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*SOME FEATURES OF AMERICAN HIGHER EDUCATION.**

THE first characteristic, then, of our American system of higher education is the hearty cooperation of state, church and private effort in the work of founding and developing a group of institutions which taken as a whole should supply the need of higher training. And the educational welfare of the country demands that this cooperation shall continue, at least for an indefinite time to come.

We, as a people, cannot afford to let the interest of the state, of the church, or of private individuals in higher education languish or die. It is a striking testimony to the essential oneness of the American people, to the essential soundness of our educational life that all these different institutions are working consciously toward the same ends; that the fundamental qualities of American citizenship are developed in all alike and that the ideals of all these various institutions in this respect are the same. The alert, wide-awake, conscientious, devoted lover of his country and his kind, the prudent, painstaking, truth-loving scholar is the product of all alike.

Another peculiarity of American universities distinguishing them from their

* From the inaugural address of Dr. Edmund J. James as president of Northwestern University, given on October 21, 1902.

European counterparts in a very striking way is the form of government—the non-professional, non-expert board of trustees. English institutions of higher learning are in the control of their faculties or their alumni or both with now and then in certain cases a cooperation in appointments by the government. On the continent they are nearly universally under the control in many important respects of the governmental departments of education with certain cooperation on the part of the faculty.

With us they are nearly all, legally at any rate, entirely under the control of a body outside of the faculty, outside of the alumni and outside of the state departments of education. Even the state universities are usually directly under the control of a special board appointed for this particular purpose and not subject in any other way to the regularly constituted state authorities. These boards are either —as in the case of state universities— appointed by the governor or elected by the legislature or the people, or appointed by the church, or more often are self-elective, filling vacancies in the board by the votes of the board itself. These trustees are often business men, sometimes not college graduates themselves; often professional men—nearly always men who have had no other connection with educational work than that involved in their duties as trustees.

To these boards is entrusted by law full authority to prescribe courses of study, to appoint and dismiss professors at pleasure and to prescribe their duties in detail if they so desire. The foreign student looks at this delegation of one of the most important functions of society to a set of busy men who cannot be expected to have expert knowledge of the subject with amazement not unmixed with amusement.

Does it not often happen he says that an ignorant trustee, imagining that he knows more about the business than the faculty, interferes like a bull in a china shop, disarranging the machinery, bringing everything to naught by his ignorance, his officiousness and his obstinacy? What good do they do anyhow? How can you check their pernicious activity?

Well, we have all heard of such trustees —perhaps we have known such individuals personally, not in our own institutions, of course, but in others. The trustee who thinks the faculty is made up of men trying to get the largest possible salary for doing the least possible work, and who regards it as his duty to see that they do the largest possible amount of work for the least possible remuneration; the trustee who undertakes to pass upon each individual item of college business as if he were the expert and the faculty the mere employee to carry out his plans. The existence of such a person I shall not undertake to deny; the existence of whole boards of such trustees is at least possible logically speaking and certainly the fancied knowledge of the practical man can assume most offensive and irritating forms—dangerous in proportion to the ignorance and obstinacy which lie behind it. I think it is highly probably that if we were blocking out anew in an old civilization a method of government for higher institutions of learning no one would think of resorting to such a device as that of a non-expert board of trustees as the chief organ of control.

But to-day through the evolution of American conditions we have elaborated such an organ and to my mind this fact has had a profound significance for our educational life.

Universities tend to become caste and class institutions. They tend to become pharisaic in sentiment and action. As self-governing bodies, if they have great endow-

ments they learn to regard themselves as existing primarily for the benefit of the people who happen to be in control at the time. English educationists tell us that such were Oxford and Cambrdge at one time in their existence; such were nearly all the continental universities wherever they secured complete autonomy and control of adequate foundations.

The absolute governmental control of universities on the continent to-day was necessary in order to rescue them from the dry rot which universally sets in where they are purely self-governing bodies.

