pure influences and its happy anticipations. Should not every man and woman who goes forth from the University feel that through a continued interest in and contact with it lie the best means of constantly measuring realization by the standards of early hopes and aspirations?

In closing, let me be moved by the sympathetic presence here of many guests, who are proud to owe allegiance to sister institutions, to say that the University of Chicago will be well satisfied if the men and women who go forth from its halls will equal in character and distinguished services, and in devotion to their *alma mater*, those who have come here tonight to bring us assurances of good-will.

#### THE DEDICATION OF THE HULL BIOLOGICAL LABORATORIES

In connection with the Nineteenth Convocation the formal dedication of the Hull Biological Laboratories took place, July 2, 1897. The address was delivered by Professor William H. Welch, of Johns Hopkins University, upon "Biology and Medicine." In her presentation address Miss Helen Culver said:

In some strenuous natures anxiety regarding a personal hereafter is largely replaced by an ardent desire to accomplish some real work here—"to produce," as Carlyle puts it. To them it is not enough to add somewhat, day by day, to the sum total of well-being. They long to preserve the life-force from total dissipation at the close—to leave, in concrete form, a definite resultant of the life here, and give it such direction that it may move on as a continuation of personal effort. The son, it is hoped, may be heir to his father's spirit and purpose, or by some other means power may be transmitted to succeeding generations, and an immortality of beneficent influence be secured.

It was in obedience to such a driving power that provision for these buildings was made.

Since it has fallen to me to conclude the work of another, you will not think it intrusive if I refer to the character and aims of the real donor. During a lifetime of close association with Mr. Hull, I have known him as a man of tenacious purpose, of inextinguishable enthusiasms, and above all things dominated by a desire to help his kind. Much of his time for fifty years was spent in close contact with those most needing inspiration and help. He had also profound convictions regarding the best basis for social development in our country, and these directed the energies of his life. Looking toward the close of activity, it was for many years his unchanging desire that a part of his estate should be administered directly for the public benefit. Many plans were discussed between us. And when he was called away, before he could see the work begun, I am glad to know that he did not doubt that some part of his purpose would yet be carried out. He would have shared our joy in this great University, could he have foreseen its early creation. And it would have been a greater pleasure added, could he have known the wide diffusion of its benefits sought by its management.

As already indicated, apart from my own interest in the matter, I have looked upon myself as the guardian of a trust, only the more sacred because unexpressed. That burden, Mr. President and members of the Board of Trustees, I have laid upon you, and upon all those who are to work within these halls, instructors and students. To you and to them I pass the name, which no son or daughter is left to wear, with the material inheritance, the advantages, and the duties attaching thereto.

I have believed that I should not do better than to name, as his heirs and representatives, those lovers of the light who in all generations, and from all ranks, give their years to the search for truth, and especially those forms of inquiry which explore the Creator's will, as expressed in the laws of life, and the means of rendering lives more sound and wholesome. I have believed that moral evils would grow less as knowledge of their relation to physical life prevails—and that science, which is knowing, knowing the truth, is a foundation of pure religion.

I shall attempt no further statement of the lines along which I have hoped good would flow from this foundation. Those possibilities would be better measured by some worker in the field of biological research.

Mr. President and gentlemen, I leave the buildings and my responsibility with you.

In accepting the gift of Miss Culver, President Harper recalled the circumstances under which the generous contribution was made, indicated the important place which it filled in the general plan of the University, and promised the faithful co-operation of the Trustees and Faculties in endeavoring to realize the hopes of the donor regarding the laboratories thus established. A brief description of the equipment is as follows:

The Zoological Laboratory is 120 × 50 feet, and four stories high, exclusive of the basement.

On the first floor are located the library of the Biological Departments, rooms for a synoptical museum, and a large laboratory for Elementary Zoology.

The second floor contains one large laboratory for beginners in research, and a number of smaller laboratories for more advanced work.

The third floor contains two large laboratories, one for Comparative Anatomy and Embryology, the other for Cellular Biology, and a number of rooms for research.

The fourth floor is devoted to the laboratories for Bacteriology, which are supplied with sterilizers, incubators, special microscopes, and other bacteriological apparatus, and are furnished with tables for microscopical work and for the usual laboratory manipulations.

The basement contains one large room with glass-covered extension on the south side, designed for an aquarium, two rooms for use as aviaries, vivaria, etc., one room for paleontological material, and one for taxidermy and museum purposes.

The best optical and other apparatus demanded by zoological work are provided. There are series of models and charts illustrating embryological and morphological subjects, and ample facilities for keeping land and aquatic animals under favorable conditions for study.

The Anatomical Laboratory is 120 × 50 feet, and four stories high, exclusive of the basement, and was constructed to provide for both Anatomy, including Histology, and for Neurology.

In the basement are special rooms for keeping frogs and similar animals at low temperatures; a bone-room, a cold-storage room for anatomical material, and a crematory.

On the first floor the east end will be occupied by Experimental Psychology, a number of small isolated rooms having been arranged for the research work.

There is a large photographic room containing a stone pier and connected with a well-arranged dark room.

At the west end is the general laboratory for Histology, and on the north side the store-rooms for all the Biological Departments, together with the office of the purchasing agent.

The second floor is devoted to Histology and Neurology. At the east end is the lecture-room and the laboratory for special Histology. Along the south side are the laboratories of the staff, and at the west end the neurological laboratory for microscopic work, together with a laboratory fitted for chemical studies in this line.

On the third floor is a large amphitheater. The remaining rooms have been planned for human Anatomy, but will not be fitted up for that work at present.

At the west end of the fourth floor is a large animal room so arranged that small animals can be kept under very favorable conditions. The other rooms on this floor are intended for special investigators whose work requires more space and protection than the general laboratories afford.

The Botanical Laboratory is a building 102 × 52 feet, and four stories high, with basement, and roof greenhouse, and abundantly lighted.

The basement, besides general storage, contains rooms for the preparation of material, for constant temperature, and for such physiological apparatus as requires solidity of support.

The first floor contains the general lecture hall, two large general laboratories for elementary work, and preparation rooms.

The second floor is devoted to the general Morphology and Taxonomy of Spermatophytes, containing a laboratory for special Morphology, two herbarium-rooms, five private research-rooms, and reading- and club-room.

The third floor is arranged for work in the special Morphology and Taxonomy of Cryptogams, containing two laboratories, two herbarium-rooms, and eight private research-rooms.

The fourth floor is devoted to Plant Physiology, with a general laboratory, a special laboratory, a chemical laboratory, workshop, store-rooms, and private research-rooms.

The roof greenhouse is intended for experimental work in connection with the physiological laboratories. It also serves to furnish material for the morphological laboratories.

The apparatus equipment for morphological and physiological work is of the highest grade, and large herbarium collections afford facilities for taxonomic work.

The library facilities are adapted to the work undertaken, and will be increased as rapidly as possible.

#### THE DEDICATION OF THE YERKES ASTRONOMICAL OBSERVATORY

The dedicatory exercises of the Yerkes Astronomical Observatory took place at the Observatory Building, Williams Bay, Wis., on October 21, 1897. The address was delivered by Professor James E. Keeler, director of the Allegheny Observatory upon the subject "The Importance of Astrophysical Research and the Relations of Astrophysics to Other Physical Sciences."

Mr. Yerkes in presenting the Observatory to the University through the President of the Board of Trustees, said:

*Mr. President, Ladies and Gentlemen:*

After five years of patient waiting and incessant labor, we are brought together to perform the agreeable duty which has been in our minds during the whole of that period, namely: the dedication of this Observatory.

It was in October 1892 that Dr. Harper and Professor Hale arranged for the manufacture of the telescope and building the Observatory, and since that time the work has been incessant. Before this, however, three years had been spent in preparing the rough glass, making eight years in all which was required to produce what we now have before us. The anxiety of those who were so deeply interested in the work can scarcely be imagined, for, as they followed it step by step from its incipency to its finish, many doubts and fears naturally crossed their minds. As no glass had ever been made of the size of this, there was no criterion to go by, and it was necessary to leave everything to the future. Then, again, there was the risk of accident, and when the glass was safely lodged in its final resting-place, the hearts of many who are now present beat much more freely and with greater satisfaction than they had since the projecting of the work. A priceless gem to these gentlemen was at last in safety, and when we consider what would have been the result in case of accident—six years of sincere work being thrown away, and six years more would surely elapse before the same results could be obtained—we can imagine something of their feelings of satisfaction when they saw the final accomplishment of their labors. That we have done a good deed, and one which will revert to our satisfaction, we have no doubt.

The science of Astronomy, while being the oldest extant, has been, we may say, the most neglected. It is in no way commercial, and that may be one of the chief reasons. Its promulgation has always been confined to a class of enthusiasts who felt an interest in their work and gloried in the achievements which they attained.

Five thousand years ago astronomy was studied, but it was not until six hundred years before the Christian era that any progress had been made in it. Greek mythology used it as a romance, with but little idea of its truthfulness, and up to the beginning of the seventeenth century, when the telescope was invented by Hans Lipperhay and applied by the great Galileo, but little was known of the science. From that time on through the work of Newton, Lagrange, Laplace, Dominicus, Cassini, Flamsteed, Bradley, Herschel, Bessel, and others equally celebrated, good progress was made, and

during the last half-century there have been greater advances than ever before. This is owing to the fact that we now have the ability to determine correctly, by instruments which are late inventions, matters that were never dreamed of. It is to the great telescopes that the ardent workers look for encouragement for their labors. Accurate means have been devised for recording for the observations, while the photographic plate, together with the spectroscope, has been applied with the most astonishing results.

As I said, one reason why the science of astronomy has not more helpers is on account of its being entirely uncommercial. There is nothing of moneyed value to be gained by the devotee to Astronomy; there is nothing that he can sell. Compared with electricity and other sciences of like character, there is the greatest difference; consequently, the devotee of Astronomy has as his only reward the satisfaction which comes to him in the glory of the work which he does and the results which he accomplishes.

