Ground was broken for the Harper Memorial Library on the 10th day of January, 1910. The dedication to-day completes a building enterprise, therefore, which has covered upwards of two years, and which, taken together with the extensive additions to the Ryerson Physical Laboratory, forms one of the most important constructive eras of the University.

Ground was broken for the Harper Memorial Library on the 10th day of January, 1910. The dedication to-day completes a building enterprise, therefore, which has covered upwards of two years, and which, taken together with the extensive additions to the Ryerson Physical Laboratory, forms one of the most important constructive eras of the University.

For the next two years it is the intention of the Board of Trustees to proceed with the construction of four buildings which are imperatively needed at the present time, and on which the Board believes it necessary to proceed without delay. These buildings are:

1. A Gymnasium for Women. The present quarters, provided in 1903 as a temporary matter, with the full expectation that four or five years would see a permanent building ready, have outlived their usefulness. The splendid provision for men in the Bartlett Gymnasium, as well as in the Reynolds Club and the Hutchinson Commons, are in marked contrast with the very inadequate and wholly unaesthetic one-story group known as Lexington Hall. Our women deserve better, and the time has now come when the existing situation must be ended.

For the next two years it is the intention of the Board of Trustees to proceed with the construction of four buildings which are imperatively needed at the present time, and on which the Board believes it necessary to proceed without delay. These buildings are:

1. A Gymnasium for Women. The present quarters, provided in 1903 as a temporary matter, with the full expectation that four or five years would see a permanent building ready, have outlived their usefulness. The splendid provision for men in the Bartlett Gymnasium, as well as in the Reynolds Club and the Hutchinson Commons, are in marked contrast with the very inadequate and wholly unaesthetic one-story group known as Lexington Hall. Our women deserve better, and the time has now come when the existing situation must be ended.

2. A building for the departments of geology and geography. These departments are crowded in the Walker Museum, which is unfitted for such a purpose and is at the same time prevented from being used for museum purposes. Many boxes of valuable material which ought to be in the cases are stored in the basement.

3. The grand stands and walls for Marshall Field. The present stands are no longer possible, and the fence is an eyesore.

4. The classical buildings, to be erected at the corner of Ellis Avenue and 59th St., thus architecturally giving a well-balanced finish to the Midway front of the main quadrangles, and at the same time affor ing needed quarters for the departments of Greek, Latin and Comparative Philology.

The Kelly bequest with accumulated interest may be counted as practically

2. A building for the departments of geology and geography. These departments are crowded in the Walker Museum, which is unfitted for such a purpose and is at the same time prevented from being used for museum purposes. Many boxes of valuable material which ought to be in the cases are stored in the basement.

3. The grand stands and walls for Marshall Field. The present stands are no longer possible, and the fence is an eyesore.

4. The classical buildings, to be erected at the corner of Ellis Avenue and 59th St., thus architecturally giving a well-balanced finish to the Midway front of the main quadrangles, and at the same time affording needed quarters for the departments of Greek, Latin and Comparative Philology.

The Kelly bequest with accumulated interest may be counted as practically

providing for the Classical Building. The Trustees hope and confidently expect that at any early date donors may be found whose names may be given to the other three buildings.

May I quote from the letter of the Founder of December 13, 1910?

"In making an end to my gifts to the University, as I now do, and in withdrawing from the Board of Trustees my personal representatives, whose resignations I enclose, I am acting on an early and permanent conviction that this great institution, being the property of the people, should be controlled, conducted, and supported by the people, in whose generous efforts for its upbuilding I have been permitted simply to coöperate; and I could wish to consecrate anew to the great cause of education the funds which I have given, if that were possible; to present the institution a

providing for the Classical Building. The Trustees hope and confidently expect that at an early date donors may be found whose names may be given to the other three buildings.

May I quote from the letter of the Founder of December 13, 1910?

"In making an end to my gifts to the University, as I now do, and in withdrawing from the Board of Trustees my personal representatives, whose resignations I enclose, I am acting on an early and permanent conviction that this great institution, being the property of the people, should be controlled, conducted, and supported by the people, in whose generous efforts for its upbuilding I have been permitted simply to cooperate; and I could wish to consecrate anew to the great cause of education the funds which I have given, if that were possible; to present the institution a

second time, in so far as I have aided in founding it, to the people of Chicago and the West; and to express my hope that under their management and with their generous support the University may be an increasing blessing to them, to their children, and to future generations."

second time, in so far as I have aided in founding it, to the people of Chicago and the West; and to express my hope that under their management and with their generous support the University may be an increasing blessing to them, to their children, and to future generations."

Waste in Educational Curriculum.

One of the marked facts in the educational history of the United States is the extraordinary growth in attendance on institutions of higher learning within the last few decades. The figures are as follows: The attendance in colleges, universities and technical schools in 1889-90 was 55,687, and in 1908-9 it was 170,266 — a gain of 206-o/o.

+ ~

The growth in population in the same period has been as follows: Population in 1889-90, 62,622,250; in 1909 (estimated), 90,161,309 — a gain of 44-o/o

~~It will be seen that~~ the increase in the attendance on educational institutions has outstripped the ratio of the increase of the population to a large extent.

May we infer from this very large gain in the attendance on schools of various grades that we have thereby a fair measure of progress in education? Are we getting results to correspond? Is there, in other words, a largely accelerated increase in the education and efficiency resulting therefrom throughout the country at large? In short, may we reasonably compare the effectiveness of our whole system of education with that, for instance, of Germany?

It is not my purpose to-day to discuss ~~the~~ details, to any great extent, or to criticize particular forms of education, but rather to take a general survey of the whole field. As an Association of Secondary Schools and Colleges we are in a position to regard education as a continu-

It will be seen that the increase in the attendance on educational institutions has outstripped the ratio of the increase of the population to a large extent.

May we infer from this very large gain in the attendance on schools of various grades that we have thereby a fair measure of progress in education? Are we getting results in correspond? Is there, in other words, a largely accelerated increase in the education and efficiency resulting therefrom throughout the country at large? In short, may we reasonably compare the effectiveness of our whole system of education with that, for instance, of Germany?

It is not my purpose to-day to discuss the details, to any great extent, or to criticise particular forms of education, but rather to take a general survey of the whole field. As an Association of Secondary Schools and Colleges we are in a position to regard education as a continu-

ous whole from the elementary school to the university, and perhaps in that way we can reach some judgments which at least will answer as a provisional basis for a scientific and detailed investigation. May we ask ourselves in the first place at what point in the educational scheme we find on the whole the most strenuous work on the part of students? I think few of us would doubt that we should find that especially in such schools as those of law, medicine, and technology, in every one of which there is an immediate professional purpose which gives definiteness to the ambition of those concerned. Perhaps to these may be added some college preparatory schools in which in like manner there is the definite object of passing college entrance examinations. In all these, in other words, the work of the student is directly related to an immediate end of his hopes and ambitions.

On the other hand, where in the entire

one whole from the elementary school to the uni-
versity, and perhaps in that way we can reach
some judgments which at least will answer as a
provisional basis for a scientific and detailed
investigation. May we ask ourselves in the
first place at what point in the educational
scheme we find on the whole the most strenuous
work on the part of students? I think few of
us would doubt that we should find that especially
in such schools as those of law, medicine, and
technology, in every one of which there is an
immediate professional purpose which gives defin-
iteness to the ambition of those concerned.
Perhaps to these may be added some college prepara-
tory schools in which in like manner there is the
definite object of passing college entrance exam-
inations. In all these, in other words, the
work of the student is directly related to an
immediate end of his hopes and ambitions.
On the other hand, where in the entire

scheme do we find noticeably a tendency to idling, accompanied by innumerable forms of social distraction? In other words, where do we find instructors casting about them for artificial stimuli to encourage the educational activity of students? Perhaps we should agree without doubt that we can find this particular spot in the usual secondary school and in the college. In fact, educational literature of late is filled with discussions of how to grapple with the very many puzzling forms which this problem assumes.

