Where shall the scholar live?
In solitude or in society?
In the green stillness of the country, where he can hear the heart of Nature beat, or in the dark gray city, where he can feel and hear the throbbing heart of man? I make answer for him, and say, In the dark gray city.  

LONGFELLOW
IDEALS AND METHODS IN MEDICAL EDUCATION.

WHEN, a few years ago, Boston University School of Medicine boldly announced, in advance of every other medical school in America, that on and after a certain date it would require of all students seeking its diploma attendance on a four years' graded course, it was considered a doubtful experiment by those who did not read the signs of the times; and the outcome was watched with interest. The feasibility of the plan was soon evident, for a larger number and a better class of students sought its diploma. As a result of this progressive step, other medical schools soon adopted the same plan; and to-day there is not a medical school in the United States, of any reputation, which does not require a four years' course, or its equivalent, for graduation.

During the past decade educational currents have moved swiftly: the old curricula, which had been in vogue for many years, have been modified and adapted to modern educational ideas. But probably no branch of education has undergone such a complete revolution as that of medicine. To one unacquainted with the development of medical schools the change seems marvelous. The time-honored didactic lectures on anatomy, physiology, obstetrics, pathology, surgery, and chemistry have been replaced by the clinic and the laboratory. Since the discovery of the germ theory and the introduction of aseptic and antiseptic methods, surgical practice has been completely revolutionized, and to-day there are few organs in the human body beyond the reach of surgical treatment.

The development of bacteriology and sanitary science has been the most potent factor in modifying the theory of disease, opening up a vast field for research, with which the student must become familiar.

The laboratories, which to-day are absolutely essential for training the student in delicate manipulations and exactness of observation, were practically unknown to the medical student of a quarter of a century ago. In fact, the field has so broadened that it is impossible for the student of to-day, though taking the four years' course, to become master of all departments of medical science; so the tendency of the times is to develop specialists, who devote their energies exclusively to one branch of medicine. To meet this
demand postgraduate courses have been established in many of the city schools, where the student may perfect himself in the specialty which he has chosen.

Modern medicine aims toward the rational scientific application of all remedial agents, supplanting, as fast as possible, the empiricism and superstition which have always retarded the advancement of medical practice. Under the direction of organized boards of health danger from contagious diseases has been reduced to a minimum, and the epidemics of former times have been practically eliminated.

The clinical side of medicine has also experienced an equal advance. A few years ago hospitals were practically unknown, except in large cities, while to-day nearly all the smaller cities and many large towns have their hospitals and corps of physicians, where undergraduates may gain experience at the bedside and in the amphitheatre. But the student who desires to attain the greatest practical clinical advantages should matriculate in a medical school located in a large city, where he may come in contact with, and study the methods of, the leading specialists of the country. A student confronted with the curriculum of an up-to-date medical school at once realizes the importance of a collegiate education preparatory to taking up the study of medicine, and every year the percentage of college graduates increases among the matriculants of the schools.

The establishment of state boards of registration has assisted in raising the standard of medical education by refusing to grant licenses to such physicians as are unable to pass a satisfactory examination in the general subject of medicine, and by their co-operation with the medical schools it is hoped in time to obtain a fixed standard which shall be recognized throughout the country.

The world demands, and has a right to demand, efficiency of physicians; but few outside of medical circles seem to understand what is necessary for the education of a skilful, broad-minded physician. The necessary expenses for the erection, equipment, and maintenance of laboratories, libraries, and the securing of competent instructors can no longer be met by tuition fees received from students; and the pressing need of medical schools to-day is for large endowments to carry successfully forward investigations for the alleviation of human suffering. Colleges, academies, and the many philanthropic institutions have received the support of those who have money to contribute. Why should not medical schools? There is no field of more far-reaching and certain usefulness open to the philanthropist than the aiding to perfect themselves in their equipment for work of the men and women on whose work the welfare—in so many instances, the lives—of the community depends.

Frank E. Allard, M.D.
WHY STUDY MATHEMATICS?

BEFORE a student takes charge of himself it matters little whether he likes mathematics or not. In this earlier stage circumstances may make dislike more to his credit than liking. But after the student has undertaken to direct his own studies for what there is in them, a persistent aversion for mathematics means a good deal. There are, of course, minds of peculiar habit which get along without clear and distinct ideas from any field of knowledge whatsoever, and for which perspective is not line and angle but degree of haze, and thought itself not so much an attentive undertaking as an iridescent happening. To minds of this type, mathematics, like natural science, economics, and law, can make no appeal. But a student whose mind is of the ordinary kind, reaching truth by putting clear ideas together in the right way, should feel some misgivings if, after coming to years of reflection, he finds his attitude toward mathematical studies a pronounced dislike.