These are some of the reasons why you are gathered here today, and why this edifice and its contents have been furnished.

That the work will produce good results, I am, after a thorough examination, fully satisfied, and my satisfaction is still more intense when I learn of the great and enthusiastic men which the University of Chicago has gathered around it for the purpose of taking charge of the work to be performed in this Observatory; and I therefore, with the fullest feeling of satisfaction and pleasure, turn over to you this structure, with all its contents, feeling satisfied that it is now in the best of hands, and that the labors here will be serious, conscientious, and thoroughly done. I feel that in your attempts to pierce the mysteries of the universe which are spread before you by our great Creator, the enthusiasm of your natures will carry you to success.

Mr. Martin A. Ryerson, President of the Board of Trustees of the University, accepted the gift in a brief speech. He said:

*Mr. Yerkes, Members and Friends of the University of Chicago:*

It is with great personal pleasure, increased by the feeling that I am expressing a wide-felt sense of public appreciation, that I perform the duty of representing the Board of Trustees of the University of Chicago on this occasion.

Any hesitation which one might feel on account of the difficulty of adequately expressing the sentiments which are here aroused gives way before the conviction that, when all has been said today, there will remain a continuing and growing appreciation of this great gift of which this ceremony, important as it is, is but the initial public manifestation, and which will, after all, be the true reward of the donor.

When the many expressions of gratitude have found utterance on this occasion, there will remain what must be a source of even greater gratification to Mr. Yerkes the continuing and increasing usefulness of his great gift. I use the word "usefulness" not only because I am convinced that we are here at the inception of a great work which will justify itself by the practical value of its results as well as by the ideal nature of its aims, but also because I feel that in an age when so much of the ability and energy of the community is devoted to the advancement and the improvement of material conditions each new agency for the upholding of the ideals of life through the cultivation of science for its own sake has a usefulness of the highest order. We need not fear the materialism of an age in which an intense pursuit of the useful and the practical is accompanied by an ever-widening conception of true utility, in which the satisfaction of intellectual demands is keeping pace with the meeting of physical requirements. Let us by all means be practical, if we can at the same time broaden our conception of the meaning of the word so that it may include that development of the intellectual side of life without which any improvement of material conditions is absolutely vain. While recognizing fully the great practical services which astronomy has rendered to the world, I still feel that its proudest claim to recognition and appreciation must dwell in its tendency to establish and maintain in the feelings of mankind the conviction that, amid the services of science, the increase of knowledge for the sake of knowledge is not the least.

Mr. Yerkes, on behalf of the Board of Trustees of the University of Chicago, I accept your



generous gift, and I assure you that we feel sincerely grateful for the new force for the advancement of learning which you have placed in our hands. We appreciate highly the liberality with which you have from the beginning encouraged the broadening conception of this great work, and we desire to bear testimony to the breadth of the views which you have always expressed in relation to its aims and its scope.

We shall endeavor so to administer the trust committed to us as to fulfil your highest hopes and expectations.

Then followed the address of the President of the University, as follows:

*Mr. Yerkes, Representatives of Institutions of Learning, Members of the University, Ladies and Gentlemen:*

We have been witnesses of a great act. We have listened to the significant words by which the man, whose largeness of heart made possible the erection of this temple of science, has transferred the same to the University in whose keeping it shall forever remain. The donor has now made formal presentation of this great contribution to the cause of science, and the President of our Board of Trustees has formally accepted it. This is the latest act of a long series, and very naturally, as this act has been performed, my mind has been carried back through these five years of serious and laborious struggle, to that moment when, with words perhaps still fewer in number, and with a spirit which, at all events, seemed, if possible, more gracious, Mr. Yerkes took the initial step in an undertaking, the name and fame of which have gone around the world. On Tuesday morning, October 4, 1892, when the doors of the University had been open only three days, Mr. Yerkes consented to purchase for the University the forty-inch objective. Under date of December 5, 1892, he wrote as follows:

"It was with much satisfaction I learned from you that a lens for a large telescope could be purchased immediately; and I informed you that I would purchase the lens and have it finished; that I would also pay for the frame and mountings of the telescope, so that the two together would make a perfect telescope, to be the largest in the world, namely, with an objective disk of forty inches clear.

"You gave me figures which you supposed the telescope would cost; and I readily agreed to invest that much money in the undertaking.

"Since then I have felt it proper that the telescope should have a home, to be paid for by me; and I have concluded to add to my gift an Observatory necessary to contain the instrument.

"I have already authorized you to arrange with the owners of the glass for the transfer of their rights in it to the University.

"I have made a contract with Alvan G. Clark & Sons for finishing the glass. I have also agreed upon the price, and have everything ready for the signing of the contract with Messrs. Warner & Swasey for the frame and mountings."

From that day to the present moment, the work of making plans for mountings and buildings, the work of negotiation for location, and the work of actual construction has gone on—slowly, to be sure, but without interruption. It seems, as we look back upon these years, almost impossible to calculate the time and effort expended by all concerned upon the undertaking of which today we celebrate the completion.

In our thought of the gift as a whole we must not lose sight of the several parts which together constitute it. There was first of all the forty-inch objective, the greatest and last work of its maker, Alvan G. Clark. We see before us the equatorial mounting of the objective, which, with the ninety-foot dome above us, and the rising-floor on which we sit, are evidence of the skill and thorough workmanship of the builders, Messrs. Warner & Swasey. The objective cost, when finished, \$66,000; the equatorial mounting, \$55,000; the dome and rising-floor, \$45,000. To these there must be added, as distinct gifts, the thirty-foot dome for the southeast tower, which cost \$7,000; the twenty-six foot dome and mounting of the Kenwood telescope; likewise the stellar spectrograph, constructed by Mr. J. A. Brashear, costing \$3,000. Besides all these, the building, with its piers for the instruments, its steam-heating plant, engines, dynamos, and motors, the cost of which has been in round numbers \$135,000.

On this occasion we must make acknowledgment of three additional gifts which have already come to the Observatory. First of all, the grounds on which it has been built, consisting of fifty-five

acres valued at \$50,000, a contribution of Mr. John Johnston, Jr.; second, the instruments and equipment of the Kenwood Observatory, presented to the Yerkes Observatory by Mr. William E. Hale; and third, the gift of Miss Catherine Bruce, of New York city, of \$7,000, for a ten-inch photographic telescope with building and dome.

The question of the selection of a site was perhaps the most difficult question which presented itself. In order to ascertain the scientific requirements of a site, it was deemed wise to confer directly with the leading astronomers of the country. A series of questions prepared by the Director of the Observatory, Professor Hale, was sent to a selected number of American astronomers. A consensus of opinion upon the various questions proposed was thus obtained. The claims of twenty-six different localities were considered, namely, Morgan Park, Tracy, Highland Park, Downer's Grove, Hinsdale, Mount Pleasant, Western Springs, La Grange, Glen Ellyn, Lake Geneva, Elmhurst, Elgin, Rockford, Peoria, Aurora, Waukegan, Belvidere, Sycamore, Marengo, Lena, Kankakee, Warren, Oregon, Princeton, Dixon, Pasadena, Cal. Most of these localities were visited. The objections which might be urged against each place were annotated. About this time the Trustees thought it wise to appoint as a committee, with power to select the site, the President of the Trustees and the President of the University. In a letter dated February 4, 1893, Mr. Yerkes wrote to the President of the University: "I will leave the question of site entirely to you and to Mr. Ryerson." The committee, however, did not desire to assume so great a responsibility, and, although given power to act, made a full report to the Board of Trustees, in which was presented the choice of the committee, namely, Lake Geneva, together with the reasons for the choice.

From this report I may be permitted to quote one of several paragraphs urged in favor of this location:

"It is conceded by all concerned that no site thus far suggested combines in itself so many of the requirements, or any of the requirements to so great a degree. This site is high and beautifully located. The atmosphere is clear, without danger from the encroachment of manufacturers, railroad, or electric lights."

The report of the committee was adopted by the Trustees, and the much-debated question was at last settled.

I shall not occupy your time in describing the building which you have been invited today to visit. It is sufficient to say that, in addition to the provision ordinarily made, it includes completely equipped instrument and optical shops, in which apparatus designed by members of the staff for special investigation can be constructed. At the present time a machine for ruling optical gratings, an equatorial mounting for the twenty-four-inch reflector (the mirror of which has already been made by Mr. Ritchey), and a mirror of sixty inches aperture are in course of construction.

Has the forty-inch object glass stood the test, and are the atmospheric conditions satisfactory? These questions have already been answered many times. Test after test has been applied. The following statement is made officially by the Director:

(1) Objects beyond the reach of any other telescope in existence have been discovered. The closest double stars have easily been divided by Professor Burnham. The spectrum of the sun's atmosphere close to the surface has been found by Professor Hale to contain a great number of bright lines hitherto unknown. The photographs of stellar spectra taken show that the glass, because of its great light-gathering power, is particularly suitable for spectroscopic observation of the stars. (2) The steadiness of the telescope mounting is so great that Professor Barnard finds his micrometrical measures of star positions, diameters of planetary nebulae, positions of the satellite of Neptune, etc., to be far more precise than any he has previously obtained. (3) The atmospheric conditions at night are frequently very fine indeed. The best seeing here is not surpassed by the best seeing at the Lick Observatory, though in the course of a year there would be more good nights at Mount Hamilton. On the other hand, the atmospheric conditions during the day are much superior to those of the Lick Observatory. The conditions for solar work, considering both instruments and atmosphere, are probably much better than those enjoyed by any other observatory.