If higher institutions of learning are to serve their real purpose they must at some point be brought under the influence of public opinion; they must come in contact with the daily life about them. Some means must be provided by which the life blood of the great pulsating world around them can flow in and through them, purifying, cleansing and purging them. Some common organ must be developed which can bring the university and the world of outside activity together. This end has been attained in our American device of boards of trustees and I believe that a large part of the extraordinary development of our higher schools is due to the fact that through these boards of trustees it has been possible to bring outside influences to bear on the internal management and spirit of these institutions. All this is aside from the very significant fact that they have been most important elements in securing that public interest which has turned such streams of wealth into the treasuries of our schools without which our recent progress would have been impossible. All this is aside, moreover, from the fact that many of these trustees have themselves provided the necessary funds out of their own resources.

When we add to this the circumstance that these trustees have often brought to the university in the management of its business affairs a devoted service which could not have been bought for any money you can readily realize what an important part in this magnificent development has been taken by the hundreds and thousands of public-spirited men who have at great expense of time and effort given their best services to this cause. I may add that in my own opinion such boards perform a most valuable additional service in that they offer an opportunity to have every question of general university policy submitted to the bar of an earnest, sympathetic impartial jury, before undertaking any comprehensive changes.

Another unique institution characteristic of our American system of higher education is that of the presidency. The American university president has no exact counterpart in the educational scheme of any other country. He is a development peculiar to the United States, an outgrowth of peculiar educational and financial conditions. He is theoretically supposed to be an educational leader, a financial leader and a practical business manager combined in one. He is not only expected to outline an educational policy in a broad way, but also to keep *au fait* with the educational administration of the university even into its very details. It is ordinarily made his duty to enforce the rules and orders of the board of trustees and see that every instructor is performing his duty toward the institution and the students.

He is expected, moreover, to plan a scheme of financial support for the institution and devise methods of keeping its needs before the public. If he is president of a state university he must know how to impress the legislature; if of a private university he must be able to get the attention of the church or of private individuals who are able to contribute to the endow-

ment or current support of the institution. He must also see that this money once obtained is wisely spent. He must be able to prepare a budget in which security is offered for the wise expenditure of every dollar and that the total outlay be kept within the total income. In many cases he must, furthermore, supervise and be generally responsible for the actual administration of the business affairs of the university.

In the public mind, at any rate, he is entrusted with responsibility for all the details of discipline, from providing safeguards against the silly pranks of freshmen or the wild excesses of upper classmen engaged in celebrating athletic victories, to determining the attitude of the institution toward fraternities and sororities.

In fact, the position in its functions and responsibilities has become an almost absurd one. No man, however able, however experienced, can possibly perform all its duties. I have had the rare good fortune to work in the very closest relations with two of the ablest university presidents whom this country has ever produced—remarkable not only as educational leaders of the first rank but as men of extraordinary powers for general effectiveness in anything they undertake—Dr. William Pepper, late provost of the University of Pennsylvania, the ablest native-born citizen of Philadelphia, a man of extraordinary insight and far-reaching mental powers, and President William R. Harper, whom you all know as facile princeps in this field. I have known several other able university presidents and I am sure that I am not reflecting upon their ability or their good will when I say that I have never known a university president who fulfilled even approximately the functions which his position theoretically placed upon him; for the simple reason among others that it transcends human ability.

I need not say that I have no hopes of succeeding where these men and such as they have failed. I mean by failing that they failed to do the things which the logic of their positions forced upon them; which under the circumstances nobody else could do; which they had no time or strength to do and which, therefore, went undone.

I believe the time is rapidly approaching, if it is not already here, when this office must be put into commission; when its functions shall be separated and when the duties now entrusted in theory to one man will be divided among several.

The office, as said before, is an outgrowth of our peculiar educational conditions and will probably disappear in its present form when we pass from the pioneer to the settled state of society.