Central among the causes of such aversion is usually some unsympathetic and spiritless teaching. The instructor does not always realize that arithmetic and algebra and geometry are essentially abstract studies, and that unless this very abstractness is made interesting and is mastered as a characteristic excellence of mathematical truth, it impresses the pupil as mere emptiness and poverty.

The mathematical schoolbooks, too, though better than a decade ago, are still a scandal. They read as if censored by an enemy of youth. The ordinary compendium is a mere skeleton, bare of all connective tissues. Explanations are worded as curtly as cablegrams. The chapters succeed one another without transition or cross-reference, and a class moves through them as sheep from pen to pen. Notably in algebra is the student deprived of just what he needs for seeing the whole subject in its organic unity. Of all branches of elementary study, mathematics has had its traditional form of presenting truth least shaped by regard for pedagogical principles.

This evil of a broken and grudging presentation is without excuse. In so far as more than a tradition, it rests upon the fancy that a rigorous system of truth requires an equally rigorous presentation to the student. Of course the severity and elegance of mathematical method must be made an object of appreciation; but it is idle to suppose that this can be effected by lessening the student's interest in the whole study and by increasing the difficulties of his apprehension. The same mode of instruction would seek to bring a child to hold sacred the great moral law by pelting him with its blunt imperatives.

Still another cause lies in the fact that the results of the study are not obvious to the student. The skill acquired finds but little isolated use, and is not easily distinguished from the natural increase of mental power incident to
growth. Such practical use as a schoolboy can make of the greater part of his algebra and geometry suggests very faintly, if at all, the value of mathematics in the scientific and technological mastery of the world. And the schoolboy is as quick as the rest to confound lack of outer utility with lack of inner, and to limit the educational value to studies of concrete ways and means.

With what shall the student who is trying to appraise the educative value of mathematics oppose the working of these causes?

In some way he must find out just what kind of an intellectual product or process mathematics is, and then determine for himself whether the study of it can reasonably be expected to help his private intellect in any definite ways. He ought to make his consideration as specific and businesslike as that of a farmer who ascertains on the one hand the needs of his soil and on the other the constituents of a proposed fertilizer.

In reflecting to this end upon the nature of mathematics, the first thing to note is that in a peculiar degree mathematics is mind-made. Thought commonly dwells upon the objective aspect of mathematics as a vast system of necessary truth; a cosmos not of things, but of concepts; not of cause and effect, but of condition and consequent. Nevertheless, for the appraising student the subjective aspect is still more important. For in seeing mathematical truth to be essentially the mind’s own product, and as it were a progressive explication of truth latent within intelligence, the student comes to see that every advance he makes calls into use a new potentiality of his own nature and reveals to him something more of the essential make of his own mind.

A second characteristic to be taken into account when determining the educative value of mathematics is the simplicity of the ideas dealt with. It is only at first sight or when taken up out of their natural order that the concepts employed can seem difficult. Of course this simplicity is not absolute, for there is nothing that enters the mind at all that does not suggest perplexing query if closely scanned; but in comparison with the concepts met in other sciences, mathematical ideas are conspicuously easy. The greater complexity of legal conceptions, for instance, is evident at a glance. So, too, the conceptions encountered in physics, chemistry, and biology are much more complex than those of mathematics. Compare right, person, property, and admissible evidence, or refraction, electrification, organism, nutrition, and sensibility; with division, differential, convergent series, permutation, and polyedron.

Here some one may inquire why mathematics has taken so many centuries to attain its present state, if indeed its conceptions are so conspicuously easy. But this slow growth itself attests simplicity; for the whole history of science shows that the human mind reaches its simpler conceptions tardily and through long processes of refinement and abstraction.
It should be noted also that this simplicity is not emptiness. On the con-
tary it is marvellous how the mathematician makes his omelets without appre-
ciably breaking eggs. He throws one straight line across another exactly
like it, and finds enough truth in the resulting figure to busy him several
days; which means also several hours for every generation of schoolboys year
and year out for all time. Or he tosses on a third line, and in that web of
a single mesh he takes theorem after theorem and half the science of trigo-
nometry. There is nothing in the whole field of intellectual achievement to
compare with this disparity between the simplicity of the mathematician's
data and the inexhaustible abundance of his conclusions.