Mr. Yerkes, President Ryerson has expressed to you the appreciation of the Board of Trustees for this great gift toward the resources of the University, and has emphasized most appropriately the spiritual element characterizing a gift made in an environment in which the materialistic occupies so

prominent a place. It is fitting that expression also be given on behalf of the Faculties of the University and the members of the astronomical staff. We realize that you have greatly increased the glory of the University by furnishing an equipment which makes it possible to discover new and important facts in the structure of the universe; that you have furnished stimulus and incentive to many of our number to devote their lives most earnestly and sacredly to the search for truth; that you have honored the city of Chicago, the Northwest, the entire valley of the Mississippi, by planting in its midst an institution which through the centuries will contribute to the uplifting of men and the upbuilding of character. We appreciate above all the simplicity and the sincerity of the motive which prompted you to make this gift, and the purpose which has controlled you throughout these years, during which the gift has taken tangible form. Men of science and men of learning in every land will receive and acknowledge the benefits of this gift. The Yerkes telescope is not an institution of Chicago, or of Wisconsin, or of the United States merely. It will become one of the institutions of the world, aiding and interesting those who speak many different languages, who live in many widely separated lands. We realize that through your gift the opportunity has come to us, as members of the Faculty of the University of Chicago, to perform important service in the cause of science. For the opportunity of doing what but for your gift we could not otherwise have done we are profoundly grateful. If it were possible for you to derive a tithe of the satisfaction from your gift which the giving of it will bestow upon each one of us, you will have been rewarded. It has been said that "science, like virtue, is its own exceeding great reward." This, if true, holds good not only of those who may, technically, call themselves scientists, but as well of those who make scientific work possible by their munificence.

On behalf of the students and instructors, on behalf of the University of today, and the University of the future, I thank you for the word spoken five years ago, for the word you have spoken today—the word which gave the University the gift.

#### THE GIFT OF GREEN HALL

On June 10, 1898, Mrs. Elizabeth G. Kelly, who furnished the funds needed to erect Kelly Hall, placed the University under renewed obligations by a gift of fifty thousand dollars (\$50,000) to provide for the construction of a new dormitory for women, to be known as Green Hall, in honor of her parents. This amount, being insufficient to meet the entire outlay for the building, was subsequently increased by another gift of twenty-two thousand dollars (\$22,000). The dormitory was occupied by students on January 1, 1899.

#### THE ESTABLISHMENT OF THE COLLEGE FOR TEACHERS

On July 12, 1898, Mrs. Emmons Blaine pledged to the University the sum of five thousand dollars (\$5,000) a year, for five years, for carrying on work of instruction in some center in the business portion of Chicago. As a result of this gift the College for Teachers was established, with location in the Fine Arts Building. On January 27, 1899, finding that the amount first pledged was insufficient, Mrs. Blaine gave an additional contribution of twelve hundred dollars (\$1,200). The work of the new College was formally opened on September 30, 1898, what was the Class-Study Department of the University Extension Division being gradually merged with it. At a subsequent time the name of the College was changed to "University College," the term "College for Teachers" appearing too restricted.

On September 6, 1898, Mr. Martin A. Ryerson made a contribution of five thousand dollars (\$5,000) for the purchase of new equipment for the Ryerson Physical Laboratory.

#### THE VISIT OF PRESIDENT MCKINLEY

On October 17, 1898, the University was honored by a visit from William McKinley, the President of the United States. The occasion was marked by an assembly of students from all departments of the University and by the presence of large delegations from neighboring affiliated schools. A special Convocation was held in Kent Theater, when Professor Albion W.

Small made an address on behalf of the University Congregation, and Rev. Alonzo K. Parker, representing the Board of Trustees, delivered the Convocation Address upon the theme, "The Firm Foundation of National Peace." President McKinley was then presented for the degree of Doctor of Laws by Dean Harry P. Judson, who said:

Inasmuch as the Trustees of the University of Chicago have judged it to be reasonable and right that those who, surpassing other men in native genius and in devoted toil, have carried great undertakings in letters or science to a successful issue, or in the administration of affairs have rendered memorable service to the commonwealth, should receive the meed of honors and distinctions, that they themselves may have the praise which is their due, and that the minds of others may be roused to emulate their virtues and to win like fame;

I therefore now present to you, the chief magistrate of these United States, William McKinley, who recently in the severest crisis failed at no point to serve the interest of the commonwealth; and I commend him to you as a man deserving of the highest honor that the University can bestow.

In conferring the degree President Harper said:

You, William McKinley, a man endowed with all advantages of education and experience, who, at a time of the gravest crisis, when the weal, not only of this Republic, but of foreign states, was put in deepest peril, and the path of wisdom lay dark before the people, served each highest interest, and, by your wisdom and your foresight, out of confusion brought a happy ending, the Trustees of the University of Chicago, on nomination by the Academic Senate, have admitted to the degree of Doctor of Laws, now for the first time given by them, and have granted and bestowed upon you all the honors, rights, and privileges here or elsewhere appertaining to the same.

In testimony whereof I now present you with the Doctor's hood of the University of Chicago, which, in virtue of this degree, you have the right to wear, and with the diploma of the University. And may you increase in wisdom and in virtue, and, in days to come, as in the past, cherish the Republic and defend her.

#### THE EXTENSION OF THE QUADRANGLES

The need of more ground for the use of the University being increasingly felt, steps were taken to acquire the territory embraced in the two blocks lying between Fifty-sixth and Fifty-seventh streets, bounded by Ellis avenue on the west and Lexington avenue on the east. On December 30, 1898, Mr. Rockefeller offered to give two hundred thousand dollars (\$200,000) toward the purchase of this property provided Mr. Marshall Field would give one hundred and thirty-five thousand (\$135,000). This arrangement being carried out, and the city council having vacated Greenwood avenue running through the tract, a very valuable addition was made to the University Quadrangles.

#### THE GIFT OF THE LEON MANDEL ASSEMBLY HALL

On November 29, 1899, Mr. Leon Mandel made a contribution for the erection of the long-needed assembly hall, all large gatherings at the University having been crowded into the lecture-room of Kent Chemical Laboratory, which was planned for an entirely different purpose. Mr. Mandel's gift was made in the following letter:

CHICAGO, November 29, 1899.

*President W. R. Harper:*

DEAR SIR: I will give to the University of Chicago the sum of fifty thousand dollars (\$50,000), to be used for the erection of a building for assembly purposes, on condition that the building shall be called the Leon Mandel Assembly Hall. I will pay the sum indicated when I am informed that the contract for the building has been let.

Yours truly,

LEON MANDEL.

This generous gift was increased at a later date by twenty-five thousand dollars (\$25,000), the amount first named proving insufficient for the completion of the proposed hall.

## THE GURLEY COLLECTION OF FOSSILS

At a meeting of the Board of Trustees held on December 12, 1899, President Harper announced that an agreement had been effected with Mr. W. F. E. Gurley by which a great collection of fossils, valued at one hundred and twenty-five thousand dollars (\$125,000) was to come into the possession of the University, the owner, Mr. Gurley, contributing a large proportion of the amount needed for the purpose. This collection was received in due time, and was placed on exhibit in Walker Museum.

## THE GIFT OF THE CHARLES HITCHCOCK HALL

On December 12, 1899, announcement was made to the Board of Trustees that Mrs. Annie Hitchcock was considering a large gift to the University, to be used partly in the erection of a dormitory for men, the building to be a memorial of her husband, Charles Hitchcock, long a leading lawyer of Chicago, and partly in the establishment of a professorship. At a meeting held January 2, 1900, the formal offer was made, the amount paid to the University by Mrs. Hitchcock being two hundred thousand dollars (\$200,000), in accordance with the following letter:

JANUARY 1, 1900.

*William R. Harper:*

DEAR FRIEND: Desiring to erect a memorial in the University of Chicago to my husband, Charles Hitchcock, I am prepared to transfer to that institution my interest in La Salle Block (corner of Madison and La Salle streets) to the value of two hundred thousand dollars (\$200,000), subject to the conditions already discussed between us.

Sincerely your friend,

ANNIE HITCHCOCK.

## THE FOSTER HALL ADDITION

At the same meeting the following letter was presented:

789 FULLERTON AVENUE.

*President William R. Harper, University of Chicago:*

DEAR DR. HARPER: I should like to have Nancy Foster Hall extended to the west and made a complete building with light on three sides. For the purpose of building and furnishing this extension, including an elevator for the building, I am willing to give twenty thousand dollars (\$20,000). Will you please inform the Trustees?

Very sincerely yours,

NANCY S. FOSTER.

## ESTABLISHMENT OF THE CRANE RUSSIAN LECTURESHIP

At the same meeting the following letter was read from Mr. Charles R. Crane:

JANUARY 2, 1900.

*William R. Harper, The University of Chicago:*

MY DEAR DR. HARPER: I wish to confirm by letter my recent conversation with you regarding a lectureship on Slavic subjects.

I should like to have you accept for this lectureship ten thousand dollars (\$10,000), to be paid in five annual instalments of two thousand dollars (\$2,000) each.

These lectures should, I think, be given so far as possible by distinguished Slavs, especially Russians; the course as a whole planned to give a general view of the Slavic world, its geography, ethnography, history, arts, institutions, and religious sects.

Please let me know if this is satisfactory to you.

Very truly yours,

C. R. CRANE.

The time set for the securing of the two million dollars, offered under certain conditions by Mr. Rockefeller, having expired, it was announced that the offer had been extended for three months longer, and at the Convocation in April, 1900, President Harper announced that the necessary amount had been raised and that this great addition to the funds of the University had been made.

Two significant gifts were made to the Library of the University in the early part of 1900, one being the private library of Professor Hermann E. von Holst, and the other that of Professor George W. Northrup, both collections being specially selected by the donors, the one rich in volumes of history, the other being largely theological. The equipment of the library was also enriched on April 17, 1900, through the establishment by Mrs. Delia S. Gallup of a fund of thirty thousand dollars (\$30,000), the interest of which is to be used in the purchase of books in the special field of American history.

A GIFT OF ONE MILLION, FIVE HUNDRED THOUSAND DOLLARS

On December 12, 1900, this letter from Mr. Rockefeller was presented to the Trustees:

DECEMBER 6, 1900.

