THE AMERICAN COLLEGE

A Series of Papers Setting Forth the Program, Achievements, Present Status, and Probable Future of the American College

With Introduction by

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INTRODUCTION

THE chapters included in this volume comprise the papers read at a Conference on the American College held on the occasion of the celebration of the One Hundredth Anniversary of the founding of Allegheny College. They were all specially prepared for this particular event. In fact, the entire programme of the conference was made out before anyone was asked to read a paper. Careful attention was given to selecting for a particular topic the man who could speak with authority on that topic. The book, therefore, is a new book, and presents the freshest and most comprehensive thought on the American college.

In making up the list of subjects not much attention was given to the early history of the American college or to the peculiar conditions which favored its early development. Much attention, however, was given to the programme of the college, its curriculum, its present status in various parts of the country, and its probable future. In short, it was aimed to include in the volume the essential things pertaining to the American college as a present-day institution and as an institution of promise for the future educational development

of America. Before finally deciding upon the topics to be discussed the advice of a goodly number of the foremost educators of the country was carefully sought and freely given. Furthermore, each one of the scholarly men invited to prepare a paper was asked to speak out his mind freely, and assured that what was wanted in the conference was a free, frank, and open expression of the thought of educational leaders touching the college as an institution included in the educational régime of our country.

The conference had been fairly well advertised beforehand in the public press. The unique character of the programme attracted no little attention. It was no surprise, therefore, that nearly one hundred colleges were represented at the opening session, nor was it a surprise that the spacious Ford Memorial Chapel was more than crowded to its capacity at the closing session. Not the audiences only but the interest increased from the beginning to the end. It was a matter of comment at the close of the first session that a conference of an unusually high order was on. The speakers were at their best, and some of them seemed to be better than their best. While there were some striking differences of opinion as to what the college ought to be, there was a fine spirit of toleration throughout and much more substantial agreement as to fundamentals than was antici-

pated. One speaker who made a strong plea for the place of the physical and the natural sciences in the college curriculum showed his catholic spirit in saying: "No education is liberal which does not introduce one to the world's best thought and life. A purely classical education and a purely scientific one are equally illiberal. A liberal education is broad, disciplinary, and useful; it educates head, heart, and hand; it must include literature, science, and the humanities; it must fit for contact with the world along many lines; it must help one to find himself and to choose his work; it must prepare for the largest usefulness and enjoyment." Another speaker whose responsibility was to plead for the humanities said: "The great defect with American college education is that it does not set the mass of students intellectually on fire. Our colleges are only in an imperfect degree intellectual institutions. The real rivalry is not between classics and sociology, between history and chemistry, but a struggle with ignorance, materialism, and superficiality for the development of the intellectual life. . . . Some of us would prefer to see students roused by literature, others by science, others by economics, but the main thing is that they be roused."

The European war was touched upon by several of the speakers. President Rhees referred to the so-called "biological defense" of the war.

"The tragedy of that argument," said he, "is its false analogy, its blindness to what fitness and progress have come to mean in the unfolding of human history." Professor Conklin seized the opportunity to make stronger his case by saying: "One of the slight compensations for the world war which is now raging is that we are likely to hear less in the future of that much abused word 'culture.' For half a century it has been a word to conjure with, especially in academic circles, but it has never had any constant meaning except that of self-conscious and rather intolerant superiority. As a result every cult or social group or institution or nation has defined the word so as to include itself and to exclude the rest of the world." Dean Haskins added to the strength of his plea for the newer humanities by the suggestive statement: "The present European war has shown, by impressive and even tragic examples, that the days of our national isolation are over and that we can no longer refrain from following closely those movements of world politics to which the United States has been so long indifferent."

If there was doubt in the minds of any who attended the conference as to the present status and probable future of the college in the West, the doubt vanished before the striking and almost colossal array of facts presented in the reports from seven typical colleges by President Slocum.

His argument would have been even stronger if the limits of his paper had permitted him to mention a dozen other institutions within the same area, all of which are included in the list of one hundred and eighteen institutions recommended to the *Kultus Ministerium* of Prussia by the Association of American Universities,—such institutions as Ohio Wesleyan, Kenyon, Lawrence, Lake Forest, Wabash, DePauw, Cornell, and Drake.

Perhaps the most striking difference of opinion was shown in the description of the original purpose of the American college. The difference centered about the words "cultural" and "vocational." Even here there seemed to be a disposition to see the other's point of view. A gentleman whose judgment is to be respected described the positions of two of the speakers on this wise: "Dr. A. fears that any man who uses the term 'vocation' has surrendered to utilitarianism, while Dr. B. fears that any man who uses the term 'culture' apart from purpose may be working in a vacuum."

One of the noticeable and significant things about the conference was the strength and virility of the utterances. There was no attempt to cover up. On the contrary there was a straightforward and open facing of the facts, with an appeal almost prophetic for the things which make for life and character. Here is a sample from the paper of President Meiklejohn: "So far as we can bring

it about the young people of our generation shall know themselves, shall know their fellows, shall think their way into the common life of their people, and by their thought shall illumine and direct it. If we are not pledged to that, then we have deserted the old standard; we are apostates from the faith. . . . We pledge ourselves to a study of the universal things in human life, the things that make us men as well as ministers and tradesmen. We pledge ourselves forever to a study of human living in order that living may be better done. We have not yet forgotten that fundamentally the proper study of mankind is Man." A fitting paragraph to put alongside this is from the closing part of President Finley's paper: "If this multiple college is to be merely or chiefly a place of *discipline*, then its tasks might better be given over to the high schools, to the *gymnasia*. If it is to be a place of special preparation for life, then it would better give way to the professional, the technical school, the university. If it is to be a place merely through which to attain, in an agreeable way, social position and conventional culture, to take part in contests of bodily strength and skill, or to enjoy only the companionships and friendships of living (that is, if it is to be a great college, country or city, club), it is perhaps hardly worth preserving as an American institution. But if it is to be *for the many* (what

it has been, thank God, *for the few*), if it is to be *for all the fit*, a place of understanding, of rebirth, of entering the race mind, then is the college which I see in prospect the most precious of all our educational possessions."

The above quotations are included in this introduction with a twofold purpose: First, to indicate the general scope and spirit of the papers presented; and, second, to whet the appetite of the reader for what follows. If the atmosphere which pervaded the conference shall pervade, even in some small measure, the printed page, it is confidently believed that this volume will be regarded as a real and valuable contribution to the literature of the American college.

WILLIAM H. CRAWFORD.

Meadville, Pennsylvania.
August 12, 1915.

THE AMERICAN COLLEGE

THE AIM AND SCOPE OF THE NEW ENGLAND COLLEGE

PRESIDENT WILLIAM H. P. FAUNCE

THE story of the New England college is a story of heroism and loyalty unsurpassed in American life. It has an epic quality which lifts it far above any bare chronicle of events. It sings not of arms and the hero, but of heroes who, unarmed and unsupported, devoted their lives to the good fight for the education of the generation to come. It is part of the story of Plymouth Rock and Bunker Hill. To-day colleges flourish in all our commonwealths, buildings and endowments multiply. But on anniversary occasions it is good for us to remember that we of the present generation are in a land full of wells which we digged not, vineyards and olive trees which we planted not.

The original aim of the New England college is stated in a tablet on the West Gate of Harvard University: "After God had carried us safe to New England and we had builded our houses, provided necessaries for our livelihood, reared convenient places for God's worship, and settled the civil government, one of the next things we longed

for and looked after was to advance learning and perpetuate it to posterity, dreading to leave an illiterate ministry to the churches, when our present ministers shall lie in the dust." In that sentence we have the historic order of the Puritan life: first, the building of houses to shelter the newcomers from the inclement sky; then the procuring of necessary food; then the provision for common worship; then the election of magistrates to execute the laws. Next came education, as a thing not only "longed for," but "looked after" in very practical fashion. And the reason why those men desired learning was not for its consolations and delights, not because of the satisfaction it might bring to intellectual curiosity, but because of its concrete value in equipping the new colony through all the future with competent religious teachers and guides. The college was thus born of the Christian faith, intended to serve for the maintenance of that faith, and its aim was not abstract culture, or scientific research, or the increase of human knowledge, but the equipment of men for their life work.

On the records of the ancient church in Providence, in whose meeting-house Brown University holds its annual commencements, is this suggestive entry of 1774: "Voted, to build a meeting-house for the public worship of Almighty God, and also to hold Commencement in." Again the same pur-

pose appears in the linking of education and religion. The delight in learning for its own sake, which marked the Renaissance in Europe, played small part in our colonial history. The solving of physical or metaphysical problems, which was the goal of the schoolmen, was not the aim of our fathers. To them learning was not, in Bacon's phrase, "a terrace for a wandering and variable mind to walk up and down with a fair prospect"; it was equipment for a religious vocation, it was the development of men fitted for leadership in times of stress and danger. The General Assembly of Connecticut in 1753 declared "that one principal and proposed end in erecting the college was to supply the churches in this country with a learned, pious, and orthodox ministry."

The founding of the University of Pennsylvania, under the influence of Benjamin Franklin, had, of course, a very different motive. The later establishment of the University of Virginia reflected the ideals of Thomas Jefferson, which were hardly those of the founders of the Puritan theocracy. But in New England all the earlier colleges were the offspring of religious faith. The motto of Harvard,—*Christo et ecclesiæ*,—and of Yale,—*Lux ac veritas*,—and of Brown,—*In Deo speramus*,—all affirm the religious motive behind the New England enterprise.

Our oldest colleges were thus both religious in

motive and vocational in aim. But the vocation for which they prepared men was one of the broadest and most fundamental character. The Puritan preacher was conceived to be an authority on the deepest problems of this world and that which is to come. He was the chief expounder of a long sacred history, embodied in a varied literature, and of an elaborate religious philosophy buttressed by that literature. He was also the chief orator on all public occasions, he was social arbiter, political adviser, leader of civic life, and in Massachusetts and Connecticut he was an officer of the state. Such a man must have no mere technical training. He must be made to grapple with philosophical problems, be versed in the languages in which such problems were discussed, and must possess such power of reasoning, of judgment, of expression, as should equip him for his broad and varied task.

Mere "bread-and-butter studies" were no preparation for such a life. Mere technical training, narrow in horizon and illiberal in spirit, was beside the mark. The founders of our early colleges certainly did not conceive of them as "divinity schools," in which men, already educated, might acquire the technique of a profession. Probably seventy-five per cent. of the studies pursued in those colleges had no direct bearing on the clerical calling—just as seventy-five per cent. of the studies pursued at West Point to-day have

no exclusive bearing on the soldier's profession. But the founders of our New England colleges, while broad in their horizon, were definite in their aim. To them a " vocation " was something divine, and to prepare men for the high calling—the highest on earth they conceived it to be—was a noble and heroic enterprise. If the word " vocational " has in our day acquired a narrower meaning, it is time to rescue it from degradation. Vocational training for the broadest and finest of human vocations—such was the ideal of the early New England college.

But such training, it was held from the very beginning, might be useful for many other men whose task was of broad or general character. Thus the charter of Yale speaks of " fitting youth for public employment both in church and civil state." It was early held that what was good for the minister was good also for the prospective lawyer or teacher or even physician. Gradually the constituency of the college widened, and then the curriculum widened necessarily to meet the needs of the new constituency. Gradually there grew up the ideal of general culture, apart from any vocational aim, as the true end and purpose of the college. Latin, no longer essential to success in life, was retained in the nineteenth century on grounds of disciplinary and cultural value. Greek, no longer necessary for professional equipment,

was retained for its linguistic and literary value; while mathematics, almost ignored at first, acquired large place as a training in exactness and in reasoning power, which could not fail to deepen and strengthen the mind. Gradually thus the vocational aim was merged in the disciplinary aim, and that "culture" which to the first founders was only a by-product of comprehensive preparation for life was exalted as the be-all and end-all of the college course. At the same time the theological element in the old curriculum was abbreviated, and more of the humanities,—history and "polite literature,"—was introduced. Thus it came about that for the last hundred years the New England college has been the citadel, not of a definite training, but of a humane culture which has exalted "useless studies" and sought simply to make every student a citizen of the intellectual world. It has sought, in President Stryker's phrase, "not to turn steel into tools, but to turn iron into steel."

Our early founders reproduced the ideal and method of Oxford and Cambridge Universities, which have for centuries aimed to "man the British Empire." They also brought from England the idea of a college as a place of residence, where boys might eat and worship and learn and live together under the strict and constant supervision of their teachers. In sharp distinction from the

medieval universities of the continent, where students migrated from place to place and teacher to teacher, was the common residence required in the New England college, accompanied by long lists of rules, enforced by tutorial vigilance and sometimes by corporal punishment. A common eating-place was deemed essential. Daily chapel, usually held twice a day, brought the entire family together, and offered opportunity for paternal counsel and for the practice of the students in public speech. At night the long corridors of the dormitory were often patrolled by professors, and some New England colleges adopted the rule in force at Princeton, whereby a professor might announce his presence outside a student's door by a peculiar stamp of his foot, which all students were forbidden, under severe penalties, to counterfeit.

Under such a régime the college was strictly *in loco parentis* in an age when parents were seldom accused of laxity in discipline. Hence the inner story of the colleges is one of "autocracy tempered by rebellion." The teachers were not specialists, but men of breadth of view, of demonstrated success in some calling, and of dominant personality. The one great gift of the early colleges was the opportunity for the daily association of callow youth with some of the leading minds of their generation. When Bowdoin College had no laboratories, she had on her teaching

staff Henry W. Longfellow. When Longfellow in his turn was a student at Harvard he wrote in his diary that after dining on boiled rice he "went to walk with Professor Felton." Truly a dinner of herbs was tolerable when followed by such a walk. When Brown University's total funds had reached thirty-one thousand dollars, Francis Wayland was molding her structure, and the real endowment of the university was thirty-one thousand dollars plus Francis Wayland. Mark Hopkins could make the "old log" a real substitute for library, laboratory, and apparatus, and the student whom he touched was awed and thrilled and inspired.

Not only were the teachers of that early day often more dominant personalities than those of our own time, but they had far greater opportunity to enter into the student mind. Under the old uniform curriculum all the students were together in every class, and the professor met them all, and usually every day. Sometimes one professor taught the class in several subjects, and President Hopkins at Williams instructed the senior class in all subjects throughout the year. Under such circumstances there was an intimacy of intellectual acquaintance which has never been equaled elsewhere. The total weight of all a teacher's experience, knowledge, conviction, was brought to bear on the student who, in significant phrase, "sat under him." Never, except possibly in the case of

English headmasters, like Arnold of Rugby, has the world seen greater opportunities for education by sheer contagion than in the early New England college. The enforced intimacy surely had its defects. The foibles of the teacher were obvious to all. The natural impulse of youth to rebel was encouraged by artificial and elaborate rules, with fines and penalties attached. But education by contagion, by persistent association of persons, has seldom had so fine a chance as it had among the New England hills.

If architecture is, as it has been called, "frozen music," certainly college architecture may be called congealed philosophy of life. The beautiful quadrangles of Oxford, surrounded by closely articulated buildings of the Gothic order, speak clearly of the compactness and unity of a life in which state and church are indissolubly bound together and both are exponents of order and beauty. No such quadrangles were built in New England. The only one ever projected was never completed. In the Puritan college each building, independent, isolated, seems to recognize no other structure on the horizon. Each one delights to express the independent action of some donor, the independent taste of some period, or the autocratic choice of some administrator. The "muses' factories," as Lowell called the old-time dormitories, were not the abodes of art or music or æsthetic taste. They

sometimes became mere barracks, with no refining or softening influence on their inmates. In 1878 I lived in such barracks, bringing all water from the college pump up three flights of stairs to my room, and each morning depositing hot coals and ashes from my little stove upon the wooden floor in a corner of the hallway outside my door. Life was bare and chill and unadorned amid such surroundings, but it furnished daily opportunity for the constant impact of strong, mature personalities on the unformed lives around them. Over each New England college might have been written the ancient sentence: "Let us make man." The aim was not to push out the bounds of knowledge in any line, but so to associate the strong with the weak that the strength might be infused and imparted.

What now shall we say of the more recent development of the New England college? How far is it true to its primal impulse, and how far is it being modified by the new occasions which teach new duties?

The relation of the college to the Christian faith is still vital, but is expressed in entirely new ways. Most of our colleges are now free from denominational control, and the relations of church and college are simply those of vital sympathy and co-operation. There is nothing in the charters of Yale, Amherst, Williams, Bowdoin, or Dartmouth to anchor those institutions to the Congregationalist

churches that gave them birth. If those churches should lose their interest in education or should become numerically feeble, undoubtedly those colleges would drift into vital relations with other denominations. They exist not for the aggrandizement of the Congregationalist churches, not for propagating a doctrinal viewpoint, but as the free-will offering of the churches to the cause of Christian education. The old days when every teacher at Yale must sign the Westminster Confession and look carefully after the orthodoxy of the students have gone forever. But has Christianity lessened its hold in consequence? On the contrary, those days of creed subscription on the part of every teacher were the days when French infidelity was rampant in American colleges and students called one another by the names of Voltaire and Paine and Bolingbroke. At the beginning of the nineteenth century only two students could be found in one New England college who could call themselves Christians. The orthodoxy enforced from above had produced by natural reaction complete skepticism below.

To-day at Wesleyan, Colby, and Brown there are still some denominational restrictions that survive, but they grow more attenuated year by year and by natural evolution will disappear. Yet the Christian forces in these institutions are not lessened but rather are growing. Skepticism is no

longer the badge of culture among undergraduates. In almost all our colleges the majority of the students are church members and are not ashamed of their faith. The foremost preachers of the country visit these colleges for a single service or for a residence of from one to three weeks. Christian associations, supported by alumni contributions, exist in all of them, and the secretaries are often able leaders of student opinion. The students are organized into committees for philanthropic, educational, and religious work in the communities around them. If the devotional meetings have dwindled within the college, as they have without, the expression of Christian faith in practical human helpfulness has grown more pronounced.

At several New England colleges this last winter a series of special meetings has been held, intended to move the students to personal decision, and has been attended by unusually large result. All pressure on the part of the Faculty has ceased. Required church attendance has vanished from most of our colleges. Creed subscription by members of the teaching staff is not thought of. Religion is no longer official, imposed from above; it is the natural expression of the aspiration of students and alumni. And this unofficial relation of church and college is proving vastly more fruitful in the maintenance of a Christian atmosphere

than all the old charter provisions for ecclesiastical control. The experience of the New England colleges is that the oversight and ownership of a college by a denomination is often wise and absolutely necessary in the earlier years of college history. But as the college approximates to the university, if not in name, at least in standards and ideals, the control of the church becomes less helpful. Denominational control of a medical school or a law school is an advantage to neither school nor church.

In America the function of the church has been to initiate, to start things. Its spiritual energy has impelled the church to establish charities which are later handed over to the state; to preach the duty of caring for the sick, and then to hand over that duty to the public hospital; to lay educational foundations and without complaint see that another buildeth thereupon. The voluntary principle, in education as in worship, has in New England been found to vindicate itself in the course of the years. If the churches weaken in numbers or influence, then their influence in the colleges will decay. But if they increase their powers in the community, if they send their ministers into college pulpits, and their laymen into the ranks of college officers and helpers, the non-official relation of church and college may prove to be more helpful to both than any official control could be.

Whatever may be true of new sections of our country, this is the lesson to be drawn from the educational experience of New England. Indeed, each denomination should allow those ministers who speak in the college vocabulary to spend a considerable portion of their time in addressing college assemblies. Their message is effective precisely because it is non-official. They have access to the student mind just because they are not examiners but inspirers. Such preachers find in the American college an audience more responsive than that which assembles in any church, and a task worthy of the highest human powers. In the words of President Fitch of Andover Theological Seminary: "One of the significant happenings of our day is the passing of the spiritual and ethical control of the educated youth of America out of the hands of the churches, and its centering in the schools and colleges. It is largely true that the surest and most effective method of reaching the noblest instincts of the choicest men of the coming generation is through college rather than parochial preaching." *

As regards the vocational element in education our colleges are now returning to their fundamental principle. They are perceiving that while they can never become professional schools, much less trade schools, they cannot permanently separate

* *Harvard Graduate Magazine*, December, 1914.

culture from purpose. A purely abstract culture having no goal in real life, unrelated to the life that throbs and surges outside the college fence, is really an *ignis fatuus*, and, if attained, a positive disqualification for public service. Scholasticism in college has hindered thousands of young men from real achievement, and left them critical, introspective, hesitant, incapable of swift decision and whole-hearted action. The problem before our colleges is to return to the original idea of education as fundamental equipment for vocation, but so to interpret vocation as to preserve for the college broad horizons, generous sympathies, insight into the best that the world has said or done, and profound religious faith.

No longer do we prepare men for the learned professions only, but it is our task to give the broadest training for highly specialized tasks. We must equip men not only for pulpit and bar, but for mill and store and farm; men who can earn their living without losing their life. Our colleges must see to it that the mechanician is trained in exact science, and that the man who plants corn shall understand the laws of heredity. We want the architect to be familiar with the bequest of Greece and Rome, the engineer to construct highways for human progress, the mill-owner to care not only for his products but for the producers. We want the storekeeper to know something of the great

trade routes of civilization, and the selectman of the village to understand his relation to Magna Charta and the compact signed by the Pilgrims on the *Mayflower*. We want all modern men to see their daily toil as a part of the task of rebuilding the world. We want the stone-cutter to understand his relation to Praxiteles and Michael Angelo, the farmer to know something of Virgil's Georgics and the songs of Theocritus, and the school-teacher to be a student of Plato's Republic and More's Utopia. Our high vocation is to receive the torch of enlightenment from past generations and hand it to the generations that follow. A man's vocation is to be a good citizen, a faithful husband, a pure-blooded father, a helpful neighbor, a dynamic in his community.

One of Goethe's more far-reaching sentences is this: "We exist for the sake of what can be accomplished in us, not that which can be done through us." There we have the eternal antithesis which haunts all educational enterprise. Are we then divided into two hostile camps? Shall one-half the world emphasize the things done through us, while the other half emphasizes achievement within, exalting culture? The New England college affords some reconciliation of these opposing viewpoints. It declines to become a group of professional schools. It declines to interpret a man's vocation as the earning of his livelihood. It

will never confine itself to the technique of a single profession. But it is equally averse to a vague self-culture divorced from purpose. It affirms that something must be done within the student in order that something may be done through him. It considers the self-realization of the student only a step in the realization of the entire social order. The opening of the eyes of the soul, the intellectual and spiritual rebirth, is the essential thing in the educational process. But this, as our fathers clearly saw, is never to be attained apart from the ethical purpose which makes the culture of the individual an equipment for the service of the state. The college still aims to equip human beings not to be ministered unto, but to minister.