This same simplicity makes the expression of mathematical truth singularly
easy. The symbolic notation employed in mathematics has no equal in any
science. It is worth the student's while to make clear to himself the value of
the familiar language of arithmetic, and of algebra in particular, inasmuch as
not a few severe attacks upon mathematics have specified this very excellence
as an evil. There is no need to deny that the symbols may be used as
mechanically as checkers or chessmen. There is still less to assert that in
the right hands such mechanical use is undesirable. Of course an ignoramus
may follow a rule blindly and obtain a result that is right; but it is no right
result for him, nor is his servile manipulation of the symbols in any sense
mathematical study.

Failure to understand the essential simplicity of mathematical conceptions,
and to seize the advantages that it offers the mind bent on training itself in
strength and deftness of grasp, accounts for most of the indifference with
which too many students regard mathematics. In point of intrinsic interest
the conceptions cannot for a moment be compared with the concreter and
more complex conceptions of natural science and history, or with the un-
scientific ideas in ordinary circulation. Quantitative conceptions are cold
and bare and colorless and dry. They contain nothing to stir the heart or to
confirm the will. From the ethical and aesthetic point of view, a single
golden deed or one masterpiece of art is worth more than a thousand the-
orems. Yet the student who compares his mathematical course with his work
in history or economics or psychology only in point of the intrinsic worth of
their subject-matter, and rates it accordingly, is as one who thinks meanly of
mechanism because it is not playful, or of a gymnasium because it lacks the
atmosphere of a home.

The third characteristic of mathematics to be considered from the student's
point of view is the plainness of its logical structure. The simple conceptions
are related simply. The elementary truths are trussed together like open
bridgework. The plan of the whole is not, as in history, a suggestive selection
from an incredibly complex and continuous mass of detail, nor, as in natural
science, an increasingly comprehensive reduction of phenomena multitudi-
nously given; but is just a progressive construction of simple elements in gradually complicating relations. The other sciences are handwriting on a dark wall; mathematics, a trestle against the sky.

This openness of form confronts the very beginner. The objects of his study are laid before him in rigorous definition. A few truths compel his assent as axiomatic. Then with one or two of these as instruments of insight, some implication of a definition is unfolded, or a consequence of some combining of defined objects is formally established. In principle that is all. What follows is merely new combination of truths already reached, introduction of new objects by definition, and straightforward construction of the complex from the simple. The only appeal to beginner or adept is for detection or verification of plain relations within his own insight. Hence his mastery of what mathematics can teach him is vastly more complete and should be easier than of what he learns in any other science. The boy on a haymow can understand the framing of a barn and see the reason in it almost if not quite as well as the builder; but not even a Gray can understand how plants are framed, much less how they grow.

A little reflection upon the three characteristics thus touched upon, the mental origin, the simplicity of subject-matter, and the openness of logical structure, makes quick work of discovering just what the student may reasonably expect from an energetic study of mathematics.

If mathematics is mind-made in unique degree, it cannot be intelligently appropriated without calling into play essentially creative and constructive powers of mind.

In the next place, these powers are precisely those that in their application to other fields of human interest are prized as the very soul of clear, steady, and penetrative thinking. The ordinary play of ideas, the suggestions of circumstance, the decision by least resistance, the automatic reaction against what turns up, are fortunately so adjusted to human well-being that they satisfy many people; and they are indeed indispensable for any proper conduct of life. Taken by themselves, however, they only minister and maintain; they initiate no wide enterprises and they bring no difficult events to pass. For genuine achievement the mind has need of more than this untrained coming and going of ideas. The entry of a happy thought often suggests a desired way or means; but when the happy thought hangs back the mind must be able to think happily for itself, to win and wield ideas that are definite and grasped by their essentials, to see its way steadily to the point, to hold a complex situation so that one factor illuminates instead of obscuring another; in a word, to set clear and distinct ideas in their right relations. Now, from the educational point of view, it is the chief merit of mathematics that it continually demands of the student these very mental operations in the easiest kind of matter. The extraordinary simplicity of the conceptions fits them for
the student's use. They are easier to grasp firmly in clearness and distinctness than any other set of concepts with which the student could acquire the needed skill. That they are cold and bare and colorless and dry is sheer advantage; the student needs Indian clubs, not banyan trees. In just the same way, the open structure of mathematics affords the student his best chance to learn what a clear relation is, why complete enumerations are safer than incomplete, how truths bear on one another in corroboration and on error in destruction, how he ought to feel when he is absolutely sure of a thing, how a difficulty may be analyzed and despatched piecemeal, with what power a clearly conceived end pulls the mind through fit means to the accomplishment.