May we infer that the quality of the teaching profession is at fault? While of course no one claims that the profession is beyond criticism, and that it is not open to very large improvement, at the same time I think it will be admitted that the great body of those engaged in teaching are intelligent, are faithful to their duties, and are trying in every reasonable way to improve the methods with which they are doing their work, and

anyone do we find noticeably a tendency to iditing, accompanied by innumerable forms of social distraction? In other words, where do we find instructors casting about them for artificial stimuli to encourage the educational activity of students? Perhaps we should agree without doubt that we can find this particular spot in the usual secondary school and in the college. In fact, educational literature of late is filled with discussions of how to grapple with the very many puzzling forms which this problem assumes.

May we infer that the quality of the teaching profession is at fault? While of course no one claims that the profession is beyond criticism, and that it is not open to very large improvement, at the same time I think it will be admitted that the great body of those engaged in teaching are intelligent, are faithful to their duties, and are trying in every reasonable way to improve the methods with which they are doing their work, and

to find still more definite aims. There is an increasing amount of professional training, and there is a much greater volume of careful study of existing conditions. I do not believe, therefore, that on the whole the quality of the profession can be regarded as responsible for such facts as may appear in derogation of getting the best results from certain forms of our educational organization.

Perhaps we can find some light as to our problem if we take up ~~the~~ a specific question, regarding that as somewhat typical. Some studies have been made of the age at which students trained for medical practice finally reach their profession. At a late meeting of the Council on Medical Education the President of that Council, Dr. Arthur Dean Bevan of Chicago, stated that medical candidates at the Western Reserve University in June, 1912, will have an average age of 27.9 years; Harvard, 27.2; Rush Medical College,

to find still more definite aims. There is an increasing amount of professional training, and there is a much greater volume of careful study of existing conditions. I do not believe, therefore, that on the whole the quality of the profession can be regarded as responsible for such facts as may appear in derogation of getting the best results from certain forms of our educational organization.

Perhaps we can find some light as to our problem if we take up the specific question regarding that as somewhat typical. Some studies have been made of the age at which students trained for medical practice finally reach their profession. At a late meeting of the Council on Medical Education the President of that Council, Dr. Arthur Dean Bevan of Chicago, stated that medical candidates at the Western Reserve University in June, 1912, will have an average age of 27.9 years; Harvard, 27.2; Rush Medical College,

in affiliation with the University of Chicago, 27; the University of California, 27; Johns Hopkins University, 26.4; and Cornell University, 26.4. It will be remembered that at the Johns Hopkins and at Harvard and at Western Reserve (?) the four-years' medical course follows a four-years' college course, making a total of eight years, from which it is fairly to be inferred that the students on the average must have been between 19 and 20 on entering college. At Rush Medical College the total course, including the college course, is six years, from which it should be inferred that the medical candidates must have been upwards of 20 on the average on entering college. Of course when a year or more of the hospital-interne work is added it will appear that the average age of students from the above institutions when they reach actual practice will be between 28 and 29 years. On the other hand, in England the average age of the young practitioner entering on his profession is from 25 to 26, and in Germany also

in affiliation with the University of Chicago, 27; the University of California, 27; Johns Hopkins University, 26.4; and Cornell University, 26.4. It will be remembered that at the Johns Hopkins and at Harvard and at Western Reserve (*) the four-years' medical course follows a four-years' course, making a total of eight years, from which it is fairly to be inferred that the students on the average must have been between 19 and 20 on entering college. At Tufts Medical College the total course, including the college course, is six years, from which it should be inferred that the medical candidates must have been upwards of 20 on the average on entering college. Of course when a year or more of the hospital-interne work is added it will appear that the average age of students from the above institutions when they reach actual practice will be between 28 and 29 years. On the other hand, in England the average age of the young practitioner entering on his profession is from 25 to 26, and in Germany also

from 25 to 26 years. There is thus in these two countries a discrepancy somewhere of about three years, and surely it can hardly be claimed that on the whole the medical candidates in this country are superior in their training to those in Germany. Where is the discrepancy found?

The average age at graduation from the German gymnasium is about 19. It will be seen that, entering the university at that age and beginning immediately with the medical work, as is the case in Germany, the student can complete his medical course, and complete a course as interne in a hospital, and still be ready for practice as above noted at the age of 25 or 26. The gymnasium course is on the whole practically equivalent, in its content at least, to a course in one of our high schools, together with the first two years in our colleges. The average age of those receiving the bachelor's degree at the University of Chicago in June, 1911, was 23.78. It happened, incidentally, that among the two

from 25 to 26 years. There is thus in these two countries a discrepancy somewhere of about three years, and surely it can hardly be claimed that on the whole the medical candidates in this country are superior in their training to those in Germany. Where is the discrepancy found?

The average age at graduation from the German <u>gymnasium</u> is about 19. It will be seen that, entering the university at that age and beginning immediately with the medical work, as is the case in Germany, the student can complete his medical course, and complete a course as interne in a hospital, and still be ready for practice as above noted at the age of 25 or 26. The <u>gymnasium</u> course is on the whole practically equivalent, in its content at least, to a course in one of our high schools, together with the first two years in our colleges. The average age of those receiving the bachelor's degree at the University of Chicago in June, 1911, was 22.24. It happened, incidentally, that among the two

hundred graduates in question exactly one hundred were men and one hundred were women. The average age of the men was 23.59 years, and of the women was 23.97 years, giving the average above noted of 23.78. Of course this means that the average young man who took his bachelor's degree was about 19 1-2 years old at the time he entered college, being thus rather more than two years back of the graduate of the German gymnasium. Of course these averages include all candidates for the bachelor's degree, of whom only a modicum were medical students, and from the facts as above adduced it appears that the average age of the medical students was somewhat higher than the average age of all the bachelors in question.

Now where occurs this loss of time? In point of fact the testimony of most medical men is clear that it is desirable for students to be younger when they enter on their medical studies, as their minds are more flexible. Moreover, it is, as was said, fairly plain that the German

hundred graduates in question exactly one hundred were men and one hundred were women. The average age of the men was 23.59 years, and of the women was 23.97 years, giving the average above noted of 23.78. Of course this means that the average young man who took his bachelor's degree was about 19 1-2 years old at the time he entered college, being thus rather more than two years back of the graduate of the German Gymnasium. Of course these averages include all candidates for the bachelor's degree, of whom only a modicum were medical students, and from the facts as above adduced it appears that the average age of the medical students was somewhat higher than the average age of all the bachelors in question.

Now where occurs this loss of time? In point of fact the testimony of most medical men is clear that it is desirable for students to be younger when they enter on their medical studies, as their minds are more flexible. Moreover, it is, as was said, fairly plain that the German

training certainly is by no means inferior to that in this country, at least. It seems therefore that somewhere in ~~the~~ our system there is a wastage of at least two years, and possibly more. Where does this wastage occur? Is it found in the organization of our educational system, or is it found in the rate at which our younger students progress in their education?

I am inclined to believe that there is no serious difficulty in pointing out the wastage so far as the organization of the system is concerned. In the first place, the elementary school as usually organized implies eight grades, extending from the sixth year. Of course there are variations in different places. I do not believe that eight grades are necessary. At most this work should be done in seven years, and I think myself it could be done in six years. We do altogether too much teaching at that age. The primary requirement for a child in those years is that he be a healthy, happy, busy little animal.

training certainly is by no means inferior to that in this country, at least. It seems therefore that somewhere in the system there is a wastage of at least two years, and possibly more. Where does this wastage occur? Is it found in the organization of our educational system, or is it found in the rate at which our younger students progress in their education?

