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ADDRESSES AT THE TENTH ANNUAL COMMENCEMENT
LELAND STANFORD JUNIOR UNIVERSITY

MAY 29, 1901

THE GOSPEL OF WORK

GEORGE MANN RICHARDSON

Professor of Organic Chemistry, Leland Stanford Junior University

LELAND STANFORD'S VIEWS ON HIGHER EDUCATION

DAVID STARR JORDAN

President, Leland Stanford Junior University

PUBLISHED BY THE UNIVERSITY
STANFORD UNIVERSITY, CALIFORNIA
UNIVERSITY PRESS

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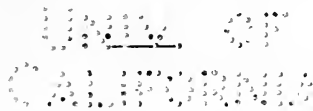
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THE GOSPEL OF WORK.

GEORGE MANN RICHARDSON.

Horace Greeley is said once to have made the remark :
"Of all horned cattle, the college graduate is the most to be feared."

There still lingers in some quarters a decided prejudice against the college graduate. You who are going out from us to-day as graduates will no doubt be made to feel this. It rests with you, in part, to determine whether the next class that goes from the University shall find this prejudice greater or less than you will find it. It is not very difficult for us to see some of the reasons for this lack of confidence. In the first place, I do not believe that it is in most cases a prejudice against a higher education or against educated persons, except as it is owing to a confusion of terms. It is common to assume that the college graduate is necessarily an educated man or woman, but this is a fundamental error. It has thus far been found impossible, even in our best and most thorough colleges and universities, to devise any system of exercises, requirements, or examinations which will make it perfectly certain that the holders of their diplomas shall be educated men and women.

An education is, in one respect, like a contagious disease—not every one who is exposed to it takes it. The diploma which you receive to-day is merely a certificate that you have been exposed to an education ; whether you have taken it or not, your future life alone will determine. Undoubtedly a great part of the prejudice against the college graduate comes from direct contact with the uneducated college graduate, and in so far as this is the case, I believe

Horace Greeley was right,—such college graduates are, to say the least, to be viewed with suspicion.

The chances are that any young man who has spent four of the best years of his life in college and has neglected to make good use of his opportunities, will continue to follow the same course after he graduates; and such are not the kind of people for whom “the world stands aside to let pass.”

The most important principle for our guidance in life is a thorough realization of the law that nothing that is worth having is to be had without work. When this law has been completely accepted and becomes part of our moral fibre, other things will be added unto us:—we have started on the right road.

Ignorance of this law or the effort to evade it is the cause of much disappointment, misery, and crime. There are no short-cuts to knowledge, to power, or to happiness. “Eminence in any great undertaking implies intense devotion thereto, implies patient, laborious exertion, either in the doing or the preparation for it. “He who fancies greatness an accident, a lucky hit, a stroke of good fortune, does sadly degrade the achievement contemplated and undervalues the unerring wisdom and inflexible justice with which the universe is ruled.” Those who are continually seeking an unearned happiness are the people that the world can best spare.

An education which is itself acquired by hard work cannot be considered as a device for getting along in the world without work: it merely makes our work the more effective, it enables us to work at the long end of the lever,—but work we must. Genius is sometimes looked upon as a substitute for hard work, but this too is an error, as we shall quickly recognize when we read the biographies of a few men of acknowledged genius. In fact, most men of this class have exhibited an astonishing capacity for work. On the other hand, it is really surprising how closely the results of application and energy resemble the results of genius.

Any system of education which fails to develop in the individual a clear recognition of this great law of work must

remain unsatisfactory. The individual who fails to recognize this law or who does not act according to it cannot be considered as educated.

The old system of education, in which the time was spent in studying Latin, Greek, and mathematics, was an excellent system for those to whom it appealed, as is proved by the grand characters that have been developed by it. It was, however, a very wasteful system, as many of the young men who went to college did not become interested in this particular kind of work. Some of this latter class, however, were nevertheless educated by the contact with earnest and educated men and by the countless other educational forces continually at work outside of the classroom at every college.

But too large a number of men succumbed to the habit, formed by four years' practice, of doing lifeless things in a listless way.

An abundance of leisure is a trial to which few men are equal; it is a trial that should not needlessly be thrust upon young people before habits of work have been established.

As the weakness of the old system came to be recognized, new subjects were added to the college curriculum to make it more generally attractive, or, as some would say, to make it "broader." There were added a little modern language study, a little history, a little political economy, a little science, and so on, until the older college course was so diluted that it offered very little training in serious scholarship, and the results very well illustrated the old adage, "He who embraces too much, holds but little."