THE PLACE OF THE LANGUAGES AND LITERATURES IN THE COLLEGE CURRICULUM

PROFESSOR PAUL SHOREY

THE chief lesson that I took away from my old Harvard course in theme-writing was the admonition, "Always write about a proposition, never about a word." It is a sound principle, though systematically ignored by the most successful of American writers, Emerson, and in what threatens to be the most prolific branch of American literature, the literature of education. The blessed word education is the sole theme of most educational discourses. The speaker defines or symbolizes in that Mesopotamia his social ideal, indignantly rebukes our present defection from it, and apocalyptically prophesies its speedy realization by the short cut of a newly revealed method or a reformed curriculum. Ignoring what old logicians called the circumstance—the who, which, what, when, and whereby, for whom, we define education in the abstract as preparation for life or it may be as "a totality of co-ordinate and reasoned suggestions," and then endeavor to esti-

mate the values of particular methods and studies by more or less plausible deductions from this indeterminate ideal. But obviously there is not one education, there are many kinds and grades. And the value and significance of any study relates itself not to education in general, but to some specific type.

Nothing is easier than to praise any study to its lovers and adepts, unless it be to demonstrate the uselessness of any study to those who are totally ignorant of it. All men naturally love knowledge, and most men, like Plato's philosophic dog, express their detestation of ignorance by barking at what they don't know. *Artem non odit nisi ignarus* is the apt inscription on the Kaiser Friedrich Museum in Berlin. "We all," says Mr. Chesterton, "have a dark feeling of resistance towards people we have never met, and a profound and manly dislike of authors we have never read."

To escape from these unprofitable generalities of educational debate, we must narrow the vague suggestions of a word to the definite implications of a proposition or a concatenation of propositions. This task is, in part, accomplished for us in the assignment of our topics to-day. For a topic is something midway between a word and a proposition. The phrasing of my topic relieves me from the tiresome necessity of reminding you that I am not proposing to force Greek particles or old

French epics upon the negroes of Mr. Booker Washington's industrial school, or to substitute Latin for vocational training in the preparation for life of the seventy-five thousand boys between the ages of fourteen and sixteen, whom the gap between required school and permitted employment turns loose upon the streets of our metropolis. I don't have to explain the value of literary and linguistic studies either to a Montessori mother or to a Professor of Plumbing in a continuation school. The American college exists, and we are not to-day discussing either its abolition or the possibility of making a million if you leave school at the age of fourteen.

To go to college at all is to decide that you can spare three or four years for studies that are something more than the irreducible minimum of equipment for citizenship, and something other than the vocational or professional mastery of the breadwinning specialty. Our theme is the contribution of literary and linguistic studies to that type of education.

Here another quicksand of futile logomachy threatens to engulf us, the obsolete and now meaningless controversy between science and classics. Science has definitively won. I may deprecate the extravagance of a biological colleague who tells a Phi Beta Kappa audience that the whole of modern civilization is the expression of a single idea, the

looking into nature by experiments. But even this challenge cannot provoke the humanist to extenuate the educational value of science, or deny its indisputable leadership in modern life. If these considerations move any undergraduate to specialize exclusively in the physical sciences, if he is quite certain that for him as for Darwin science and the domestic affections will meet all requirements of mind and heart and soul, there is for him nothing more to be said. But experience and the statistics of registration show that for the majority of students physical science alone does not suffice. They wish to study man, society, humanity, and humanity's ideals of beauty, truth, and goodness. And this fact at once converts the obsolete and fallacious alternative classics or science into the larger question of the significance of linguistic and literary studies, both as a preparation for and an integral part of the study of man.

The study of language and of literature are united in my topic, and are in fact interrelated and interdependent. They are not, however, identical. On the contrary, in the rivalries of actual educational practice they unfortunately may become adversaries. It may appear poor strategy to dwell upon this dissidence while pleading the common cause. But the very existence of serious literary study depends upon the maintenance of

the distinction. This statement tells you that if compelled to wear a label or fly a flag, I should be found in the camp of literature. But though I shall abbreviate the plea, I do not intend to betray the cause of the half of my subject which appeals to me personally the least.

The place that the study of language holds in a rationally ordered college curriculum is secured by at least four considerations: 1) French and German are indispensable tools, in every domain of knowledge, as Latin is for all historical and literary scholarship. 2) The technical study of linguistics has the same claim to a place as an option in the curriculum as any other technical specialty. 3) Language is so inextricably bound up with the higher intellectual functions of man that some systematic and analytic study of its structure and logic is for the normal student a condition of the full development of his powers both of thought and expression. This discipline may be imparted by analytic and critical study of the vernacular. But an immense experience proves that some foreign language, and preferably a synthetic, classical language, is the best educational instrument for this purpose. The pure bluff of the assertion that such generalized intellectual discipline is a superstition of the apologist for classics exploded by modern science will merely damage the reputation of every psychol-

ogist who endeavors to impose it upon the public. Diatribes denying all disciplinary and general intellectual values to the study of language may be found in the literature of controversy. But the psychologist who seriously maintains this thesis only writes himself down as incompetent in his own specialty. The absolute affirmation that conceptual thought cannot exist without language requires qualification and admits of debate. But in practice the two are so indissolubly associated that it is almost impossible to develop and impracticable to study the one apart from the other. And experimental psychology, as soon as it approaches this higher aspect of mind, is compelled to undertake in the laboratory with falsifying and artificial simplifications and grotesquely undiscriminating acquaintance with the material in which it works experiments which observant teachers and students of language are conducting with greater precision and subtlety every day of their lives.

Lastly, language is the indispensable key to literature. I intend no illiberal disdain for translations, popular lectures, and other substitutes for the best. But it cannot be the chief office of the college to obliterate distinctions and solicit the customer to content himself with something "equally as good." Phonographs and chromos have their uses. But the hearth of scholarship and

culture is not the place for the gas log. Only the original text can communicate the finer shades of thought, the harmonies of sound, the soul of poetry and eloquence. A truly intelligent reading of our own older literature, of Tennyson, Pope, and Milton even, demands of the speakers of the present-day American vernacular a linguistic study differing only in degree from that which Latin provides in a simpler and more effective form. The heresy that a translation will serve as well as the original, and the fallacy that nothing short of complete mastery of a language can profit by the original, have been too often exposed to merit further respectful consideration. The student of the original not only may also use translations, but he is the only one who can use them intelligently. And even a little knowledge of the original language doubles their value for him.

The place of linguistic study, then, is secure. For the specialist it is an end in itself. For the majority it is an instrument and a key, an instrument of intellectual discipline and a key to the study of literature and the history of ideas. Our colleagues in linguistics will view this distinction with suspicion, and our colleagues in general literature will be impatient of it. Nevertheless it is vital. Culture and liberal education must steer a safe middle course between the rocks of

technical linguistics and the frothy whirlpools of dilettanteism. This topic would demand a volume for itself, a volume which in some sort already exists in Professor Babbitt's vigorous but partisan book on literature and the American college. Here I can only indicate in passing what seems to me the formula of judicious compromise. The dominant aim of collegiate linguistics should be the interpretation, the full appreciation, of the meaning of great literary texts. Limitation to this aim will yield if not all yet enough of the peculiar disciplinary values of linguistic study. More than this is specialization in the science of language, and from the point of view of the student of literature and the history of ideas, pedantry. Less than this is laxity and dilettanteism.

The application of this general principle to the specific tasks of a language classroom demands some discrimination and some self-restraint on the part of the instructor. But it is entirely feasible. The teacher who really knows the language he professes to teach knows or can ascertain with approximate and practically sufficient certainty whether a given item of syntax, accidence, etymology, or lexicography is really needed for the intelligent appreciation of the authors, or whether it merely belongs to the order of facts which help him to settle *hoti's* business, properly base *oun*, and perfect his own private theory of the irregular

verbs. No one, of course, expects a meticulous, pettifogging consistency in such discriminations. But the broad general principle is valid, and should hold for all collegiate teaching of language, except, of course, that which is avowedly practical and colloquial at one extreme, or admittedly specialized for future students of linguistics at the other.

In all this we have taken for granted that the study of literature takes precedence of the mere study of language, and is indeed one of the chief constituents and supreme ends of a truly liberal education. What else could we do? To a lifelong student of literature, to one who has the reading habit, the request for an apology for the study of literature is like a demand for proof of the utility of the air he breathes or the water he drinks. Life without letters is a living death, he murmurs. "You don't play whist, young man. What a sad old age you are preparing for yourself," is infinitely truer in the application, "you are not forming the taste for good and varied reading, young man." It is impossible in twenty minutes to justify an ideal and a philosophy of life. The apologist for literary study in the college can at the most remove a few misconceptions and repeat a few commonplaces. I need hardly repeat the well-worn topics of the consolations of literature and the praise of books from

Cicero to Richard of Bury, from Petrarch to Ruskin and Frederic Harrison. Truisms may be staled by repetition. They are not, as some epigrammatic prophets of the up-to-date fancy, thereby converted into falsities. Quotations from the eloquent literature in commendation of books and reading would merely illustrate and adorn our thesis. They would not prove it. An equal array of authorities could be mustered against self-stultification and the suppression of originality through the abandonment of the mind to other men's ideas. Scientific men repeat the epigram of a great philosopher and man of science, that if he had read as much as other men, he would be as ignorant as they. And Hazlitt, Emerson, Lowell, and a long succession of modern essayists have rewritten Montaigne's essay on the ignorance of the learned and the futility of mere bookishness. But it may be observed that they do not practice what they preach. And Shakespeare's "How well he's read to reason against reading" hoists them all with their own petard. Lowell, who elsewhere boasts himself to be the last of the great readers, was reading ten hours a day, pen in hand, when he praised the "gamey flavor of the bookless man," and proclaimed that "one drop of ruddy human blood is worth more than all the distillation of the library."

But why make a study and task work of what

should be a delight? Why force our tastes and strain our apprehensions in conformity to outworn traditions and dogmatic conventions? An entertaining essay of the witty novelist James Payn gives trenchant expression to the feeling that we cannot always live on the heights, but must occasionally let ourselves down to a scrofulous French novel and a hammock. The ingenious Mr. Balfour has made an acute and plausible plea for the second-rate book as nearer to us, and therefore often more practically helpful and instructive, than the masterpiece. And the small fry of contemporary story-tellers, journalists, and minor critics incessantly denounce the tyranny of the books that no gentleman's library should be without, insist that modern man must find his chief solace and entertainment in the literature that portrays the passing panorama of the life that now is, and affirm that we shall best realize both the pleasures and the profits of reading by yielding ourselves uncritically to the spontaneous appeal of what most easily interests and attracts our relaxed moods and our natural taste for bathos. They might as well say that a perpetual surfeit of chocolate sundae and cream cakes will meet all the ends of alimentation as well as a varied and substantial diet of wholesome food. It is only the accumulated and compounded interest on the acquisitions of a studious youth that will make reading a lifelong and

dependable joy which no vicissitudes of fortune can take away.

If this pleasure were purchased at some price of disciplinary pain in youth, it would only follow the general law of life and education. But the popular notion of the special distastefulness and futility of the schoolroom inculcation of literature belongs to the type of commonplaces that owe their vogue not to their truth but to their flattering of ordinary human nature and their convenience as texts for the ready writer. "If ten gentlemen," says old Ascham, "be asked why they forget so soon in court what they were so long learning in school, eight of them, or let me be blamed, will lay the fault on their ill handling by their schoolmasters." Except in the schools of Utopia, all subjects are liable to be badly taught. But we specially resent mediocre teaching of literature because of the more poignant contrast there between the actuality and that which might, or we fancy might, have been. "Farewell, Horace, whom I hated so," cries Byron. But in fact Byron did not hate Horace in the least. And feeble as the teaching of language and literature at Harrow school may then have been, it was that and that only which made possible the wider reading in the Latinized literature of the seventeenth and eighteenth centuries that formed Byron's mind and informed his writing.

"Nothing that my tyrants knew or taught I cared to learn," boasts the rebellious Shelley in the Revolt of Islam. Yet where, save under the tyranny of an English classical schoolroom, did he learn to construe the ode of Pindar from which the poem takes its motto, the Lucretius from which he drew the philosophy of Queen Mab, the Æschylus that inspired Hellas and Prometheus Unbound, the dirges of Bion and Moschus on which he patterned Adonais, the Virgil which reread in his summer walks amid the Italian hills he transmuted into the Witch of Atlas, the Plato that was the chief inspiration of his maturer life and poetry, the Sophocles clasped to his bosom in death beneath the Tyrrhene wave? And Shelley here is but the type of the ungrateful graduates who denounce the salutary restrictions of the schoolroom because they were sometimes irksome to the spirit of youth or have been outgrown in maturity. Of course the forbidden books seem more attractive than the prescribed task work. And of course the ripened mind discovers meanings in the old school texts which the schoolmaster did not perceive or despaired of imparting. But these peevish contrasts afford no just measure of the value of the collegiate study of literature. To judge of that, we must compare the graduate who has received this imperfect initiation with the utter helplessness and bafflement in the presence of a great

library of the man who is launched on the infinite sea of literature without compass or guide, who has no chart in his memory of the main routes and currents, who has no conception of the humanistic traditions and accepted values, no standards of reference for agreement or dissent; the man who has never learned through the critical reading under guidance of a few good books something of the principles of interpretation that are essential to the right understanding of any book. Col. Higginson once wrote a paper entitled, " Ought women to learn the alphabet? " The question assigned me to-day is, Ought college students to learn to read? The mere " literacy " of the statistician, the ability to spell out words and catch impressions or prejudices from the yellow headlines, is not reading. A large part even of non-literary education consists mainly in teaching those who think that they can read that they cannot. The study of the law, for example, is largely the learning to read with nice appreciation of the force and bearing of every word and qualification on the definition and determination of human relations and rights. And one-half of the mastery of every science is the substitution in a limited field of the exact and discriminating reading of the expert for the slovenly, confused, and equivocal reading of the layman. Now the collegiate study of literature, the slow critical reading of a few of the

world's masterpieces under competent guidance, is just learning how to read the book of human experience outside of the specialized sciences real or imaginary.

The sciences emerged and were differentiated from the less determined thinking of Greek philosophy, and now that our faith in absolute metaphysics is gone, the sciences merge and find their limit in the vast ocean of common sense and humanistic tradition of which the world's best literature is the expression. Literature is, so to speak, the residuary legatee of all the stores of experience, the discriminations of thought, the æsthetic sensibilities that science has not yet been able to catalogue, subdue, systematize, administer, and annex. The serious and sincere study of great literature not only serves to develop and refine sensibilities which exclusive devotion to the discipline of physical science may leave to atrophy, but it is the best, the only sure corrective to the chief source of modern fallacy, the preposterous and premature claims of the inchoate and as yet pseudo-sciences. We all acknowledge, even when we do not greatly esteem, the first service. Everybody recognizes that four years in a chemical laboratory may not, in Matthew Arnold's classical example, teach a boy that "Can you not wait upon the lunatic" is not a felicitous equivalent of "Canst thou not minister to a mind diseased."

Or to adopt and adapt from Mr. Bailey's recent book on Milton a less obvious illustration, a man may be able, as Renan complimented Pasteur on doing, to distinguish unfailingly the right hand acid from the left hand acid and yet fail to appreciate the difference between Wordsworth's

"Negro ladies in white muslin gowns"

and Milton's

"Dusk faces in white silken turbans wreathed."

The æsthetic value, then, of literary study is condescendingly admitted. Its intellectual service, both to the enlargement and the clarifying of our thought, is overlooked. Matthew Arnold's phrase about the best that has been thought and said is almost too hackneyed even for allusion. But as Socrates once observed, so long as fallacies are repeated, we must meet them with truisms. Goethe, De Quincey, Ruskin, Emerson, Arnold, and Morley in their attempts to define literature all say essentially the same thing. "Society," says Emerson, "has at all times the same want, the need of one sane man with adequate powers of expression, to hold up each object of monomania in its right relation." Emerson, the hero worshipper, personifies this function in one representative man. Arnold generalizes it as culture. "Culture," he says,

"is always assigning to system makers and systems a smaller share in the bent of human destiny than their friends like."

Here you have the real ground of the hostility to serious literary study as a part of the college curriculum sometimes manifested by the system mongers, the prophets of pseudo-science, the pedagogical psychologists, the men of one trade-mark idea who are seeking to dominate the education and the intellectual life of our time. Literary culture resembles travel and the frequentation of good society in that it acquaints us with many ideas and harmonizes them not by the goose-step of a system, but through the give and take of civilized intercourse and the adjustments of common sense and right feeling. It is not good for an idea to live alone and get accustomed to having its own way always. A small quantity of gas, physicists tell us, would expand to infinity in a vacuum. And something like this happens to any lonely little idea that finds lodgment in a vacuous and system-building brain. And the harm extends not merely to the intelligence but to the feelings. For just as water boils too easily in a thin and rarefied atmosphere, even so does the little pot soon hot of the sentimentalist who is the predestined prey of the system monger boil and slop over at temperatures which only diffuse a genial warmth through a mind restrained by the circumambient at-

mospheric pressure of the world's best traditional thought. I should violate my own principles if I treated metaphors and similes as arguments. In the brief space assigned me, I could not even glance at many of the topics pertinent to my theme. Still less could I prove anything. I can at the most suggest some of the ways in which precision and breadth of literary culture in youth may serve to counteract the chief intellectual disease of our time. When four of Benedick's five wits go halting off from the encounter with Beatrice, we attribute his discomfiture to the intuitive quickness of Beatrice's woman's wit. But it is not solely Miss Agnes Repplier's native cleverness that has enabled her to overthrow in controversy some of the world's most pompous authorities in social science, history, and diplomacy, and make their arguments look sick and silly in what Lord Morley calls " the double light of the imaginative and practical reason." It is largely because year after year she has been steeping her mind in the common sense of the world's best books, while they have been reading only dissertations, documents, protocols, and the erudite treatises of their colleagues. And to-day the adequacy of our President for his heavy burden, our restful and grateful confidence that he will never fail to speak the sane, considerate, and nobly representative word for America, is mainly due to the fact that though a pro-

fessor, he is not a professor of a pseudo-science, nor even a narrowly exclusive expert in his own special field of so-called political science. It is due mainly to his lifelong devotion to the study of "mere literature."

THE PLACE OF THE NEWER HUMANITIES IN THE COLLEGE CURRICULUM

DEAN CHARLES H. HASKINS

THE group of studies which I have been asked to represent in this conference, the so-called newer humanities, comprehends, as I understand it, history and the various social sciences of economics, political science, and sociology. These differ from the natural sciences in that their subject-matter is man and human society; they differ from the humanities in the older sense of the word not only in their newness, but also in their immediate relation to the social and political life of the present-day world. It is, indeed, possible to deny them the name of humanities altogether, if we limit ourselves to the narrower and merely æsthetic connotation of the term as concerned only with literature as an art of beautiful expression. If, however, we take humanity in its historic contrast with divinity as the study of human affairs and interests in contradistinction to theology, or if we take it in its Latin sense of humane and liberal culture (*humanitas*), we shall find good

warrant for its extension to these more modern constituents of a liberal education.

That these studies are a comparatively recent element in the American college is a fairly obvious fact. The oldest of them, history, was kept subordinate to philology and theology until well into the nineteenth century and did not win an independent place in our colleges, with a few notable exceptions, until well after the Civil War. Economics secured a foothold somewhat later, political science later still. Thirty years ago a term in Guizot's *History of Civilization* or Freeman's *General Sketch*, a term in some brief economic text, and a term on the Constitution of the United States constituted the sum and substance of the instruction in this group of subjects in a fair average of American colleges, where classics and mathematics were still required and the natural sciences already well established. These brief courses were given by the president, by the professor of philosophy, or by anyone else who had a vacant period or a broad back for college burdens, very rarely by one who had any special training whatever. The " fourteen-weeks " epoch in American education lay heavily upon all new subjects and most heavily upon the newest.

How all this has changed within a generation is a matter of common knowledge. New chairs have been established, special professors appointed, and

courses developed with some freedom and generally with wisdom. The process has gone on most rapidly in the universities, both state and private, often more slowly in the independent colleges, where the tradition of the older subjects is stronger and the need of response to popular demands less immediate, so that any generalization must take account of the unequal development of such instruction in different institutions. Nevertheless, if these subjects have not fully come to their own in all colleges, the time has arrived when we can take account of stock and ask ourselves what are their real claims upon college authorities, what is their place in college education. Indeed, these questions have been asked many times already, and one cannot even now hope to give them a new or a final answer.

We must first of all disclaim any necessary antagonism between the newer humanities and the older, or between the humanities in general and science. No single group of studies is sufficient to occupy the whole field of education for any individual, and each group shades into the other. History has intimate relations to language, literature, and the fine arts; economics has its mathematical and its psychological aspects; while the methods and the results of modern science are of ever increasing importance in the study of all questions which concern the state and society.

Much of the progress of knowledge in our generation has been achieved in those borderlands where two or more subjects of inquiry meet, and the future scholar, as well as the general student, needs none of those water-tight bulkheads between different disciplines which the academic world has sometimes considered necessary for its safety. Least of all is the college a place for that intellectual arrogance and self-sufficiency which would limit the really significant in education to Greek or chemistry or economics or any other subject. All subjects are not of equal value, but no subject is of supreme or exclusive value, and none can be wisely studied in college or elsewhere apart from its relation to others.

Among the various studies which contend in healthy rivalry for recognition at the hands of students and of college authorities, the newer humanities occupy a central position, intermediate between the older humanities on the one hand and the natural sciences on the other. Their subject-matter is human, their method scientific. Taken broadly, they comprehend the whole range of organized human interests in the past and in the present, and subject them to critical analysis in the search for truth. They cannot experiment, only in part can they observe; dependent upon indirect methods for their knowledge of the past,

whether recent or remote, they must employ the most penetrating criticism and laborious and impartial sifting of evidence. Applying the critical and exact methods of science to the rich and varied material of human life, they appeal to imagination and sympathy at the same time that they train the judgment and enrich the understanding. If our curriculum is to have a center or core, it may well be sought in this great connecting group of subjects, which, by joining the study of literature to the present and bringing the student of nature into touch with the world of man, furnish a natural corrective to the one-sidedness of a training which is purely literary or purely scientific.