*Mr. Martin A. Ryerson, President Board of Trustees, University of Chicago, Chicago, Ill.:*

MY DEAR SIR: My father will give to the University of Chicago one million, five hundred thousand dollars (\$1,500,000), of which \$1,000,000 is for endowment, payable as of the date of December 1, 1900, in cash or approved securities at the option of the Board, and \$500,000 is for the general needs of the University, payable as required before July 1, 1902.

Very truly,

JOHN D. ROCKEFELLER, JR.

THE ESTABLISHMENT OF THE SCHOOL OF EDUCATION

The early part of 1901 was marked by the establishment of the School of Education, this great advance coming as a result of the negotiations growing out of the receipt of the following letter:

CHICAGO, February 5, 1901.

*To the Trustees of the University of Chicago:*

During the past three or four weeks we have had some interviews and correspondence with President Harper, with a view to the transfer to the University of Chicago of educational work which we have been intending to carry on, namely, a pedagogic school and a school for children in continuation of the schools formerly in charge of Colonel Francis W. Parker at Normal Park. At one time during the course of our communications with President Harper we addressed to your Board a proposition which, we believe, has not been presented to you because the conditions upon which it was based were deemed by President Harper impracticable.

We wish now to make the following offer: We will turn over to the University property of about the value of One Million Dollars, consisting of—

- a) Unimproved real estate for which four hundred and twenty-five thousand dollars in cash was paid in 1890.
- b) School equipment and building materials which have cost a little more than seventy-five thousand dollars.
- c) Convertible securities worth five hundred thousand dollars; provided, the use of this property for the purpose for which we have intended to use it can be assured on a basis agreeable to you and to us.

We have not as yet gone into the subject sufficiently to enable us to make any more definite proposal of terms; but if your Board should be disposed to enter upon negotiations with us, we shall be glad to proceed immediately.

Our plans are such that the greatest possible haste is necessary; if therefore you should accept our contingent offer, may we suggest that you make such provision that there may be on your side no delay in the negotiations, and that, if these reach a satisfactory conclusion, a proper contract may at once be executed?

(Signed)

{ ANITA McCORMICK BLAINE,  
OWEN F. ALDIS,  
HENRY BAIRD FAVILL,  
CYRUS BENTLEY,  
STANLEY McCORMICK,

*As Trustees of the Chicago Institute.*

At a meeting of the Board held March 5, 1901, a resolution was adopted setting apart from the funds given by the Reynolds estate the sum of Seventy Thousand Dollars (\$70,000) for the erection of the Students' Club House.

On March 18 it was voted to erect a building for the University Press at a cost not to exceed Eighty Thousand Dollars, and on the same day it was voted to build a Heat, Light, Power, and Water Plant, at an expenditure not to exceed One Hundred and Fifty Thousand Dollars.

On April 16 a general plan of laying out the University grounds was approved, and steps were ordered taken for carrying it out. At the same meeting plans were formulated by which the first two years of the work of the Rush Medical College, an affiliated institution, was to be transferred to the University.

At the same meeting the following communication was presented :

Desiring to leave some lasting memorial to my late beloved husband, J. Young Scammon, who was for many years a Trustee of the University of Chicago and had great interest in its affairs, and valuing lots 5 to 16 inclusive in block two (2) in Fernwood addition to Hyde Park, in the county of Cook, state of Illinois, at One Hundred and Twenty-two Thousand One Hundred Dollars (\$122,100), I offer to convey the same to the University for the sum of Sixty-one Thousand and Fifty Dollars (\$61,050), being one-half of such sum and value, subject to all unpaid taxes and assessments; conditioned that such land be used solely and exclusively for University purposes, that it bear the name of "Scammon Court," and that such name be forever maintained in some conspicuous place in or on it.

MARIA S. SCAMMON.

The Trustees voted to accept this offer of Mrs. Scammon.

On May 15 an important gift was received from Mr. Stuart Weller, of the Department of Geology, who presented his private collection of fossils, comprising between two and three thousand specimens representing one thousand types.

#### THE DECENNIAL CELEBRATION<sup>15</sup>

On June 14, 15, 16, 17, and 18, 1901, the Decennial Celebration was held. The first day was devoted to the interests of the students of the University, the most prominent feature being the performance of the play, *As You Like It*, under the auspices of the Department of Public Speaking.

Saturday, June 15, was Alumni and Class Day, the various business meetings and the dinner of the alumni being held, as well as the Class-Day exercises of the class of 1901. An interesting feature of this occasion was the presentation to the University of a memorial tablet to Hon. Stephen Arnold Douglas, the founder of the first university established in Chicago. The tablet of bronze shows an excellent likeness of Mr. Douglas, and beneath it the inscription

<p>IN HONOR OF STEPHEN A. DOUGLAS WHO IN 1855 GENEROUSLY CON- TRIBUTED TO THE FOUNDING OF THE FIRST UNIVERSITY ESTABLISHED IN CHICAGO THIS TABLET IS ERECTED IN JUNE 1901 BY THE DECENNIAL CLASS OF THE UNIVERSITY OF CHICAGO</p>
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The address on behalf of the class was made by Mr. Arthur Eugene Bestor, the class president. Mr. Franklin MacVeagh, representing the Board of Trustees, accepted the tablet, saying, among other things :

<sup>15</sup> The *University Record*, Vol. VI, No. 13, pp. 123 ff., published June 23, 1901, gives a complete account of the Decennial Celebration.

The university which Senator Douglas helped so liberally and with such enlightenment to establish has passed away. But it lasted long enough to educate many worthily; to make a rallying point for the higher intellectual life of a giant city in its beginnings; to emphasize the fitness of university life in this appointed city of educational leadership; and to break the ground for this far greater University, which came, in due course, to realize in the fuller time every dream and ideal with which Senator Douglas and his associates began their enterprise.

And that university ought not to be permitted to pass out, though its halls are closed and its voices are silenced. Though it was only a group of memories before this University was conceived, those memories should be permanently treasured, and the spiritual relations between that university and this, the successive efforts of a great underlying educational necessity, should be carefully recognized. And it is a peculiarly happy thing that the Seniors of this year, grounded strongly in loyalty to their own *alma mater*, should, with true catholic feeling, turn their faces for a while to the first beginnings of university life in Chicago, with the wish to commemorate them gratefully. Certainly no time could be more appropriate for such cordial reminiscence than this year, when the new University is celebrating its unprecedented development and prosperity. I congratulate the Seniors upon their choice of the occasion, and upon their selection of the man, in honoring whom they intend to mark their appreciation of the early strivings of all those earnest men and women who, through sunshine and cloud, did their utmost to establish here that higher education which now flourishes all the more appropriately and luxuriantly because of their labors and sacrifices.

This day was also marked by the corner-stone ceremonies of the University Press Building and the Charles Hitchcock Hall, and the formal dedication of the addition to Nancy Foster Hall. The first corner-stone to be laid was that of the University Press Building. The following introductory statement was made by the President of the University:

The printing press is the university's most efficient ally. Through the press, instruction which would have reached tens or hundreds is received by hundreds of thousands.

During the period of its work the Press of the University of Chicago has purchased and sold books, stationery, and scientific equipment to the amount of about \$552,213; it has printed and published 372 volumes of books and pamphlets, aggregating 76,350 pages, together with volumes of twelve journals and periodicals, aggregating 459 separate issues, amounting to 47,736 pages, and 38 official documents, aggregating approximately 10,000 pages; a grand total of 1,071 publications, of 124,068 pages. This would amount to 413 volumes at 300 pages each. The Press has in addition executed printing to the amount of \$118,585. The purpose of the organization of the Press was, as stated ten years ago, the following:

- a) The printing and publishing of University bulletins, catalogues, and other official documents.
- b) The printing and publishing of special papers, journals, or reviews of a scientific character, prepared or edited by instructors in the various Departments of the University.
- c) The printing and publishing of books prepared or edited by University instructors.
- d) The collecting, by way of exchange, of papers, journals, reviews, and books similar to those published by the University.
- e) The purchase and sale of books for students, professors, and the University Library.

It is fitting, in the opinion of the Trustees, that a work of so important a character should have suitable quarters. The building will be erected with funds kindly furnished by the founder of the University. When finished, it will serve also as the temporary home of the Library.

The following list of articles deposited in the corner-stone was read by Dr. T. W. Goodspeed, Secretary of the Board of Trustees:

Photograph of the founder of the University; official statement of donations for the erection of the building; the *University Register*; the *University Record*; *Directory of Alumni*; Chicago daily papers; program of Decennial Celebration; addresses delivered at the laying of the stone; catalogue of the publications of the University Press; University Press *Style Book* and style sheet; representative publications of the University Press.

The corner-stone was thereupon laid by Mr. Newman Miller, Director of the Press, and the corner-stone address was delivered by Professor J. Laurence Laughlin.



At the laying of the corner-stone of the Charles Hitchcock Hall the President made the following introductory statement:

To have one's residence on the university grounds or in close proximity to them is a privilege of university life second only to that of enjoying the facilities for instruction offered in connection with the class-rooms, the libraries, and the laboratories. When it was officially decided ten years ago to erect, on the Quadrangles, University houses for men and women, a most important feature of the University's policy was established. There are very few situations in which this policy, ordinarily called "the dormitory system," is undesirable. In an institution located in a great city it becomes an absolute necessity.

It is frankly to be confessed that up to this time the University has not done for men in this particular feature of its policy what it has done for women. This inability to carry out its ideals has been due to the fact that so large a share of the time and attention of those concerned has been devoted to the erection of buildings necessary for instruction. With the laboratories of the University now in large measure provided for, it is possible to enter more definitely upon the work of making better provision for the needs of student life. It is a source of much gratification that these needs have already appealed so strongly to some of the University's friends. This morning it is our privilege to celebrate the first beginning of a Hall which is intended to serve as a contribution toward the elevation and enrichment of student life. A woman profoundly interested in the upbuilding of young men, in memory of a husband who in his lifetime was equally interested, expresses her own high estimate of the magnificent possibilities of human life by erecting the building, the corner-stone of which is now to be placed.