Moreover, in mathematics the student can learn to best advantage the nature and effects of error; for it is a peculiarity of mathematics, shared perhaps only by laboratory and shop work, that a mistake on the student's part reveals itself. A boy may imbibe some error in history, or associate a wrong meaning with some word of literary use, or confound the properties of hydrogen and nitrogen, and carry the mistakes uncorrected to his grave; but an error in mathematics is like the stolen fox under the Spartan lad's cloak.

All this of course does not mean that to become a swift and sure thinker the student needs only to study mathematics. Nor does it mean that professional mathematicians make the best counsellors for kings. Life does not come under the guise of definition and diagram, and few of its problems admit of solution or indeed of complete statement. But this much is meant. Whatever of sympathy and instinctive tact and of other unreasoned processes the mind may need in facing actual life, it also needs as much skill as it can possibly acquire in consciously directed thinking; that is, in appreciating and utilizing clear conceptions; and however much other branches of study may entertain and inform and develop, mathematics is of all studies the best fitted by its nature to train the mind in thinking clearly and straight to the point.


THE ANNUITY PLAN OF BOSTON UNIVERSITY.

Any person desiring to give money, stocks, notes, or other property to Boston University may do so and secure in return an Annuity Bond, legally executed, and yielding an annual payment of the interest to the donor during his or her natural life. The rate of interest paid varies from four to six per cent per annum, according to the age of the donor. At the decease of the donor the principal, which is kept intact and loaned upon adequate security, remains in the treasury of Boston University to be used solely in the interest of higher education.
(1) This annuity plan relieves the donor from all care and anxiety about the money or property given. Money kept on loan by individuals often becomes scattered and the interest remains unpaid. Again, the guarantee of loans may be uncertain through an imperfect title-deed or otherwise, and much unrest be occasioned to the lender. This is especially the case where persons have no opportunity to become acquainted with the credit of the borrower. It requires an expert to loan money judiciously for a term of years. The trustees of the University give an absolute guarantee to the donor of the annual payment of the per cent agreed upon, and there need be no unrest or doubt as to the future outcome of the investment. The sense of security in the investment contributes to a person's contentment and happiness by bringing that freedom from business cares which is so desirable while passing through the declining years of life.

(2) The plan exempts the donor from heavy taxes. The principal is not taxed, for that has been given to the University. Only the claim against the University for an annual income for life is taxable at its cash value according to the expectation of life, and this amount is of course a small matter.

(3) Again, this plan enables the donor to become his own executor. It avoids any possible litigation, as well as the cost of the settlement of the estate by administrators or executors. In accepting the annuity plan, all that is necessary is to pay the money or assign the note or stocks to the trustees of the University, and this transfer, if desired, may be made without publicity.

(4) Another important consideration is that the estate of the donor will not be subject to the inheritance or war revenue taxes, which in some cases have amounted to no less than fifteen per cent of the whole bequest.

(5) The donor retains during his natural life, or that of his dependents, the income arising from the amount given. He certainly could do no better, even if he held the principal in his own name.

(6) This annuity plan insures that every dollar thus given will be prudently invested for a noble Christian cause as long as the world shall stand. The money gathered by years of toil and frugal saving, and given wisely while living, brings abundant satisfaction to the donor.

The benevolent character of the work which Boston University is doing cannot be otherwise than encouraging to the friends of education. Men of means have it in their power to link themselves to the great work and let their lives, as represented in their money, enlighten men and honor Christ through the centuries to come.

If you, or any of your friends, contemplate an offering to Christian education subject to a life annuity we should be glad to receive it. Any further information you may desire will be cheerfully given in response to a line addressed to President Wm. F. Warren, LL.D., 12 Somerset Street, Boston, Mass.
The name of Israel Tisdale Talbot is as enduringly enshrined in the memories of all friends of American homœopathy as in the tablet of imperishable bronze, lately placed, to the perpetuation of that memory, on the walls of Boston University School of Medicine, of which he was for more than a quarter of a century the honored and able Dean.