I am inclined to believe that there is no serious difficulty in pointing out the wastage so far as the organization of the system is concerned. In the first place, the elementary school as usually organized implies eight grades, extending from the sixth year. Of course there are variations in different places. I do not believe that eight grades are necessary. At most this work should be done in seven years, and I think myself it could be done in six years. We do altogether too much teaching at that age. The primary requirement for a child in those years is that he be a healthy, happy, busy little animal.

He should learn some things which he can use in the way of reading and writing and number-work and the use of his hands in various ways, and in observation. At the same time the main thing in those years is not the content of knowledge, and I believe that the long duration of the school year fags the child so that there is an intellectual loss in the weariness of the constant schooling. We must remember that education is by no means all the result of schooling. The child gets education at home and in his total environment. Moreover, his mind is maturing and getting added powers by the mere process of growth, and the schooling is one, therefore, among many factors. Let this child escape from us teachers a reasonable amount of time during those years, and I believe we should get just as good results at an earlier age.

In the second place, if we study high school and college catalogues we shall notice that in point of fact the colleges in their first year and

He should learn some things which he can use in the way of reading and writing and number-work and the use of his hands in various ways, and in observation. At the same time the main thing in those years is not the content of knowledge, and I believe that the long duration of the school year tags the child so that there is an intellectual loss in the weariness of the constant schooling. We must remember that education is by no means all the result of schooling. The child gets education at home and in his total environment. Moreover, his mind is maturing and getting added powers by the mere process of growth, and the schooling is one, therefore, among many factors. Let this child escape from us teachers a reasonable amount of time during those years, and I believe we should get just as good results at an earlier age.

In the second place, if we study high school and college catalogues we shall notice that in point of fact the colleges in their first year and

in a part of their second year so far as the content of the instruction goes are doing precisely the same things that are done in the high schools. To all intents and purposes, therefore, the work is a duplication. There is an overlapping of work and a waste of time. Of course the students are older in the college than they were a year or two before in the high school, and, being older, perhaps they can do the work in a different way and possibly a little better; but then, so far as that goes, it is true at any point in the total curriculum, and I cannot see the advantage of this utter wastage of time. If the work of the secondary school is properly done - and if not properly done it ought to be and can be - when the student finishes with the secondary school he ought to be ready for the university; and by that I mean not for a Freshman class in a college but for the junior class in the college, which is the beginning of real university work.

in a part of their second year so far as the content of the instruction goes are doing precisely the same things that are done in the high school. To all intents and purposes, therefore, the work is a duplication. There is an overlapping of work and a waste of time. Of course the students are older in the college than they were a year or two before in the high school, and, being older, perhaps they can do the work in a different way and possibly a little better; but then, so far as that goes, it is true at any point in the total curriculum, and I cannot see the advantage of this utter waste of time. If the work of the secondary school is properly done - and if not properly done it ought to be and can be - when the student finishes with the secondary school he ought to be ready for the university; and by that I mean not for a freshman class in a college but for the junior class in the college, which is the beginning of real university work.

All the preliminary work which covers the latter part of the high school and the first part of the college course ought to be finished at that time, and the student able to enter specifically and definitely on a given course, continuing it with accurate methods and with a definite, accurate purpose.

Now if it is possible to organize the work through the entire curriculum, the saving in the elementary school and the saving in the maladjustment before the secondary school and college would rescue just the two years that we need to be able to carry the student through as is done in Germany. Here, then, would seem to be the point of attack for an adequate study of the situation.

At this rate it will be seen that the student should, if he enters college as it is now organized, be not more than 16 years, or at most 17 years, of age; should enter the university ready for

All the preliminary work which covers the latter part of the high school and the first part of the college course ought to be finished at that time, and the student able to enter specifically and definitely on a given course, continuing it with accurate methods and with a definite, accurate purpose.

Now if it is possible to organize the work through the entire curriculum, the saving in the elementary school and the saving in the readjustment before the secondary school and college would rescue just the two years that we need to be able to carry the student through as is done in Germany. Here, then, would seem to be the point of attack for an adequate study of the situation.

At this rate it will be seen that the student should, if he enters college as it is now organized, be not more than 16 years, or at most 17 years, of age; should enter the university ready for

professional work in medicine, law, or what not at the age of 18 or 19 years. My own belief is that in every case the earlier age is entirely practicable, but even conceding the other age we should still have a considerable saving.

Considering the other question of the coherent efficiency of the work of the entire curriculum, we are confronted with these facts: The student passes from school to school, falling into the hands of a different set of teachers with different ideas and ideals, but as a rule, so far as my observation goes, possessed with a uniform conviction that the work of preparation in the school immediately below is altogether inadequate, and therefore that much of it must be duplicated. I have noticed this in certain high schools, where it seems that the graduate from the grades comes to the high school improperly trained. I notice it each year in colleges, where the college teachers complain that the high school training is not adequate for their purposes. In fact, I remember

professional work in medicine, law, or what not at the age of 18 or 19 years. My own belief is that in every case the earlier age is entirely practicable, but even conceding the other age we should still have a considerable saving.

Considering the other question of the coherent efficiency of the work of the entire curriculum, we are confronted with these facts: The student passes from school to school, falling into the hands of a different set of teachers with different ideas and ideals, but as a rule, so far as my observation goes, possessed with a uniform conviction that the work of preparation in the school immediately below is altogether inadequate, and therefore that much of it must be duplicated. I have noticed this in certain high schools, where it seems that the graduate from the grades comes to the high school improperly trained. I notice it each year in colleges, where the college teachers complain that the high school training is not adequate for their purposes. In fact, I remember

very well a number of years ago that what was then called a grammar school, which would cover about the second half of our present grades, had the same complaint of the work done in the first four grades. Poor little tots who had come from the ~~grades and the~~ three or four elementary years came up to this grammar school and were not properly trained. I wonder how many of us remember Thomas Nast's cartoon illustrating the Tweed Ring in New York in 1870. The picture showed all the thieving city officials standing in a circle, and each man was pointing his thumb over his shoulder at the man behind him. Nobody was responsible himself; it was always the other fellow who did it. Now I sometimes have thought that we teachers, although of course entertaining no criminal intentions, in practice are somewhat in the position of the gentlemen in Nast's cartoon: it is the other fellow who did it. We are doing our part as well as it can be done, and if only

very well a number of years ago that what was then called a grammar school, which would cover about the second half of our present grades, had the same complaint of the work done in the first four grades. Poor little tots who had come from the grades and the three or four elementary years came up to this grammar school and were not properly trained. I wonder how many of us remember Thomas Nast's cartoon illustrating the Tweed Ring in New York in 1870. The picture showed all the thieving city officials standing in a circle, and each man was pointing his thumb over his shoulder at the man behind him. Nobody was responsible himself; it was always the other fellow who did it. Now I sometimes have thought that we teachers, although of course entertaining no criminal intentions, in practice are somewhat in the position of the gentlemen in Nast's cartoon: it is the other fellow who did it. We are doing our part as well as it can be done, and if only

the other fellow would do his part we should get so much better results.

Another difficulty perhaps can be found in the very natural evolution of the secondary school in the direction of specialization. Instead of one teacher being responsible for all the work or the most of the work of a student of a given age, he passes from the hands of a professor of Latin into the hands of a professor of geography, and thence into the hands of a professor of English, and so into the hands of a professor of mathematics, and so on ad infinitum. Each one naturally magnifies his calling, and is sure that he must have just as much of a student's time as he can get. None of them can have in mind the totality of the pupil's work, and the proper adjustment and relativity of the various subject matters of instruction. In other words, they are seeking to make the pupil a Latinist, a mathematician, a geographer, and what not, instead

the other fellow would do his part we should get so much better results.