More than one foreign critic has remarked upon the strange forces which in a republic have evolved such an anomalous officer—strangest of all in the republic of letters and science—an officer with vague but real powers of discipline over faculty and students—chosen not by faculty or students but by an outside and irresponsible body—the anomalous organ before referred to—the board of trustees. Somebody has defined the government of Russia to be a despotism tempered by assassination. Somebody else has remarked that this is almost an exact description of the government of an American college or university. The president of the institution backed up by the board of trustees can drive out not only any particular professor but an entire faculty or several faculties—such an occurrence is not unknown in our educational history. The president keeps on in his course of change—reformation or deformation as the case may be—until the rising tide of opposition finally overwhelms

him and a new experiment is made with another man. The comparison of the function of an American university president with that of a king or despot, is, however, an unfortunate and misleading one. Much more illuminating would be the comparison with the responsible head of an English cabinet. As long as he proposes plans which command the assent of his board of trustees—representing in this case the parliament—the lawgiving authority—he is all powerful. He has behind him the entire force of the country so to speak. He can build and rebuild; extend and contract; raise up and cast down. But the instant he loses the confidence of this board for any reason, good or bad, his power is gone; his position becomes untenable. He goes to join the ever-lengthening list of ex-ministers always willing to criticize, always willing to give their advice and counsel.

The American system of higher education would probably never have developed with such astonishing rapidity if it had not been for these two peculiar organs of life and expression—the trustees and the president; but it is hardly conceivable that either of them is destined permanently to play such an important part in the educational economy of the country as they have done in the past and are doing now.

If time permitted, I might discuss many other interesting peculiarities of the American system of higher education which distinguish it from its counterparts in other countries; but I must content myself with a mere glance at one or two other aspects of it.

Our American system of higher education is evangelistic in character. Our institutions—at least in the last generation—have never been satisfied with merely offering their facilities to the public, content to let those who wished such opportunities avail themselves of them. They have gone forth into the community in one form or another and preached the gospel of a higher education; they have gone out into the highways and hedges and compelled the guests to come to the feast which has been prepared for them. They have all engaged in this form of university extension work and the result is seen in the ever-rising tide of university attendance. We have, generally speaking, in this country not compelled attendance at universities as they do on the continent. We have not made attendance at a university a condition of admission to the bar, to the church, to medicine or other professions or callings. We have left it free to our young people to attend these institutions or not as they saw fit. What the government has failed to do in this respect, private parties must do for it, if the standards of education and culture are to keep pace with our growing wealth and population. Hence the willingness on the part of our higher schools to preach this doctrine of the desirability, nay, necessity of university training.

This campaign for higher education—we can really call it nothing else—takes on different forms in different parts of the country. The president in a small college not a thousand miles from Chicago told me of a missionary tour he made one summer which doubled the attendance at his college. He hired a large covered wagon and a strong team of horses for three months. He loaded in his college glee club and a few cooking utensils and started across a section of country from which as far as he could learn no candidates for any college had ever emerged. He would drive into a village, tether his horses and making arrangements for food and drink begin his campaign. The glee club would sing a series of all-compelling college songs on the space in front of the wagon or on the village green. After a suitable crowd had

gathered the president would deliver an address on the desirability of a higher education. This would be followed up by a meeting in the church or churches, by an address before the town schools, etc., etc. Before he was through with his three days' meeting the whole town was as excited on the subject of colleges and universities and higher education as it was in the habit of becoming only over politics and religion.

This may be a somewhat crude form of preaching the gospel of higher culture, though it was doubtless effective. It is the salvation army plan of getting into the educational depths. The greater institutions have pursued more subtle methods—oftentimes with even greater effect. The system of accrediting schools with the periodical visitation by a member of a university faculty; the system of affiliating schools and making them to feel themselves a part of the university—thus leading many youths to look toward higher schools who would not otherwise have thought of it; the building up of great alumni associations with one of their chief objects the increase of attendance at alma mater; the publication of alumni magazines and semi-scientific periodicals of various kinds; the sending out of news letters to the press; the organization of university extension work in all its various forms; the trips of the college associations like glee clubs, football elevens and baseball nines, intercollegiate debates, the annual tours of university presidents through the country, the offering of scholarships and fellowships, etc., etc., all contribute to the same end of popularizing the university and of accomplishing by different methods and methods more consonant with our American life the same end of bringing large numbers of people in contact with higher education as the compulsory methods of European countries do for them.

Some critically inclined people have called this evangelistic work by the cruel term of advertising, and have denounced it as unworthy the institutions and educational policy of a great country, have referred in scathing terms to the strenuous competition of our universities and colleges for students. Such a conception fails to grasp the vital elements in the situation.

The whole movement has undoubtedly assumed the form of a strenuous competition. It would, of course, be easy for such a strife to degenerate and to assume a ruinous and destructive form.