Dr. Talbot was born, Oct. 29, 1829, in Sharon, Mass. He stood seventh in an honorable line of American patriots and citizens, whose original ancestor, Peter Talbot, came to America under unusual and romantic circumstances,—swimming to its shores from an English man-of-war, to whose service he had been forced by the nefarious press-gang methods then in common use.

Dr. Talbot's remarkable abilities manifested themselves at a very early age. Before his own education was complete, and to amass means to that end, he established a private school, in his fifteenth year, in the city of Baltimore, which enterprise proved successful. He early chose the medical profession as the life-work most to his mind, and pursued his studies for that work at the famous homœopathic college of Philadelphia, where he graduated in 1853; and, later, in the Harvard Medical School,—whose degree he also held,—and in the office of Dr. Samuel Gregg, who is remembered as the first physician in New England to adopt the homœopathic method of practice. It was through Dr. Gregg that Dr. Talbot originally was led to investigate the claims of homœopathy, to which he became such an ardent convert. He extended his educational horizon by European travel and study. Being of a markedly mechanical talent, surgery naturally made strong appeal to him, and it is among the most notable facts of his career that he was the first surgeon in America to have a successful operation in tracheotomy set down to his credit, which operation he performed on June 5, 1855.

Dr. Talbot's services to American homœopathy are household words. He proved that as the "blood of martyrs is the seed of the church," so the persecution of the adherents of any honorable cause may be made the seed of the advancement of that cause. He was active in the establishment of the Homœopathic Dispensary in Boston; in the establishment of the Massachusetts Homœopathic Hospital; of Boston University School of Medicine, of which, as has already been said, he was the first Dean, continuing in that office up to the time of his death. Largely through his foresight, tact, and ability came the establishing of the State Hospital for the Insane, at Westborough, Mass., as a homœopathic institution. He held the office of president of the National Homœopathic Society. With the city and state societies in the immediate field of his labors, he was indefatigably identified. He was an honorary member of the National Homœopathic Societies of Great Britain, France, and Germany.

In 1856 Dr. Talbot was married to Emily Fairbanks, of Winthrop, Me. His widow survives him, as do two sons and two daughters.
EDUCATION AND LIFE.

SUMMARY OF AN ADDRESS DELIVERED BY DEAN HUNTINGTON AT THE COLLEGE OF LIBERAL ARTS.

EDUCATION is for all who can and will avail themselves of its opportunities. To limit education to those whose life-work requires a liberal training is to take a narrow view of education and to draw wrong limitations upon life. Education is the enlargement, enlightenment, and discipline of all the powers of mental and moral life; it is not simply training for a specific range of work, professional or non-professional. The young man who is preparing for the Institute of Technology or the professional school should first secure the wide discipline of a course in the liberal arts. It is not wise in these times for any one to avoid the college course and "climb up some other way" into the schools of theology, law, or medicine. He who does so will be a loser in the twentieth century in the same ratio that he seems to be a gainer in time. Neither poverty nor the haste to mingle in the competitions of life should be allowed to stand in the way of a college education. Poverty is not an easy master, but those who learn its moral lessons have a very wholesome respect for the things it teaches. There are many times more poor men who have struggled and sacrificed their way into learning than there are men who have reached distinction in letters or science from the fat and easy conditions of opulence.

Then that other thing, which I have called impatience with the time it takes to become well educated. Probably for the mass of students the present allotment of four years is not too much time, although there may be those who develop rapidly and to whom the special privilege of finishing the course in a shorter time may be granted. Steadiness and patience in the preparation for life-work are immensely important elements. Education in the higher sense means putting one's self into good company and staying there. The student dwells apart from the confusing crowd for a time; thinks with the best minds of the ages; lives among the elect spirits who have made the world of thought and imagination, philosophy and science, what it is. One must learn to love solitude or he never can enter into the treasures of
his own being, or into the deeper things that are only found apart from the strife of tongues. Again, I wish to put the love of books over against another affection very prevalent in our times — that is the love of money. Education ought not to object to the honorable accumulation of money. But the love of books, the love of that for which books stand, — a mental life that has a range and outlook beyond the ledger and office walls, — is an affection which will help to subdue that awful avarice that is making sad encroachments upon American life and the social conscience.

Learning to think is, after all, the best part of education; and I would put the ability to think clearly and steadily over against the impulsive and childish way of using the mental powers so common among the undisciplined. Even after four years of college discipline most students will confess that they are just beginning to understand the value of this power to think.