Another difficulty perhaps can be found in the very natural evolution of the secondary school in the direction of specialization. Instead of one teacher being responsible for all the work or the most of the work of a student of a given age, he passes from the hands of a professor of latin into the hands of a professor of geography, and thence into the hands of a professor of English, and so into the hands of a professor of mathematics, and so on ad infinitum. Each one naturally magnifies his calling, and is sure that he must have just as much of a student's time as he can get. None of them can have in mind the totality of the pupil's work, and the proper adjustment and relativity of the various subject matters of instruction. In other words, they are seeking to make the pupil a latinist, a mathematician, a geographer, and what not, instead

of seeking the balance and rounded training to which each child is entitled.

Again, there have been innumerable additions in our schools in the last generation in respect to the subject matter of instruction. ~~Very many subjects have been added.~~ The field of human knowledge is constantly increasing, and we feel that our schools ought to reflect that vast field. It seems a fair question whether the tendency of this is not to try to spread over a curriculum too many small fragments of many things, whereby the pupil loses in the coherence of a definite plan of study and finds substituted a very great number of small fragments of things. It does seem to me that we should get more educational values out of fewer things, taught for a longer time, and with more effective drill and repetition.

Again, I am wondering whether we are getting out of some of our subject matter all the values

of seeking the balance and rounded training to which each child is entitled.

Again, there have been innumerable additions in our schools in the last generation in respect to the subject matter of instruction. Very many subjects have been added. The field of human knowledge is constantly increasing, and we feel that our schools ought to reflect that vast field. It seems a fair question whether the tendency of this is not to try to spread over a curriculum too many small fragments of many things, whereby the pupil loses in the coherence of a definite plan of study and finds substituted a very great number of small fragments of things. It does seem to me that we should yet more educational values out of fewer things, taught for a longer time, and with more effective drill and repetition.

Again, I am wondering whether we are getting out of some of our subject matter all the values

for which we hoped. May I illustrate, for instance, by such a subject as that of English? As we know, a generation or so ago the English in the secondary school consisted in the main of grammar and rhetoric, and possibly a little in the way of the history of English literature, with now and then readings from some selected authors. That has been expanded into a rich English curriculum, in which a great deal of work is done in writing and in the study of specific authors. We have in our schools a large English faculty, consisting of well-trained instructors and eager teachers who are trying faithfully to accomplish very definite results. These results, I suppose, are to train the student to speak and write English well, to become familiar with the best literature, and above all to become fond of the best literature. I don't feel at all sure that we are getting those results. I don't notice that students entering college write, so far as I

for which we hoped. May I illustrate, for instance, by such a subject as that of English? As we know, a generation or so ago the English in the secondary school consisted in the main of grammar and rhetoric, and possibly a little in the way of the history of English literature, with now and then readings from some selected authors. That has been expanded into a rich English curriculum, in which a great deal of work is done in writing and in the study of specific authors. We have in our schools a large English faculty, consisting of well-trained instructors and eager teachers who are trying faithfully to accomplish very definite results. These results, I suppose, are to train the student to speak and write English well, to become familiar with the best literature, and above all to become fond of the best literature. I don't feel at all sure that we are getting those results. I don't notice that students entering colleges write, so far as I

can see, perceptibly better English than those who entered college a generation ago, before all this work was done. I don't notice that their grasp of English literature, and especially their love for good literature, is very much better, if any, than it was then. Now of course in saying this I admit frankly that I speak not on the basis of an extensive and scientific study of the situation, but simply on the basis of what has come repeatedly under my observation. I am wondering whether the efforts of our ~~university~~ teachers to get their pupils to write good English is not in part counteracted and nullified by the incessant note-taking and scrappy writing done by the same pupils in other departments. In the English department they are taught to write in a certain way to secure good form, and then they go into a geography or history lesson, take rapid notes, and write rapid papers which may contain the subject matter of knowledge in those departments,

can see, perceptibly better English than those who entered college a generation ago, before all this work was done. I don't notice that their grasp of English literature, and especially their love for good literature, is very much better, if any, than it was then. Now of course in saying this I admit frankly that I speak not on the basis of an extensive and scientific study of the situation, but simply on the basis of what has come repeatedly under my observation. I am wondering whether the efforts of our enthusiastic teachers to get their pupils to write good English is not in part counteracted and nullified by the incessant note-taking and scrappy writing done by the same pupils in other departments. In the English department they are taught to write in a certain way to secure good form, and then they go into a geography or history lesson, take rapid notes, and write rapid papers which may contain the subject matter of knowledge in those departments,

but presented in very slovenly English because they have no time to do the thing as it should be. Therefore what we are putting into the pocket with one hand perhaps we are taking out with the other. I cannot forget how one of the noblest poems written by an American author was ruined for me completely by my being obliged to parse it. All the glory and beauty of the poetry evaporated, and there remained a delicately articulated skeleton. I don't know whether this is typical or not, but judging by the kind of reading done by most of our young college students I simply raise the question whether we have got so far as we hoped we were going to get when we entered on this very extensive program of instruction in English.

Now these points are suggestive. I am not recommending a specific plan, although of course it would be easy for any of us to do something of that sort. My own ~~reasonable~~ estimate would be that a better organization

but presented in very slovenly English because they have no time to do the thing as it should be. Therefore what we are putting into the pocket with one hand perhaps we are taking out with the other. I cannot forget how one of the noblest poems written by an American author was ruined for me completely by my being obliged to parse it. All the glory and beauty of the poetry evaporated, and there remained a delicately articulated skeleton. I don't know whether this is typical or not, but judging by the kind of reading done by most of our young college students I simply raise the question whether we have got so far as we hoped we were going to get when we entered on this very extensive program of instruction in English.

Now these points are suggestive. I am not recommending a specific plan, although of course it would be easy for any of us to do something of that sort. My own recommendation would be that a better organization

than the one at present would be an elementary school of six years, the main purpose being not primarily the acquisition of knowledge; followed by an intermediate school of three years from the ages, say, of 12 to 15, in which the child ought to learn how to use his mind to acquire some specific knowledge; and then perhaps what we might call in the absence of a better name a collegiate school of three years more, in which the student might finish his preparation either for business life or for the university. This would, as you see, take off one grade from the eight absolutely; and would take off the last grade of the remaining seven and combine that with the first two of the present secondary school; and would condense the remaining two of the secondary school with the first of the ordinary college into the work of three years: thus making the student ready for the university proper at the age of about 18, or, if you like, 19.

than the one at present would be an elementary school of six years, the main purpose being not primarily the acquisition of knowledge; followed by an intermediate school of three years from the ages, say, of 12 to 15, in which the child ought to learn how to use his mind to acquire some specific knowledge; and then perhaps what we might call in the absence of a better name a collegiate school of three years more, in which the student might finish his preparation either for business life or for the university. This would, as you see, take off one grade from the eight absolutely; and would take off the last grade of the remaining seven and combine that with the first two of the present secondary school, and would condense the remaining two of the secondary school with the first of the ordinary college into the work of three years: thus making the student ready for the university proper at the age of about 18, or, if you like, 19.

Further, I am inclined to think that our grading is not sufficiently exacting. In other words, that too many are promoted en masse. We ought to sift those who are admitted to each grade of the schools from the one below with progressive sharpness, so that the burden of proof should be on a student to prove his right to pass from the elementary to the intermediate school, to pass from the intermediate to the collegiate school, and still more to pass from the collegiate school to the university. That is to say, it should be progressively more difficult to secure promotion. In this way I fancy we could get greater efficiency from our instruction.

You will notice that these matters as to reorganization are by no means the presentation of a definitely formulated plan, but are merely a suggestion as to what perhaps is worthy of consideration and investigation. Many plans may be

Further, I am inclined to think that our grading is not sufficiently exacting. In other words, that too many are promoted en masse. We ought to sift those who are admitted to each grade of the schools from the one below with progressive sharpness, so that the burden of proof should be on a student to prove his right to pass from the elementary to the intermediate school, to pass from the intermediate to the collegiate school, and still more to pass from the collegiate school to the university. That is to say, it should be progressively more difficult to secure promotion. In this way I fancy we could get greater efficiency from our instruction.