While the old difficulty was far from being overcome by these changes, a new difficulty, a lack of thoroughness, was introduced. "A broad education,"—what crimes have been committed in that name!

The demand still frequently voiced for a fixed course of study which shall best fit the "average man" for the life of to-day is wholly irrational. It is not worth while to exchange the tyranny of the old fixed course of study for the tyranny of a new fixed course of study.

Owing to the endless variety of human characters and human tastes, and owing to the present extent of human knowledge and human activities, such a course of study is an absolute impossibility. Such a process for producing machine-made men would be prodigally extravagant of human material. In thus attempting to produce a uniform product, the very best part of the mental equipment of many men would be cut away or hindered in growth to make them fit into a system which at best is artificial. The best preparation for the life of to-day is to know well something worth knowing,—if possible, to know it better than any one else knows it. Such a knowledge is attained only when the work necessary to it strikes a responsive chord in the individual mind.

Our American universities are tending in the right direction, it seems to me, in offering the student a wide range of studies and then allowing him to select for himself those to which he will devote his attention. A university with unlimited means should extend knowledge and offer instruction in every worthy subject. A subject to be worthy must be, first, such that its serious study offers good mental training, and second, such that a knowledge of it tends toward human advancement. But the university with unlimited means is an ideal which has no realization.

It is the first duty of a university to do *well* that which it undertakes. There is no doubt but that much of the criticism which has been called forth by this introduction of "electives" into the university curriculum is more than justified by the consequent crippling, owing to inadequate means, of work previously undertaken, and to an equipment wholly inadequate to do justice to the new work. The expansion of the curriculum under such conditions is thoroughly dishonest, and the results are most deplorable. It is a vulgar form of self-advertisement to which no university should stoop. Desirable as it is to have a wide range of studies from which the student may select, expansion of the curriculum in any given institution is justifiable

only when the work already undertaken is adequately done.

Since all universities are hampered from a lack of funds, it is eminently desirable that all universities should cooperate in this expansion of their curricula, and instead of following the old and narrow policy, dictated by petty jealousies, of establishing new departments because they have been established elsewhere, let each university look to develop where other universities have not developed, so that somewhere, here or there, the student will be able to find the thing he needs for his highest development.

With ample opportunities for studying worthy subjects the student should be able to find in the university that thing which will best enable him to find his sphere of greatest usefulness in the world, that thing which awakens his enthusiasm, — and it is not of great importance what the thing is; it is the *awakening* that is of supreme importance; *that* is the first great step towards a sound education.

One student will gain inspiration from the great epics of Homer, Dante, or Milton; another will be thrilled and incited to higher effort by reading the earth's history in the earth's crust; a third will have his soul stirred and be able to detect nature's immutable laws by the study of the venation in the wings of insects. Any work which is thus capable of inspiring men to new and nobler effort can ill be spared from our educational system.

James Russell Lowell is reported to have said that his admiration for Dante lured him into the little learning that he possessed; while the direction of Darwin's work was determined by his desire to know all about coral reefs. As often as not it is the teacher, and not the subject taught, that first arouses the interest of the student.

Thomas Jefferson said of one of his old teachers, that the presence of that man on the faculty of the College of William and Mary fixed the destinies of his life. The university that has a Mommsen, a Lowell, or an Agassiz in its faculty is in the possession of a power for good that is beyond estimation. How important it is that the student

should be able to arrange his work so as to come into intimate contact with such men!

The fear is often expressed that with such possibilities of choice the student may not choose wisely, — that he will overspecialize, that he will be too narrow in his selection; and, strangely enough, this fear is most frequently expressed by those who look back to the older classical system as probably, after all, the golden age of education, and who look upon the new changes as an unwise catering to a popular demand. Will there ever again be such magnificent specialization as when the student pursued the study of Latin for three years in the preparatory school, for four years in the college, and as much longer as his schooling extended?

Indeed, it was, in my opinion, just this specialization that enabled the older system to produce such excellent results. The thorough and extended study of a subject produces the best kind of training.

“The only true enthusiasm lies in specialization, and the effort to compass the whole realm of knowledge ends in bewilderment and failure.” The fear of narrowness that leads to a scattering, that kills enthusiasm and produces superficiality, is far more to be dreaded than narrowness.

It is serious study that broadens; not the study of any specific subject or of many subjects. Thorough knowledge of any kind begets respect for, and sympathy with, thorough knowledge of every kind. The mastery of one subject gives strength to master another.

So long as universities refuse to give place in their courses to the trivial, the superficial, and the sham, overspecialization is a danger that need have no terrors.