Life is the other member of my double theme. Life is that into which education is expected to play, as sap into the whole organism of the tree, or as blood into the arterial system. In the philosophy of materialism, in the doctrine of evolution, and in the interpretation of our Biblical literature the last generation of the nineteenth century has seen a notable clearing-up of thought. The intelligent life of the civilized world has been wonderfully clarified and settled by the friction of opinion and by the sifting of facts and evidence. All the great headlands of thought are in clearer view than they were fifty years ago. There are more certainties in knowledge; there is more assurance of faith; there is a better conception of social relations, social morals, and obligations; there is a richer outlook in every direction for human intelligence. Education ought not to lead to anything like an exclusive or privileged relation among those who are educated. With all its faults, a democratic condition where there is no factitious separation of classes furnishes the best opportunities for education to leaven and enlighten the whole community life. What the world demands of education is living men and women who by their own enlightened minds carry out into the world new vitalizing power wherever they move in the common paths of service. Nor ought education to make visionaries. But there is still room enough for any great dreamer who sees visions that he can read and out of which he draws inspiration for noble living and deeds of power. There is still room for the seer and the poet, though there is no room for the visionary. Education playing into life has, after all, only a simple function to perform; for its business is to fit us to bring something to pass that is worth doing. It is a great art to seize upon the imperishable values.
The recent meeting and action of the judges appointed to determine names which shall find place in the Hall of Fame to be erected, at a cost of $100,000, for New York University by Miss Helen Gould brings that unique idea afresh to every mind. That Miss Gould should have seen fit to bestow so large a sum for this purpose exhibits first of all her desire to provide a means for according due honor to the great men America has already produced; but secondarily, her recognition of the fact that New York University is so well provided for as to be in no need of funds or buildings for the primary purpose of a university, namely, that of educating young men and women for life. There are perhaps a few other universities in the United States which are equally rich, and gifts to which do not so much increase their usefulness as their splendor. But the majority of our institutions of learning, and among them many of the best, are still struggling to make their financial resources meet the demands of the students who fill their lecture-rooms to overflowing. Boston University is included in this class. Its constantly increasing patronage proves its acknowledged usefulness, but at the same time makes the call for generous contributions to its funds all the more imperative. Should not men and women who have wealth at their disposal bestow it upon colleges and universities which need the money for utility rather than for ornament?

College Endowment as an Investment.

Intelligence and morality are the two corner-stones of the temple of liberty. Colleges which educate the head and Christianize the heart of the citizen are patriotic institutions. The Christian college is the mint at which sterling citizenship is coined.

Generally speaking, money spent for charity is wisely spent, and the donor is held in esteem. But every dollar spent for the education and Christianization of men, whereby they may never become objects of charity, is more wisely spent, and the investor should be more highly esteemed. As a general rule, it is better policy to show a man where he can earn a dollar, or to equip him with capacity to earn that dollar, than to give him the dollar outright. Professor Agassiz once said, "Every dollar given for higher education, in whatever department of knowledge, is likely to have a greater influence upon the future character of our nation than even the thousands, hundreds of thousands, and millions which we have spent, or are spending, to raise the many to material ease and comfort."
A man who can preach or teach for forty years may do much good in the world; but the man who can provide money to keep a succession of men teaching or preaching, not for forty years merely, but through all coming time, will do much more good in the world. A shrewd man will invest his money in business, that he may see the income; but a truly wise man invests his money in some Christian college, that he may see the outcome. The first seeks his own profit; the second, the profit of others.

College endowments are continually useful. President Eliot said, "University endowments are the quickest, most hopeful, and most lasting means of doing good, generation after generation, to mankind at large, through the most promising youth which each generation selects to receive the highest training."

A writer in the *Overland Monthly* some years ago states the case thus: "Herein is the wisdom of money spent in education, — that each recipient of influence becomes in his time a centre to transmit the same in every direction, so that it multiplies forever in geometric ratio. This power to mould unborn generations for good, to keep one's hand mightily on human affairs after the flesh has been dust for years, seems not only more than mortal, but more than man. Thus does man become a co-worker with God in the shaping of the world to a good outcome."

President Gilman, of Johns Hopkins University, in his volume on "University Problems," says: "Those who, in the favorable conditions of this fruitful and prosperous land, have acquired large fortunes should be urged by all the considerations of far-sighted philanthropy to make generous contributions for the development of the highest institutions of learning. There is now in the golden book of our Republic a noble list of such benefactors. Experience has shown no safer investments than those which have been given to learning — none which are more permanent, none which yield a better return."