You will notice that these matters as to reorganization are by no means the presentation of a definitely formulated plan, but are merely a suggestion as to what perhaps is worthy of consideration and investigation. Many plans may be

formed, any one of which may be better than the one herein suggested. The main thing I have in mind is to answer these questions: Can we not in our educational system save at least two years which seem now to go to waste owing to the needless protraction of schooling and the needless duplications? Can we not make our work more effective by giving it greater coherence throughout? Can we not study the subject matter of our instruction in various things with a view of ascertaining whether on the whole we are getting the results which we ought to get? In other words, if a student of secondary school age has been studying French two or three years why should not the student be able to use that French effectively as a means of conversation and sight reading? Why may not the same thing apply to Latin; why may not the same thing apply to any branch of knowledge which we try to impart? Are we getting this form of result?

formed, any one of which may be better than the one herein suggested. The main thing I have in mind is to answer these questions: Can we not in our educational system save at least two years which seem now to go to waste owing to the needless protraction of schooling and the needless duplications? Can we not make our work more effective by giving it greater coherence throughout? Can we not study the subject matter of our instruction in various things with a view of ascertaining whether on the whole we are getting the results which we ought to get? In other words, if a student of secondary school age has been studying French two or three years why should not the student be able to use that French effectively as a means of conversation and sight reading? Why may not the same thing apply to Latin; why may not the same thing apply to any branch of knowledge which we try to impart? Are we getting this form of result?

U N I V E R S I T A T I S C H I C A G I N I E N S I S

Praeses, Curatores, Decani, Professores

U N I V E R S I T A T I S S A N C T I A N D R E A E

Cancellario, Vice-Cancellario, Rectori,

Facultatum Decanis, Collegiorum Praefectis,

Professoribus

S. P. D.

Amidissime voluistis, Collegae Clarissimi et Doctissimi, nos quoque, multo longius a Vobis remotos quam Vos a patria illius qui Britannos penitus toto diuisos orbe descripsit, gaudii Vestri aliquam partem percipere. Recte mentem et studium nostrum iudicastis: doctrinae enim amor artissimum et iam inter eos uinculum est qui regiones orbis terrarum diuersissimas incolunt. Per quinque saecula in isto terrae Scotorum angulo festiuissimo Academia Vestra semen uerae scientiae et philosophiae constanter fouit, quod ita increuit ut nouis stipitibus adiectis non limites Caledoniae modo totos inumbrauerit sed exemplar etiam toti orbi se praebuerit. Dei senectus, ut ait poeta, cruda et uiridis: Academiae Vestrae, quae cotidie ex fonte diuinae scientiae haurire solet et iam in primo iuuentutis flore ac robore uersatur, nos uniuersitatis nomine vixdum gradum primum uitae ingredientis immortalitatem uerae laudis precamur et auguramur.

S I C . D . S I C . O

In testimonium uoluntatis nostrae sigillum Uniuersitatis et chirographum Praesidis apponenda curauimus.

Praeses

(L . S)

Datum ex aula academica
Kal. Sept. A. S. O D C C C C X I .

U N I V E R S I T A T I S C H I C A G I N I E N S I S

Praeses, Curatores, Decani, Professores

U N I V E R S I T A T I S S A N C T I A N D R E A E

Cancellario, Vice-Cancellario, Rectori,

Facultatum Decanis, Collegiorum Praefectis,

Professoribus

S. P. D.

Amicissime voluntis, College Clarissimi et Doctissimi,

nos quoque, multo longius a Vobis remotos quam Vos a patria illius

qui Britannos penitus toto divisos orbe describit, gaudii Vestri

aliquam partem percipere. Recte mentem et studium nostrum indicastis:

doctrinae enim amor artissimum et iam inter eos vinculum est qui

regiones orbis terrarum diversissimas incolunt. Per quinque saecula

in lato terrae Scotorum angulo festinissimo Academia Vestra semen

verae scientiae et philosophiae constanter fovit, quod ita increvit

ut novis atque ditissimis adiectis non limites Caledoniae

modo totos inumbraverit sed exemplar etiam toti orbi se praebuerit.

Dei benectus, ut ait poeta, crude et viridis: Academiae Vestrae,

quae cotidie ex fonte divinae scientiae haurire solet et iam in primo

inventutis flore se robore veratur, nos universitatis nostrae vixdum

gradum primum vitae ingredientis immortalitatem verae laudis precamur

et augeramur.

S I G . D . S I G . Φ

In testimonium voluntatis nostrae sigillum Universitatis

et chirographum Praesidis apponenda curavimus.

Praeses

(L . S) Datum ex aula academica
Kal. Sept. A. S. ⊕ D C C C C X I .

delivered at Univ Minnesota

Presidential inauguration

18 Oct 1911

THE IDEA OF RESEARCH

One of the most whimsical facts in our educational history is the great variety of meanings given in different parts of the country and at different times to the term "university". We are all familiar with the thriving frontier town, one of whose prominent citizens boasted that it was growing in population and business very rapidly, had two newspapers, three banks, six saloons, two universities, and was just planning for a third. Of course in the town in question a university was any institution of learning other than a common school. This is a typical case. Throughout the country at times the term "university" has been attached to a great variety of institutions, with the vaguest possible connotation. It

THE IDEA OF RESEARCH

One of the most whimsical facts in our educational history is the great variety of meanings given in different parts of the country and at different times to the term "university". We are all familiar with the thriving frontier town, one of whose prominent citizens boasted that it was growing in population and business very rapidly, had two newspapers, three banks, six saloons, two universities, and was just planning for a third. Of course in the town in question a university was any institution of learning other than a common school. This is a typical case. Throughout the country at times the term "university" has been attached to a great variety of institutions, with the vaguest possible connotation. It

has the advantage of sounding bigger than "college" or "school" or "academy". Again, in other parts of the land it apparently has been considered that a university differs from a college merely in bigness, and therefore that any college if sufficiently large may properly be called a university. Here at once there is a line of connection that runs through the previous consideration, the essential idea being that of magnitude. In quite a different sense the term has been used as applied to a group of colleges. Here we are reaching firm ground. This is essentially of course the English idea. The University of Oxford consisted of a federation of more or less independent colleges. It is in this sense I suppose that the state universities have been organized, and while in their incipiency perhaps the name "university" was rather

has the advantage of sounding bigger than "college" or "school" or "academy".

Again, in other parts of the land it apparently has been considered that a university differs from a college merely in bigness, and therefore that any college if sufficiently large may properly be called a university. Here at once there is a line of connection that runs through the previous consideration, the essential idea being that of magnitude. In quite a different sense the term has been used as applied to a group of colleges. Here we are reaching firm ground. This is essentially of course the English idea. The University of Oxford consisted of a federation of more or less independent colleges. It is in this sense I suppose that the state universities have been organized, and while in their incipiency perhaps the name "university" was rather

indicative of hope and ambition than of realization, still as time has passed on and organization has become more definite and standards have become better the state university is very properly a group of colleges.

Within the last generation, however, another step has been taken in the development of universities, and two new ideas have appeared. The first is that of the so-called "graduate school", which essentially is simply an organization for training those who have taken their baccalaureate degree in some specialty,- geology, chemistry, political economy, law, or what-not. Accompanying this is the idea of research. This implies that one essential function of the university is the pursuit of new truth. Of course the graduate school idea and the research idea are to a very considerable extent conjoined, as the specialist must himself be an investi-

indicative of hope and ambition than of realization, still as time has passed on and organization has become more definite and standards have become better the state university is very properly a group of colleges.