Dr. Goodspeed read the following record of articles placed within the stone:

Memorial volume of Mr. Hitchcock; diploma from Dartmouth College; admission to practice in United States Supreme Court; proceedings of the Illinois constitutional convention of 1870, of which Mr. Hitchcock was president; photograph of Mr. and Mrs. Charles Hitchcock; photograph of the late D. L. Shorey (by request of Mrs. Hitchcock); photograph of the Hitchcock homestead; bookplates of the library to be placed in the Hall by Mrs. Hitchcock; photograph of the founder; photographs of the University buildings; photograph of Hitchcock Hall; addresses delivered at this corner-stone laying; the *University Register*; the *University Record*; the *Cap and Gown*, 1901; the *University of Chicago Weekly*; the Chicago daily papers; *Directory of Alumni*; program of Decennial Celebration; official statement of donation for erection of building.

Mrs. Charles Hitchcock then formally laid the stone, and Professor Paul Shorey delivered the corner-stone address.

The dedication of the addition to Nancy Foster Hall occurred immediately after the laying of the corner-stone of the Charles Hitchcock Hall. The President made the following introductory statement:

If it is regarded as important that men should have an opportunity of living in suitable circumstances on the grounds of the University, in the case of women this becomes a matter of necessity. The University owes a debt of gratitude to the woman whose generosity we celebrate to-day, because ten years ago she was the first woman graciously and voluntarily to suggest that she desired to erect a home for women on the University grounds. The encouragement which this suggestion gave to us at that time will never be forgotten; and when, a year ago, a most urgent effort was being made to comply with the terms of a great contribution, she again proffered to the University a sum of money with which to enlarge and to complete not only the building she had erected, but as well the entire southeastern corner of the University grounds. The debt of gratitude, already large, was more than doubled. To this good woman, whose age makes her presence here today impossible, we send the heartiest greetings from the women of the Hall which bears her name, from every woman in the University, from every member of the University, and from every man or woman who is, or has been, interested in the cause of woman's education.

We rejoice today that her esteemed son, a member of the Board of Overseers of Harvard University, and a respected citizen of Chicago, Mr. George E. Adams, is here today to represent her in the presentation of Nancy Foster Hall to the University.

Mr. Adams said:

As the President has already said, I am here as the representative of Mrs. Nancy Foster, the giver of Nancy Foster Hall.

Among all her many acts of benevolence—and the world will never know how many they are—I believe there is not one that has given her more sincere pleasure than the gift of the money by which Nancy Foster Hall, in its original form, was constructed a few years ago. It was more than a gift of money; her heart went with the gift; her heart has been with it ever since. The kindly smile that beams from her portrait over the mantel in the old hall is only a token of the tender regard and interest she has felt for the welfare, not only of the women who now reside here, but for the welfare of the women who will reside here during the generations to come; and when, as the President of the University has told us, opportunity came to enlarge and complete the Hall, it was a new happiness to her to furnish the money with which that was done. It would be a still further happiness to her if she were strong enough to be here and take part in this ceremony which marks the consummation of her gift. She cannot be here. I am here to speak and act for her; and so, Mr. President, it is my pleasant duty, in token of the affectionate regard of Mrs. Nancy Foster for the University of Chicago, and especially for the women of the University, to deliver to you the keys of Nancy Foster Hall.

President Harper then said:

I accept these keys on behalf of the University, and on behalf of the women of the University. It is a matter of rejoicing also with us today that on this occasion the address will be made by one who was most closely associated with the first work of the University; one who, so far as women are concerned, in large measure formulated and carried into execution the policy of the University during its first years—Mrs. Alice Freeman Palmer.

Mrs. Palmer then made the dedicatory address.

On Saturday evening the second performance of *As You Like It* was given, following the annual dinner of the Alumni Association.

On Sunday, June 16, four meetings were held. The first was a Bible service, with addresses on the theme "Sacred Wisdom;" by the President, who discussed the wisdom of the Old Testament; by Professor Richard G. Moulton, who discussed the wisdom of the Apocrypha; and by Professor Shailer Mathews, who discussed the wisdom of the New Testament. The second was the Convocation Religious Service, at which the President delivered the Baccalaureate Address. The third was a vesper service, at which brief addresses were made by Professor Eri B. Hulbert, Rev. Marcus Dods, of New College, Edinburgh; Professor Emil G. Hirsch, and Chancellor Elisha Benjamin Andrews of the University of Nebraska. The music on this occasion was furnished by the University of Chicago Military Band, Mr. Glenn M. Hobbs director, and by the Decennial Chorus, Mr. Lester B. Jones director, comprising the members of the University of Chicago Choir and Chorus; the Quadrangle Chorus (Mrs. T. D. Wallace leader), and the following church choirs: the Immanuel Baptist, the Normal Park Baptist, the Lexington Avenue Baptist, the First Methodist (Englewood), the First Baptist (Englewood), the St. James Methodist, the Oakland Methodist, the Hyde Park Baptist, the Calvary Baptist; assisted by Mrs. Clara Henley Bussing, soprano; Miss Etta C. Levin, contralto; Mr. Boise Carson, tenor; Miss Mary Tracy, Miss Margaret Coulter, Mr. Edward G. Ewart, accompanists. The closing service of the day was the union meeting of the Young Men's Christian Association and the Young Women's Christian Association, at which addresses were made by Rev. Ernest M. Stires, of Grace Church, Chicago, and by Miss Jane Addams, of Hull House.

Monday, June 17, was devoted to a series of educational conferences. In the morning a general meeting was held, where addresses were delivered upon the theme, "College and University Problems," by Chancellor Andrews, of the University of Nebraska, President George E. MacLean of the State University of Iowa, President Charles H. Thwing of Western Reserve University, and Professor Albion W. Small. At the close of this meeting exercises were held marking the official opening of the School of Education, the address being delivered by Professor

Nicholas Murray Butler of Columbia University, after which a procession moved to the site of the new buildings in Scammon Court, where, after a brief introductory statement by President Harper, Director Francis Wayland Parker turned the sod for the foundation, and then said:

Nothing that is good is too good for the child; no thought too deep, no toil too arduous; for the welfare of the child means better homes, means an improved state of society, means the perpetuity of our republic, the salvation of the world. The economy of all economy is the education of the little child.

We are thankful to God for the universities and for *our* University; to him for his mercy, to man for his gifts. But it can be said that of the great throng of men and women who leave the universities there is a large contingent who fail; their failure due, not to the universities, but to the education below it, to elementary education. To put money into the education of the child means the building of the university in the broadest and grandest way.

Our fathers, inspired, founded the common school for the development of a free government. Normal schools, now spread all over the land, were established for the training of teachers and the advancement of the common school. Then came the kindergarten to breathe the breath of life into education. The establishment of chairs of pedagogy in universities followed; and, last, schools of education, Columbia University having led the way. Now this, the second school of education, is here dedicated to the little child. May it be consecrated under God to the development of the child and the salvation of society. We march along the endless pathway of unrealized possibilities. The possibilities lie in the little one who are like Him who was born at Bethlehem. Let me say with Froebel: "Come, let us live with the children."

In the afternoon the conference met in four sessions, representing Science, Language and Literature, History, and Theology. The first was addressed by Jacob Henry Van't Hoff, Professor of Physiological Chemistry in the University of Berlin, and by Charles Doolittle Walcott, Director of the United States Geological Survey. The second was addressed by Basil L. Gildersleeve, Professor of Greek in Johns Hopkins University, and by George Lyman Kittredge, Professor of Latin in Harvard University. The third was addressed by His Excellency M. Jules Cambon, Ambassador Extraordinary and Plenipotentiary from the French Republic to the United States of America. The fourth was addressed by Marcus Dods, Professor of New Testament Literature in the New College of Edinburgh, Scotland, and by William Newton Clarke, Professor of Christian Theology in Colgate University.

The Decennial Celebration came to an end with the exercises of Tuesday, June 18, centering around the Thirty-eighth University Convocation. Before this meeting there were corner-stone ceremonies connected with the University Commons, the University Tower, the Students' Club House, and the Leon Mandel Assembly Hall. At the site of the Commons President Harper said:

No more difficult problem presents itself in connection with the life and work of a large institution than that which relates to the preparation of food for the students of the institution. Those who engage in intellectual work require a nourishment of the body which will meet the special demands made upon it. To ignore this fact, to live without regard to well-known principles, or to be compelled because of poverty to live in a manner known to be injurious, means great loss of power on the part of the individual, and consequent loss to the institution. We are willing to acknowledge that hitherto the University of Chicago has been unable to perform its full duty in this direction. For lack of adequate arrangements the men of the University have been left to take care of themselves. But now, by the generosity of Mr. Charles L. Hutchinson, in whose honor the building has been named Hutchinson Hall, this great lack will be supplied, and in the beautiful Hall, the corner-stone of which we are about to place, the social and spiritual side of student life will be assisted, as well as the physical.

The following list of articles deposited in the corner-stone was read by Dr. Goodspeed:

The *University Register*; the *University Record*; the *Cap and Gown*; the *University of Chicago Weekly*; the Chicago papers; the addresses delivered at the laying of the stone; the photograph of the founder of the University; pictures of the buildings and grounds; the *Directory of Alumni*; the Decennial program.

Mr. James Milton Sheldon, chairman of the Junior College Council, laid the stone, after which the address was delivered by Professor A. W. Small.