But the actual fact is the contrary. And this leads me to the further proposition in regard to our American system of higher education; viz: that it has been characterized during the past fifty years in all its parts by an earnest desire for improvement in every direction. Our institutions have competed with one another in improving their facilities, striving to see which one could offer the best libraries, the best laboratories, the most learned and skillful teachers, the best opportunities for physical culture, the best chance for an all-round, well-developed manhood and womanhood. And the story of advance along this line is marvelous.

They have competed with one another in raising their standards of admission and their requirements for graduation until now many of our able educators think that this progress has gone too far, that we are making unreasonable requirements for admission to college, for graduation from college, for admission to graduate work and for the higher degrees.

This competition has been along the very highest times. It has led, as modern competition so often does, to various forms of cooperation. Our higher schools have united for common action on many things. They are rendering service to the secondary

schools by helping to fix their standards and maintain a high quality of work.

Another peculiarity of the American system of higher education is the unparalleled extent to which it provides for the education of women. No system of higher education in any country at any time has ever made such liberal provision for the higher education of women as our own. This has taken different forms according to the local conditions prevailing in different parts of the country. In the state universities as might be expected it has assumed the form of coeducation in the fullest sense of the term—absolute equality and similarity of treatment of both sexes in all respects, practically no recognition that either sex requires or would care for any special provision for its peculiar wants or needs. In the Mississippi Valley most of the church institutions and other schools under non-state control have, naturally enough, followed the example of the state universities, and established as a principle anyhow the complete parity of the sexes in higher education.

In the east the older universities like Harvard, Yale, Columbia, Pennsylvania, etc., have adopted a somewhat different plan. Starting as a mere scheme of private tutors for women under a certain supervision of the university, these plans have worked out into a system of women's colleges affiliated with or annexed to the university in which many of the facilities accorded to the men may be enjoyed by the women. And finally the system of women's colleges, pure and simple, has been elaborated which beginning with Vassar now numbers east and west more than half a dozen institutions of the first rank of which we may well be proud.

What the ultimate form of female education is to be in this country I think no wise man would venture to predict with any confidence. It is safe, however, to say that in all probability the various forms now in existence will continue to flourish and other forms may be added as our society develops. The typical form, however, that which will ultimately embrace the vast majority of institutions and students will be, in my opinion, for a long time to come at any rate in the Mississippi Valley the system of coeducation, simple, complete and unadulterated; if for no other reason, for the simple one that for the complete education of women as our American society conceives it the entire range of educational institutions must be provided and for a long time to come we shall not be able financially to build and maintain two entirely different systems of education, one for women and one for men. Nor, I may add, will such a duplication of educational faculties ever be justified by the fancied evils of coeducation.

There is still another feature of our American system of higher education which ought not to be omitted in even a cursory view of the subject. That is the peculiar way in which we have combined the work of technical instruction with that of the humanities and the professions in one institution. We have united, to use a German term, the Polytechnicum and the university. This has had a marked effect upon instruction in both branches of the institution. The technical school has made university work more practical, compelled it to measure itself by new and healthful standards and brought a new spirit into much of its activity. The university has humanized the technical work.

A technical school bodies forth in its very aim and spirit an idea which is at times in danger of being lost in the pursuit of pure science and the humanities, viz: that the ultimate test of all knowledge is being good for something besides itself.

The presence of the professors of technical subjects in a faculty where all other subjects of college and university instruction are represented has proved to be a healthful and inspiring influence. Contact with the culture side of education has in its turn reacted upon the technical instructors and thus the way is paved for a mutual action and reaction of these two great forces in education much to the benefit of both and to the lasting improvement in spirit and method of every grade of American education. I am aware that some acute critics of American education have lamented this very fact. But it seems to me that their view of education is erroneous. It is not necessary, as has been well said, by one of our great scholars, that every man in the community should study Latin and Greek for ten or twelve years; it is not necessary that every man should have an adequate conception of Greek and Roman civilization. It is very necessary, however, to national welfare that some members of our society should give time and attention to these things; that some scholars should give strength and power to the mastery of this ancient civilization and thus interpret for our day and generation the imperishable experiences of Greece and Rome, live over for us their history and be able to rewrite and reinterpret it for us all.