Within the last generation, however, another step has been taken in the development of universities, and two new ideas have appeared. The first is that of the so-called "graduate school", which essentially is simply an organization for training those who have taken their baccalaureate degree in some specialty,- geology, chemistry, political economy, law, or what-not. Accompanying this is the idea of research. This implies that one essential function of the university is the pursuit of new truth. Of course the graduate school idea and the research idea are to a very considerable extent conjoined, as the specialist must himself be an investi-

gator. Therefore the university professor is engaged primarily in investigation, and at the same time he is training the graduate students in investigative method.

The definition adopted by the Association of American Universities may perhaps be considered as indicative of the present trend of thought in that direction. In accordance with this definition the American university should have a strong graduate school, and if it has professional schools these must be essentially graduate in character. Now I put the statement in this form understanding distinctly the present limitation in the regulations of the Association whereby "at least one of the professional schools must have a combined course, graduate and collegiate, of not less than five years." Of course the expectation is that ultimately all professional schools will be of such character that the professional degree will be given

gator. Therefore the university professor is engaged primarily in investigation, and at the same time he is training the graduate students in investigative method.

The definition adopted by the Association of American Universities may perhaps be considered as indicative of the present trend of thought in that direction. In accordance with this definition the American university should have a strong graduate school, and if it has professional schools these must be essentially graduate in character. Now I put the statement in this form understanding distinctly the present limitations in the regulations of the Association whereby "at least one of the professional schools must have a combined course, graduate and collegiate, of not less than five years." Of course the expectation is that ultimately all professional schools will be of such character that the professional degree will be given

only after a baccalaureate degree has been obtained, thus making the school essentially graduate. But the graduate idea implies both specialization and research, so that research may be regarded as the heart of the university idea at its present stage of development.

The purpose of university investigation is merely to ascertain new truth in the various fields of knowledge. The advance of science has of course resulted from the activities of the many men who have been eager to extend the boundaries of knowledge beyond what exists. On the brilliant results which have followed these activities it is needless to dwell. Few things are more fascinating than the researches now under way in many parts of the world in the various fields affecting human health. The discoveries which have made it possible to

only after a baccalaureate degree has been obtained, thus making the school essentially graduate. But the graduate idea implies both specialization and research, so that research may be regarded as the heart of the university idea at its present stage of development.

The purpose of university investigation is merely to ascertain new truth in the various fields of knowledge. The advance of science has of course resulted from the activities of the many men who have been eager to extend the boundaries of knowledge beyond what exists. On the brilliant results which have followed these activities it is needless to dwell. Few things are more fascinating than the researches now under way in many parts of the world in the various fields affecting human health. The discoveries which have made it possible to

eliminate malaria and yellow fever in the way of preventive medicine; are familiar to all; the discoveries which have made it possible to cure in nearly all cases cerebro-spinal meningitis and other virulent diseases have also yielded large results. The foundation of the Rockefeller Institute of Medical Research, and many other endowments for this purpose in this country and abroad, are certain to be of benefit to humanity beyond the power of words to describe. In like manner investigations on the part of science have revolutionized agriculture, and enormously multiplied the possibilities of the soil. These are the merest suggestions of what investigation, properly conducted, has already yielded to the advantage of human power. Every university should have, therefore, as an essential part of its purposes the prosecution of investigation in order to encourage the advance of knowledge.

eliminate malaria and yellow fever in the way of preventive medicine; the discoveries are familiar to all; which have made it possible to cure in nearly all cases cerebro-spinal meningitis and other virulent diseases have also yielded large results. The foundation of the Rockefeller Institute of Medical Research, and many other endowments for this purpose in this country and abroad, are certain to be of benefit to humanity beyond the power of words to describe. In like manner investigations on the part of science have revolutionized agriculture, and enormously multiplied the possibilities of the soil. These are the merest suggestions of what investigation, properly conducted, has already yielded to the advantage of human power. Every university should have, therefore, as an essential part of its purposes the prosecution of investigation in order to encourage the advance of knowledge.

eliminate malaria and yellow fever in the way of preventive medicine are familiar to all; the discoveries which have made it possible to cure in nearly all cases cerebro-spinal meningitis and other virulent diseases have also yielded large results. The foundation of the Rockefeller Institute of Medical Research, and many other endowments for this purpose in this country and abroad, are certain to be of benefit to humanity beyond the power of words to describe. In like manner investigations on the part of science have revolutionized agriculture, and enormously multiplied the possibilities of the soil. These are the merest suggestions of what investigation, properly conducted, has already yielded to the advantage of human power. Every university should have, therefore, as an essential part of its purposes the prosecution of investigation in order to encourage the advance of knowledge.

eliminate malaria and yellow fever in the way of preventive medicine; the discoveries are familiar to all; which have made it possible to cure in nearly all cases cerebro-spinal meningitis and other virulent diseases have also yielded large results. The foundation of the Rockefeller Institute of Medical Research, and many other endowments for this purpose in this country and abroad, are certain to be of benefit to humanity beyond the power of words to describe. In like manner investigations on the part of science have revolutionized agriculture, and enormously multiplied the possibilities of the soil. These are the merest suggestions of what investigation, properly conducted, has already yielded to the advantage of human power. Every university should have, therefore, as an essential part of its purposes the prosecution of investigation in order to encourage the advance of knowledge.

But it should not be forgotten that the immediate beneficial results of investigations can seldom be forecast. On the other hand, discovery of new truth in any line may easily lead to utterly unforeseen results of great practical value. Men of science, therefore, should be encouraged in their investigations in as many fields as possible, with the confidence that after all what we need is truth and sound knowledge. Applications are sure to follow.

The question at once arises as to whether it is not better for university men who are engaged in research to give their whole time to this subject, and to be released altogether from teaching. There may be circumstances which would warrant such a procedure. I am satisfied, however, that in the great majority of cases an investigator is benefited rather than injured by a reasonable amount of teaching

But it should not be forgotten that the immediate beneficial results of investigations can seldom be forecast. On the other hand, discovery of new truth in any line may easily lead to utterly unforeseen results of great practical value. Men of science, therefore, should be encouraged in their investigations in as many fields as possible, with the confidence that after all what we need is truth and sound knowledge. Applications are sure to follow.

The question at once arises as to whether it is not better for university men who are engaged in research to give their whole time to this subject, and to be released altogether from teaching. There may be circumstances which would warrant such a procedure. I am satisfied, however, that in the great majority of cases an investigator is benefited rather than injured by a reasonable amount of teaching

He is able in this way often to test what he is doing, and the contact with those who are learning is in itself a stimulus to his mind. On the other hand, of course he ought to be a far more fruitful and inspiring teacher from the fact that he is not giving information that he has acquired in a routine way, but that he is always speaking and working from the point of view of one who is himself a productive scholar. One may be an excellent teacher who is not a good investigator; one may be an excellent investigator who is not a good teacher; but in the long run each of these application ought to be of great behefit to the other. As a rule it follows, therefore, that research and teaching should be combined. It may easily be wise in case of a given investigation of large purpose to release the investigator for a given time from any other employment. This,

He is able in this way often to test what he is doing, and the contact with those who are learning is in itself a stimulus to his mind. On the other hand, of course he ought to be a far more fruitful and inspiring teacher from the fact that he is not giving information that he has acquired in a routine way, but that he is always speaking and working from the point of view of one who is himself a productive scholar. One may be an excellent teacher who is not a good investigator; one may be an excellent investigator who is not a good teacher; but in the long run each of these application ought to be of great benefit to the other. As a rule it follows, therefore, that research and teaching should be combined. It may easily be wise in case of a given investigation of large purpose to release the investigator for a given time from any other employment. This,

however, should as a rule be wholly temporary.

At the same time it is obvious that no one can carry on an investigation satisfactorily if all his strength is absorbed in teaching. Therefore the proper relation of investigation and teaching should be kept carefully in mind, and a good investigator should be relieved from overmuch teaching if the best results are to be obtained.