The corner-stone of the Tower was laid by Mr. Joseph C. Hazen, chairman of the Divinity School Council. The President made the following introductory statement:

It has been the thought of the University Trustees that the most careful consideration should be given to the arrangement and architecture of the buildings erected. In an institution of learning there must be found ways of cultivating the side of sentiment. In the older universities there is the sentiment that grows out of age, but this is necessarily lacking in a younger institution. Perhaps nothing exerts a stronger influence in this regard than beautiful buildings. As an architectural feature of the entire body of buildings, and as a special feature of the buildings of this group, the Tower has been planned. Representing, as it will, not only beauty, but strength, not only symmetry, but power, we shall have constantly before our eyes that which will give encouragement by the association of thought, and that which will afford inspiration by the suggestion of the ideal.

The building of this Tower is made possible by the kind munificence of one of Chicago's most noted and liberal business men, Mr. John J. Mitchell, president of the Illinois Trust and Savings Bank.

Dr. Goodspeed read the following official record of the articles placed within the stone:

The Holy Scriptures; the address delivered at the laying of the stone; the photograph of the founder; pictures of the buildings and grounds; the *Directory of Alumni*; program of the Decennial Celebration; the Chicago papers; the *University Register*; the *University Record*; the *Cap and Gown*; the *University of Chicago Weekly*.

Professor Richard Green Moulton made the address.

Mr. David A. Robertson, chairman of the Senior College Council, laid the stone of the Students' Club House, after the following introductory statement by the President:

The average college man receives as much benefit from his fellow-student as from the officers of instruction in the college with whom he comes in contact. College life, in a word, is the close association of a body of men who have in general common sympathies. This life is in miniature the life which these same men will live later in the world at large. It includes friendships and animosities, struggle and achievement, disappointment and victory. The college world is the most democratic world that exists. Occasionally, to be sure, politics gains an entrance, as in other democratic communities; but, generally speaking, the man who gains distinction earns it.

The Student Club House to be erected on this corner is expected to become the headquarters of student life and activity. It is here that friendships will be cemented, battles fought, victories gained, and defeats and disappointments manfully accepted. It is impossible to overestimate the importance or the significance of this new addition to the University life. This building is provided by the choice of a committee representing the estate of Joseph Reynolds, who died February 21, 1891. It was Mr. Reynolds's desire to do something for boys and young men. In the erection of this building that desire will have been fulfilled. The building will bear his name and will stand in the future as the memorial of a man whose life was full of that same vigor which he desired to see cultivated by the men of the coming generation.

The articles placed within the corner-stone were these:

The official statement of donation; the photograph of Mr. Reynolds, the donor of the building; some memorials of Mr. Reynolds; the photograph of the founder of the University; the *University Register*; the *University Record*; the *Cap and Gown*; the *University of Chicago Weekly*; the *Standard*; the addresses delivered at the laying of the stone; the *Directory of Alumni*; the Decennial program; the Chicago daily papers.

The corner-stone address was delivered by Associate Professor George E. Vincent.

Mr. Henry M. Adkinson, chairman of the Graduate School Council, laid the corner-stone of the Leon Mandel Assembly Hall, after President Harper made the following statement:

The sufferings of the members of the University here on the University grounds during these first years have been only less than the privileges and pleasures that have been enjoyed. In so far as these sufferings affected ourselves, we have tried to be patient and submissive, but when we have

been called upon to suffer vicariously for our friends who visit us from time to time, the exercise of patience has not always been observed. Again and again in the history of the University distinguished men have come to us, but we have had no University hall in which to receive them, in which to give them opportunity to present their message. It has been a source of serious and constantly increasing pain and grief that we could not say to our friends in the city and from the states about us on these important occasions: "Come and join us." The largest room on the grounds today will not seat one-third of the students. In fact, it is not large enough to accommodate the members of the Faculties and their families. The fact that in these first years we have not all been able to come together on any occasion has resulted in great injury to the development of the spirit of unity—but the clouds are vanishing, and within a year these difficulties which have seemed almost unbearable will be removed. The Assembly Hall, of which the corner-stone is at this moment to be placed, will be that building on the grounds which more than any other shall represent the unity of our University life. Here we shall receive words from the lips of the greatest characters. Here we shall assemble for recreation; on this spot, in short, there will grow up a community of feeling, a center of activity, which no other portion of the grounds will furnish.

The University is indebted for this great addition to its general equipment to a highly esteemed citizen of Chicago, Mr. Leon Mandel, whose interest in higher education and in the work of the University has led him to make this generous gift.

The articles placed within the corner-stone were the following:

The *University Register*; the addresses delivered at the laying of the stone; the photographs of Mr. and Mrs. Leon Mandel; the photograph of the founder of the University; the *University Record*; pictures of the buildings and grounds; the *Directory of Alumni*; the *Standard*, the Decennial program; the *Cap and Gown* for 1901; the *University of Chicago Weekly*; the daily papers.

The corner-stone address was given by Professor Emil G. Hirsch.

#### THE DECENNIAL CONVOCATION

The Convocation exercises were held in a large tent which had been pitched in the center of the Quadrangles. The Convocation procession consisted of three divisions. The candidates for degrees met at Kent Laboratory. The President of the University, the founder of the University, the Senators, the Board of Trustees, and the candidates for honorary degrees met at the President's house. The Faculties and distinguished guests met at Haskell Oriental Museum. The first and second sections, uniting, marched to the President's house, and thence the entire procession, numbering more than five hundred persons, took its way to the tent.

The prayer was offered by the University Chaplain. The following address on behalf of the Board of Trustees was delivered by President Martin A. Ryerson:

#### *Members and Friends of the University:*

The charter of the University of Chicago bears the date September 10, 1890; its academic existence began in 1891 with the appointment of the first members of the Faculty; its doors were first opened to students in the autumn of 1892.

This is not an imposing chronological table; it does not appeal to us through any charm of age or long association. Any interest which it may inspire must be derived from something other than a long retrospect. Yet we feel that there is a special interest in the fact that this is not only the regular Summer Convocation of the University, but also a part of our Decennial Celebration—an interest derived from the very youth of the University, taken in conjunction with the position it has attained.

We are here to rejoice in this vigorous youth because of what it has so quickly brought; we are here to rejoice in it more because of what it promises for our own future; we are here to rejoice in it most because of what it indicates for our country and our times.

In this age of rapid change, of quick development, we should welcome every evidence that the world's great material growth, so threatening in some ways in the minds of many, is but a manifesta-

tion of a general progress which is urging us onward intellectually with equal rapidity. We are surrounded with evidences that theology, science, literature, and art are all ready to participate in every forward movement, but we do not always realize how full a share they will claim if the opportunity be offered.

We should therefore greet this event as significant, not only of a higher progress, but also of the fact that the world is as ready to respond to earnest and devoted work in moral and intellectual fields as it is to efforts put forth for material gain.

We should rejoice that the short space of ten years can contain so much of importance in the life of an educational institution newly founded; that the termination of that period seems to call for special notice. That the period just elapsed does call for such notice no members of the University are in a better position to realize than the Board of Trustees. We know that these ten years have brought a success beyond our highest expectations.

We understand that, as factors in the results attained, we can claim but a small part of the credit. There are many others more important to share it with us. This gives greater freedom to our appreciation and lessens any sense we might feel of self-congratulation when we give expression to our satisfaction.

In touch as we are with both the material and the intellectual sides of our University's life, we have been able to note each step in its advance, and yet today we come to this celebration with sensibilities unimpaired and gratitude undiminished by this familiarity. In fact, close observation of the daily progress of the University leaves us more impressed by the results attained than can be any stranger who looks upon those results today for the first time, for we have not left so far behind the obstacles overcome that they cease to magnify our appreciation of the advance made.

To what should we attribute the growth and the success of the University of Chicago? It would be an interesting but a difficult task to analyze all the elements which have contributed to them. Under the guidance of Divine Providence there have been many factors, personal as well as conditional. Perhaps the underlying element is the fact that there was a strong latent demand for another institution of higher education in this community, that the great middle West was ready for the establishment of a university in its metropolis. The business sense of the Board is impressed with the feeling that we are supplying a demand active and growing; its philanthropic instincts are troubled by the seeming impossibility of keeping pace with it.

There is a continuous pressure upon us to enlarge the sphere of the University's activity. In the guidance of its growth we are embarrassed by the vigor with which it seeks to expand. Our difficulty lies in choosing rather than in seeking fields of usefulness. There are many here at hand—we see them all about us. There come to us at the beginning of each Quarter increasing numbers of earnest students with aptitudes and ambitions which justify the best training which modern educational methods can supply, and we owe it to them, to the community, and to ourselves to keep abreast of their requirements.

A second element of our success lies in the fact that we have been fortunate in securing the enthusiastic co-operation of an able Faculty, as loyal to the young institution as though bound to it by the strongest ties of time and tradition. It would give me pleasure to dwell upon this feature, to express more fully the appreciation of the Board. If we have had in this connection any cause for disappointment, it has been our inability to furnish the material requisites for the full fruition of all the knowledge and the energy which is here at the service of the University. Particularly must we regret that the pressing demands of the growth in which we rejoice have made it impossible to attain our highest ideals of the functions of a university, which should include more encouragement to pure scholarship and original research than we have been able to give.

What can I say that will measure our debt to the head of this Faculty, the President of the University, Dr. Harper? Dr. Harper is so bound up in our conception of the University and its work that praise of the institution is his praise. It is rarely given to a man to identify himself so fully with a great educational work, for it is rare to find untiring energy and unselfish devotion united with high scholarship and great executive ability, and to these given a great opportunity. We who have seen him at work since the early small beginnings of the University can testify to his possession

of these qualities, and with them an impartial solicitude for all of the departments of our work. Himself an able specialist in one great field of scholarship, he has always shown the broadest sympathies with the work of those who are laboring in other fields.

I am tempted at this point to say something about my colleagues in the Board of Trustees, about their patient attention to all the details of the University's affairs, and their ready acceptance of all the responsibilities; but, as I am to speak for them and not about them, I shall only pause a moment to give expression to our affectionate remembrance of those whom death has removed from our number: Judge J. M. Bailey, Daniel L. Shorey, W. B. Brayton, and C. C. Bowen. Their devotion to our work may well be recognized here. It was given at a time when our responsibilities were very heavy and our difficulties very great.