Now there has never been a time in this country when the facilities for the study of the humanities have been greater, or the ardor in their pursuit more intense than to-day. Never has the study itself been more practical and useful than at present. And it seems to me apparent that the very emphasis which pure and applied science has received in our modern educational system by the union of technical school and university has made its contribution to the revolution in the study of the humanities which has marked the last generation in this country. Technical students leave our universities defenders of the importance of the study of the humanities—a justification in itself of the union of the polytechnicum and the university.

As a result of all these things and many more which time does not permit me to discuss I believe that the American system of higher education is nearer to the people, commands more completely their sympathy, is better understood by them and consequently more admired and loved than ever before.

The general public is far more interested in everything relating to our colleges and universities; our newspapers give more space to chronicling the events in the academic world, take a livelier interest in the discussion of college and university policy than ever before. All these things point to the firm hold which this department of education has taken of the average man, developing in him an interest in and affection for our higher institutions which argues well for their future.

And this has come about among other things because we have secured the cooperation of state, church and private initiative, thus bringing in all classes of the community; because we have secured a close contact with the community in our very scheme of organization because our institutions have conceived it to be a part of their duty to beget by conscious activity an interest in the great public for their work; because we have cared for the education of women and thus enlisted the support of an enormously large and ever more important element of our society; and because we have emphasized the great departments of applied science in our scheme of higher education as well as the traditional training for the learned professions.

I cannot let such an occasion as this pass

without thanking you one and all for your presence here. I am well aware that it is no personal testimonial to me. Many of you I have met to-day for the first time and although I shall hope to have many opportunities of cultivating an acquaintance so pleasantly begun yet it is possible that many of us may never meet again.

Your presence here, however, is a testimony to the essential oneness in aim and in spirit of our American institutions of higher learning; it is an evidence of sympathy and good fellowship; it is earnest of cooperation and emulation for all good things.

We who are gathered together here as students, professors, trustees, benefactors, friends, of American colleges and universities may congratulate ourselves. We have surely followed Emerson's injunction and hitched our wagons to the stars. Every one of us may be glad that it has been permitted to him to take a part, however humble, in the great work of laying the foundation and erecting the superstructure for a series of institutions from the Atlantic to the Pacific, from the Great Lakes to the Gulf, which shall do for us and our civilization what the universities of the Old World have done for Europe.

Surely we may rejoice if we can help to win for our country the same proud position in education and science which our fathers and brothers have won for it in industry and commerce.

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*ON THE POSITIONS OF THE NORTHERN CIRCUMPOLAR STARS.**

THE importance of knowing the positions of the fixed stars has been recognized from the time of the early Greek astronomers, and the accuracy demanded has increased with the progress of the science. During the past two hundred years an enormous amount of labor has been expended in forming catalogues of the stars, and further progress in this direction is recognized to-day as one of the principal needs of astronomy. Not only ought a larger number of stars to have their places accurately measured, but the positions of many of the so-called fundamental stars should be more precisely determined.

Since the motions of the Sun, Moon and larger planets are confined to the region of the sky known as the Zodiac, the equatorial and zodiacal stars have been more frequently observed and their positions more accurately determined than is the case in general with the circumpolar stars. Comparison stars are needed near the pole only on those rare occasions when a comet crosses that region of the sky.

Beginning with the epoch-making observations of Bradley about one hundred and fifty years ago, the work of determining fundamentally, that is with reference to the equator and equinox, the places of a limited number of equatorial and circumpolar stars has been carried on continuously at Greenwich. Since its foundation about 1840, work of the highest value has been done by the National Observatory of Russia at Pulkowa, near St. Petersburg. Fundamental work of this kind has also been done at various other observatories, mostly European, and by professional astronomers, notably by Bessel and Struve.

Valuable differential work on the circumpolar stars has been done by amateur astronomers, whose work has been based on the positions of fundamental stars previously determined. Some of the noblest examples of devotion to science are found in the history of this subject.

Perhaps the most remarkable case is that of Stephen Groombridge, a linen draper of London, who about 1802 set up a transit circle by Troughton of three and one half

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