There is a wide variety of teaching ability in any faculty. Some are teachers by nature; some are teachers by experience; some are not teachers at all. The same considerations absolutely apply to research aptitude. Some men are created to investigate; some men learn to investigate and to do it reasonably well; others have no fitness for it at all. It should not therefore be presumed that everybody should be engaged in investigation, or that all who are so engaged

however, should as a rule be wholly temporary.

At the same time it is obvious that no one can carry on an investigation satisfactorily if all his strength is absorbed in teaching. Therefore the proper relation of investigation and teaching should be kept carefully in mind, and a good investigator should be relieved from overmuch teaching if the best results are to be obtained.

There is a wide variety of teaching ability in any faculty. Some are teachers by nature; some are teachers by experience; some are not teachers at all. The same considerations absolutely apply to research aptitude. Some men are created to investigate; some men learn to investigate and to do it reasonably well; others have no fitness for it at all. It should not therefore be presumed that everybody should be engaged in investigation, or that all who are so engaged

should be engaged to the same extent. Where the research idea has become dominant oftentimes it has resulted in a great amount of useless work by unfit people who have the impression that everybody must be an investigator. All that is quite needless. But the university should be so adjusted as to encourage research on the part of those who are qualified to carry it on with success.

It does not at all follow that any one institution is under obligations to carry on research along all lines of human knowledge, or even along all lines in which the institution in question gives instruction. On the other hand, better results will probably be obtained if research is provided in a limited number of fields; in this way it will be prosecuted more effectively and far more fruitfully. Investigations may easily be costly. The mere fact that investigators

should be engaged to the same extent. Where the research idea has become dominant often-times it has resulted in a great amount of useless work by unfit people who have the impression that everybody must be an investigator. All that is quite needless. But the university should be so adjusted as to encourage research on the part of those who are qualified to carry it on with success.

It does not at all follow that any one institution is under obligations to carry on research along all lines of human knowledge, or even along all lines in which the institution in question gives instruction. On the other hand, better results will probably be obtained if research is provided in a limited number of fields; in this way it will be prosecuted more effectively and far more fruitfully. Investigations may easily be costly. The mere fact that investigators

should be relieved from the full quota of teaching in itself involves additional cost to the institution. Therefore, not merely should investigation be encouraged only among those who are good investigators, but also only in those subjects for which the university can make adequate provision. Obviously some institutions may prosecute successfully certain lines of research activity, and others quite different lines. In this way, taking the country at large, the field of human knowledge should be adequately covered.

A fair question is whether an institution supported by the state should devote itself largely to research. Why not? It is the purpose of the state of course to educate its young men and women to make them better and more effective citizens. It is also the purpose of the state in its educational work to provide such knowledge as is needed not only by the young but by all parts

should be relieved from the full quota of teaching in itself involves additional cost to the institution. Therefore, not merely should investigation be encouraged only among those who are good investigators, but also only in those subjects for which the university can make adequate provision. Obviously some institutions may prosecute successfully certain lines of research activity, and others quite different lines. In this way, taking the country at large, the field of human knowledge should be adequately covered.

A fair question is whether an institution supported by the state should devote itself largely to research. Why not? It is the purpose of the state of course to educate its young men and women to make them better and more effective citizens. It is also the purpose of the state in its educational work to provide such knowledge as is needed not only by the young but by all parts

of its population. To this end our states have already done a great deal of enormously valuable work in agricultural investigations, with the purpose of course of securing practical results which may be placed in the hands of the agricultural community. This has had a very great practical and financial value, and bids fair to have in the future even larger results in these ways. The State Geological Survey is a piece of investigation of very great importance, and in its nature is essentially a part of university work. The whole question of conservation of such natural resources as a state may possess involves investigation scientific in character, and essentially closely connected with the university. In short, the state owes it to itself, to its great body of citizens, and to their welfare in all fields, to follow out so far as possible all investigations along lines which will benefit the public. Surely nothin

of its population. To this end our states have already done a great deal of enormously valuable work in agricultural investigations, with the purpose of course of securing practical results which may be placed in the hands of the agricultural community. This has had a very great practical and financial value, and bids fair to have in the future even larger results in these ways. The State Geological Survey is a piece of investigation of very great importance, and in its nature is essentially a part of university work. The whole question of conservation of such natural resources as a state may possess involves investigation scientific in character, and essentially closely connected with the university. In short, the state owes it to itself, to its great body of citizens, and to their welfare in all fields, to follow out so far as possible all investigations along lines which will benefit the public. Surely nothing

is more vital than public health, but the health of the state on the moral and spiritual side is quite as vital to good citizenship and progress as physical health itself. Investigation therefore in such lines of social activity as are connected with the care of the feeble-minded and the delinquent classes, for instance, is a legitimate subject for the expenditure of state money. The state establishes and maintains a great university. It has in mind the higher education of its youth, in general culture and in specific professions. It has in mind also the discovery and dissemination of new truth which will aid the people of the state to make their lives safer and more prosperous. It aims to do its part towards adding to the sum total of human knowledge for the benefit of all mankind.

is more vital than public health, but the health of the state on the moral and spiritual side is quite as vital to good citizenship and progress as physical health itself. Investigation therefore in such lines of social activity as are connected with the care of the feeble-minded and the delinquent classes, for instance, is a legitimate subject for the expenditure of state money. The state establishes and maintains a great university. It has in mind the higher education of its youth, in general culture and in specific professions. It has in mind also the discovery and dissemination of new truth which will aid the people of the state to make their lives safer and more prosperous. It aims to do its part towards adding to the sum total of human knowledge for the benefit of all mankind.

The University of Chicago
FOUNDED BY JOHN D. ROCKEFELLER

The Faculties of Arts, Literature, and Science

OFFICE OF THE DEAN

~~May 29th, 1912.~~

The University of Chicago extends to the trustees and faculty of Franklin and Marshall College cordial congratulations on the 125th anniversary of the granting of the first charter.

will out

Faithful to its earliest ideals, the college has sent into the world generation after generation of devout and earnest students whose signal services have gained the grateful recognition of their countrymen. The splendid history of the institution renders it in every way the fit representative of the two great men whose names it bears. In common with all other American institutions of higher learning, we offer our hearty wishes for its continued prosperity.

President

Secretary of the Board of Trustees

June thirteenth
nineteen hundred twelve.

write out

The University of Chicago extends to the President, the Regents and the faculties of the University of Michigan cordial congratulations upon the 75th anniversary of the founding of the institution. To the University of Michigan more than to any other single agency is due the miraculous development of the great system of State universities by means of which the possibilities of the higher education have been freely brought to all the children of the commonwealth. For this, as well as for the distinguished services of her sons and daughters, eminent in every field of noble human endeavor, the University of Chicago, in common with all other forces making for spiritual progress, gladly acknowledges enduring gratitude. May the great mother, from whom have sprung these benefits to mankind, live on in ever-increasing usefulness ~~for~~ through the generations to come!

President

Secretary of the Board of Trustees

June twenty-third
nineteen hundred twelve

(Seal)

The University of Chicago

FOUNDED BY JOHN D. ROCKEFELLER

The Faculties of Arts, Literature, and Science

OFFICE OF THE DEAN

Mr. President:

I accept these keys as a symbol that this noble building now becomes a permanent part of the equipment of the University; and to the end that its beneficence may immediately be realized, I hereby transfer the custody of the Harper Memorial Library to the Director of University Libraries, in the full assurance that by its use, to employ the words of the University motto, "Knowledge will increase, and life be ennobled and enriched."

Mr. President:

I accept these keys as a symbol that this noble building now becomes a permanent part of the equipment of the University; and to the end that its beneficence may immediately be realized, I hereby transfer the custody of the Harper Memorial Library to the Director of University Libraries, in the full assurance that by its use, to employ the words of the University motto, "Knowledge will increase, and life be ennobled and enriched."