I come now, in my brief enumeration, to an element of our success which is placed after the others, because I know that it has been called forth by confidence in them. I refer to the liberality of the friends of the University who have so generously given it moral and material support.

Their number is too great for me to mention all here. I name only Mr. Field, Mr. Cobb, Mr. Kent, Miss Culver, Mrs. Snell, Mrs. Foster, Mrs. Kelly, Mrs. Beecher, Mr. Mandel, Mrs. Hitchcock, Mr. Mitchell, Mrs. Scammon, Mr. Yerkes, Mrs. Haskell, Mrs. Blaine, the Reynolds and the Ogden estates. The University has on other occasions acknowledged its indebtedness to them, and to the many others who have given us aid and encouragement.

An important acknowledgement still remains to be made. Its importance has caused it to suggest itself to everyone present; it has carried itself along in our minds as an accompaniment to this enumeration of all the other elements of our success, for it is the acknowledgment of something which has made all the other elements possible and effective. It is not easy to put it into words forcible enough to express our sentiments, and which will at the same time be acceptable to the one to whom they are addressed.

Sometimes the comfort and satisfaction which men derive from their benefactions are disturbed and even diminished by a recognition which they deem too forcible. While their broad human sympathies lead them to value the good opinion of their fellow-men, they prefer to any profuse assurance of gratitude the evidence that they are succeeding in doing the good which it is in their hearts to do. I shall, therefore, not say all that comes to my mind in acknowledging here on behalf of the Board of Trustees the special debt of gratitude which we owe to the founder of the University, Mr. John D. Rockefeller. We feel it deeply; the events of these last few days and all that has been said must have made this evident. We trust that it is equally evident to him that his great benefactions are doing the good which he hoped for them. I desire, however, to lay stress upon the fact that this is not merely a recognition of the original impulse given to our work; it does not confine itself to the material aid so generously provided; it is inspired also by the moral encouragement which he has given at every onward step and by the feeling that Mr. Rockefeller is not only the founder of the University of Chicago and its greatest benefactor, but also an earnest sympathizer with its highest aspirations.

I might perhaps close here, but I am sure that the Board of Trustees wish their message to express something more than their satisfaction with what has been accomplished; something more even than the general optimism which it seems to justify.

Our Decennial Celebration is drawing to a close; we are about to enter upon a new decade, and our thoughts naturally turn to the future. Much has been done, but more remains to be done. The strength of some parts of our work has, by contrast, made evident the weakness of other parts. The necessity of strengthening these weak parts is causing delay in initiating new work necessary to the symmetrical development of the University. We recognize that our task is only begun.

These considerations mingle with our rejoicing, and might even overshadow it, did we not find in the past something more than the record of this incomplete achievement. We do find in it much more: we find a promise for the future, not only in what has been done, but also in the spirit in which it has been done, and in the spirit in which it has been received. We feel that the same conditions continue, the same demand exists, the same influences are at work; and, above all, we see everywhere in the University and among its friends a constantly broadening conception of its mission.

Following the address of Mr. Ryerson there were addresses by Professor Frank F. Abbott, on behalf of the Faculties of the University; by Mr. Arthur Eugene Bestor, on behalf of the students and alumni; by Mr. George E. Adams, on behalf of the city of Chicago: and by the founder of the University, Mr. Rockefeller, who said:

It is a great pleasure for me to be present on this occasion. Five years have quickly passed since my last visit, and I see on every hand the great work which has been accomplished during that period—greater by far than our most sanguine expectations at that time.

The extent and magnitude of the work are not alone measured by what we see of new structures and additional lands, together with new books and apparatus, but also by the steady and remarkable growth in the influence which this University exerts. It has stood, and will stand, for the best and the highest; for the good of man and the glory of God.

I am not here to discuss theological questions, such as whether Jonah's relation to the whale was that of tenant or landlord, nor yet the question of whether Stephen A. Douglas—all honor to his memory—or President Harper was the founder of the University of Chicago. But of this I am satisfied, that the University of Chicago would not be in existence today had it not been for our honored President, William Rainey Harper. The friends of the University gave him their confidence and highest regard from the first. It is needless to say that he has shown himself entirely worthy of it, and that he has always proved himself eminently fitted for his high position. No words of mine can give you a more favorable impression of President Harper in respect to every quality that goes to make him what he is—one of the foremost leaders and educators of our time. Indeed, I do not know where we could have found another so well qualified for this important work. I am sure I express the wish of all present here today, and a multitude of friends throughout our land and other lands, that his life and health may long be spared to continue this great work which he has in this very brief period brought to such a high state of perfection, and which already ranks with the leading universities of our country and the world. We, the friends of the University, assure President Harper of our continued co-operation and support.

The University is to be congratulated on its Board of Trustees. It was no easy undertaking to secure such a Board, composed as it is of men occupying the most important positions in the business and professional world. This task, however, was rendered less difficult on account of the widespread confidence felt in our President. Much as we value the contributions of money which have been so generously furnished by the many friends of the University, we cannot overestimate the services of the Trustees, which have been given with unsurpassed ability, loyalty, and devotion. Indeed, I am certain that many gifts of money and property to the University of Chicago have been made because of the growing and well-merited confidence which the services of these Trustees have inspired in the public at large. In addition to these gifts, it is well known to you that large contributions have been made by individual members of this Board, and I understand there are still others in contemplation.

The statement has been made, on good authority, that the Faculty of the University of Chicago is not surpassed by that of any other university in our country. It has been chosen with the greatest care by those eminently qualified to make such choice. No pains or money were spared in securing the very best professors and teachers, from every part of our own country and also from Europe. Certain it is that the high commendations with which they came to this University have been borne out in the work which they have since accomplished. They have proved themselves broad-minded and progressive men, and the large body of students from all parts of the country who have been in attendance at the University of Chicago is the best testimonial to their ability and efficiency. The confidence and esteem in which the Faculty is held is shared by the President, the Board of Trustees, and the community at large. Most friendly and cordial relations exist between the Faculty, the students, and all others sharing with the Faculty the responsibilities of the University administration, and at no time has there been so bright an outlook for the University as at present.

Students of the University of Chicago, what can I say to you that will enable you to make the best use of your opportunities? You look out upon the world with bright prospects, and from a standpoint far more advantageous than that of many who preceded you. Whatever your station may be hereafter, do not fail to turn gratefully to your families and friends who have stood by you



in your time of struggle for an education. Many of them toiled incessantly through long, weary years, that you might be possessed of advantages which they were unable to secure for themselves. I entreat you not to forget them, and not to fail, as the years go by, frequently to express to them your gratitude and regard, and to return to them, in loving and helpful attentions, the proof of the sincerity of your unfailing appreciation. These expressions will give happiness to them, and the reflex influence of your words and acts of gratitude will bring blessing to you. We all rejoice in your hope of success. We trust that you will be so anchored in the possession of sterling qualities that you will turn to best account whatever life has in store for you. In the end the question will be, not whether you have achieved great distinction and made yourselves known to all the world, but whether you have fitted into the niches God has assigned you, and have done your work day by day in the best possible way. We shall continue in the future, as in the past, to need great men and women to fill the most important positions in the commercial and professional world, but we shall also need just as much the men and women who can and will fill the humblest positions uncomplainingly and acceptably. The vital thing is to find as soon as possible the place in life where you can best serve the world. Whatever position this is it is the highest position in the sight of good men and in the economy of God. I tremble to think of the failures that may come to some of you who are possessed of the brightest intellects and capable of the greatest accomplishments. I shall expect to see many who are here present among the slow, methodical, plodding ones, who are not at all distinguished as you are for brilliancy, go forward until at last they are found occupying positions of greatest honor and responsibility. Some of the foes which threaten your success may not be apparent to you until it is too late. If you are to succeed in life, it will be because you master yourselves, and if you are to continue masters, and not slaves, you do not need that I should say to you here today that you must jealously guard the approach of any foe to your well-being. You will do well not to underestimate the strength of such a foe. How many a young man whom I knew in my school days went down because of his fondness for intoxicating drinks! No man has ever had occasion to regret that he was not addicted to the use of liquor. No woman has ever had occasion to regret that she was not instrumental in influencing young men to use intoxicants. So much has been said of late on the subject of success that I forbear making particular suggestions. The chances for success are better today than ever before. Success is attained by industry, perseverance, and pluck coupled with any amount of hard work, and you need not expect to achieve it in any other way.

Citizens of Chicago, it affords me great pleasure to say to you that your kindly interest in, and generous support of, this University have been of the greatest encouragement to all those interested in its welfare, and have also stimulated others to contribute to its advancement. It is possible for you to make this University an increasing power for good, not only for the city of Chicago, but for our entire country, and indeed the whole world.

The success of the University of Chicago is assured, and we are here today rejoicing in that success.

All praise to Chicago! Long may she live, to foster and develop this sturdy representative of her enterprise and public spirit!

Following Mr. Rockefeller, President Harper made a review of the ten years' history of the University, mentioning as the four factors in its success, its professorial staff, its many friends, over three thousand of whom had contributed funds, its Board of Trustees, and the character of the student body.