Central with respect to the other subjects of the curriculum, the newer humanities are unique in their relation to social action. It is their distinguishing characteristic that they deal with organized society and especially with the state, and thus constitute the necessary preparation for intelligent participation in social and civic activity. They give a body of knowledge acquired nowhere else, and they are unique in training the judgment upon political and social facts. They are thus practical, not in the narrower sense as leading to a livelihood, but in the larger sense of preparing for life. This preoccupation with practical matters is sometimes made the occasion for reproach,

but it is a reproach which, if properly understood, the social sciences are quite willing to bear. "In whatever it is our duty to act, those matters also it is our duty to study," said Thomas Arnold, and he cannot be accused of being an educational Philistine.

If all this seem somewhat abstract, there is another set of reasons why the newer humanities should have a large place in the curriculum, namely, that students are interested in them. We may believe with *Mr. Dooley* that undergraduates should study only what is "onpleasant"; the effect of this has too often been that the undergraduate refuses really to study at all. Whatever his concern with more remote or abstruse themes—and I do not mean in the least to disparage their importance—he is likely, if he is normal and healthy, to read the newspapers and to take an interest in what is going on about him. He hears of wars and rumors of wars, of social questions and political problems, and he realizes, or ought to realize, that these are questions which concern him and will depend in some measure upon him for their solution. In a democratic society with active public discussion, healthy young men cannot fail to want to know about the life of the world in which they live and their relations to it. Given the students' interest, it is the function of the college to guide and broaden and develop that interest un-

til it eventuates in intelligent citizenship and intelligent leadership.

This is a well-worn theme which ought now to require no elaboration, but I may be permitted to illustrate it in one of its aspects. The present European war has shown, by impressive and even tragic examples, that the days of our national isolation are over and that we can no longer refrain from following closely those movements of world politics to which the United States has so long been indifferent. Whether we like it or not, we must prepare to make decisions on matters of grave international import which will compel us to reconsider traditional policies, to develop new ones, and to examine questions of war and peace in the light of actual fact and not of sudden impulse or abstract theory. Such a crisis finds us as a people extraordinarily ignorant of history, of international law, and of those economic conditions which shape international policies; and it finds us even more deficient in an international habit of thought and in the sense for foreign affairs. In the formation of an enlightened, just, and far-sighted public opinion in international matters the colleges must take the lead. The response during the present year to courses and special lectures bearing upon these subjects shows that our students are ready to do their part, but much remains to be done from the side of college authorities to guide

and deepen this interest in the direction of a sane and intelligent international-mindedness. It is particularly upon the departments of history, government, and economics that this new obligation falls, and it is a national duty to give them adequate opportunities.

I am well aware that there is an obvious danger in the over-emphasis of the immediate and the actual, and that we are already beginning to see a certain thinness and lack of depth in some of our instruction, particularly on the side of applied economics, sociology, and descriptive political science. Some college instructors in these fields lack perspective and breadth and thoroughness of training, and it is not surprising that their defects are magnified in their students to the point of contempt for the past and its contributions to culture, and of a blind faith in the saving virtue of mere information in political and social matters. The narrowness of the supposedly practical is in the long run more dangerous than the narrowness of the idealist, since this can always be in some measure corrected by contact with the everyday world of later life, while the outlook and vision which one misses in college days are generally lost for good. "Why," it may be asked, "spend the precious time of the college upon the contents of the newspapers and magazines? If our students study the same problems as the man in the street,

what doth it profit them to go to college? Let us subscribe for more periodicals and put the boy to work!" The answer to this lies not in a different subject-matter but in a different treatment. The social sciences must be approached, not as material for a momentary sensation or occasional debate, but as requiring thorough study and hard thinking and as needing to be seen in their larger relations to human experience. Against the treatment which is merely informational and descriptive must be set the careful analysis of scientific economics and the science of government; undue absorption in the ever-insistent but fugitive present must be prevented by the enlarging and humanizing study of the thought, the literature and the achievements of the past.

Fortunately, through the study of history the newer humanities can supply, from their own ranks, the corrective to many of these evils. History offers not only a body of information concerning the past life of the race, but also a method of inquiry upon which the social sciences rest, and a genetic point of view by which the present can be measured and understood in its relations to the past out of which it has come. History stirs the student's imagination, steadies his judgment, and serves as the intermediary between literary studies on the one hand and the social sciences on the other. The time has come when we might as well

admit frankly, however much we may deplore the fact, that for the great body of our college students the classics have lost their hold as the basis of general education, and that for the present generation the chief opportunity for giving the background and breadth of view which our conceptions of culture still demand is to be found in the study of history. For most of our students the great avenue to the feeling and experience of the race lies through the vital study of the historic past, approached not as something dead or remote but as something full and rich, varied in its interest and many-sided in its appeal, through which alone we can hope to understand the present which it has produced. Even in so modern a subject as history, it is necessary to resist those ultra-moderns whose historical interests are circumscribed by the past few years or who, under the specious theory of apperception, would devote so much of our study to the recent and the local as to crowd out the larger and more humane study of the past and obscure the unity and continuity of its history. Historical near-sightedness must not deprive us of the base-line which the remoter past affords for an intelligent study of the present, and even the most materialistic of historians must, in dealing with historical facts, take account of their mass as well as of the inverse square of their distance. To the real teacher of history the whole of the past

is alive and no part is too remote to touch the imagination and understanding of his students.

There are obviously important questions respecting the relations of the newer humanities to one another as well as respecting their collective place in the college curriculum, but in neither case can they receive a final answer or one of universal application. Much will inevitably depend upon the traditions of the college, upon its resources, upon the personality of its different professors, as well as upon the changing position of various studies as instruments of education. For reasons which have already been indicated, history must always be largely represented, as furnishing the materials and the methods of the other subjects of this group and as affording the necessary background and connections with other fields. The scientific study of government, always closely connected with history on the one hand and with law on the other, has recently shown a tendency to emphasize its independence from history and its relations with law. As a subject of undergraduate study, however, its legal aspects are of less significance than its historical ones, and its professors have especial need of a broad historical training, while at the same time they must be ever ready to bring their students into touch with the concrete reality of actual government. The inevitable development of separate instruction in political science must not be al-

lowed to obscure its intimate relations to history. Economics has gone further than political science in the direction of distinct organization and has secured general recognition as a separate department with a growing body of instruction and a growing appeal to the American undergraduate. Here again, however, the tendency to short courses on current problems must be resisted by emphasis, on the one hand upon the economic history which shows their genesis, and on the other hand upon the more scientific and disciplinary aspects of the study as seen in the analytical processes of economic theory and the exact training of economic measurements. The close connections of economics and government must likewise not be forgotten. The latest arrival in this group of subjects, sociology, has a less certain position, owing partly to its newness and partly to its vastness. There are even those who insist that its newness is an inherent quality and that its vast programme of co-ordinating scientifically all social knowledge is fundamentally impossible of execution. Without entering into this question, it may be suggested that, for the present, sociology as an undergraduate study is valuable chiefly as giving a significant point of view, and that, until its content and method are more thoroughly worked out, undergraduates cannot to advantage substitute extended elections in this field for the more

highly organized and clearly defined social sciences of economics and government.

Nowhere does the personality of the teacher count for more than in the study of the newer humanities, for nowhere is the content of instruction more varied and its methods more flexible. In the somewhat ambitious Amherst plan of introducing freshmen to the whole range of the humanistic sciences the whole responsibility rests, and must rest, upon the professor in charge. No book or set of books has envisaged that vast and unsolved problem. If we simplify the task by subdividing it, the problem has been transformed, not solved, and a new and difficult problem of co-ordination has been added. The unity of the newer humanities is in danger of disappearing with the multiplication of departments and courses, and their cultural value is correspondingly weakened unless some serious counteracting effort be exerted towards correlating the student's attainments in diverse fields. It should be observed in this connection that no subjects lend themselves better to some form of tutorial instruction, and none stand in greater need of the co-ordinating final examination at the end of the undergraduate course to which such instruction can with much profit be directed. If, as many of us believe, the universal American practice of awarding degrees upon the basis of a mere accumulation of isolated credits is wrong, both in

principle and in its results, the evils of the system are greatest in those subjects where there is not, as in mathematics and many branches of science, a progressive correlation inherent in the nature of the subject, but where, as in the more descriptive fields of English literature and history, the order and advancement of courses is more or less fortuitous and the later courses do not depend upon the earlier in any such close sequence of necessary prerequisites. The demand that the candidate for the bachelor's degree show some definite result from his college education beyond the scoring of a certain number of units of credit is most imperative where the courses of the senior year do not involve and test his whole previous training. A comprehensive final examination which shall accomplish this object presupposes a considerable amount of co-ordinating instruction for each student, and this of course calls for additional expenditure of energy and of money.

The fact is that our teaching of the newer humanities has been and is too cheap. No studies are more intimately dependent upon the library, yet what college has done for its library what it has done for its laboratories, or furnished duplicate copies of reference books as it furnishes duplicate apparatus and laboratory supplies, or provided assistance and supervision for its students in the library as it gives them without question to its

students of science? How many colleges have developed professorships of history, government, economics, and social science in proportion to their departments of chemistry, physics, biology, geology, and astronomy? And how far do we require, or permit, in these departments the same thoroughness of teaching and individualization of instruction which is demanded in other fields? The new problems which the teachers of the newer humanities have to face require far greater resources if they are to be wisely solved for the benefit of the student and of the country, resources of libraries, of materials for study, and above all of men. Moreover, the work of professors in these fields is not now confined to college walls, for they are called in increasing measure to render service in local and national affairs as expert advisers and as leaders of opinion. Within reasonable limits, such contact with the actual world enriches and vitalizes the work of the classroom, but the burden is often a severe one, and the college must be willing to carry its share in this labor for the community by relieving such masters from academic routine and by guarding their leisure as men of learning and wise counsel.

Finally, in all discussions of the value of different studies and their place in college education we must beware of proceeding abstractly, as if we were dealing with a hypothetical undergraduate,

without taking sufficient account of the different reactions of different students to the same subject. We hear, for example, that the function of mathematical training is to develop the power of abstract reasoning, while we know that in a large number of instances it develops nothing higher than ingenuity. The delicate power of literary appreciation which the study of Greek produces among the elect few becomes with others merely a matching of words against words and of the forms of inflection against the corresponding sections of the grammar. So history can become a mere jumble of meaningless dates and events or a vague and pleasant—and often false—notion of progress. We must not forget that one student's imagination may be stirred by poetry, another's by history, another's by engineering. One may learn thoroughness and scientific accuracy from a Greek grammar, another in the chemical laboratory. We cannot guarantee the reactions of any individual to any subject. The most that we can do is to place before him a sufficient variety of significant fields of learning and a body of vigorous, alert, and enthusiastic teachers, and trust to Providence for the results. If he is really stirred and stimulated in any direction, we ought to be thankful. The great defect in American college education is that it does not set the mass of students intellectually on fire. Our colleges are only in an im-

perfect degree intellectual institutions. The real rivalry is not one between classics and sociology, between history and chemistry, but a struggle with ignorance, materialism, and superficiality for the development of the intellectual life. We are wrestling against principalities and powers, against the rulers of the darkness of this world, and we need help from every quarter. Some of us would prefer to see students aroused by literature, others by science, others by economics, but the main thing is that they be aroused. The first business of the American college is to make its students intellectually keen about something; what that is, is a matter of less moment. Only—and here I come back to the newer humanities—as the world exists to-day, many students are likely to be moved only by studies which have some immediate and obvious relation to their own time, and to them the social sciences make an appeal which we cannot and must not disregard. It is the part of wisdom to take advantage of this legitimate interest, to offer it food to feed upon and wise and competent guidance, to discipline it by thorough and exact methods, to broaden it by a wide and humane knowledge of other nations and other times, and to steady it by a sane appreciation of the best things that have been said and done in the world. So shall the social sciences be humane as well as new, human as well as scientific.

THE PLACE OF THE PHYSICAL AND NATURAL SCIENCES IN THE COLLEGE CURRICULUM

PROFESSOR EDWIN G. CONKLIN

I

From the beginnings of colleges and universities down to the present time some form of what we now call science has held a well-recognized place in every plan of liberal education. In the Universitas Studii Generalis of Paris, which was the mother of modern colleges and universities, the "Trivium" included grammar, logic and rhetoric, and the "Quadrivium" arithmetic, geometry, astronomy, and music. Under the influence of Galileo and Newton physics, or what was long known as natural philosophy, was introduced into the curriculum.

Thus mathematics, astronomy, and physics have been represented in colleges and universities from their very beginnings, and even to this day they occupy in many institutions a more secure and more honorable position than is accorded to the newer sciences of chemistry, geology, and biology.

The quality of learning is not strained. The spirit of real scholarship is broad and eclectic and great scholars in all ages from Aristotle to those who sit on this platform have had the open mind, the sympathetic heart, the helping hand for all branches of human learning. But the great growth of sciences and of industries based upon them and the great demand for technical education which characterized the past century has caused many persons to fear that liberal learning is endangered. And so there has grown up a conflict between those who represent the older system and those who advocate the new over the place of the physical and natural sciences in institutions of liberal learning.

The agitation for the introduction of the sciences of chemistry, geology, and biology into our colleges and universities, and for the teaching of all sciences by the laboratory method rather than by lectures and demonstrations, began in force about the middle of the nineteenth century. Up to that time chemistry was rather a subject with which to amaze the spectator than a serious study to instruct the student, while geology and especially biology were more frequently taught as branches of natural theology than as natural sciences.

In 1848, in an old frame building on the Charles River in Cambridge, Louis Agassiz opened the first scientific laboratory in America for the instruction

of students by the laboratory method. His laboratory of zoology thus antedated all other teaching laboratories in this country. But although Agassiz taught zoology from a scientific point of view it was still generally regarded as a part of natural theology. At a time when laboratory instruction required justification and popular support he said, "The laboratory is to me a sanctuary; I would have nothing done in it unworthy of the great Author,"—truly a noble and beautiful sentiment, but an evidence that science was still looked upon as a handmaid of religion rather than as an independent subject of teaching and research.

And it was against this very conception of science as a subject worthy of study for its own sake, and worthy of a place in the college curriculum because of its cultural value, that the representatives of the older systems of education objected most strenuously. Mathematics and physics had long occupied an unquestioned position in the curriculum, but the newer sciences seemed to many purists in education to be less pure than the older ones. And no doubt many scientists went too far in the condemnation of the older systems of education, while many classicists went too far in the condemnation of the new. If advocates of the newer learning proclaimed with pride, "We are the people and wisdom was *born* with us," representatives

of the older learning answered with scorn, "We are the people and wisdom will *die* with us."

Each of us must be aware of a tendency to believe that the experience and training which were beneficial for us must be the best possible for others. Also we magnify the importance of that which we have known by deprecating the value of that which we have not known. And it is an interesting fact which requires no comment that those persons who are most certain that the newer sciences have little or no cultural value are always those who know little or nothing about them.

Thus the warfare went on between the scientist and the classicist during the latter half of the nineteenth century and occasionally echoes of it are heard even to this day. But the demand for instruction in science comparable to that in other fields of learning became too great to be successfully resisted and gradually it was admitted to the college curriculum, but, as it were, by the back door. The scientific goats were not allowed to mingle with the academic sheep, but in the larger universities separate scientific schools with separate faculties and student bodies were established, such as the Lawrence Scientific School at Harvard, the Sheffield Scientific School at Yale, and the Green School of Science at Princeton; while separate scientific courses having different requirements for entrance and for degrees than in the

case of the academic courses were organized in many other institutions.

For many years this sharp distinction between academic and scientific faculties and students was maintained, but gradually this distinction has broken down and now the sheep and goats are generally indistinguishable except that at Commencement the former are branded "A. B." and the latter "B. S."

II

Having thus briefly sketched the historical developments by which the physical and natural sciences came to have a place in the college curriculum let us now consider the more fundamental question as to whether they ought to be there. The physical and natural sciences now form a well-recognized and firmly established part of the curriculum of every higher institution of learning. Indeed, in not a few institutions scientific studies overshadow all others and we have passed from the condition of a generation ago, when science was merely tolerated in the curriculum, to one in which the question is frequently asked whether we are not in danger of losing our classics and humanities.

What are the net results of all these changes? Are we losing in our colleges and universities high ideals of scholarship and culture? Is the material

and sordid character of the age, which is frequently proclaimed and decried, the result of increased attention to science in the schools? Does science appeal largely to the material interests of men while leaving untouched their intellectual and spiritual interests? Is a scientific education synonymous with a technical one, and is it the purpose of such education to make technicians rather than men?

I believe that all these questions may be and should be answered in the negative; that the cultivation of the sciences has done more for the intellectual than for the material interests of men; and that the natural sciences have rightfully taken their place in the curriculum alongside of the classics and the humanities as subjects of liberal culture.

No education is liberal which does not introduce one to the world's best thought and life. A purely classical education and a purely scientific one are equally illiberal. A liberal education is broad, disciplinary, and useful; it educates head, heart, and hand; it must include literature, science, and humanities; it must fit for contact with the world along many lines; it must help one to find himself and to choose his work; it must prepare for the largest usefulness and enjoyment.

One of the slight compensations for the world war which is now raging is that we are likely to

hear less in the future of that much abused word "Culture." For half a century it has been a word to conjure with, especially in academic circles, but it has never had any constant meaning except that of self-conscious and rather intolerant superiority. As a result, every cult or social group or institution or nation has defined the word so as to include itself and to exclude the rest of the world. Like orthodoxy, which Bishop Warburton said "is my doxy, heterodoxy is another man's doxy," so culture has been defined as my cult, while all other cults are philistinism. In particular the high priests of education and the Levites in charge of the Ark of Culture have always felt called upon to smite the Philistines hip and thigh.

But however the word culture may have been used and abused we all agree that ideally it stands for something real and good. It is no exclusive possession of a single cult. It is no single definite object, but a general and rather indefinite ideal. There are many kinds of culture, but each and all may be regarded from the standpoint of the individual or from that of society; the former we call education, the latter civilization. Viewed from either of these aspects I believe that it can be shown that science is one of the most valuable and most important forces in modern life.

Much has been said and written of the debt of civilization to the natural sciences, but it is per-

haps impossible for any of us to realize the extent of that obligation. No catalogue of the material, the intellectual, the moral, and the social changes wrought in human society by science and the scientific method could possibly be complete and none could convey any adequate conception of the sum total of the debt which mankind owes to science. It is no exaggeration to say that the chief differences between ancient and modern life are due almost entirely to this one factor. Literature, philosophy, and art the ancients had which will compare favorably with that of any age, but science they did not have except in its merest beginnings.

The wonderful material changes wrought by science, such as the developments of steam, electricity, and great engineering enterprises and the consequent increase of comforts and enlargement of human experience; the remarkable growth of the applied sciences of chemistry, physics, biology, and geology; and perhaps most of all the revolutionary changes in medicine, surgery, and public health which have followed a scientific study of the causes and remedies of various diseases, are liable to blind us to other great achievements of science, which if less material are none the less real and valuable.

1. First among all the contributions of science to civilization stands the emancipation of man from various forms of bondage. Science has to a

large extent freed civilized man from slavery to environment; it has well-nigh annihilated time and space, it has levied tribute upon practically the whole earth to supply his wants, it has taught him how to utilize the great resources of nature, and to a large extent it has given into his hands the control of his destiny on this planet.

But the highest service of science to culture has been in the emancipation of the mind, in freeing men from the bondage of superstition and ignorance, in helping man to know himself. We can never fully realize the terrors of a world supposed to be inhabited by demons and evil spirits, a world in which all natural phenomena were but the expressions of the love or hate of preternatural beings. But we may gather from history and from present-day ignorance and superstition some faint idea at least of the ever-present dread, even amidst happiness and joy, of those who feared Nature because they knew her not, of those to whom the heavens were full of omens and the earth of portents, of those who peopled every shadow with ghosts and evil spirits and who saw in all sickness, pain, adversity, and calamity the cruel hand of a demon or the evil eye of a witch.

It is frequently assumed that the decline of superstition is due to the teachings of religion or to the general development of the intellectual powers of man, and there is no doubt that to a

certain extent this is true. The general advance of the intellect, in so far as it is associated with truer views of nature, is unquestionably inimical to superstition; yet the persistence of such a superstition as that concerning witchcraft through periods of great religious and intellectual awakening, the almost universal belief in it throughout the golden age of English Literature, the statutes of all European countries against the practice of witchcraft, sorcery, and magic, some of which remained until the beginning of the nineteenth century—all these things show that however religion and general intelligence may have curbed its cruel and murderous practices, the downfall of this superstition could be brought about only by a more thorough knowledge of nature. The common belief that insanity, epilepsy, and imbecility were the results of demoniacal possession necessarily led, even in enlightened and Christian communities, to cruel methods of exorcising the demon, and the final disappearance of this superstition (if it may be said to have disappeared even at the present day) is entirely due to a scientific study of the diseases in question.

The same might be said of any one of a hundred forms of superstition, which like a legion of demons hedged about the lives of our ancestors. As false interpretations of natural phenomena, only truer interpretation could replace them, and

what centuries of the best literature, philosophy, and religion had failed to do science has accomplished. Science is, as Huxley has said, organized and trained common sense, and nowhere is this better shown than in its rational, common-sense way of interpreting mysterious phenomena. No doubt much still remains to be accomplished; the unscientific world is still full of superstition as to natural phenomena, but it is a superstition of a less malignant type than that which prevailed before the general introduction of the scientific method.

Furthermore the cultivation of the natural sciences has done more than all other agencies to liberate man from slavish regard for authority. When all others were appealing to antiquity, the Church, the Scriptures, Science appealed to facts. She has braved the anathemas of popes and church councils, of philosophers and scholars in her search for truth; she has freed man from ecclesiastical, patristic, even academic bondage; she has unfettered the mind, enthroned the reason, taught the duty and responsibility of independent thought and her message to mankind has ever been the message of enlightenment and liberty, "Ye shall know the truth and the truth shall make you free."