Investments such as these are like the seed sown in good ground, producing a hundred-fold. Given by consecrated men and women, they are intrusted to consecrated men who administer the trust for the benefit of others, preserving the productive principal sum generation after generation. That productive fund is like the Word of God: thousands feed on it as the years go by, and it is not diminished. As one lamp kindles another, nor grows itself less brilliant, so such investments extend the influence of the investor undiminished to the end of time.

It has been said that the most accurate prophecy for the future is the present opinions of the young, who hold the future in their hands. If the future is to be safe, the present opinions of the future rulers are of the utmost consequence. The farmer who wishes a specific kind of crop must sow the seed that will produce the kind of a crop desired. In this land the majority governs, whether
wise or ignorant, whether moral or immoral; and the man who wants to see this country ruled by a race of intelligent and honest men must have a care that those institutions are nourished which will produce intelligent and honest men. He may rest assured that unless the right kind of seed is sown the coveted harvest will not be gathered; for whatsoever a man soweth, that shall he also reap.

The charitable person, whether possessed of a million or the widow's mite, can do nothing more patriotic with his gifts than to invest them where they will be forever effectual in educating and Christianizing, in each generation, the men who are to lead and rule the next. All such gifts at all times are bringing their good influence to bear upon the future leaders of men. Further than that, college students, as a class, are among the very best of their generation. You then have the combination of the best influences working upon the best material; and history justifies the conclusion that such a combination produces the best results.

In their beneficence and constant productiveness such gifts as I have described are not like the sky-rocket, which flashes once into the heavens with a great light and then goes out, never to shine again, but are like the never-failing rays of the sun, which, with undimmed splendor, are perpetually driving the darkness from some part of the globe. To draw your check in support of such an institution is as patriotic as to draw your sword in defence of your country. To pour your gold into the coffers of such an institution is as great a public beneficence as to pour out your blood on the field of battle. The thunder of cannon may not proclaim to the world that the sacrifice is being made, but God sees the sacrifice, and will bless it forever.

If the duty of giving to a Christian college will not appeal to you from a patriotic standpoint, let it appeal to you from a religious standpoint. A college cannot be a church; but a Christian college with a thousand students will annually spread more religious truth and witness more conversions among its members than any church of an equal membership. I look upon my own Alma Mater as the best church I ever attended. No church, even when it is working at its best, will, year after year, add to the ranks of the church milit­tant more young men and women; no church manifests a nobler Christian life in its members; no church sets before its members a higher ideal of personal duty and consistency; and no church is more sure of a genuine revival each year than the Christian college.

Lemuel D. Lilly.
FUNDS WELL INVESTED.

IMMENSE SUM INTRUSTED TO AMERICAN COLLEGES IS GENERALLY ABLY ADMINISTERED.

PRESIDENT Charles F. Thwing, D.D., LL.D., of Western Reserve University, has collected reports from between one hundred and two hundred of the representative colleges of the United States relative to their finances and investments. These reports are said to show that at least four-fifths of all the productive funds of the colleges are invested in bonds and mortgages.

A few of them, notably Columbia and Harvard, have invested largely in real estate.

Harvard's immense property is changed in the forms of its investments more frequently than the property of many colleges, but of its ten or more millions, railroad bonds and real estate represent the larger share, the amount of bonds exceeding the value of real estate.

In the United States are no less than twenty colleges each having an income-producing property of at least $1,000,000. Among these are our two oldest colleges,—Harvard, which has more than $10,000,000, and Yale, which has about $5,000,000.

Among the others which have passed the million mark are Columbia, Cornell, University of Chicago, Johns Hopkins, Northwestern University, University of Pennsylvania, Wesleyan University, Middletown, Conn., Amherst, Boston University, Rochester University, Tulane University of Louisiana, Western Reserve, and Brown University.

Several State universities are possessed of either funds or an income insured by the State representing property of at least $1,000,000. Among the wealthier of these universities are those of California, of Michigan, of Wisconsin, and of Minnesota.

The number of colleges possessed of more than $1,000,000 each is so small it is evident that the vast majority of our colleges are poor. The number of colleges which have each less than $200,000 in interest-bearing funds is considerably larger than the number of those which have more than $200,000. The great sum of $150,000,000 intrusted to the American colleges is invested well — well in point of security; well, also, in point of income. The financial management of the colleges in the United States has, on the whole, been abler than the management of the banks of the United States.