Degrees were then conferred upon a large number of candidates, and at the close of this ceremonial the special ceremony of conferring honorary degrees in celebration of the Decennial of the University was carried out. Dean Harry Pratt Judson called successively to the platform the following gentlemen: His Excellency, Jules Cambon, Ambassador to the United States from the Republic of France; E. Benjamin Andrews, Chancellor of the University of Nebraska; William Newton Clarke, Professor of Theology in Colgate University; Marcus Dods, Professor of New Testament Interpretation in New College, Edinburgh; Basil Lanneau Gildersleeve, Professor of Greek in Johns Hopkins University; William Watson Goodwin, Professor of

Greek in Harvard University; George Lyman Kittredge, Professor of English Literature in Harvard University; Edward Charles Pickering, Professor of Astronomy and Director of the Astronomical Observatory of Harvard University; Jacob Henry Van 't Hoff, Professor of Physical Chemistry in the University of Berlin; Charles Doolittle Walcott, Director of the United States Geological Survey; Edmund Beecher Wilson, Professor of Zoology in Columbia University. Each one of these gentlemen, as his name was called, came upon the platform arm in arm with a member of the University Senate especially appointed to accompany him. He took his place in front of the President of the University, who had risen, and after a recital by the President of his distinguished services in politics or letters, closing with the formal conferring of the degree, the hood was placed upon his shoulders by the Recorder of the University. The ceremony was concluded by the President taking the hand of the recipient, thus welcoming him to the University. The degree of Doctor of Divinity was conferred upon Marcus Dods and William Newton Clarke; upon the others the degree of Doctor of Laws.

#### THE SOCIAL SIDE OF THE DECENNIAL CELEBRATION

The presence of the founder of the University and Mrs. Rockefeller during these exercises, together with the attendance of many distinguished educators, whether as visitors or as official guests, gave to the Decennial a social interest of a marked character. Besides the informal meetings of the educational conferences, several social functions were arranged, whereby an opportunity was given to many members of the University and their friends to greet the guests.

On Saturday at 1 P. M. the first University luncheon to the official guests was given in Nancy Foster Hall. The same evening at 6:30, occurred the annual dinner of the Alumni Association, at the Quadrangle Club.

The second University luncheon was given on Monday at the Quadrangle Club. The same evening occurred the President's dinner to the official guests, at 6 o'clock, at the Quadrangle Club. A large number of persons occupied seats at the long tables in the dining-room. At the close of the dinner Dean Harry Pratt Judson greeted the visitors in the name of the University. Two brief addresses were made, the one by President A. S. Draper of the University of Illinois, representing American universities, who gave a vigorous and growing eulogy of democratic institutions, the other by Professor Jacob Van 't Hoff, of the University of Berlin, representing European universities, who declared that the deepest impression thus far made upon him by his visit to America had been that of the spirit of idealism which he found everywhere present.

Perhaps the most unique and attractive social affair connected with the Decennial was the Convocation Reception, held in the great tent on Monday from 8 to 11 P. M. It is estimated that more than three thousand persons were present and greeted the founder of the University.

At the close of the Convocation, on Tuesday, the Congregation Dinner was held in the tent on the Graduate Quadrangle. More than six hundred persons sat down at the tables. At the close of the dinner Professor T. C. Chamberlin, vice-president of the Congregation and toastmaster, introduced the speakers.

The program was as follows:

"The University from the View-Point of a Trustee" - . . . . .	MR. CHARLES L. HUTCHINSON
"The Alumni" - . . . . .	MR. GEORGE E. VINCENT
"American Universities" - . . . . .	MR. W. W. GOODWIN
"European Universities" - . . . . .	MR. MARCUS DODS
"Requisites in Founding Universities" - . . . . .	MR. JOHN D. ROCKEFELLER
"Our Guests" . . . . .	MR. WILLIAM R. HARPER

In his response Mr. Rockefeller said:

I was very much interested in the statement of the morning that the contributions to build this University came from more than three thousand people. I was not only very much interested, but also very much delighted. I also heard the statement that the contributions to the University of Chicago came in without solicitation. Now, as you may imagine, that was to me a most interesting statement. Nevertheless, I cannot question the correctness of the statement. I do, however, know of certain institutions of this kind where many solicitations have been made and a smaller percentage than 91 per cent. has been received.

I am hesitating with reference to one statement that I now make. I am fearing that I may be taken by this august body and tried for treason. I may say that I make the statement with no purpose to do you injury. I have no such thought. I only make it in harmony with the idea that prevails here that we hear and see both sides of the question. I approve of that idea. The statement is this: A friend of mine, in order, I suppose, to encourage me and help me on, made the remark—and you will probably regard it as a very cheerful remark—that funds contributed for the University of Chicago were thrown away. It reminded me of a little incident in my own business experience. A bright Boston man, well able to take care of himself, an able and experienced merchant who, while he was seeking to protect his own interest, was jealously watching to see that others were not getting any advantage in any particular, being suspicious that some neighbors out in the West were receiving advantages which he did not receive, addressed them something like that: "I am opposed, I am decidedly opposed, to any of these schemes by which you have the advantage over me, unless I am in it." Now, I need not explain to you that my dear friend who gave to me those comforting words just referred to was not—at all events I have not heard of him as—a regular contributor to the University of Chicago. I want to say to my friend, concerning the University of Chicago: *I am in it*. And it is not such a case as I once heard of. A New England man, trying to give his own description of a burying ground, said that it was a place where those who were in could not get out and where those who were out did not want to get in. Dear friends, I do not want to get out. And I have to thank you for allowing me to stay in.

What a delightful reception you gave us last night! We very much appreciated it and your many other kind attentions. And the beautiful spirit in which they have been given!

Recurring again to that reception, that delightful and ever-to-be-remembered reception of last night, I desire especially to thank our President for his kind and well-meant advice as to sundry applications to be used in restoring our right arm and hand. Friends of Chicago, you have indeed taken strong hold of me!

Finally may I refer to just one little incident, that of an ignorant young man who was desirous of entering the church? He had not been well instructed; he was sincere in his desire to lead a better life, and, as is often the case, there were many questions asked of him, and probably many more than there should have been, but he was asked at last: "What do you think of Jesus Christ?" And the poor, ignorant young man said: "I have nothing agin' him." And so say we to dear President Harper, and so say we to you all before making our adieus to everyone present here today: We have nothing "agin'" you. We have had a most delightful visit and owe you naught but good will.

During the months following the celebration of the Decennial the Trustees of the University were busy with many plans for the completion of the new buildings and for the changes in the University in consequence of these added facilities. On July 30, 1901, arrangements were made for the construction of a temporary building to be used for the School of Education, this to be erected on the corner of Ellis avenue and Fifty-eighth street at a cost of not to exceed twenty-five thousand dollars. The construction of this building was pushed rapidly, and it was ready for occupancy at the opening of the Autumn Quarter.

#### DEATH OF PRESIDENT MCKINLEY

At a meeting held Sept. 17, 1901, the Trustees adopted the following expression of feeling over the death of President McKinley:

The Trustees of the University of Chicago share in the prevailing sorrow of their fellow-countrymen over the death of President McKinley.

During his life the University conferred upon him its highest honor. In his death it mourns the nation's loss of an upright, able, and patriotic President.

In his domestic relations, in his devout life, in his devotion to the public welfare, in his manifestation of the many virtues which adorn human life, he has bequeathed to his country a priceless heritage. The record of his life will long continue an inspiration to noble living. The Trustees extend to Mrs. McKinley their sincere sympathy.

At the same meeting an additional contribution to the University was announced from Mrs. Elizabeth G. Kelly, in the amount of fifteen thousand dollars.

#### THE GYMNASIUM CORNER-STONE LAID

On Thanksgiving Day, November 28, 1901, the corner-stone of the Frank Dickinson Bartlett Gymnasium was laid with appropriate ceremonies.

The following introductory statement was made by the President of the University:

*Ladies and Gentlemen:*

It was just ten years ago this month, November, that the arrangements were finally completed for the organization of the Department of Physical Culture and Athletics in the University. It was the thought of the Trustees at that time that the gymnasium would be one of the first four or five buildings to be erected on the University grounds. A statement to that effect was made to Mr. Stagg, and he came to the University with the full expectation that there would be furnished a well-equipped building for the work of the Department which he represents. At two or three times during the year preceding the opening of the University it seemed quite certain that such a building was about to be secured. On the first of July, when only ninety days remained until the time should come for the opening of the doors of the University to students, it was decided to build a temporary structure which might provide facilities for two or three years. Ten years have passed and the Department is still doing its work in a temporary structure. The difficulties with which the staff of the Department have had to contend have been almost incalculable. The spirit with which these difficulties have been met, on the part of the staff and students, has been admirable.

We rejoice today that within the coming year the Department will have a permanent home in a building of adequate size and provided with proper facilities of instruction. We rejoice that a citizen of Chicago, one of the Trustees of the University, has thought it wise to erect this building of which the corner-stone is now about to be laid—a building which will represent educational work as it stands related to the body, the physical well-being of the student. And we rejoice that in the erection of this building there shall be forever preserved a memorial of that young life taken from us so suddenly and mysteriously. His was a short life, but a true one, and while our rejoicing is mingled with sadness, we may nevertheless remember that it was a life so pure and strong that, notwithstanding its brevity, it deserves the lasting and magnificent memorial which has been established by a loving father. As the first stone in this great structure takes its place, let us recall the beautiful memories of the past, and let us look forward to the great and splendid possibilities of the future which shall always be connected with the name of Frank Dickinson Bartlett.

After a brief address by Director A. A. Stagg, the Secretary of the Board of Trustees, Dr. T. W. Goodspeed, read the following list of articles deposited in the corner-stone:

Photograph of Frank Dickinson Bartlett; Bible belonging to him; coat of arms of his *alma mater*—Harvard University; University publications—the *Register*, etc.; student publications—the *Cap and Gown* and the *Weekly, Directory of Alumni*; addresses delivered at the laying of the corner-stone; photograph of the founder; photographs of the University buildings; Chicago daily papers; proceedings of the Intercollegiate Conference of Faculty Representatives of Athletic Committees or Board of Control of Western Universities to date; A. A. Stagg's *Treatise on American Football*; H. Butterworth's *How To and Exercise for Everybody*; list of men who have won the "C" up to this date; official program, football season 1901; the *Standard*; program of the Thanksgiving Day exercises; official statement of Mr. Bartlett's donation for erection of building.

The corner-stone was then laid by Mr. A. C. Bartlett, the donor of the building, after which the corner-stone address was delivered by Rev. Frank W. Gunsaulus.