2. But science has not only broken the chains of superstition and proclaimed intellectual emancipation, she has enormously enlarged the field of

thought. She has given men nobler and grander conceptions of nature than were ever dreamed of before. Contrast the old geocentric theory which made the earth the center of all created things with the revelations of modern astronomy as to the enormous sizes, distances, and velocities of the heavenly bodies; contrast the old view that the earth was made about six thousand years ago—5,675 last September, to be exact, and in six literal days—with the revelations of geology that the earth is immeasurably old and that not days but millions of years have been consumed in its making; contrast the doctrine of creation, which taught that the world and all that therein is recently and miraculously were launched into existence, with the revelations of science that animals and plants and the world itself are the result of an immensely long process of evolution. As Darwin so beautifully says, "There is grandeur in this view of life with its several powers having been breathed by the Creator into a few forms or into one, and that whilst this planet has gone cycling on according to the first law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved." There is grandeur in the revelations of science concerning the whole of nature—grandeur not only in the conceptions of immensity which it discloses, but also of the stability of

nature. To the man of science, nature does not represent the mere caprice of god or devil, to be lightly altered for a child's whim. Nature is, as Bishop Butler said, that which is stated, fixed, settled; eternal process moving on, the same yesterday, to-day, and forever. Men may come and men may go, doctrines may rise and disappear, states may flourish and decay, but in nature, as in God himself, there is neither variableness nor shadow of turning. The all too prevalent notion that nature may be wheedled, cheated, juggled with, shows that men have not yet begun to realize the stability of nature and indicates the necessity of at least some elementary scientific training for all men. "To the solid ground of Nature trusts the mind that builds for aye."

3. Science has changed our whole point of view as to nature and man, and science cannot therefore be eliminated from any system of education which strives to impart culture. It is not principally nor primarily in its results, however great they may be, that the chief service of science is found, but rather in its method. In a word the method of science is the appeal to phenomena, the appeal to nature. To the scientist the test of truth is not logic, nor inner conviction, nor conceivability and inconceivability, but phenomena or what are commonly called facts. The steps of this appeal to phenomena are first observation or experiment;

then induction, hypothesis, or generalization, and finally verification by further observations, experiments, and comparisons. The methods of science have now invaded to a greater or less extent all domains of thought,—philosophy, literature, art, education, and religion,—and the unique character of the method of science may not be fully appreciated except upon comparison with prescientific or non-scientific methods.

Of course one need not expect to find any proper appreciation of the scientific method among the ignorant, but it is amazing how such appreciation is lacking among many otherwise intelligent and cultivated people. We daily see cases where the test of truth is the appeal to superstition, to sentiment, to prejudice, to inner conviction, in short to anything rather than to facts. The world is full of people who know nothing of the value of facts or of evidence, whether it be with regard to such general themes as religion, education, government, society, personality, or more special ones such as diseases and methods of treating them, vaccination, animal experimentation, food fads, and the like.

Consider for a moment the art of healing, as contrasted with the science of medicine; the various "schools of medicine" and much more those who never went to school appeal not to carefully determined, accurately controllable phenomena, but

largely to sentiment, prejudice, and superstition. The same is true of the "fake" science which flourishes mightily in the daily papers, and especially is it shown in the hypotheses, discoveries, and dogmas of those who determine the laws of nature from introspection and construct the universe from their inner consciousness.

Every little while there arises a new and brilliant Lucifer who draws after him a third part of the hosts of heaven. Though he appears under many guises, such as Divine Healer, Christian Scientist (Heaven save the mark!), Spiritualist, Theosophist, Telepathist, the main tenet of his belief is always the same,—a revolt against the scientific method of appealing to phenomena.

One of the hardest lessons of life is to learn to see things as they are. We tend by nature to put ourselves into everything we interpret. We see things not as they are but embroidered round and covered over by our fear or love or hate. Our emotions blind our judgments and not infrequently reduce us to the level of irrational beings. There are thousands of intelligent men and women, among them many graduates of colleges and universities, whose opinions regarding the most important questions of their lives are shaped by sentiment and prejudice and convention rather than by a study of facts. And it is this which makes possible blind loyalty whether to college or

party or church, and blind prejudice and hatred between classes and races and nations; it is this which arouses war and destroys the monuments of civilization. It is this refusal to see things as they are that destroys character and peace and progress.

What is the remedy for such a state of affairs? What can be done by our colleges and schools to improve this really dreadful condition? How can individuals be taught the value of facts? There is probably no better way than by inculcating the methods of science, by the first-hand appeal to phenomena. The appeal to facts is the very foundation of science, and it is a method in which every person should receive thorough and systematic training. Even this will fail in many cases where inherited tendencies are too strong to be overcome by training, but at least it will help to promote a spirit of open-mindedness, sincerity, and sanity.

To me it seems that there is no part of an education so important as this, none the lack of which will so seriously mar the whole life. Of course it is not claimed that all scientists best illustrate the scientific method nor that it may not be practiced by those who have not studied science, but that this method is best inculcated in the study of the natural sciences. Science not only appeals to facts, but it cultivates a love of

truth, not merely of the sentimental sort, but such as leads men to long-continued and laborious research; it trains the critical judgment as to evidence; it gives man truer views of himself and of the world in which he lives, and it therefore furnishes, as I believe, the best possible foundation not only for scholarship in any field, but for citizenship and general culture.

But culture is not some definite goal to be reached by a single kind of discipline. There is no single path to culture and the great danger which confronts the student of the natural sciences is that his absorption in his work may lead to a narrowness which blinds him to the larger significance of the facts with which he deals and unfits him for association with his fellow-men. A technical education which deals only with training for special work without reference to foundation principles may be useful and necessary but it cannot be said to contribute largely to culture. What teacher has not been surprised and pained by the fear which some students exhibit that they may waste an hour on some subject the direct financial value of which they do not see,—students who fail to grasp general principles, to take a broad and generous view of life, to appreciate good work wherever done? The scientist no less than the classicist or the humanist should know the world's best thought and life. Life is not only *knowing*

but *feeling* and *doing* also, and other things than science are necessary to culture. The day is forever past when any one mind can master all sciences, much less all knowledge; there can never be another Aristotle or Humboldt; nevertheless in the demand for broad and liberal training the greatest needs of scientific work and the highest ideals of culture are at one, and this Institution can serve no more useful purpose than to stand in the future, as it has done in the past, for the highest, broadest, and most generous views of learning and of life.

THE COLLEGE AS A PREPARATION FOR PROFESSIONAL STUDY

PRESIDENT RUSH RHEES

We are constantly reminded of the fact that modern higher education is the outgrowth of a medieval demand for more thorough training for professional careers—in theology, in law, in medicine, and in teaching. And it is true that the foremost of the medieval universities gained distinction as schools for training for one or others of these professions—Bologna for law both civil and canon, Salerno for medicine, Paris and in large measure the ancient English universities for theology—while all of these maintained faculties of arts, whose masters became the teaching guild for all of Christian Europe.

It cannot be regarded as accident, however, but as a conclusion from experience, that in most of those universities the faculty of arts early came to be more than a colleague or rival of the other faculties. It soon developed into an ally of the others, and, particularly in the English universities, the primate among them. The courses

of study for theology and law early recognized the value of a prior training of their students under the faculty of arts; and special concessions were made in the time required for degrees in the case of students who enrolled under these faculties after being graduated in arts.

Nor can it be truly deemed accidental that, when the colonists in New England and Virginia made the first beginnings of higher education in America, with the avowed purpose of training youth for the ministry, for law, for medicine, and for public service, they planted in the wilderness not schools of theology or medicine or law, but modest copies of the English colleges in which their founders had gained their own training in general liberal culture.

In accordance with the precedents with which the founders of Harvard and Yale were familiar in their English college life, and for the furtherance of the primary purpose which actuated the founding of those first New England colleges, chairs of divinity were indeed established in Harvard in 1638 and in Yale in 1741. In 1755 the charter of Kings College (now Columbia) provided for a professorship of divinity, but no appointment was ever made. During all the colonial period, however, practical preparation for the ministry was for the most part obtained by means of the instruction and example furnished to aspirants

for the ministry by leaders in that profession, who took the young theologues into their homes and churches as virtual apprentices. A similar apprenticeship system was relied upon for the training of physicians and lawyers. In the exigencies of their pioneer life the founders of our American colleges selected instinctively the school of liberal culture as the indispensable factor in higher education, and left to a later time the development of schools for professional training.

Not until the closing years of the colonial period did that development make its appearance.

As early as 1750 lectures on anatomy were given in Philadelphia by Dr. Thomas Cadwallader, and in 1765 Dr. John Morgan and Dr. William Shippen, Jr., founded a school of medicine in that city, which was attached to the College of Philadelphia, now the University of Pennsylvania. In 1763 the governors of Kings College in New York voted to provide instruction in medicine as soon as funds could be procured, and in 1767 a Medical School was established with six professors, the first medical degrees being awarded to two graduates in 1769. The Harvard Medical School was founded in 1782. Since that time the growth of schools of medicine in our country has been abundant if not appalling.

The first school organized to give instruction in

law was founded by Topping Reeve in Litchfield, Connecticut, in 1784, and it flourished for many years, graduating over a thousand students. In 1792 a chair of law in Columbia College was created, and in 1793 James Kent was chosen to fill it. He held the post until 1798, when through failure of the legislative grant which had provided the salary the chair was discontinued.

In 1823, however, Kent again became professor of law in Columbia College, and held the post until his death in 1847. The Harvard Law School dates from 1820, though its vigorous life did not show itself until 1830.

The year 1784 saw the establishment of the first Theological Seminary in America—that of the Dutch Reformed Church, in New Brunswick, New Jersey. Since that time many schools for ministerial education have been founded, and more of them have been independent of affiliation with colleges or universities than have had such academic connections.

The modern developments of applied science have brought into being many very strong schools for training in various branches of engineering, a development prophetically foreseen in the later years of the eighteenth century, but essentially a nineteenth-century growth. Even more recent is the development, now progressing rapidly, of special colleges for the training of teachers,

to which many students resort who have first gained a bachelor's degree in arts or science.

I have offered this cursory sketch simply to remind you of the relative lateness, as well as of the recent luxuriousness, of the growth of institutions for distinctly professional education.

I now desire to call attention to an interesting feature of that development. Many of the schools for theology, medicine, and law which appeared during the nineteenth century not only had no connection with any faculty of arts or liberal culture, but made hesitating if any demand for college training as prerequisite for admission to the professional courses.

This attitude of independence or indifference found some historical justification in the practical parity of the faculties of theology, medicine, and law with the faculty of arts in the typical medieval universities, and it characterized until quite recent times the attitude and practice of most of the professional faculties which were developed by our older colleges in the course of the development of a genuine university organization. Not only so, but a singular inconsistency sometimes appeared, namely a readiness on the part of professional faculties in our emerging universities to receive students in their classes with less rigid scrutiny of their preliminary education than the college—or arts—faculty were exercising.

Recent years, however, have seen two noteworthy developments in professional education in America: A very great broadening of the conception of professional education, which has given to the work of these schools a more generally scientific, as distinguished from a narrow vocational or technical, character; and a decided stiffening of requirements for preliminary education both in extent and in quality. The former of these tendencies is a natural consequence of a higher conception of the importance of the scientific basis for professional competency, and a more alert academic conscience. It has brought about a marked increase in the personnel of the force of instruction essential to the maintenance of such professional schools, a growing demand that incumbents of professorships in such schools be acknowledged leaders in the scientific aspects of their specialties, and that they be men who are willing to make teaching their vocation, not simply their avocation. This recent development has also involved a great increase in the extent and costliness of the equipment for professional education. As a consequence there appears a strong tendency to concentrate effort for the betterment of teaching in theology, law, and medicine upon schools which are organized as departments of strong universities, or may become such by affiliation.

The tendency to increasing vigor in the definition and administration of entrance requirements shows two aspects which are of great interest to the American college. There is on the one hand a slowly growing demand for a bachelor's degree, or its clear equivalent, as a condition of admission to some of the leading professional schools. And where this rigid requirement is not enforced, there appears in its place a requirement of the successful completion of one, two, or three years of the customary college course.

Herein we see a revival of the preference granted to Masters of Arts by the faculties of theology and law in several of the medieval universities, or a desire to put admission to American university schools of law and medicine on a basis equivalent to that furnished by the completion of the course of study in a German gymnasium or a French lycée.

On the other hand there appears to be growing, especially in the demands of faculties of medicine, a tendency to push back into the college course something of the narrowness of professional outlook and interest which belongs of necessity to the professional school.

Now, what meaning have these developments for the American college? On the one hand the growth of professional schools in equipment of men and material facilities, and in scientific thor-

oughness, which is placing them in the plane of worthy constituent membership in a group of university faculties, seems to not a few to point to a coming readjustment of American education, in which the old-time college, which served well the needs of our pioneer life, shall give way for a more modern adjustment of secondary to higher education. On the other hand the tendency on the part of several of our most richly endowed and equipped professional faculties to declare that their superior service is to be reserved for a select class of students, who qualify for the privilege by obtaining first a bachelor's degree, gives a notable testimony to the value which leaders in professional education place upon the effects of a thorough course in liberal culture.

Let me call attention at this point to the essential features of college education as we in America have developed it. The American college either by the invitation of attractive opportunity for election, or more commonly by a more or less definite prescription of studies, opens for its students doors of outlook upon many different sides of life and phases of truth. The college degree presupposes that its holder has gained some acquaintance with at least several of the great departments of college instruction: namely, foreign languages; the mathematical, natural, and physical sciences—both

as to facts and as to scientific method; the history of the political development which has given us our institutions; economic and social science; philosophy—the endeavor of the human mind to apprehend somewhat of the meaning of existence; and literature—the record of the high creative attainments of human thought and insight. No student is likely to have entered upon all these branches of study, every graduate has given his attention to several of them.

Now each one of these branches of college study appeals to a different sort of intellectual interest, and awakens a different kind of intellectual alertness; and as studied in college each introduces the student to the value and delight of learning, quite apart from any consideration of the subsequent utility of the subject-matter of the studies pursued.

Obviously it is important that the years spent on the study of Greek or Latin or German or French should endow the student with the ability to use these foreign tongues for reading or conversation. But even more significant than that ability is the experience which the study of foreign languages gives of the understanding of ideas unfamiliar to the student's thought, expressed in words and constructions strange to his mind, which picture conditions of life and ideals of conduct and endeavor quite foreign to his experience.

This study stretches the boundaries of his understanding and sympathy, and begets in him, if it succeeds with him at all, a power of intellectual adjustment to unanticipated conditions and ideas, and a power of appreciation for truth appearing in strange garb, that not only enrich the man's life, but immensely enlarge his ability to be of use in dealing with other men. For, after all, the great task of human fellowship in work and in social relations is the task of translation. The greatest need of my life of human intercourse is ability to understand what another man means who does not think in my way or speak with my shibboleths, and ability to express my thought in terms that will convey and not obscure it to another mind.

Similarly the study of science and of history enlarges the borders of a man's life, and deepens the wells of his understanding, quite in addition to the mastery he may gain of the facts and hypotheses and methods of any particular science, or the familiarity his study may give him with the story of any given people or period of history. And such broadening increases rapidly with each additional science or historical epoch with which the student gains acquaintance.

Quite different and more deepening is the enlargement which comes to the mind with the pursuit of philosophical inquiry and the study of the

history of human thought. While the man who enters the treasure house of literature, and makes friends with the great minds of the ages, has enriched his life with enduring wealth of intellectual comradeship, and has also risen to a higher outlook upon life and all its concerns, whence he can see things in more just proportions, and judge questions with more equitable judgment, than is possible for the man of rigid professional training.

It is not only impossible, but it is undesirable that any man should be asked to gain for himself each one of these varied enlargements of life; for the effort would frustrate itself by substituting superficial intellectual indulgence for serious intellectual work. But the significance of college training lies in the fact that these avenues of interest and human enlargement are opened to the college student, that each man of necessity enters upon two or more of them, and that in each one of them he follows a path that leads him to a larger knowledge of truth, without conscious concern for the practical uses of that truth.

I say without *conscious* concern for the practical uses of that truth. For with the amazing development of the applications of science and all learning to the practical problems of our modern life there are few branches of intellectual inquiry that do not contribute greatly to some practical

undertakings which men follow as vocations. The study of chemistry and biology in college may be, and should be, directly serviceable to graduates who enter medical schools. The college studies of history and philosophy may be, and should be, directly serviceable to men who go forward to prepare for the ministry or the law. But there is importance in the detachment from concern with practical uses which characterizes the college man's pursuit of learning. That detachment constitutes one of the most valuable items in his education, one of the most effective influences for intellectual breadth and intellectual sympathy. For it carries his thought out to interests and realities that are beyond and above his own life, and furnishes a wide horizon in which to see the relations and proportions of his more personal undertakings and concerns.

This brings me to the essence of the subject which has been assigned to me, and gives opportunity for avowal of my faith in the present and future value of the American college.

I believe that the American college contributes to preparation for professional study an influence for intellectual maturity which no other agency has to offer. By intellectual maturity I do not mean simply developed intellectual power, for professional studies as at present conducted have no superior in that respect. I mean by intellectual

maturity a well-balanced judgment, a sense of proportion in the estimate of truth, and ability to see facts in larger and more remote as well as in nearer and obvious relations. It is a maturity like that which a man gains from travel in foreign lands, like that which the varied experiences of city life bring to the man country bred. It depends on ability to see particular truths from the vantage point of a wide outlook, and to estimate them with the broad sympathy of understanding which is begotten by interest in other phases of truth.

Such breadth of outlook and sympathy of understanding come to the student of theology or law who knows something of the facts and methods of natural or physical science. They are given to a student of medicine or engineering by some knowledge of literature and some understanding of philosophy and philosophic method.

College education cannot guarantee that intellectual maturity will be found in all wearers of college degrees—for some students never get their blinders off, so as to see truths in wide relations. But college education offers the most promising means for such intellectual emancipation. Therefore I hold it to be a peculiarly important and valuable preparation for professional study.

This service cannot be so well rendered by an extension of the secondary school, after the pattern of the German or French practice. The medieval

course in arts was not a preparatory school, though its value as a preparation for work under other faculties was early recognized. The independence of interest, the detachment of endeavor, which belong to the best college work, contribute in essential ways to the maturing influences which give college study its value as a preparation for later professional courses. If I mistake not, herein lies part of the secret of the peculiar sanity, the balance of judgment, and the sense of proportion which characterize English scholarship, even when in laborious mastery of details and in wealth of erudition it falls short of German and French attainments. I am convinced that for our future good the emphasis we have placed on studies for liberal culture in the atmosphere of an institution of higher learning, borrowing our practices from England, should be strengthened, and not abandoned.

Another contribution which college education makes to preparation for professional study is corollary to this maturity of mind to which I have just alluded. Let me call it a developed intellectual instinct against rash generalizations and against over-confident logical conclusions. I shall doubtless lay myself open to charge of transgressing my own law, if I confess that I know of no more misleading influence in our intellectual life than logic. That generalization is rash. Its justifica-

tion lies in the fact that it challenges consideration, critical, modest, and teachable, of the premises of which impeccable logical procedure makes use. I know nothing more pathetic than the dogmatic deliverances of metaphysical theologians concerning what can be true in the world of nature, excepting the dogmatic assertions of men of science who wander into philosophy's domain and seem wholly unaware that in that strange field their impressions and speculations have lost all the authority that of right inhered in their scientific observations and inductions therefrom. We have heard and seen much these recent months of the so-called biological defense of war. The tragedy of that argument is its false analogy, its blindness to what fitness and progress have come to mean in the unfolding of human history. The sensitive intellectual conscience, quick to discern such fallacies, and repudiate premises which issue in false conclusions, is bred by such varied studies and such detached interests as the college of liberal culture offers to its students.

Another value of college training as a preparation for professional study I find in that facility of translation to which I have already referred as one of the most essential qualities of the broadly educated man. It is needless that I enlarge further upon it; enough to call to mind the growing importance, with the increase of men practicing

our varied professions, of ability on the part of leaders in professional life to convince and lead what I may call "lay" opinion. Experience has demonstrated that that power of translation, of expressing new truth in familiar terms, is one of the natural products of college education.

One other contribution is indirect rather than obvious, and it is even more broadly human and less professionally significant in its value than either the maturity of mind or the sensitive intellectual conscience, or the power of translation to which I had just called attention. I mean the resources for richer intellectual living which a man acquires when he has traveled far enough and widely enough in the world of the mind to be at home in different places and with different interests, and when he has entered somewhat into the fellowship of great thoughts and great lives of other times and other climes.

In conclusion, let me reaffirm my belief that however much of accident due to pioneer conditions may have entered into the origins of our American colleges, the riper development of our intellectual life is to come to our country by nourishing, by cultivating, by pruning if need be, and by guiding the work of the American college, so that the unique service which can be rendered to national wisdom and national power by the matured mind and judgment of men who have pursued truth with

some detachment from every consideration but the love of it may be the privilege of the coming generations, as it has been of that which is now joining here in celebration of a century of fidelity to its ideals by an American college.

THE COLLEGE AS A PREPARATION FOR PRACTICAL AFFAIRS

PRESIDENT CHARLES F. THWING

And what are practical affairs? What are the forces, the movements, the concerns which we call practical? The practical represents those powers often called utilities, which are embodied in material forms, or which represent those forms. The practical is a force which makes its appeal to the eye, to the ear, to the touch. The non-practical may seem to make its appeal to the eye, as Raphael's Madonna or a Greek marble, or to the ear, as a noble piece of music, but these make their appeal through the outer organ to the inner sense or sensibilities. The practical finds its supreme achievement in a material civilization. Its standards are scales and yardsticks; its results are embodied in tons, square feet, and cubic yards. Its ends are primarily quantitative. Its atmospheres are the lust of the flesh, the lust of the eyes, and the pride of life. At its highest its results are seen in the center of the metropolis, as, for instance, of that part of London known as the Bank, a microcosm of the forces of the world.

At its worst its results are seen in the selfishness and the sensualism of a mind disintegrated, of a conscience corrupted, of a will weak for right and strong for wrong. This microcosm may apply to the individual or to the community, as seen in the court of Louis XV.

The practical man is the man who has an eye for the main chance, who casts an anchor to the windward, who seeks to be safe, who avoids risks, who likes comfort. He may believe in education, but if he does, he believes in it chiefly because education helps him to make more rather than to become more; who, if he believes in the church, believes in it for this world and not for other-worldliness; who wishes the community to be well housed and properly fed; and who would improve humanity by comforts and by material forces rather than by ideas. This man has imagination, but it seldom rises above the fifth story of the five senses, and sometimes not above the "third story back." He has no sky, no horizon, no "intimations of immortality," either in life's prose or life's verse. He may read poetry, but it is rather Walt Whitman than Wordsworth. He hears no skylarks, he sees no Grecian urns, he has no vision from peaks of Darien.