The student who enters the university and selects his studies with a view to their bearing upon his future calling is pursuing a thoroughly rational course. After spending four years in the serious study of things, even though they have a direct bearing upon his life-work, if the mind of the student is still narrow, then there is no implement in the

educational workshop with which it can be broadened. It is well for us to remember in this connection that there are minds which no system of education yet devised seems to broaden, minds which never gain the power to look upon any subject except from the bread-and-butter point of view.

In an address, delivered not long since, Professor Charles Eliot Norton deplored the tendency of our times as exhibited in the decay of principle in our public men, and as an antidote to this he recommended a more universal and a more thorough study of English literature. Even among those who believe the evils pictured to be true, many would be inclined to smile at the remedy suggested.

Yet the remedy is a good one. Its value lies not in any specific quality of English literature as distinguished from other branches of knowledge, but rather in the inspiration, the uplift, and the appreciation of truth that comes from earnest and thorough study of any worthy subject.

The advocates of the older system of education are now for the most part ready to admit that recent changes are perhaps justifiable upon purely utilitarian grounds. Indeed, when we look about and note the wonderful material advancement made possible by a more general and a more exact knowledge of natural laws, it would be captious to deny this. But many of them still believe that, when it comes to the development of real culture, the new education can only helplessly appeal to the old.

In consequence, we hear much about so-called "culture studies" as distinguished from others, which, by implication at least, stand on a distinctly lower plane. In this connection allow me to quote from a recent editorial in the *Nation* called forth by certain changes in the entrance requirements of Columbia University intended to permit the substitution of an increased amount of mathematics for some of the Latin previously required.

"President Low's recommendation," says the writer in the *Nation*, "will certainly be cited and appealed to as a

precedent by lesser colleges and universities; and in many a Western faculty Columbia and Cornell will be held up as bright examples of modern tendencies in the education in the East. . . . We have before us the problem of articulating the public school with the college. It is no easy task. Western universities (most of them are really colleges), growing up under local conditions and holding utilitarian or scientific ideals before them, have not been vexed by the problem, but our stronger Eastern universities and colleges have it still to work out.

“While these institutions have met the modern demand for scientific training, they have also sought to retain their ideals of culture, and most of them have succeeded in the effort. The modern public school, being nearer the popular heart, has sacrificed ideals of culture to those of science, so that, while the ordinary public schools can send up to the college or university students prepared to continue their education along scientific lines, most of them are unable to furnish the necessary propædeutic for culture. President Low’s idea of a solution is simply and frankly to follow Western experience; to unify the two along the line of physical science and utilitarian aims — a line of least resistance — and let the culture go. . . . Thus, when we are forced to the conclusion that our classical machinery of elementary culture is inadequate to modern intellectual life and to our modern educational conditions, we think we must abandon culture, at least elementary culture, altogether, and devote the earlier years of training to a preparation for the pursuit of science. Small wonder if those of us who cannot ignore the value of culture are thus compelled to oppose the development of science as the only means of retaining what culture there is in our educational system.”

According to this writer, it would appear that culture is something that cannot possibly be attained by the study of any science. Does culture, then, consist of a certain number of definite attainments, the possession of which means culture, and the lack of which excludes culture? Is it possible

that a certain prescribed course of study produces in all minds the uniform results which we call culture, while in all other things we observe the most striking differences in the ways in which different minds react toward one and the same discipline?

Is not culture rather a combination of character and attainments? A true basis for culture in the individual is a sincere love of truth, and a firm belief that all truth is safe.

Emerson says of the possessor of culture: "He must have a catholicity, a power to see with a free and disengaged look every object." Culture is found among men of the most widely different training, and it is also frequently lacking in men whose training has been all that thought could suggest.

May we not therefore justly conclude that there are many roads leading to culture, and that, owing to the great diversity of minds and characters among men, when we limit the number of these roads we simply diminish the number of persons who attain culture? The evidence seems clear that there are many who attain culture by a study of the ancient languages and literatures who never would attain it by a study of the physical sciences; likewise there are many who reach culture through a study of the physical sciences who never would reach it by a study of the classics.

Why not leave both avenues of approach unobstructed?

The folly of keeping a Pasteur at writing Latin verses is quite equalled by the folly of keeping a Tennyson at peering through a microscope.

The notion is prevalent that such freedom of choice, which renders possible the easy following of one's own inclination, cannot possibly furnish the same discipline as may be had by the student's being forced to pursue some line of work that may perhaps be more or less distasteful. It is doubtless true that human beings, like other things in nature, tend to follow the line of least resistance. Yet it is by overcoming resistance that we gain strength. There is here a real danger to the student which can be avoided

only by the constant vigilance of the university authorities.

Only worthy subjects adequately cared for should be found in the university curriculum.