The salary of the most highly paid professors in American colleges considered in the aggregate is about $2,000, and the salary of other professors about $1,500. The average number of members in the faculty of American colleges, taking one hundred and twenty-four colleges as a basis, is sixteen
and one-half persons. Two or three colleges are paying to a few teachers salaries of $7,000, and perhaps ten colleges are paying $4,000 at least. The present tendency is toward an increase of the highest salaries and toward a decrease of the stipend of new instructors.

About one-half of the wealth that is bestowed in beneficence is the result of bequests, and about one-half also is the result of gifts. Massachusetts beneficences of a public nature are more common than in any other State.

BOSTON AND BOSTON UNIVERSITY.

The city of Boston, by reason of its scholarly traditions, is appropriately called "the Athens of America." Prominent among her many great institutions is Boston University, incorporated in 1869, which has become one of the most influential educational forces in the nation. The University embraces the departments of Liberal Arts, Law, Medicine, Theology, and the Graduate School of Arts and Sciences. It has nearly one hundred and fifty instructors and more than fourteen hundred students. Of the latter, two-thirds are young men. The scholastic buildings and varied appliances are among the best. In classical and professional education it has established the highest standards of requirements for degrees, and given unusual encouragement to postgraduate students. It was the first university ever organized with no discrimination on the ground of sex, race, or color. Its growth has been national and international. Twenty-four foreign countries were last year represented; and among the students, there were graduates of one hundred and ten other colleges and universities, American and foreign.

The University is fortunate in its location. No other city in America presents such opportunities for study and scholarly development. The students have access without expense to the treasures of the Boston Public Library, and to other collections, literary, artistic, and scientific,—the priceless accumulations of generations. Here likewise the parks and parkways, on which more than twenty million dollars have recently been expended, are delightful places for recreative exercise. Bunker Hill and Plymouth, Concord and Lexington, Duxbury and Salem, not to speak of the homes and haunts of the great American statesmen, philosophers, and poets, are readily accessible, so that even odd hours and holidays may be made delightfully instructive. It is estimated that there are ten thousand students in Boston and its beautiful suburbs enjoying these privileges. Student life in such a centre cannot fail greatly to augment one's intellectual resources and to enrich the later life.

Within the brief period of its history the University has done a noble
work. It has shared in the education of thousands. It affords in its various departments the equivalent of free instruction to more than three hundred students annually. Its breadth and catholic spirit are illustrated in the fact that among the five hundred and seven students enrolled in the College of Liberal Arts last year there were thirty religious denominations represented.

The University merits the generous gifts of public-spirited and patriotic friends that it may keep pace with its constantly enlarging needs. The assets above liabilities at the close of the last fiscal year were $1,732,893.33. The receipts of the year were $237,991.89. It is evident that if the University is to do its providential work of training earnest and gifted leaders for coming centuries the permanent endowment should be increased by several millions of dollars. Money invested here is effectively invested for the service of humanity. It is an enviable privilege for any one to found a professorship and let the income of the money thus given go on perpetually working to direct the intellectual and spiritual forces of those who will constitute the strongest bulwark of our civilization. The gift will enrich the donor's life and through all future time multiply his power and influence for good by commanding the services of trained scholars who will help to maintain our free institutions and our inherited ethical standards.

The Trustees of Boston University invite you to co-operate with them in the furtherance of the great and worthy aims of the institution. All benefactions will be applied with sacred fidelity, in accordance with the expressed wish of the donor. If desirable the University will give a life-annuity on the amount donated. We feel confident that you will cheerfully respond, according to your ability, to a cause so worthy of our noblest benefactions. Any further information you may desire respecting the institution will be cheerfully given in response to a line addressed to the President, Wm. F. Warren, LL.D., or to the Treasurer, R. W. Husted, 12 Somerset Street, Boston, Mass.

BOSTONIA

Is published by a committee appointed by the trustees of Boston University. It aims to give its readers important information respecting Boston as an educational centre, and also to augment the educational facilities presented in the University.

ITS SUBSCRIPTION PRICE IS FIFTY CENTS A YEAR.

It is, however, the intention to send it gratuitously to all known contributors to the University funds, and at the request of friends it can be so sent to a limited number of other persons. Such requests should be addressed to

"BOSTONIA," 12 Somerset Street, Boston, Mass., U.S.A.

Entered at the Boston Post-office as second-class mail.