The college has nothing to do with practical concerns, says one. It is utterly remote from such mundane considerations and relationships.

The college is a monastery placed far away from the world. The college is a philosophy like Hegel's, which is said to be a system shot out of pure space. The college buildings should be put either on Mt. Sinai peak or in an African desert. Its chief inhabitant should be Browning's Grammarian.

Such is the interpretation of one who believes that the college has no relations at all with practical concerns. The college should be unpractical. It should embody what a great teacher of mathematics is said to have said upon writing a formula upon the blackboard: "Thank heaven that can be put to no use!" The unpractical man, in continuation of the type of the unpractical college, is he who fails to adjust ideals to forces, who declines to relate causes to effects, or effects to causes, or conditions to conclusions, either remote or immediate.

In these two interpretations so unlike, so almost contradictory, wherein lies the truth? As often happens, the truth does lie in the mean, not only as executive strength, but also as veracity. The college has to recognize that man is a citizen of two hemispheres, the material, the visible, the audible, the tangible; the immaterial, the invisible, the inaudible, the intangible. He is not so much a contradiction, as Pascal says, as he is a union of opposites. He is, indeed, as Pascal does intimate, somewhat akin to the brutes, but he also is somewhat akin to

the angels. He is the subject of greatness and the victim of baseness. He may be a reed, the weakest in nature, but he is a reed that thinks. If he inhabit one hemisphere alone, he is only one-half a man. By living in both he becomes the whole, the spherical man.

It is of course acknowledged that what we call the purely intellectual hemisphere the college should train. The college should do for man to-day what Socrates did for Plato and Plato for his disciples. It is to adopt and to use the Athenian, and not the Spartan, type of education. It is to give acquaintance with the truths of life; to orient the student into a world of citizenship; to lead one back into the sources of civilization, and from those sources to create resources; to help one to discern and to direct the tendencies of which he is a part, and always and everywhere to create life in his own bosom. It is to develop the non-material, the spiritual elements of the community and of the person.

But it is also—and right here is the crux of our problem—to seek to discipline that part of the material hemisphere of man which lies closest and nearest to the non-material. On this material side it is to accomplish five results: first, it is to teach one to think, to think clearly; second, to teach one to appreciate, to appreciate sympathetically; third, to teach one to apply truth, to apply truth

usefully; fourth, to teach one to work, and to work thoroughly; and fifth, to teach one to enjoy, and to enjoy fully.

First, to teach one to think, and to think clearly. To think is the most precious intellectual result of the college. Thinking is an art. It is, of course, also a science. But for the college man it is primarily an art. An art is learned by practicing it. Thinking is, therefore, learned by thinking. It represents habits of intellectual accuracy, discrimination, comparison, concentration. Such habits are formed by being accurate, discriminating, and by the actual concentration of the mind. A course in education promotes such thinking better than a course in business. For education represents orderliness and system in intellectual effort. The effort proceeds by certain graduated steps, from the easy to the less easy, from the difficult to the more difficult. The purpose is to train in the valuation of principles, which underlie all service, and not in the worth of rules, which are of special and narrow application. The man trained only in business of one kind is not fitted to take up business of a different kind. The broadly trained man is prepared to learn business of any kind, and if business of one kind has been learned, he is able to leave it to take up work of another kind without difficulty. The practice of any art should make the one who practices this art a better thinker

in it; but this advantage relates in a large degree to one who has first approached the art through thinking.

I suppose it may be said that the man who is self-educated is usually very narrowly educated. He is educated along and in certain lines. He is educated, so to speak, tangentially. His thinking, too, is usually tangential. It lacks comprehensiveness and a sense of relations. It has force, and the endeavors which spring out of it are forceful; but breadth is sacrificed. To do away with such tangential education is the purpose of the college. Education should be made a curve. It should possess symmetry. The college represents a fine communal force which best draws that curve. Tangents are individual.

Also, on the material side, college is to teach one to appreciate sympathetically. Provincialism is, despite our so-called cosmopolitanism, one of the curses of modern life. Our cosmopolitanism is often merely superficial. The college is to teach this semi-materialistic man and provincial that there is a spiritual world above what he sees and hears. It is to bring him into relationship with every side of life's polygon. It is to help him to become a citizen of the world and to be properly at home in any society.

Third, the college on the material side is also to help each man to apply the truths he receives,

the powers which he represents, usefully unto the highest. One does not forget that one of the greatest of modern scientists was Lord Kelvin. A pure scientist he was, but every telegram which goes under the sea bears in essence the power of Kelvin, and every ship sailing the seas sails it more safely by reason of Kelvin's compass.

College men of liberal training have founded the United States Geographical Survey, the Weather Bureau, and many agricultural and experimental stations. Let it be not forgotten that Eli Whitney, the inventor of the cotton gin, was a graduate of Yale College of the Class of 1792, and that Samuel F. B. Morse, the inventor of the electric telegraph, was also a graduate, eighteen years after.

Fourth, education, on its material side, is to teach one to work and to work thoroughly. It is as popular as it is, I fear, honest to declaim against our mechanical looseness and slackness. In every building, we know that the hidden foundations do not go deep enough, that sand takes the place of cement, putty of lead in the plumbing, weak wooden beams for iron girders, cotton for wool, and canvas for leather in the furnishing. We know that too many workmen seek to give the least labor for the most pay. The close of the eight-hour day finds the laborer with overalls off and coat on, ready to go home. Now in all practical concerns education should teach a man to

give an equivalent for what he receives. Education teaches him that in practical concerns, to be honest in his service, to be no shirk, to seek for every man's rights and his own duties, as well as for the other man's duties and his own rights, to be a workman so just, so careful, so considerate, so thorough, that even the gods may approve of his handicraft. The college should be a hard taskmaster in order to train its man to serve and to live as ever in his "great taskmaster's eye."

Fifth, on the material side also, the college is to train the student to enjoy life fully, thoroughly, to enter into all cubical relationships of the length, the depth, the height of being. The college should train this man to find delight in the oratorio, and not to limit his pleasure to rag-time, or to "It's a Long Way to Tipperary." It should help him to find satisfaction in an art museum, and not to teach him that the pictorial art does not go beyond the "movies." It should help this graduate to have resources in books and not to be obliged to build a laboratory in his cellar to escape nocturnal dullness. It should help this business man, manufacturer, merchant, chemist, banker, farmer, to see the infinite relations of his work, to feel its poetry, to be stirred by its imaginations.

If the college on its material side can give these great teachings,—to think clearly, to appreciate sympathetically, to apply usefully to work thor-

oughly, to enjoy beautifully,—it has done much, very much, to enlarge, to deepen, to heighten, to enrich, to strengthen, life's practical concerns.

The four qualities most needed in practical concerns one might say are judgment, energy, tact, patience. They are the foundation on which the four-square house of business is built. The college helps to construct each of these walls. It builds the wall of judgment, for it trains one to see, to discriminate, to relate, to infer. It builds the wall of energy, for it creates and it conserves strength, enlarges resources, dissipates fear, and enriches power. It builds the wall of tact, for it trains the gentleman. It builds the wall of patience, for it lifts the heart away from the impact of to-day onto the appreciation of yesterday and the vision of to-morrow.

In a word, I would have this graduate in a materialistic age serve that age by being an idealistic materialist. In a merchandise age I would have him serve his age as an idealistic merchant. In an industrial age I would have him serve his age by being an idealistic industrialist. In an age of steel I would have him put the strength, the flexibility, the adaptiveness of steel into his mind, the coolness of steel into his eye to see truth justly, the heat of steel into his heart to feel warmly for all men, and the power of steel into his whole character, that he may give strength unto all.

THE PRESENT STATUS AND PROBABLE FUTURE OF THE COLLEGE IN THE EAST

PRESIDENT JOHN H. FINLEY

THE great president of a great university in the East, whom you are to have the good fortune to hear to-night, spoke a few days ago with disparagement of the industry of a Latin student who had found that the conjunction " et " was used by Virgil in the Æneid 5,932 times (as I recall), and of the thesis of a New York candidate for the doctor's degree who discussed the interjections (nineteen in number) which appear in certain poems of Terence. With such an admonitory word concerning meticulous scholarship fresh in mind, I dare not undertake to note the permutations of the entrance requirements of the Eastern colleges, nor attempt to record the ephemeris of their curricula in the northern heavens, where fair Harvard sits like Cassiopeia in her eternal chair, where the six binary Pleiads of Columbia shine, and where Amherst glows like Capella with a spectrum which, it is claimed by some, most closely resembles that of the sun of our daily existence,

and is thought by others to resemble Capella only in the respect that the light of that star is forty years in reaching our planet.

Yet I realize that it is only such meticulous studies of the stars in the academic skies which will enable us to make any accurate prophecy, that is, enable us to determine the ephemeris of to-morrow.

We are informed by astronomers that there is a clearly discernible movement on the part of the stars of heaven, a " star-drift " towards a certain star; as I recall, a star in the constellation of Canis Major. That is the supreme ultimate fact of the physical universe. And by analogy what is really of concern to us is not as to just what positions the several colleges in the northeastern heavens hold to-day or will hold to-morrow, but as to the direction in which they are moving, as to what is the universal and ultimate goal of their movement.

We seek the Canis Major, that is, the " place of understanding," the ultimate. We wish to know its azimuth and right ascension, or, better, its terrestrial latitude and longitude.

Job sought it, saying: " Surely there is a vein for silver and a place for gold where they find it "; and after giving poetic intimations of courses in meteorology, geology, chemistry, physical geography, and engineering, which led towards it, he

asks in tired refrain: "But where is the home of wisdom and where is the place of understanding?"

Man, he added, has taken iron out of the earth,
He has melted brass from the stone,
He has made a deep shaft,
He has swung suspended afar from men,
He has searched for stones in darkness,
He has carved the flint,
He has cleft the rock,
He has bound the stream from overflowing,
He has seen every precious thing,
He has searched even into the shadows of death,

And yet, Job cries after his summary: "Where is the place of understanding?"

Since Job's day, man has succeeded in doing many things which only God could then do in his designing the place which no falcon had seen and which no lion had passed by;

For man has made a weight for the winds;
He has decreed whether rain shall fall upon him;
He has found the way of the lightning;
He has looked and talked to the ends of the earth;
He has beheld the infinitesimal;
He has divided the invisible atom;
He has learned what is burning in the hearts of the stars.

And still it is asked: "Where is the place of understanding?"

It is a long way from the observations of Job

to those of William James, but we find in this dearly lost philosopher an intimation as to the status or prospect of the college, in *his* part of the heavens, which it is my part to sweep in these few moments. With a comforting certitude, William James says that a college is a place where one learns to know a good man when one sees him. It is, after all, only the positive form of Job's definition of understanding:—James's is to discern the good; Job's was to "depart from evil."

Whether the definition by James is of status or prospect is not clear, but it reveals by implication the general location of the ultimate, the Eastern college which is or is to be.

When I first passed up over the Laurel Hills of Western Pennsylvania, a little way to the south of this place from the west into what was the east of a quarter of a century ago, to enter its first university, Johns Hopkins, the colleges were, I think, closer to Job's definition than James's in that more attention was given to protecting from the evil than to aggressive discerning of the good.

And the institutions were not then classified according to magnitude or brilliance into Alpha and Beta stars, though there was appreciation of the fact that one star did differ from another in glory. There was no spectral analysis then. If there had been it would have been discovered that the mag-

nesium of philosophy and the sodium of mathematics and the calcium of language appeared in about the same proportions in all. The stars were just plain stars, instead of composites or compounds of units. There were no great constellations even, such as now bestud our academic skies—star clusters with a dominant Alpha star of liberal arts and pure science holding in close and imperious relationship schools of medicine, law, engineering, pharmacy, veterinary surgery, dentistry, domestic science, etc.; no solar systems with their planetary wanderers, the university extension lecturers; no moons to take up the wondrous tale of wisdom in evening courses; no brilliant comets, those international exchange professors, who startle all our eyes in the winter season of the East. And the great "Milky Way" of the General Education Board and the Carnegie Foundation was not yet arching the dome, with nourishing and incalculable wealth.

Seeing all this college development, which I have borrowed an astronomical figure to intimate; seeing the curricular moons and stars which have been ordained, and the provision of laboratory and dormitory, field and gymnasium, I exclaim after the manner of the Psalmist: What precious thing is man that Thou art so mindful of him, and the son of man that Thou visitest him even in the Freshman Dormitory!

The most impressive scientific lecture I ever

heard, so far as I now remember, was in the broken speech of that great Scandinavian scientist, Arrhenius, who told how life was propagated, carried from planet to planet, from star to star,—the immigrant star-dust evolving in new sequences of life on each new star-shore. So is life developing in its own peculiar and infinite sequences in each of these colleges, though it was propagated by the same immigrant, life-giving dust. And there is no considerable generalization possible.

When I first knew of the Eastern colleges they seemed all, or most of them, to have foundations after the fashion of the heaven which John saw in his apocalyptic vision. Need I recall the sequence? The first foundation was of jasper, the second sapphire, the third chalcedony, the fourth emerald, the fifth sardonyx, the sixth sardius, the seventh chrysolyte, the eighth beryl, the ninth topaz, the tenth chrysoprasus, the eleventh jacinth, the twelfth amethyst. What I mean is that the foundation stones or disciplines were specifically stratified and identified. There was, however, no agreement as to the size of the stones till President Butler came with his College Entrance Examinations and insisted that if sapphire was used it must be so many units long and so many cubits wide, and if there were a Virgilian amethystine top stratum it must be of certain cubic content. It was simply a dimensional standardiza-

tion of the intercollegiate mind. But it was a great step forward.

The elementary and secondary schools were still free to use chrysolyte or chrysoprasus, sardius or sardonyx, in whatever order they chose, or to make concrete of their precious stones if they preferred. And newer and synthetic disciplines, as contrasted with what were known as the " natural disciplines," were also included in the dimensional or syllabic tables.

Coincident with this prescription of content, there came the definition of the time-unit. So universally has this unit, known generally as the Carnegie unit, been adopted, that I have intimated that it might well be included among the tables of weights and measures which appear in the arithmetics:

45 minutes make an " hour "
5 " hours " make a " week "
36 " weeks " make a " unit "
15 " units " make a " matriculant "
5 " matriculant " hours (for one year) make a point or count
60 points or counts make a degree.

Here, then, is the status reached by the colleges in the East: we have entrance requirements standardized as to content and time.

But while the length and height and depth of the several foundation stones have been prevised

and adopted, and while twelve foundation years, elementary and secondary, are indicated in the specifications of practically every Eastern college, there is now a greater variety in the foundation material: chrysoprasis, which is Greek, is seldom used; sardius, which is Latin, is no longer universal. Instead are found stones of disciplines of more recent origin: sedimentary rocks, deposited by modern experience, synthetic stones, made in scientific laboratories. Indeed, the secondary school builders, who are engaged in the laying of foundations for life as well as for college—and mainly for life—are more and more insistent that whatever is used for the life foundations shall be accepted as suitable material for the college entrance: Greek or biology.

There is prejudice against synthetic articles which are "just as good." There is a prejudice in favor of the old labels. Cottonseed olive oil may have the carbon, oxygen, and hydrogen in the same proportions as the oil produced from the fruit of Minerva's tree; terra cotta (man-cooked earth) may be more lasting than marble God-composed, reënforced concrete than building stone, but it is only slowly that inherited appraisements are modified.

This admission of new disciplines in the secondary period, with selective liberty, has resulted in enrichment, as in the case of the college cur-

riculum, but there are signs that asterism or constellating is setting in these as in the collegiate system. I have no prophecy to make here except of a thought which came to me in midocean last year—out where provincial and national considerations are less disturbing—the thought that if we could but bring together and into comparison the content of what each people thinks it most essential that its children should receive, up to the age of sixteen, let us say, through formal teaching out of its own experience and that of the race—what information, what discipline—we should, after eliminating that which is local and peculiar to each people, reach the race's educational foundations. We should find what are accounted the vital, elemental, conscious tuitions of what President Butler calls the " international mind," of the race mind, which, as a poet-teacher, Woodbury, has put it, has been " building itself from immemorial time out of this mystery of thought and passion, as generation after generation kneels and fights and fades, takes unerringly the best that anywhere comes to be in all the world, holds to it with the cling of fate, and lets all else fall into oblivion." I believe that though this formal tuition, which every people gives to its children, is colored by prejudice and restrained by tradition and distorted by individual ignorance and selfishness, it yet gives a clear indication of the disciplines and

knowledges by which the race is to rise. It is that genius of the species which, as Maeterlinck says of plants, is to save it from the stupidity of the individual. It is that which gives one confidence in a democracy, in the great, deep instincts of the race.

Upon these deep racial foundations are these colleges East or West to be built and not upon an incidental art or upon elected fragments of this or that, valuable as they may be as a basis for certain life occupations.

New disciplines are to be admitted to these foundations; the new racial acquisitions must be gradually embodied as a result of the new uses which the race is making of this earth and universe, but their values must be tested, whether you use the figure of nutrition or stress and strain.

There is need, incidentally, of a great laboratory for the study of such nutritive values, such intellectual physics, entrance qualitative analysis, —for such studies as Thorndike, of Columbia, for example, is carrying out.

I hold to the Apocalyptical figure a moment longer, until I have said that we are now at one of the many gates into the place of understanding (for as there are many gates pictured for the place of ultimate happiness, so are there many for this place but set each at the same foundational height).

And if I, unable to describe, in any detail or in any reliable generalizations, the colleges of the East as they actually are, tell you, having led the way to their gates, what I see them to be in the prospect or in probable future of my confident hope, and any assisting effort that I can give, if I can point you to the place in the heavens to which they are moving, I beg you will let that be my contribution to this symposium.

The multiple "place of understanding" is the place not only of better compensation, of higher specialization, of longer days, of longer years, or nights as well as days, but the place where the world is "reborn in the young soul" (to quote my poet-teacher again), where the pollen of the past's richest, noblest flowering is caught into a fresh-blown mind—a mind which would have been sterile, without these microspores, these microcosmic seeds scattered from a rich world mind;—the place where through disciplines, and knowledges, the literatures, sciences, and arts, one enters into a race mind, goes out into the bush as the Australian youth with the sage of his tribe to learn its solemn secrets,—that is, into an understanding of the "continuing sacrifice" through which one age has fed the next, one culture has given its fruit to another, one mind has lighted a generation, while burning itself out.

And the curricula are to be molded not primar-

ily by pedagogists, but by great poets and philosophers of science, the transfigurers who will fuse the knowledges through new interpretations, bring to youth a world literature, an all-embracing science, a synoptic, social gospel, and a practical philosophy, whose supreme end, as Kant said, is to find "the method of educating and ruling mankind." Precursors and transfigurers, who will convert atom and molecule, ion and electron, root and blossom into spiritual phenomena and forces, even as he who first dreamed of the atomic theory and laid aside his own affairs to learn the nature of things (natura verum) and relate them to the nature of the gods (natura deorum). I do not venture to predict the detail of these curricula, but I do know that they will not be gerrymandered by softness or narrowness or numerical avarice.

They are to be curricula of personal salvation (for I borrow the intimation of C. Hanford Henderson's answer to the august question, "What is it to be educated?" that "education and personal salvation are one and the same thing").

I have been impressed, rereading Dante's "Divine Comedy," by the wonderful discrimination shown in providing for the punishment of souls lost or in limbo. There is not a prescribed or elective number of objective standard units of agony to be endured. Such an inferno or purgatorio would have made his great epic as uninterest-

ing and colorless as the average college catalogue. No. His punishments take character of the souls of the men who are suffering. Their tasks are fitted to their soul's needs. They are not simply doing things, pursuing purgatorial and infernal vocations; they are working out their soul's salvation or their soul's eternal torment.

And that curriculum of salvation is to be vitally, daily related with the earth life, the home, the community, the state, the world,—with the race mind.

These colleges are not to be like unto the colleges which Samuel Butler describes (in that satire "Erewhon" which Augustine Birrell has called the best of its kind since Gulliver)—the Colleges of Unreason, where the principal study was "hypothetics," where they argued that to teach a boy merely the nature of things which existed in the world around him would be giving him but a narrow and shallow conception of the universe, which it was urged might contain all manner of things which were not now found therein, and where they spent their time in imagining all sorts of utterly strange and impossible contingencies, conversing even in a hypothetical language and having, indeed, to maintain professorship of Unreason and Evasion in order to preserve vested opinions and traditional creeds out of which the race has risen.

For the colleges which I am describing are to be ready, alert, to weave into their curricula what the new human uses of the world add to the race's consciousness so far as it can be interpreted and is vital to be preserved.

I had once to defend a college course which was conventionally so uncultural that it was necessary to open the windows. It was a course in public health. Going one day to the laboratory I had difficulty at first in staying in the room. A half-dozen college men were standing around the carcass of a cow that had died or had been put to death because of tuberculosis. "Uncultural?" I said. "These young men are preparing themselves to perform the duties of an office which is the nearest of all our existing public functions to those of the most sacred official in ancient life." We have the highest classical prototype for them. He was the *haruspex* who examined the entrails of animals in order to divine the will of the gods. These young men were examining the interior parts of a cow in order to interpret the laws of God to men. If Virgil had only put this into his Georgics, the process might have risen to cultural dignity.

If this multiple college is to be merely or chiefly a place of *discipline*, then its tasks might better be given over to the high schools, to the *gymnasia*. If it is to be a place of special preparation for life, then it would better give way to the professional,

the technical school, the university. If it is to be a place merely through which to attain, in an agreeable way, social position and conventional culture, to take part in contests of bodily strength and skill, or to enjoy only the companionships and friendships of living (that is, if it is to be a great college, country or city, club), it is perhaps hardly worth preserving as an American institution. But if it is to be *for the many* (what it has been, thank God, *for the few*), if it is to be *for all the fit*, a place of understanding, of rebirth, of entering the race mind, then is the college which I see in prospect the most precious of all our educational possessions.

I am not sure that I have made it sufficiently clear in outline or curriculum so that you can even tell (to borrow an observation of Gilbert Chesterton's) whether it is a "cloud" or a "cape," a star or a light upon earth. And this would be an unhappy attempt at definition if I left you in doubt, for, as Chesterton has further said, the most dangerous ideals are those which may be taken for something practical and the most dangerous practical things are those which are taken for the ideal.