COPY (for Dr. Kyes)

THEOBALD SMITH, Professor of Comparative Pathology in Harvard University and Director of the Pathological Laboratory of the Massachusetts State Board of Health; investigator in scientific medicine; pioneer in the discovery of pathogenic protozoa; clear-sighted student of immunity and protective inoculation; author of fundamental contributions to the knowledge of tuberculosis in man and in domestic animals; active participant in the work of utilizing scientific discovery in the service of the commonwealth; patient and acute student of many and varied subjects in the field of comparative pathology; especially distinguished for profound insight into the relations of microörganisms and disease:- By the authority of the Board of Trustees of the University of Chicago, and upon nomination of the University Senate, I confer on you the degree of Doctor of Laws of this University, with all the rights and privileges appertaining thereto. In testimony of which I bestow upon you this hood - wear it as a Doctor of the University - and this diploma, under the University Seal.

COPY (for Dr. Kyes)

THEOBALD SMITH, Professor of Comparative Pathology in Harvard University and Director of the Pathological Laboratory of the Massachusetts State Board of Health; investigator in scientific medicine; pioneer in the discovery of pathogenic protozoa; clear-sighted student of immunity and protective inoculation; author of fundamental contributions to the knowledge of tuberculosis in man and in domestic animals; active participant in the work of utilizing scientific discovery in the service of the commonwealth; patient and acute student of many and varied subjects in the field of comparative pathology; especially distinguished for profound insight into the relations of microorganisms and disease:- By the authority of the Board of Trustees of the University of Chicago, and upon nomination of the University Senate, I confer on you the degree of Doctor of Laws of this University, with all the rights and privileges appertaining thereto. In testimony of which I bestow upon you this hood - wear it as a Doctor of the University - and this diploma, under the University Seal.

OBEDIENCE TO LAW

The republic is more populous, richer, filled with a vastly more complex and strenuous life than ever before, and what once were minute flaws appear now as huge rifts. It may be that we have more lawlessness in the aggregate, but not more in proportion than in the days of our fathers. But American inheritance and education together seem to have imbued the national life with an instinctive restiveness under legal restrictions. We like to get at the heart of the matter at once without waiting for the observance of established forms. We applaud the public officer who cuts the Gordian knot, and are inclined to scorn the patience which waits to untie it. We instinctively sympathize with Roosevelt's Tammany friend in the New York legislature, "What's the Constitution among friends?"

A railroad man said in my presence not long since, "We have done many illegal things in recent years, some good, some bad, but all illegal." A prominent lawyer of a great city I have heard to say that it should not be supposed that all the foolish laws passed by our preposterous legislatures ought to be heeded.

The first settlers on the New England coast were refugees from law which they detested. Our national independence was the result of riot and rebellion. The millions of immigrants who flocked to our shores in the following decades were escaping from tyranny. Our

OBEDIENCE TO LAW

The republic is more populous, richer, filled with a vastly more complex and strenuous life than ever before, and what once were minute flaws appear now as huge rifts. It may be that we have more lawlessness in the aggregate, but not more in proportion than in the days of our fathers. But American inheritance and education together seem to have imbued the national life with an instinctive restiveness under legal restrictions. We like to get at the heart of the matter at once without waiting for the observance of established forms. We applaud the public officer who cuts the Gordian knot, and are inclined to scorn the patience which waits to untie it. We instinctively sympathize with Roosevelt's Tammany friend in the New York legislature, "What's the Constitution among friends?"

A railroad man said in my presence not long since, "We have done many illegal things in recent years, some good, some bad, but all illegal." A prominent lawyer of a great city I have heard to say that it should not be supposed that all the foolish laws passed by our proposterous legislatures ought to be heeded.

The first settlers on the New England coast were refugees from law which they detested. Our national independence was the result of riot and rebellion. The millions of immigrants who flocked to our shores in the following decades were escaping from tyranny. Our

greatest social problem, slavery, was settled by physical violence, not by calm statesmanship. The census of 1860 put the number of slaves in the south at four millions. A liberal estimate of the value involved is $2,000,000,000. To have bought the freedom of the slaves, and then to have provided by wise methods for their prudent direction through the transition from slavery to self-supporting manhood, this would have been statesmanship. Instead of that we abolished slavery by a contest which cost more than a half million lives and not far from $11,000,000,000, which for the time being shattered the social structure in a moiety of the states, and which then cast the helpless freedmen adrift as the prey of their own ignorance, of base politicians, and of fanatical notions of political and social equality. This was not statesmanship. Thus like a scarlet thread through the russet and gold of the fabric of our history runs this proneness to violent remedies in place of the more remote securities of legal process.

It is only by training of our youth in such principles that we can expect the development of social justice to become the fundamental principle of our modern state.

greatest social problem, slavery, was settled by physical violence, not by calm statesmanship. The census of 1860 put the number of slaves in the south at four millions. A liberal estimate of the value involved is $2,000,000,000. To have bought the freedom of the slaves, and then to have provided by wise methods for their prudent direction through the transition from slavery to self-supporting manhood, this would have been statesmanship. Instead of that we abolished slavery by a contest which cost more than a half million lives and not far from $11,000,000,000, which for the time being shattered the social structure in a moiety of the states, and which then cast the helpless freedmen adrift as the prey of their own ignorance, of base politicians, and of fanatical notions of political and social equality. This was not statesmanship. Thus like a scarlet thread through the russet and gold of the fabric of our history runs this proneness to violent remedies in place of the more remote security-tics of legal process.

It is only by training of our youth in such principles that we can expect the development of social justice to become the fundamental principle of our modern state.

INTERNATIONAL PEACE

There are questions affecting, for instance, the national honor, the national existence, or at all events those which may be considered as vital national interests, which nations are not likely to submit to arbitration. Again, it is often believed that arbitration among nations as among individuals is likely to lead to compromises.

A dynastic war is no longer possible. A war among civilized nations with the sole purpose of conquest is no longer possible. Wars from trivial causes are hardly possible. The great wars of the last two centuries have resulted, we may say, from a question involved in the balance of power in Europe or from questions involved in the occupation of lands which were either unsettled or settled only by savages, or in the third place, wars which have arisen in the attempt to police lands which are more or less lawless. Of course in the last case conquest has often been the result.

The possible dissolution of the Austrian Empire may of course lead to very grave questions of this character, but at this time the likelihood of such dissolution does not seem near. So far as the occupation of unsettled or uncivilized lands is concerned there is no longer any such question. Africa has practically been partitioned among the European powers. The islands of the South Seas are all occupied by European powers. The Americas are all governed by sovereign jurisdictions. This cause of international wars, then, may be dismissed as practically settled.

INTERNATIONAL PEACE

There are questions affecting, for instance, the national honor, the national existence, or at all events those which may be considered as vital national interests, which nations are not likely to submit to arbitration. Again, it is often believed that arbitration among nations as among individuals is likely to lead to compromises.

A dynastic war is no longer possible. A war among civilized nations with the sole purpose of conquest is no longer possible. Wars from trivial causes are hardly possible. The great wars of the last two centuries have resulted, we may say, from a question involved in the balance of power in Europe or from questions involved in the occupation of lands which were either unsettled or settled only by savages, or in the third place, wars which have arisen in the attempt to police lands which are more or less lawless. Of course in the last case conquest has often been the result.

The possible dissolution of the Austrian Empire may of course lead to very grave questions of this character, but at this time the likelihood of such dissolution does not seem near. So far as the occupation of unsettled or uncivilized lands is concerned there is no longer any such question. Africa has practically been partitioned among the European powers. The islands of the South Seas are all occupied by European powers. The Americas are all governed by sovereign jurisdictions. This cause of international wars, then, may be dismissed as practically settled.