But I assure you that the thing I see is a "cape" and not a "cloud," that it is something substantial which will build itself impregnably not alone on some "cape sublime" frowning upon the

idle foam of time, but in whatever latitude or longitude colleges stand with such a purpose as that which I have tried to define,—there gather great souls as teachers. This is the prospect that I have in hope and desire for the colleges of the East.

THE PRESENT STATUS AND PROBABLE FUTURE OF THE COLLEGE IN THE SOUTH

PRESIDENT WILLIAM P. FEW

The development of American institutions of higher education is one of the outstanding facts of our time; but this development has largely taken place within the last fifty years. And while this development in other parts of the country has been going on, the educational history of the Southern States has been interrupted by the devastations of civil war, by the nightmare of reconstruction, and by long, tedious years of convalescence.

For a good part of the past half-century educational conditions in the Southern States have therefore been altogether chaotic. The circumstances considered, however, much has been accomplished by self-sacrificing and high-minded men and women. These willing and capable workers for their devotion to great causes and for their personal qualities deserve high rank among American teachers of their generation. But they have

been hampered by lack of material and educational equipment.

In these impoverished and confused times it has been difficult to standardize our Southern colleges at the level of the best educational thought and practice. But towards this end several causes have steadily worked. Such has been an organization, for example, like the Association of Colleges and Preparatory Schools of the Southern States, begun nineteen years ago with a membership of six colleges and now composed of all the stronger colleges and preparatory schools. This association exists for the promotion of better educational standards and ideals, and it has from the beginning been an influence for good.

Another such agency is a movement started by the Southern Methodist Church seventeen years ago. In the year 1898 the General Conference of this church created an educational commission to consist of ten practical educators who should have full authority to formulate minimum requirements for admission and graduation, these requirements to be enforced by all colleges affiliated with the church. Since that date the commission has met at least once during each quadrennium and has prescribed standards by which all colleges affiliated with this church have been classified.

A third agency, important though its influence on college standards has been indirectly exerted, is

the General Education Board of New York. This board has set up no educational standards to which colleges that would seek its aid must conform. But it has made wise and statesmanlike efforts to strengthen some of the more promising colleges; it has had on exhibition in its office carefully collected data on Southern colleges; and it has done something towards bringing Southern colleges into contact with educational methods and men in other parts of the country. All of these things have had a tendency to lift the general level and so to raise the educational standards of Southern colleges.

Still another agency is the Carnegie Foundation for the Advancement of Teaching. The Foundation adopted a definition of a college and a standard of entrance requirements, and declined to put on the Foundation any institutions that did not conform to its standards. The desire to be placed on the Carnegie Foundation has influenced very few Southern colleges to raise their standards. But the Foundation has exerted a still more potent influence. President Pritchett made a thoroughgoing study of American colleges and published the results. He gave each college a rating on the basis of its admission requirements. This publication had a wide circulation and exerted an unprecedented influence.

The last agency which I shall mention, and the one which is intrinsically the most interesting and

ultimately the most important, is the small number of individual institutions that have, through all the cross purposes and warring forces of our years of educational wandering, been courageous enough and far-seeing enough to stand and call aloud, as the voice of one crying in the wilderness, for a better order of things, and that have not hesitated to sacrifice in so great a cause the prestige of numbers and the more immediately satisfying compensation of tuition fees. These colleges have stood as beacons of light along the hard road of progress and as bulwarks of strength against which the intellectual confusions, and even at times the surging passions of the hour, have dashed themselves in vain. To such colleges—and they have been found in all parts of the Union, North and South—the country owes a debt of gratitude it can never pay.

Such forces as these, though different in origin and different in the method and sphere of their operation, have all been working together towards one end,—the making of stronger, better equipped, and more serviceable institutions of the higher learning throughout the Southern States. And they have all been strengthened by the new prosperity and hope that in recent years have come to Southern people. Improvement is now everywhere evident and is sure, I think, to go on rapidly. Movements in our time when once set forward are apt to be quick and far-reaching in their results.

The South has already a number of colleges that in standards of work, in ideals of excellence, and in the quality of the men who teach and the quality of the men who are taught are thoroughly respectable, even when judged in the light of the great colleges of the world. Colleges of this sort are of inestimable value in Southern civilization. They will set the pace for the intellectual life, and through their influence on the lower schools and through the leaders of the people that they supply will have a large share in shaping and molding the structure of our entire civilization. The colleges themselves are being rapidly refashioned and, in a period of flux and change now, they are nevertheless taking a setting and direction that are apt to fix their character and work for many years to come.

Southern colleges, then, coming into their period of growth at a time when colleges in other parts of the country have reached maturity, have the extraordinary opportunity to develop in the light of the experience of others. We ought to learn from the mistakes of others as well as from their successes. And the future of our colleges will depend on how well we learn our lesson. Especially must we learn how to bring the processes of education effectively to bear on a larger proportion of students. The growing importance that secondary concerns hold

in the thought of undergraduates is more and more tending to obscure the true ends of a college course. If we will take command of the situation before the tyranny of public opinion is fastened upon us by students, young alumni, and communities taught to demand this sort of entertainment at the hands of colleges, then I believe it will be possible for us to shift the center of interest from athletics and other equally irrelevant undergraduate absorptions to the intellectual pursuits and wholesome recreations that are proper to college life. This shifting of the center of gravity will be helped by adequate regulation and due subordination of athletics; by demanding strict attendance upon college duties; by exacting a reasonable amount of intellectual work; and by enforcing rigorous standards of scholarship. In developing our colleges we have the chance to put upon self-cultivation and wholesome living an emphasis they do not now usually get in American colleges.

Our opportunity consists partly too in strengthening the personal element in education and thereby attaining the end for which colleges primarily exist, that is, to bring the right kind of teacher into sympathetic and helpful contact with the right kind of student under conditions that will make for the highest success and happiness of both teacher and student. The pioneer stage in American education has passed. The propaganda

for enlarged and improved educational machinery and organization has won. In nearly all of our states education as an opportunity for every youth has been achieved. The watchword henceforth is to be not more education but better. And this better education, we all concede, can only come through better teachers. How to get better teachers is a question much discussed. "Higher salaries," says one. "Better technical training," says another. "More expensive equipment in buildings, laboratories, libraries, playgrounds," say still others.

But success in this difficult field, I believe, lies rather in magnifying the office of the teacher, and in giving to education itself a larger meaning and mission for our whole national life. Hirelings never can give the truest service. The measuring of a man by the wage scale can never lift teaching above a stale and unprofitable business.

Over against this conception we now have the opportunity to set the doctrine of the teacher as a worker at the hard tasks of society, as a builder of civilization, who, if he be efficient enough, may become a shaping, transforming influence like Moses or Socrates. Thoughts and aspirations are after all the greatest forces in civilization, and from educators and those they educate must come this high leadership of ideas and ideals in the service of the republic. The measure of the teacher's

influence is not the amount or quality of intellectual nourishment that we may dole out to docile youth, but the kind of guidance he gives to individual minds, to communities, and to states and the moral energy that he succeeds in producing. And teachers of this higher sort can never be bought.

Expert training is not our supreme need, either. For teachers, our schools of all grades need not simply experts in the several branches of learning, but men and women of ideas and power. The too exclusive use of scholarship tests in the selecting of teachers is, in my judgment, one of the gravest defects in modern education, especially in our American colleges and universities. Men and women of ideas and originating power are needed at all times, but they would seem to be especially needed in times of unsettlement and rapid change. And in spite of all misgivings, most competent men actually at the work of upbuilding and rebuilding Southern civilization believe that we are standing now at the very threshold of a new era of growth and development. The belief itself, even if it were not so amply justified by the facts, would tend to produce the expected result. An age of hopefulness is apt to be an age of achievement.

I do not underestimate equipment and organization, but I would emphasize the fact, which is so often overlooked in our time, that these things are of no value except in so far as they furnish the

means by which competent men and women may work effectively. The one sure way to promote the welfare of the state and nation is to build soundness into the mind and character of the youth of our country. Those who have command of this source of power must not mistake themselves or be mistaken by others for innocent pedagogues and school-keepers. Affording as it does opportunity for the exercise of creative ability and for a high order of usefulness, life for us teachers, we ought to feel, is not a weak and passive thing, but a great and noble calling.

Despite some superficial appearances to the contrary and despite some real difficulties that must be overcome, I am convinced that this section has the best chance in America to build up at least a few, I will not say big, but genuinely great educational institutions within this generation. And therefore, I think there never was in the history of the world a more inviting field for teachers with building power than right here and now; and this sort of teacher is going to be developed and held not by institutions that put their faith in size, in numbers, in big material resources, but rather by those that are dedicated to sound ideas and disciplined by sacrifice in the causes of men. For it is never the material but the ideal that abides and commands.

The greatness of our colleges will depend upon the elevation of the teaching profession, and the eleva-

tion of the teaching profession does not depend upon higher salaries, better technical training, or more elaborate equipment, but upon giving it the proper dignity and importance in our life. This involves a new and truer popular understanding of education. And education we must come to regard not as an agency for making skilled wage-earners or experts in knowledge, but for developing men of moral and intellectual competence. This defining of education to include not merely the training of the hands or the mind but the shaping of the whole personality lifts the teaching profession into a great art in which excellence is as well worth striving for as in poetry or architecture, and in which success is perhaps harder to achieve; for this art deals with the most difficult as well as the most precious material in the world.

And I have the faith to believe that at least some of our colleges will go this way to greatness.

THE PRESENT STATUS AND PROBABLE FUTURE OF THE COLLEGE IN THE WEST

PRESIDENT WILLIAM F. SLOCUM

The college has a well differentiated character and history in the educational evolution of the United States. It was the earliest organized institution for the higher learning in the country, and has so maintained its position and continued its contribution to the moral and intellectual life of the nation that, as has been said of it by our ablest expert, it is "the most permanent factor in our educational system."

Successfully it has borne adverse criticism, wisely adjusted itself to the growth of methods while broadening its range of subjects whenever reasonable demand has arisen; but no foundation has so persistently and consistently held to its main purpose and its high ideals as the American college. Universities, technical education, public school systems, have passed through distinct modifications, while with its dominating ethical and intellectual purpose it has steadily and persistently maintained its unifying ideal.

The all-controlling end of the true college has been, is and always must be, to train men. It exists primarily to produce persons of character and intelligence, who as such can hold successfully the position to which they are called, and do well the work for which they are especially fitted.

The English colleges from which the American sprang, seeking to discover truth by means of scholarship, with their tutorial system and more than a score of presidents for three thousand students, have made the spirit of their training individualistic in order to produce leaders in the political, social, religious, and intellectual life of that empire. The Oxford and Cambridge colleges have been the center of " the humanities," because of their intellectual and moral discipline. Affirming that these studies appeal directly to " the finer instincts and affections," they have produced fully developed men with noble sentiments and strength of character. These colleges are the mothers of commanding leaders and great movements. Without them England's political, ethical, and religious life would have been unspeakably less powerful. The English college is the representative of the strength of her character and her institutions.

It was this that Lord Bryce so strongly emphasized in his memorable address, when the Rhodes Scholarships were established at Oxford, as he urged that there should be the utmost possible

degree of efficiency in equipment and instruction for scientific education; but he insisted still more strongly that to subordinate the interests of the humanities to those of science is deliberately to dethrone the essential function of the college. He agreed that there should be a scientific foundation for every department of industry in its application to the arts of life, but said that this is not the primary function of the college, which has a much more fundamental and essential part to play in the creation of the leadership of the nation.

The mission of the college has been and always must be, in the old world and the new, in the East and in the West, to train men, by means of teaching, to be servants of humanity. The great business of the college is to teach, and by teaching to fit its students to become serviceable in the life of the world.

It is not so much what it teaches and how many subjects; but something it must teach so that its graduates shall be strong to serve, and powerful enough to battle the evil of the world, and construct virtue in the characters of men and women. This was why the Oxford College taught the humanities, why the famous University of Salerno had but one faculty; while both alike sought to create scholars who should "serve their fellowmen."

The main purpose of the German gymnasium and university is to discover truth and to make it known in all its relations; the English and American college has always sought to discover truth by scholarship and train men for service. This must ever be its exalted function, and its permanency is conditioned upon remaining true to its birthright and the highest of all educational prerogatives. To be false to the sacred trust which the college has placed in the keeping of its trustees and faculties is not only to sell one's birthright for pottage, but it is a sacrifice of the most momentous issues in the whole educational movement.

The college by no means assumes that it alone has assigned to it the ethical training of the leaders of the nation; but it stands as no other institution by its traditions, its history and ideals, as a foundation whose dominating end is the preparation of students for intellectual and moral leadership. This is the noblest of all missions in the training of the youth of a nation.

If the American college loses sight of this sacred duty, it becomes false to its trust, recreant and faithless before the most essential of all the ends for which an educational movement can exist. All attacks upon its function, all would-be modifications of its range and scope, and of its four years of opportunity for study and spiritual growth, are

the outcome of a misconception of the end which led to its foundation.

Lord Bryce's position is the true one. There should be the utmost possible degree of efficiency in scientific education; but to subordinate purely intellectual and moral discipline to the interests of science is not only to dethrone the essential intent of the college, but to miss the pre-eminent function of education.

Whatever the changes that have and must continue to come in subject and method, the end for which our fathers planned and toiled in founding Harvard College and those which followed should be conserved in the East and West, for the sake of the preservation of the nation and holding it to its mission in the life of the world. Three things were written large in the history and government of these early New England colleges: "piety," "morality," and "learning," all of them essential for "the public weal."

The status and future of the Western college must be tested by those purposes for which it was established and developed in England and America.

The maintenance of the college in the West depends very largely upon conformity to what it has been in the East, and upon the realization of the exalted aim which called it into existence, and which has been its genius in years gone by.

For this reason it is exceedingly important that

with self-respect it should stand independently upon its own feet, and refuse to be driven from its noble purpose by those who are interested, for good and sufficient reasons, in other types of educational foundations.

The attempt to modify its curriculum, to take away from it one or two years of the time which it must have for perfecting its work, is a mark of subserviency which is unworthy of its past history and its future possibilities.

The questions growing out of the length of time it takes a student to prepare himself for his life work, the forcing upon it of what is called the "practical side of education," and the demand for shortening preparation, especially when all this is done at the expense of the college, are fraught with gravest danger and serious consequences, not only to the college but to the best life of the nation.

A comparatively few years ago in the West the opinion was widely promulgated that the day of the college was past; that it was to be crushed between the secondary school and the university; that it was a sort of unnecessary luxury and that the day was not far distant when it must close its doors, discharge its faculties, and say to its eager young men and women: "There is nothing further that we can do for you, our mission is ended." That issue has been successfully met, quietly, ear-

nestly, and deliberately. The men who agitated this conception have either disappeared or for the most part have passed into silence, while the leaders of the college movement are standing with independence and self-respect, unmoved, courageous, and hopeful, declaring that the college is just entering on its largest mission and its most important work.

The same independence, far-sightedness, and self-respect should come into play in meeting the new form of attack upon its integrity, in the present advocacy of the so-called "Junior College." This is another demand that it should take a secondary place in the educational movement, step aside from its high office, and abrogate its unsurpassed opportunity for service. To yield to this new attack is but a step in the path which leads ultimately to its obliteration, and thus to lose sight of the most important element in the educational movement in America.

No intelligent person questions the place that professional and technical education has taken and must assume in the development of the nation. We must not forget also that there is enormous danger in the tendency which loses sight of what the English college conserved by its study of the humanities, which, as Lord Bryce says in the address to which reference has been made, "appealed thoroughly to the finer instincts and affections." It is

the old problem of the proper adjustment in the development of the individual between what is physical and that which is spiritual. It raises the question as to whether a nation given over to love of the material side of life, or, if you please, of mere science, is to find its true destiny. Is love of learning for its own sake, of literature, of poetry, of art, of philosophy, of ethics, and, most of all, of religion to sink into the background and lose its place of commanding pre-eminence?

In meeting this issue, as is being done in the West at the present time, on the whole with distinct success, it is recognized that four years in college is not necessary so much for certain courses of study as it is essential for giving opportunity for that intellectual and moral growth which is absolutely requisite in the production of trained men and women. The law of growth as established by the Creator bears even more fully upon the development of a human soul than it does upon the production of crops from the soil or animals on the face of the earth. Forced growth in the evolution of character is suicidal.

In discussing the present status and probable future of the college in the West, one must consider it in the light of what it has been in the past, and whether it can and will maintain its efficiency, its strength, and its peculiar character. Its value and its stability are conditioned upon con-

serving its primary mission of producing trained men for leadership.

One answer to this inquiry can be found in examining the condition of its physical and financial standing. Without income and equipment it cannot possibly do its work or fulfill its high prerogative. Reference will be made to only a few typical Western colleges, as illustrating the position taken in this paper.

It is not maintained that all the colleges of the West are fitted for the work to which they are called. Many of them ought never to have been instituted, as is true of other educational establishments. Others have so far departed from that to which they were called that they cannot recover, and should drop out of existence. Some have been founded on too narrow a basis to be of any distinct value.

If, however, it can be shown that there are certain colleges holding vantage ground of strategic importance which are doing effective work and carrying out the ends for which they were founded, it will establish the proposition that these and others like them should be maintained at all hazards. Moreover, there is not time to do more than refer to this limited number of institutions. What is maintained is that there are colleges in the West that rank with the best in the country, which are holding true to the traditions of the past and ful-

filling the intent of these well-differentiated and independent institutions of higher learning. Examination will be made of seven only, which hold widely separated geographical positions, and which are admirably and wisely located so as to be centers of large and commanding influence.

The first is Beloit College in Wisconsin, founded for the purpose of carrying out the conceptions which established New England institutions. It possesses endowment funds of $1,400,000 and buildings and equipment which have cost in the vicinity of $520,000. These have steadily increased during the past twenty or more years, and it has a group of 375 students, with an able and well-trained faculty. Its standards are such that colleges of its own type in the East accept its examinations. It has fulfilled in a marked degree the intellectual, moral, and religious purpose for which it was established in that section of the country.

The second is Carleton College in Minnesota, founded by the early settlers with a distinctly religious as well as educational motive. It has passed through years of struggle and heroic devotion. At present it occupies a place of influence in its important location. It had last year 456 undergraduate students, and its endowments have increased in the last seventeen years from $250,000 to a little over $1,000,000. Its grounds, buildings,

and equipments have a value of $565,000. Every college and university of the East is very glad to welcome as undergraduate or graduate student those who have passed the examinations at this institution. Its influence locally and nationally is already making itself felt in ways of which its founders would approve.

The third is Colorado College, located in the heart of the Rocky Mountain region, in a city preeminently well fitted to be a college town. It also was founded by the early pioneers for a very distinctively ethical and religious purpose. After years of severe effort and many discouragements, having made its standards the same as those of the leading institutions of New England, it began its advance movement. It has an endowment in carefully invested funds of $1,042,000, and has spent $968,000 upon buildings, equipment, and its library of 87,000 volumes. It has a faculty which will compare favorably in teaching power and intellectual strength with the faculties of other leading colleges of the country. Its graduates are received into the professional schools and universities of the country. Its students to-day number 708.

The fourth typical institution is located in the center of Iowa: Grinnell College. It, too, was founded by men of high character and rare devotion. It has held with great tenacity to high

ideals in its undergraduate work, and it has a faculty of unusual ability, which numbers among its members men of scholarship, whose publications are known throughout the scientific and educational world. It possesses an endowment of $1,305,000, and an investment in buildings, equipment, and library of $764,000. Its students number 663, and its educational standards are as high as those of any of the other colleges to which reference has been made.

The fifth foundation is situated in the state of Ohio: Oberlin College. Few institutions in the world have had such a record of loyalty to religion and intellectual standards as has this foundation. It, too, was established by thoughtful men possessed of a spirit of unusual self-sacrifice. Its regular undergraduate students number something over 1,000. It possesses an endowment, including its last gift, of over $3,000,000, and has an investment in equipment and buildings of $1,409,000.

The sixth is in California: Pomona College. Its early history is largely a repetition of what has already been said in regard to the others mentioned. Its standards are also recognized by the older institutions of the East, and it holds a place of strategic importance in its large and important commonwealth. Its students last year numbered 515, and its endowment at the present time is a

little over $1,000,000. It has an investment in equipment and buildings of $467,000.

The last institution is in the state of Washington: Whitman College. It holds an important situation in the new Northwest. Its beginnings were practically the same as those of the other foundations which have been enumerated. Its ideals, aims, and purpose are those distinctly of the historical colleges of the country. Its faculty has the same rare devotion, and it, too, holds a position with high standards corresponding to those of such colleges as Allegheny, Williams, and Amherst. It had last year an endowment of $663,000, an investment in buildings and equipment of over $300,000, and an enrollment of 450 students.

Here are seven educational organizations that have stood loyally to the historic standards, ideals, and purposes of the college. They have refused to yield to the demands that have been made and are still being made for a modification of courses and of the time occupied in the training of their students. They hold to the four years necessary for graduation. There are in them 4,057 students. Their invested funds, the income of which is used for current expenses, amount to $9,353,000, and the total cost of their buildings and equipments has been $5,012,000, making a gross valuation of endowments and equipments of $14,365,000. They

possess faculties that in scholarship and academic attainments will rank with those of such institutions as Williams, Amherst, and Bowdoin. Five of them are on the list of accepted institutions of "The Carnegie Foundation for the Advancement of Teaching." All have been recognized by the "General Education Board." Their graduates have won high distinction in the leading schools of medicine, law, journalism, theology, and science. Many of them are on the faculties of such institutions as Harvard, Yale, Columbia, Johns Hopkins, and Leland Stanford Jr. Universities. Others have become leaders at the bar, in the pulpit, in medicine and surgery. An unusually large number are statesmen of the highest order, and no group of colleges in the world has sent as many in proportion to their graduates into foreign service under missionary boards, as physicians, teachers, clergymen, and administrative officers. Their influence in the life of the world and of our own nation is of inestimable value. They have all now reached a point in their history where it is impossible to think of their disintegration or of their going backwards, either in their material prosperity or in their academic standing. It may well be doubted whether there are seven colleges in the world that are to-day doing as much for the moral, religious, and intellectual leadership as are those to which reference has been made. If one desires to

know the status and future of the college in the West, he has but to visit and critically study the present work of these seven typical colleges, to come in contact with their faculties and students, to examine their equipments, and, above all, to trace the history of their graduates in the life of the nation and of the world.

Without doubt all of these institutions could use to great advantage larger endowments and equipments and increased faculties. Practically every one of them is suffering from the stress and strain of restricted income and there is no institution in America which could be aided to greater advantage than these colleges and those that are like them, if one cares for the moral, religious, and intellectual standards of the nation.

In spite of these limitations, they are rendering a service of incomparable value and are holding to those conceptions and ideals which have made the English college a power in the history of the British Empire, and the American college a force in the creation of the best leadership in the country.

Their past history, however, is not comparable with the possibilities of their future service. The almost irresistible movement towards the domination of material things, the power of wealth, the struggle for preferment, are tending in many ways towards lowering of ethical standards, and against

that which Lord Bryce has said are the essential qualities in the making of a nation.

Without such influence as they exert political and moral decline will come to this people as it has to others. The holding of the nation to the " finer instincts and affections " which make for strength of character carries with it the glory and sanctity of a commonwealth.

It still holds true that the great business of the college is to fit its students to be serviceable in the life of the world, and so to " serve their fellow-men." Its effort must ever be to discover truth by scholarship, and train men for service. This is its birthright, and this is also the noblest of all educational prerogatives. The university and the technical school have a mission of far-reaching significance. There is also a well-defined and differentiated mission for the college, which, if lost sight of, destroys its raison d'être.

No college to-day has fully risen to the importance or the privilege of its opportunity. It needs to guard itself with great care in order that it may realize its errand to humanity, but that it is rendering a service of incomparable and inestimable value there can be no doubt.

THE FUNCTION OF THE COLLEGE AS DISTINCT FROM THE HIGH SCHOOL, THE PROFESSIONAL SCHOOL, AND THE UNIVERSITY

PRESIDENT ALEXANDER MEIKLEJOHN

I MUST begin this paper by asking a question—a question addressed to the audience. The answer is a matter of vital concern to me. I wish to ask you whether from one statement which I shall give another logically follows. If we say that everything that could be said about the American college has been said, does it follow that there is nothing more to say? My own opinion is that it does not follow at all and I appeal to the science of logic for justification. That science tells us that whatever has been said in one way can be said again in another, and that perhaps just such translation into other forms is the chief task of what we call thinking. And especially logic tells us that whatever has been said in affirmative terms may often, to great advantage, be expressed in negative terms.

If it is truly said that "John is in Boston," it is also safe to remark that "John is not in New

York," and this latter statement may be of much greater importance to some of John's friends. There is, of course, a difficulty, namely that it is hard to exhaust the content of the negative judgment. When once you start on this process the trouble is not to find something to say but to tell where to stop in the illimitable expanse which lies before you. It is well enough to say that John is not in New York, but if you proceed to tell all the places in which John is not, considerable time must be allowed for the operation. While, therefore, I insist that this logical principle be accepted in order that I may have a subject to talk about, I beg the audience not to be terrified by its possibilities. For general purposes, logical principles must be applied sparingly and with discretion. It is quite possible to have too much of a good thing.

But the one point on which I do insist is that in spite of all the wisdom of these ten wise men who have preceded me there is still something left to consider. They have told you what the college is. I may try to tell you what it is not. They have told you what the college has, what it does, what it has accomplished, what it dreams, what it will be in the days to come. Somewhere within the field of what it has not, what it does not do, what it has not done, what it does not dream, what it will not be—somewhere within this field, for which one

might claim infinite time, there lies the subject of this paper.

If, then, we were with any fullness to define the function of the college in negative terms it would be necessary to show and to explain that the college is not a high school, not a professional school, not a university, nor any part thereof. But everyone knows that there are many kinds of high school, many types of professional school, many separate schools within a university. If we should discuss each one of these "separatim et seriatim," showing that the college is not any one of them, is different from them all, I fear that the consequence for you would be much weariness of the flesh and great vexation of the spirit. But again the kindly science of logic will hurry to our rescue. That science has another valuable principle, viz., that there is no sense in denying a statement unless someone has asserted it. What assertions, then, of the identity of the college with other institutions are just now being made with sufficient insistence to demand our attention? There are teachers who seem to find little difference between the college and the high school, but their lack of perception is not very important. We are just emerging from a period in which the college has been regarded as a part of the university and has been identified with the whole in essential attitude and spirit. But the day of that confusion is

rapidly closing. The one confusion which does today threaten our understanding of the function of the college is that which identifies it with the professional school, which declares that there is no genuine education which is not really professional, which characterizes the belief in a "liberal education," separate from and independent of vocational and professional study, as an idle creation of dream and fancy. In these pragmatic days such a confusion as this is likely to spread far and wide. It is not the only instance of pragmatic thinking which just now threatens the clarity of our educational policy, but it is an especially dangerous one because it strikes at the very roots of all our liberal teaching. Amid these days of celebration and study of the American liberal college, I should like to smite as hard as I can hit at this heresy which denies the very belief on which that college is built.

The heresy is hard to meet just now because in a sense it catches us off our balance. Under the influence of the university ideal the colleges had been saying to their students, "Study anything you like; all knowledge is good; in fact, all knowledge is equally good; make your choice, follow your bent; if only you keep going in any direction a liberal education is assured." But as against this, we are seeing more and more clearly every day that the content of a liberal education is not

thus indefinite and indeterminate, that there is an intellectual culture which one must master if he is to travel the way of liberal education. And in our enthusiasm we have been crying: "Back to the good old college of earlier days, away with the extravagances of election and specialization, let us return again to the fathers, to the requirements which they established, to the college which they founded." And here it is that the subtle and dangerous heresy finds its opportunity. "Do you wish definite and coherent requirements?" it asks. "Very well, you will find them in the professional school." And if we protest that these are not the requirements that we had in mind, that they are not liberal but technical, then there descends upon us a crushing and bewildering argument. "You wish to return to the spirit and practice of the old colonial college," it says; "very well, do so, but first recognize that the college which you imitate was itself a professional school. The colonial forefathers were not wasting idle dreams on this airy nothing which you call 'liberal training.' They needed ministers for their churches and so they founded colleges to train those ministers. The colleges which they established were in essential purpose schools of divinity, schools to train young men for the profession of the ministry. They were devised for a special purpose and the forefathers were shrewd enough to see to it that that

purpose was realized." And from this assertion as its premise, the argument proceeds to its conclusion.

"The old college was professional in spirit; then so too should we be who imitate it in spirit. But the old college intended to train for only one of the professions. To that end all its courses of study, all its methods of teaching, were adapted. It will never do to give the same courses of study, the same teaching, to the boys who are planning for other professions. Loyalty to the old college demands that for each profession its own special system of preparation be devised; we in our day must do for lawyers, engineers, physicians, architects, for each of these what the fathers in their day did for the students of divinity." So by the argument the college becomes simply a collection of professional schools; liberal education as a thing apart has disappeared. And we arrive at a new definition of the American liberal college,—it is an institution which some people had mistakenly believed to exist.

In considering the effect of such an argument as this it is necessary to take into account the secondary result as well as the primary. The first effect, as in the case of all honest conflicts with convincing arguments, is that you find yourself knocked down. The second stage of the experience, however, reveals two facts: (1) that you can get up again,

and (2) that you are not hurt, indeed that you are rather exhilarated by what has happened. This secondary stage is proof positive that you have not been hit by anything solid. At this time, it is in order to inquire what it was which, at the moment of impact, gave such an impression of solidity.

The most interesting feature of the argument is that the premise on which it depends is not true. The premise asserts that, in the sense in which we now use the term, the colonial college was a professional school. But it was not, nor was it intended to be. The supposed evidence for the assertion is simply a confusion as to the meaning of another statement which is true. There is no doubt that one of the primary motives of the founders of the early colleges was to provide for the education of the clergy. But the assertion under discussion is not identical with this, nor does it follow from it. And apart from questions of inference, the plain facts of record concerning the purpose of the founders forbid the suggested interpretation of their intention. He who would hold to this interpretation must maintain two assertions concerning our colonial forefathers: (1) that they did not mean what they said, and (2) that they did not get what they paid for. My impression is that the antecedent probability is in both cases strongly against my opponent.

With regard to the purpose which the colleges were intended to further, there are clear expressions in the charters under which they were established. The assertion under discussion is that these colleges were established to give professional training to ministerial students. The charter of Harvard College, granted in 1650, defines the aim as "for the advancement of all good literature, arts, and sciences." The new articles of 1780, reviewing the achievements of the college, say "in which University many persons of great eminence have, by the blessing of God, been initiated in those arts and sciences which qualified them for public employments *both in Church and State.*"

The charter of Yale University, the Collegiate School of Connecticut, describes it as a school "wherein youth may be instructed in the arts and sciences, who through the blessing of Almighty God may be fitted for Public employment *both in Church and Civil State.*" The charter of the Academy and Charitable School in the Province of Pennsylvania approves the project, "hoping that this academy may prove a nursery of wisdom and virtue, and that it will produce men of dispositions and capacities beneficial to mankind *in the various occupations of life.*" The charter of Kings College in New York provides for the instruction and education of youth in the learned languages and in

the liberal arts and sciences. The announcement reads in part as follows:

"A serious, virtuous, and industrious Course of Life being first provided for, it is further the Design of this College, to instruct and perfect the Youth in the Learned Languages, and in the Arts of Reasoning exactly, of Writing correctly and Speaking eloquently; And in the Arts of Numbering and Measuring, of Surveying and Navigation, of Geography and History, of Husbandry, Commerce, and Government; and in the Knowledge of all Nature in the Heavens above us, and in the Air, Water, and Earth around us, and the various Kinds of Meteors, Stones, Mines, and Minerals, Plants and Animals, and of every Thing useful for the Comfort, the Convenience, the Elegance of Life, in the chief Manufactures relating to any of these things; And finally, to lead them from the Study of Nature, to the Knowledge of themselves, and of the God of Nature, and their Duty to Him, themselves, and one another; and every Thing that can contribute to their true Happiness, both here and hereafter."

Surely this is a strange course of study for a divinity school!

One of the most illuminating cases is that of Brown University. The expressed intention of the founders of Brown University was "to establish a seminary of polite literature subject to the Government of the Baptists," and beyond question they

were planning for the education of their own candidates for the ministry. But does this mean that they planned to give professional theological training in the college? If so, why is it specified that youth of all religious denominations shall be accepted? Was it intended that Congregationalists and Episcopalians should become Baptist ministers? And why is it so definitely stated that " the Sectarian differences of opinions shall not make any Part of the Public and Classical Instruction "? Is it customary in a divinity school to forbid the discussion of the tenets of the sect by which the school is established? There was no such restriction when the first divinity school was established at Andover in 1807, for then the project was delayed until the founders could agree what creed should be taught, and until it had been voted that each professor should assent to the creed which the Hopkinsians had prepared. Is there not a different motive here from that expressed in the charter of Brown which says, " Into this Liberal and Catholic Institution shall never be admitted any Religious Tests but on the Contrary all the Members hereof shall for ever enjoy full free Absolute and uninterrupted Liberty of Conscience "? In 1770 the trustees of the new college in Rhode Island voted " that the children of Jews may be admitted to the institution and intirely enjoy the freedom of their

own religion without any constraint or imposition whatever." Was it in order that they might be prepared for the priesthood of their own church, or was it in the hope that the free and unhampered dialectic of their own Jewish faith might bring them eventually into the Baptist pulpit?

I have given only a few quotations from the charters and early statutes, but on these we may safely rest the case as to the purpose of the founders of the colonial colleges. Some people are saying to-day that the intention was to give technical training for the ministry. The charters say that the colleges were established to give teaching in literature, the arts, and sciences, with the expectation that this teaching would be of value both in church and state, in all the various occupations into which young men might go. For my own part, the evidence of the charters is the more convincing. I am inclined to think that the colonial forefathers knew what they meant and meant what they said.

But now for the test of the work done. Whatever they said, did the colleges actually train men for the ministry in the sense in which professional schools are now preparing them for separate occupations? In his book on Educational Reform, President Eliot records that in the ten years from 1761 to 1770 the percentage of ministers among the graduates of Harvard College was twenty-nine,

among those of Yale thirty-two, and among those of Princeton forty-five. In the first thirty-nine classes graduated from Brown only twenty-five per cent. of the members entered the ministry. Now what shall we say of the seventy-one per cent. at Harvard, the sixty-eight per cent. at Yale, the fifty-five per cent. at Princeton, and the seventy-five per cent. at Brown? These men were planning to practice law, medicine, teaching, business. Why did they go to a divinity school? Did they think that a man who is ready for the ministry is ready for anything? The statement is perhaps true, but hardly relevant. I venture to suggest that their real opinion was that expressed in the charters we have quoted, viz.: that the education which the college gave was regarded as of value to a man whatever the profession into which he might go. If it be urged that there were no other schools to which they could go, I should reply that in that case, if they had wanted something else, they would have made protest long and loud, and would have demanded changes in the old colleges or the establishment of new ones. But a record of the attitude of the lay graduates of our colleges is not one of fault-finding and protest. Rather have they shown unswerving loyalty and gratitude, and because of their faith in the college and its teaching, they have poured out the wealth which has enlarged the college to proportions of which its founders never

dreamed. Benefactors and graduates alike have believed in non-professional education, and have believed they were receiving it. He who says that they have paid for professional education says that they have paid for what they thought they were not getting. Knowing them as I do, I find the statement hard to accept.

The point just made presents itself in another form when viewed in relation to present conditions. To the old college there went students planning to enter all the professions, and they found there the education which they sought. Of what professional school is it true to-day that candidates for the other professions go to it for training? Are there many law students in the medical schools, many engineering students in the divinity schools, many architects in the schools of music? Would it not be a new type of engineering school which should attract forty-five, fifty-five, seventy, or seventy-five per cent. of students going into other professions? I think that if we found an engineering school of that type we should begin to give it ferent function from the one we had assigned it, another name, should recognize it as having a difshould take away from it the name " professional " and call it " liberal," a school in which are to be found studies and teaching of value to a man whatever his profession may be. To call such a school technical or professional is simply to twist terms

out of all resemblance to their ordinary meanings. It indicates a confusion of thought which demands more careful analysis of the argument than we have yet given. It will be worth while to examine it more closely.

The argument as it stands is one of the most common types of fallacy. It says, "The colonial college prepared men for the ministry; hence it did nothing else. It is the argument "a is b, hence a is only b," or again, it is, "if an object have a given quality, then it has no other quality." "Charles Darwin was an Englishman, hence of course he was not a biologist." "Spinoza was a grinder of lenses, hence he cannot have been a philosopher." But Darwin was a biologist in spite of the argument; and Spinoza did dominate the thought of Europe, even while grinding lenses in his garret. The trouble with the argument is that the conclusion does not follow; there is no logical connection between conclusion and premise. A may be b and yet be also c and d and e as well. A college may be a good place for a young man who plans to enter the ministry and may yet have qualities and purposes of which that statement is in no sense an adequate description. It may well be that its value for ministerial students is only one phase of its total and fundamental function. That this is true is already apparent from its appeal to students of other professions. If we can now de-

fine this total appeal, the confusion should disappear and the modicum of truth which the argument contains should separate itself out from the vast error in which that truth has been involved.

The real motive of the founders of the early colleges, so far as it concerned students for the ministry, appears in the account given by Walter Cochrane Bronson in his History of Brown University. The Baptists, he tells us, were eager to have a college under their own control, to which their ministerial students might go. But why? Was it because they were not sufficiently supplied with ministers, or that the candidates were unable to secure the technical training needed for their profession? Not at all. The reason, he tells us, was that at the time Brown was established "there were only two Baptist ministers in all New England who had what is called a liberal education; and they were not clear in the doctrines of grace." Now in accordance with the custom of the time, the leaders of the denomination could easily provide for the professional training of their boys by placing them in the charge of older men who regularly gave such instruction to their apprentices. But they recognized that the denomination could not hold its own, could not achieve its purpose in the community unless its ministers were men of power and intelligence, men who could lead and dominate the men about them. And so the

Baptist Church provided for the education of its young men who were candidates for the ministry. Did it provide for their technical theological instruction? The charter of the college specifically denies this. The purpose was to educate ministers,—but in what sense? Our opponents have interpreted the purpose as that of educating men to be ministers. The real purpose was that of educating ministers to be men. And at the same time by the same methods they were educating lawyers to be men, and teachers, physicians, and business men to be men. The same argument which proves the old college to have been a divinity school would prove it to be a law school, a medical school, a school of pedagogy, a business school. But the argument proves too much. There is a limit to the number of different things a single thing can be. The old college did educate ministers just as it educated candidates for other professions, but it did not give to each of these groups a different education. It was dealing with something common to them all, and so it gave to them all the same instruction,—the culture of a liberal education.

I think it is clear that the issue we are discussing rests upon the interpretation of a phrase—"founded for the education of ministers." There is no doubt that the phrase expresses in large measure the purpose of the early colleges. But what does it mean? It is amazing to see how, in the face

of definite records to the contrary, this statement has been taken to mean that the colleges were schools of divinity. But the phrase admits of another interpretation which has the advantage of agreeing with the records. What does it mean to teach a minister? Does it mean only to teach him to be a minister? He has many other things to learn besides that. He is taught by his wife, taught by his children, by his friends, and by his enemies. But the caddie who teaches him to play golf does not thereby become a member of a faculty of divinity; he may even not be a professor of religion. A school for the deaf does not necessarily teach deafness, nor does a school for foreigners usually teach them to be foreign. A school for anybody may undertake to teach him what he needs to know. Our colonial forefathers were persuaded that ministers as well as other men need knowledge of things outside their profession, need knowledge of the arts and sciences, and it was that belief which found expression in the colleges which they established.

The argument which we have been attacking has told us to follow the example of the colonial college. If I understand at all the purpose of the modern liberal college that is just what it is doing. There is a vast difference in intellectual content as between the old college and the new, but the two institutions are at one in the belief in the value

of knowledge as the guide of human life, and in the conviction that certain elements of knowledge are of common value to all men whatever their differences of occupation or trade.

I should like to have the privilege of attempting one last restatement of this conviction in positive terms before this paper is closed.

In the old colonial community, the clergyman, as in lesser degree the lawyer and the teacher, was the man of ideas. He was no mere teacher of the gospel and tender of the parish. While his people lived their lives it was his task to reflect upon their living, to formulate the beliefs on which it was based, to study the conditions by which it was molded, to bring to clearness the problems by which it was faced, to study the moral, social, economic, political situations of which it was constituted. It was his part and the part of men of like intellectual development to attempt to understand the lives which other men were living with lesser degrees of understanding. It was his task to serve as prophet and seer, as guide and counselor of his people.

It was for this task that the liberal college intended to prepare him. And in these latter days, as the scope of education has been extended more and more broadly, the same liberal education has been given to great numbers of our young men, whatever the professions they are planning to

enter. At the present time a very small percentage of our college graduates become ministers; more than half of them enter into some form of business occupation. But whether they are to be in business or in the ministry, the same education must be given them, since the new community has the same need as had the old of understanding itself, of stating itself in terms of ideas.

This fundamental belief of liberal education can be stated in terms of two principles. The first is shared by both liberal and technical teaching. The second applies to liberal education alone. The principles are these: (1) that activity guided by ideas is on the whole more successful than the same activity without the control of ideas, and (2) that in the activities common to all men the guidance by ideas is quite as essential as in the case of those which different groups of men carry on in differentiation from one another.

The first principle applies to all higher education. We recognize that human deeds may be done in either of two ways,—first, by habit, by custom, by tradition, by rule of thumb, just as they always have been done; or, on the other hand, under the guidance of study, of investigation, of ideas and principles by which men attempt to discover and to formulate knowledge as to how these activities can *best* be done. Now all higher education, liberal or professional, rests on the belief that on the

whole an activity which is understood will be more successful than one which is not understood. Knowledge pays; intelligence is power.

The liberal school and the professional are, however, separated by their choice of the activities which each shall study. Every professional school selects some one special group of activities carried on by the members of one special trade or occupation and brings to the furtherance of these the full light of intellectual understanding and guidance. The liberal school, on the other hand, takes as its content those activities which all men carry on, those deeds which a man must do in virtue of the fact that he is a man; and within this field it seeks to achieve the same enlightenment and insight. The liberal college would learn and teach what can be known about a man's moral experience, our common speech, our social relations, our political institutions, our religious aspirations and beliefs, the world of nature which surrounds and molds us, our intellectual and æsthetic strivings and yearnings—all these, the human things that all men share, the liberal school attempts to understand, believing that if they are understood, men can live them better than they would live them by mere tradition and blind custom. But one of the terrible things about our generation is that the principle which it accepts so eagerly in the field of the vocations it refuses and

shuns in the deeper things of human living. I have known fathers, planning for the training of a son, who would see to it that in the preparation for his trade every bit of knowledge he can have is supplied him. If the boy is to be a dyer of cloth, then he must study the sciences that understand that process. All that can be known about the nature of fabrics, the constitution of dyestuffs, the processes of application and development of the dye—not one bit of all this may be lacking from the teaching of the boy. To put him into the shop without that knowledge, to let him learn by imitation, pick up the rule of thumb, follow the ways of master workmen of the trade—to do that would be to make him only a workman, one who can do what has been done, can do what he is told to do. But the father is not content with this. His boy must understand and know the trade so that he may be the leader and the guide, may give the orders rather than obey them. But how often the same father is unwilling that his boy attempt to understand his own religion, his own morals, his own society, his own politics! In these fields, surely the father's opinions are good enough! Keep the boy's mind at rest regarding his religion and his economics; what has been believed before had better still be believed! It may be bad for business, may interfere with a boy's success if he becomes too much interested in the fundamental things of life! And

so such parents invite us to leave the universal things, the things most sacred and significant, to blindness, to the mere drift of custom, to tradition, and rule of thumb. And here it is that the liberal college again asserts its loyalty to the men who founded the older institutions. Those men had intellectual faith; they believed that it is worth while to know the life of man, and so they studied it and taught it to their pupils. I know that I speak for the teachers and the administrators of the liberal college here represented to-day when I pledge anew our loyalty to the men in whose footsteps we follow. So far as we can bring it about the young people of our generation shall know themselves, shall know their fellows, shall think their way into the common life of their people, and by their thought shall illumine and direct it. If we are not pledged to that, then we have deserted the old standard; we are apostates from the faith. But I think that a good many of us are still loyal. We welcome every new extension of vocational instruction. We know that every man should have some special task to do and should be trained to do that task as well as it can possibly be done. The more the special trades and occupations are guided and directed by skill and knowledge the more will human life succeed in doing the things it plans to do. But by the same principle we pledge ourselves to the study of the universal things in human

life, the things that make us men as well as ministers and tradesmen. We pledge ourselves forever to the study of human living in order that living may be better done. We have not yet forgotten that fundamentally the proper study of mankind is Man.

THE AMERICAN COLLEGE IN THE LIFE OF THE AMERICAN PEOPLE

COMMISSIONER PHILANDER P. CLAXTON

From the beginning we of the United States have believed in the education of the college no less than in that of the elementary school. North and South and in the ever-expanding West as our frontier has moved across the continent, we have felt the need of men and women with the education of the college for social, industrial, civic, and religious leadership. The consciousness of this need has become clearer as industries have become more numerous and extensive, church more free, religion more comprehensive, and society and state more democratic. Scientific discovery, labor-saving invention, commercial expansion, facility of travel and intercourse, literary activity and the growth of the spirit of criticism have brought a clearer recognition of the value of all education. Increase in wealth, most rapid in the last half century, has made it possible for us to establish and maintain schools in some degree at least in proportion to our recognition of their value.

True to our Anglo-Saxon ideals, we have in our efforts to supply our need for schools welcomed the assistance, alike, of individuals, churches, benevolent societies, and of the Federal Government, States, and smaller political units. All these agencies have worked in generous rivalry and with hearty good will towards one common aim. Public and private schools, of whatever grade, have all been schools of and for the people. They have differed chiefly in their means of support. In a very real sense all our schools have been and are public schools. In reality we have no private schools. Whatever the source of their income and the form of their control, all our schools have been and are, in all things essential, governed by public opinion and popular sentiment, the great controlling forces in all democracies. Their only purpose and function have been and are to serve the public by preparing children and youth for life, for wise and noble living, for intelligent useful work, for the duties and responsibilities of citizenship, and in so far as may be, for eternal destiny. It is the glory of our schools that they exclude none because of social rank, religious creed, partisan political affiliations, economic conditions, or race. Private schools, even the most select, seldom exclude any who will conform to their standards of conduct. Church schools welcome youth of all creeds and of none. For the poor there are free

tuition, scholarships paying all or part of their expenses for living, loan funds on the most liberal terms, and opportunities to pay their way by labor of many kinds. Fortunately all kinds of useful labor done with worthy purpose are regarded as honorable. Social recognition and highest honors frequently go to those who pay their way even by menial service. Even in those States in which white and colored children must attend separate schools, there are schools for all, and the tendency grows stronger from year to year to make the schools for the children and grandchildren of former slaves as nearly as possible equal in efficiency to the schools maintained for the children and grandchildren of the former masters. Democratic, or striving to be democratic, in all else, we are striving to be democratic in education also; and our democracy grows broader and stronger and finer and richer and more tolerant and more all-pervasive as the years go by.

Is it too much to claim for the American college that it has been the chief force in our American life making for industrial efficiency, economic development, sane and safe democracy, social purity and refinement, religious freedom, spiritual culture, and higher idealism? In the upward striving and onward march of the American people from the time when a few thousands, mostly sons and daughters of the poor, landed on the shores of Virginia

and New England till now, when after three short centuries they fill the space between the double oceans, a hundred million strong, peoples from all the ends of the earth, of all creeds, tongues, and races, living in peace in half a hundred self-governing States, united in one great democratic republic, the freest, strongest, and wealthiest, and most progressive nation the world has ever known, the colleges have played their part faithfully and well. Without them and their influence the story of our life would have been quite different in most particulars. How different, it is impossible to imagine. Read the story of religious leadership in the seventeenth and eighteenth centuries. Call the roll of the signers of the Declaration of Independence, of the Continental Congress, and of the Constitutional Convention. Visit the halls of the College of William and Mary, Princeton, Columbia, Yale, and Harvard, and note how many of the leaders in the great events connected with the birth of the nation are claimed as their sons.

Through Washington, Jefferson, Hamilton, Madison, Monroe, the Adamses, Webster, Calhoun, Benton; Cooper, Bryant, Longfellow, Lowell, Hawthorne, Bancroft, Motley, Taylor, Emerson, Lanier; Gray, Dana, Leconte; Parker, Dwight, Beecher; Whitney, Morse, and hundreds of others of their day and later whose names are known to all, the colleges have made direct contributions of

incalculable value to all phases of American life. But the contributions made through the lives of hundreds of thousands of their students less well known, and by their indirect influence on the lives of millions of earnest men and women who never entered their halls, have been greater still. Greatest of all has been the influence of the spirit of freedom and democracy, idealism and service, and devotion to truth which has pervaded them all and inspired the communities to which they have ministered. In plain living and high thinking the colleges and college men and women have led the way.

Not two decades had gone by since the first landing of the pilgrims in New England, and the colony was still small and weak, and, but for the sterling character, strong faith, and fixed purpose of the colonists, still uncertain as to its future, when the school was founded which later became Harvard College and Harvard University. For many decades Harvard was a typical small college, with cheap buildings, little equipment, meager income, small faculty, and few students. It was rich only in the love and devotion of its friends, its idealism, and its purposes. But the Harvard of the seventeenth century, even its poverty, served the pioneer people of this Eastern coast and met their demands as hundreds of small and struggling pioneer colleges, some of them struggling

unto death, served fresh water and backwoods communities through two centuries of pioneer life.

The population of Virginia was still small, though its territory was large and indefinite enough, when Their Majesties' Royal College of William and Mary was founded in 1693, to become in the next century the training ground of democracy, the inspiration of the Declaration of Independence, and the inalienable rights of man. Only these two, Harvard and William and Mary, survive from the seventeenth century. From the first quarter of the eighteenth century we have Yale and Washington College, in Maryland. From the second quarter we have the University of Pennsylvania, the Moravian Seminary and College for Women in Pennsylvania, Princeton, originating in the "Log College," and Washington and Lee, known in those days as Liberty Hall. From the third quarter we have Columbia (Kings College), Brown, Rutgers, and Dartmouth. These twelve antedate the beginning of the Revolution.

From the last quarter of the century we have Hampden-Sidney, Washington and Jefferson, Dickinson, University of Pittsburgh, Georgetown, St. John's College, The College of Charleston, Williams, Tusculum, Blount (now the University of Tennessee), Washington (the last three founded in the same year and all in the valley of East Tennessee), Union, University of North Carolina,

Transylvania, Marietta, University of Vermont, and Middlebury. A total of seventeen survive from these twenty-five years of revolution and the inauguration of our government. This fact alone, that during these twenty-five years of stirring events our fathers established almost a score of colleges that have lived and grown until now, is sufficient evidence of their belief in the value of the college in a democracy of the kind they were trying to build. At the beginning of the nineteenth century there were twenty-nine schools which are still counted among our colleges and universities, and there were probably as many others which no longer exist. Not a bad showing for a struggling group of pioneer rural States with a total population of little more than five millions. It is significant that five of the twenty-five were west of the Alleghanies. Of the twenty-seven which date from the eighteenth century three are now State universities.

Continuing our count, from the first quarter of the nineteenth century we again have twenty-nine, ten of which are west of the Alleghanies. Among them is Allegheny College, fortieth in the list. Five of the twenty-nine are now State schools. From the second quarter of this century we have 113, of which nine are State or National schools, and from the next decade ninety-one, of which five are State schools. Of the 567 colleges and univer-

sities reporting to the Bureau of Education in 1914, 262 had their beginning before the war between the States. The decade of the war and reconstruction gives us eighty-two, of which fifteen are State or National. The large increase in the number of State schools in this and the following decade is due in large measure to the passage of the First Morrill Act in 1862, appropriating public lands for the use of Colleges of Agriculture and Mechanic Arts. This Act gave impetus to the growing sentiment for public education and schools of all grades free to all and supported by public taxation. From the next three decades we have eighty-two, sixty-seven, and eighty-six, respectively, and from the last decade of the nineteenth century fifty-six, a total of 291 for the four decades, fifty of them State, National, municipal, or distinctly technical. From the first decade of the twentieth century we have only twenty-seven new institutions, of which six are State or technical, and from the next four years only four, of which one is a university with no college department yet organized.

These are the numbers of those which survive. Some have died, some have been united with other schools, some have given up the struggle to maintain themselves as colleges and have taken names which indicate more accurately the work they do. There are still some that call themselves colleges

or universities but are not listed as such by the Bureau of Education.

That we have had and still have more colleges than we need, that many have been founded unwisely, that many have, because of lack of means, been unable to do the work they honestly tried to do, that many have functioned chiefly in booming real estate—all may be conceded. But what does it matter? This kind of extravagance is probably inseparable from a young and exuberant democracy such as ours has been. All have served a good purpose. Even the fake institutions have served to develop the critical spirit, and their power to deceive is a tribute to the faith which the people have in the college and the things for which it stands.

In the Report of the Commissioner of Education for 1892, 600 colleges are listed; in the Report for 1895, 694; for 1900, 677; for 1905, 633; for 1910, 618; for 1914, 567, an average now of one college for 175,000 of total population. The number of colleges will probably continue to grow less for many years. A word later about the reasons for this.

Of the 567 colleges listed in the Report of the Commissioner of Education for 1914, ninety-five are under National, State, or municipal control; thirty-two are under denominational control, and 144 are non-sectarian. Ninety-two are colleges

for women, 145 are colleges for men, and 330 are co-educational.

So much for the colleges of the past and the present. It would be a pleasant task to dwell on the various phases of their work and of their benign influence on American life. But their past is safe, and I am just now more interested in their future. What changes are necessary to enable our colleges to adjust themselves to the new conditions and demands which have arisen, to use their means and energies more economically, and to render fullest and best service in the larger and more complex life upon which we have entered?

First. I suggest that the colleges which have preparatory departments should begin at once to prepare to abandon them or to organize them as separate schools, with their own teachers and dependent upon their own resources.

There was a time when there was need for the preparatory school or department at all or most colleges. Schools in which boys and girls could be prepared for admission to any college with respectable standards were few. The public high schools of four years based on eight years of elementary schooling are of recent date. There was a large gap between the work of the public schools in most communities and the work of the freshman class in any good college. Private preparatory schools were costly and many were inefficient

and unsatisfactory. But these conditions have changed rapidly in the last fifteen years. There are now in the United States nearly fourteen thousand public and private high schools, fully ten thousand of which have courses of full four years. These are found in cities, towns, and rural communities alike. In the ten thousand four-year high schools are enrolled more than a million students. Many of these high schools are better equipped with buildings, laboratories, and teachers than most of our colleges were a generation ago. Practically all are capable of giving the preparation required for admission at most colleges. If some of the public high schools fail to give the desired amount of Latin or Greek, they give more of other subjects; and most of the private high schools, of which there are more than two thousand, are able to give full preparation in these languages. For many reasons the public and private high schools are better and more desirable than the preparatory schools of the colleges.

Still 354 church and non-sectarian colleges report preparatory departments with approximately forty-three thousand preparatory students. The same colleges enroll less than sixty thousand regular college students. The total number of their preparatory students is more than two-thirds the number of their regular college students. In many colleges the number of preparatory students

is two, three, four, or five times the number of college students. Why should these colleges continue to divide their means and energies and bring more or less confusion into their work that they may add 354 high schools to the fourteen thousand which we already have, more than ten thousand with courses of four years, and give to forty-three thousand boys and girls instruction little different from that received by a million and a quarter other boys and girls in the high schools?

These colleges are as a rule not among the stronger and richer. Most of them have much less income and equipment than they need for their legitimate college work. Many of them have lower standards of admission than are justified by the work now done by the better public and private high schools. Some of them admit students to their freshman classes with much less preparation than can be had in the high schools. Of the ninety-two colleges for women, sixty-eight maintain preparatory departments. These report 6,873 preparatory and 8,045 regular college students. Practically all these colleges have very meager incomes. Why should they stint their college work that they may add sixty-eight to more than ten thousand high schools open to girls and able to prepare them for admission to the freshman class of any of these colleges? The eight thousand students in their preparatory classes is inconsiderable in comparison with

the seven hundred thousand girls in the public and private high schools. And it should be remembered that many, probably most of the students in the preparatory classes of colleges of all kinds, never enter the college proper. To the extent that this is true they are not in reality preparatory schools, but only abnormal high schools for general education.

Nor are most or all these colleges with preparatory departments found in the States which have fewest good high schools. Iowa reports 592 public high schools with 45,877 students and 85 private high schools with 3,614 students, yet 21 Iowa colleges report preparatory departments with a total of 1,820 students. The same colleges report less than twice this number of regular college students, and all need larger incomes and better equipment for their legitimate college work. Pennsylvania reports 886 public high schools with enrollment of 84,453 students, and 138 private high schools with 12,935 students. But 22 Pennsylvania colleges maintain preparatory departments for 2,601 students. Ohio reports 811 public high schools with 77,324 students, and 75 private high schools with 4,336 students, yet 28 Ohio colleges support preparatory departments for 3,039 high-school students. New York reports 666 public high schools with 133,736 students, and 237 private high schools with 17,081 students, yet

11 New York colleges give some kind of high-school education to 3,393 boys and girls in their preparatory departments. Eleven Indiana colleges, 27 Illinois colleges, 26 Missouri colleges have preparatory departments. There seems to be no longer any good reason for this policy, however necessary it may have been formerly.

Second. All colleges which now require for admission less than the preparation that can be had in four years of good high-school work should raise their standards to this point at once or as early as the majority of the communities served by them can be brought to maintain good high schools with courses of four years. There is now little reason, and there should soon be none, why any institution calling itself a college should do high-school work or admit students who have not had four years of work in a good high school or its equivalent. Within the last ten years and especially within the last five years there has been a very general movement for higher standards. Half the colleges of the country or more have within these years raised their standards of admission, on paper at least, by an amount represented by one, two, or three years of high-school work. But not all of these have raised their standards of graduation by an equal amount, and bachelor degrees still have a very uncertain and indefinite meaning. There is need of some general agree-

ment as to the terms on which these degrees shall be given and as to what they shall mean.

Third. Colleges requiring or accepting for admission units in any subject should build their work in that subject on the work accepted for admission, and not on a smaller amount. The total amount of work in any subject should be the sum of the work accepted for admission plus the full number of years of college work. Units of preparation should not be counted both for admission and for graduation. As nearly as possible college work should be in the line of the preparatory work and in substantial groups, so that the colleges may be relieved of the necessity of doing through a series of groups a large amount of more or less disconnected high-school work.

Fourth. Two hundred or more of the smaller colleges should, I believe, become junior colleges, attempting to do only two or three years of college work, preferably only two years. These junior colleges should require for admission the same degree of preparation as is required by the standard four-year colleges and should not attempt to maintain preparatory departments. They should, on the other hand, concentrate all their energies, means, and equipment of buildings, laboratories, libraries, and teaching force on doing well and in a large and strong way the work of the first two college years. For the work of in-

struction they should employ men and women of the best native ability, good scholarship, and the highest skill in teaching. The instructors should have a comprehensive grasp of the principles of education, its aims and ends and its relations to life. They should be whole-souled men and women with sympathy for boys and girls at this most critical period of their life, with high ideals and power to inspire them to the best. Here more than elsewhere are needed teachers answering to Daniel Coit Gilman's description, " tall men, broad-shouldered men, sun-crowned men," or women like unto them. In these years the personality of the teacher probably counts for more than at any other time, as did the kind of personal contact which students had with the principal members of the faculties of the old-time colleges, but which they no longer can have in the larger colleges of to-day, nor with men of the highest ability in most of the smaller colleges as they are now organized. Ideals, inspiration, desires, and enthusiasms may count for more here than technical knowledge of subjects, however accurate and thorough. For two years of college work these schools with comparatively small incomes might hope to pay a few teachers of the kind I have tried to describe sufficient salaries to hold them for this most important work, and to equip laboratories and libraries adequately, so that a minimum of the time of the

students would be lost. The importance of this will be better understood if it is remembered that more than sixty out of every hundred who enter college leave at or before the end of the second year, never to return. What college does for them must be done in these two years, for many of them in one year only.

After finishing the two years of the junior college, students should, of course, be advised to go for the last two years of college work to the larger and richer colleges which are able to equip their laboratories and libraries and to employ large numbers of specialists for the more technical work of these years. Can there be any doubt that under these conditions many more would enter and remain through these advanced classes than now do or that the sum total of results of the four years in college would be much larger than it now is for most students? For most students the two years of junior college work might be made almost the full equivalent of what is done now in three and the better preparation and the stronger impulse gained would insure better results in the last two years also.

Of course this better type of work in the smaller junior colleges would soon compel the larger colleges to make like provision for their first and second year students, who are now too often crowded into over-large classes or sections and

given into the hands of young and inexperienced teachers quite different from the ideal set forth above and seldom come in contact with the larger and more experienced men and women who make the reputation of the colleges. Some of these younger and more inexperienced teachers do prove to be men and women of the best type and make good when they have had more experience, but many only prove themselves to be unfit.

That you may understand still better the need for this reorganization of our colleges, let me call your attention to the following significant facts:

In 1892 the 600 colleges reporting to the Bureau of Education had property and endowment amounting to $200,541,375, a working income of $17,034,614, 11,432 professors and instructors, 122,403 students. In 1914 the 567 reporting had property and endowments amounting to $849,296,071, a working income of $102,156,401, 31,312 professors and other instructors, and 334,978 students. The increase in twenty-two years was more than three hundred per cent. in property and endowment, five hundred per cent. in working income, nearly two hundred per cent. in instructors and in students. The figures for property and endowment and for working income are most remarkable. But most of the increase in property and in income as well as in instructors and students has been in

a small per cent. of the institutions and the differences in wealth and size are now much greater than they were twenty-two years ago.

In 1914, 29 colleges do not report their incomes, and 45 report incomes less than ten thousand dollars; 92 report working incomes between ten and twenty thousand dollars, and 80 between twenty and thirty thousand dollars. Including in the count those not reporting incomes, as all except two or three should be, we have 246 colleges with working incomes less than thirty thousand dollars. Forty-six having working incomes between thirty and forty thousand dollars and 46 between forty and fifty thousand dollars. There were in 1914, therefore, 328 colleges having working incomes less than fifty thousand dollars. Sixty per cent. of the colleges and universities had six per cent. of the total of annual working incomes, ten per cent. of the total property and endowment, and twelve per cent. of the college students; forty per cent. had ninety-four per cent. of the total of working incomes, and eighty-eight per cent. of the students. Twenty-six institutions, each having $600,000 or more working income, had thirty-six per cent. of the total of working incomes, and eighteen per cent. of the students. Again, ninety-three of the colleges having working incomes less than fifty thousand dollars had less than fifty regular college students each and ninety-nine had more

than fifty but not more than one hundred such students, a total of 192 colleges with not more than one hundred regular college students.

In the average college with 50 students 35 will be in the first two years and 15 in the last two. In a college of 100 students, 70 will be in the first two and 30 in the last two years. The expense for teaching the 15 and the 30 will be more than the expense for teaching the 35 and the 70. If the two higher classes were sent away to the larger and richer colleges, the number of students in the lower classes might be more than doubled and the total attendance increased more than fifty per cent. without additional cost for teaching and equipment, and all students, those remaining and those sent away, would be better taught. But the better teaching in the lower classes and the larger number of students attracted to and held in these classes thereby would result in more general support, larger endowments, and more adequate incomes for the colleges.

In most instances these junior colleges should be affiliated more or less closely with one or more stronger colleges to which they would send most of their students. Many students from the same junior college would thus find themselves in the higher classes of the same institution, and would rejoice in keeping up in the larger institution the spirit of the college from which they came

and in which they received their ideals and inspirations. They would think of themselves, both while in the senior college and in after life, as of the college in which they spent the earlier years of their college life. Thus the junior college need not fear losing its place in the affections of its students.

I have dwelt on this matter of the junior college because it seems to me to be a matter of very great importance and because I know how difficult it is going to be to bring many institutions that should transform themselves into junior colleges to break away from the traditional four years. Yet a beginning has already been made and there are now a score or more junior colleges in the country. Unfortunately most of them still do two or more years of high-school work. This work, I feel sure, they will abandon soon. On the other hand, some of the city high schools are adding two years of college work and calling themselves junior colleges. There are a dozen such in California.

Fifth. Fifty or seventy-five colleges with incomes between fifty and one hundred thousand dollars should follow the example of Allegheny and Amherst and limit themselves to one, two, or three well-organized groups of subjects, doing four years of earnest work in these, and striving to attain in them a higher degree of excellence than

is possible with the larger and more diversified curricula of most modern colleges. If this were done students would then be able to select the college in which the best opportunities might be had in the subjects and group of subjects in which they were most interested. Classes in the general subjects would thus come to be made up of select students. Abler instructors would be attracted by the opportunity of doing better work than can be done with classes in which many of the students have no interest in or ability for the subject. A finer and better spirit would pervade the entire school and the results obtained would be more satisfactory in every way. Fortunately this is no longer a matter of mere theory or surmise. The two colleges already referred to and some others have already demonstrated its practicability.

When the readjustments here set forth have been made, as I believe they will be made in the next few years; when we have reorganized our twelve years of elementary and secondary schooling on a basis of six years of elementary and six years of high school, as we are now beginning to do; when we learn to promote teachers with their classes in the elementary school so as to preserve the continuity of teaching from year to year, as we do not do now, and when we have learned to demand a little better preparation on the part of

all teachers both in the elementary school and in the high school, we shall, I feel sure, be able to send boys and girls to college with the equivalent of two years in advancement over that which they now have and with much greater power of initiative and independent thinking, and to gain the equivalent of another year in the four years of college work. This, with the fuller development of a few of our graduate schools made possible by their large and rapidly increasing incomes, and with the raising of standards in our professional and technical schools, now well under way, will enable us not only to give better preparation to the young men and women upon whom must rest the duties and responsibilities of leadership in our own country; it will also enable us to rise to the opportunity offered us and the responsibility thrust upon us by what is now taking place in Europe, and to assume world leadership in education. Attracting to our schools thousands of young men and women from all countries of the world, we shall be able to inspire them with the spirit of our democracy and to teach them a higher philosophy than they have been able to learn from the military despotisms, aristocracies, and feudalisms of the Old World.

Our own democratic republic with its two hundred millions of people and its thousand billions of wealth within the next fifty years, with its

larger and more complex industrial and political problems and its finer and richer culture, and a world civilization to be rebuilt on broader and safer foundation, call us to the task and hearten us for its accomplishment.