As has been already stated, the most important thing to be acquired in a general education is the habit of work, and this is most easily and most surely acquired by doing work that is congenial. This habit once acquired, all work assumes a different aspect, and growth in all directions is henceforth possible. On the other hand, the attitude toward work and the habits acquired by enforced contact with uncongenial work are apt to dull enthusiasm, to stifle ambition, and future growth becomes much more problematical.

It is quite human for the man who has enjoyed the privileges of the older classical education and who has drawn therefrom inspiration, pleasure, and appreciation of the beautiful, to look upon the trend of modern education with misgivings and suspicion and to raise his voice in a cry of warning. It is perhaps equally human for the scientist who has likewise drawn from his work, and without the aid of the classical education, inspiration and pleasure and appreciation of the beautiful, to lose patience with the claims of superior excellence advanced for the classical training. Is it not time, however, for educators to borrow a page from one another's experience, and to recognize once for all that the desirable qualities that we class under the head of education and culture are not produced in different minds by identical processes? May we not welcome every new field of knowledge and recognize its power for training youth? May we not look upon it as some new tool in our workshop by means of which we may be able to reach some minds that it has been impossible to reach with the old implements?

This joining of hands upon the part of educators will require some exercise of culture, some "power to see with a free and disengaged look every object." We must make some effort in order to understand one another. We must remember that our estimate of the relative importance of

things is largely a result of our point of view, and that the same things appear quite differently from different points of view.

Human knowledge has now vastly outgrown the grasp of any single mind; ignorant in some departments of knowledge the most scholarly and the most industrious must remain, and that without shame. Let no one deceive himself with a superficial omniscience. The next best thing to knowing a thing well is to know that we do not know it.

Why should educators waste time and energy in trying to compare the values of different forms of knowledge, when their lack of omniscience renders them incapable of forming just judgments? Our own specialty is obviously to each of us the most important form of knowledge; let us show this faith that we have in our specialty not by criticising or ridiculing other forms of knowledge which we are incapable of understanding, not by hindering and checking the growth of other things, but rather by advancing that specialty to our utmost by honest work and earnest endeavor.

Many of the faults ascribed to over-education and its unfitting of people for their true spheres in life can be directly traced to the undue importance which has in the past been attributed to particular forms of knowledge and activity and to a consequent implied degradation inflicted upon equally meritorious forms of knowledge and activity. Aristotle's dictum that "all manual work is degrading," that "all paid employments are vulgar," has cost the world dear by the long maintaining of false ideals.

Slowly, however, more just views are prevailing, and already the men who do the world's work are meeting with the esteem due them from all right-minded persons.

The student who is graduated from a university where he has had large freedom of choice in the selection of his studies has less excuse for remaining uneducated than one who has been forced through a prescribed curriculum, much of which may have possessed no interest for him. Upon you, therefore

as graduates of Stanford, rests the increased responsibility of proving yourselves to be educated men and women. It may safely be assumed that a considerable majority of you have formed the habit of work, that you have accumulated a fund of useful information, and that in accumulating it you have learned how knowledge is obtained. You are then prepared to walk on your own feet and to think your own thoughts. But no one supposes that your education is ended. If that were the case this would have been called "Ending Day" instead of "Commencement Day."

In closing, I will, if I may, leave with you this short prescription for happiness: Choose your life-work with care, with deliberation, if need be; but when it is chosen, enter upon it with zeal. Let your attitude toward your work be such as was recently advised by President Hadley from this platform, "Not how much you can get out of it, but rather how much you can put into it." Be not over-particular about the importance of your first position — the important thing is not where you begin but where you end. At first the chief thing is to begin. Do not flatter yourself or discourage yourself by comparing your own progress with the progress of your neighbor or your friend, but rather live up to your own best all of the time, and that best will constantly grow better and your progress and ultimate success will take care of themselves. Fix your eyes upon the advantages that you have, rather than upon those that you have not.

Finally, "Look forward, not backward; look up, not down; and lend a hand."

LELAND STANFORD'S VIEWS ON HIGHER EDUCATION.

DAVID STARR JORDAN.

It is my pleasant duty once again to welcome a body of young men and young women into the ever-widening circle of Stanford Alumni, now after ten years numbering 1402. The certificates I have just placed in your hands testify to our confidence in your ability and your purposes. In our eyes, you, like those who have passed before you, are youth of promise. We have done the best we know in aiding you in your preparation for usefulness. The rest lies in your own hands.

One of the greatest of the joys we call academic is that of looking into the eyes of young men and young women with the feeling that some small part at least of their strength is the work of our own minds and hearts. Something of the teacher we see in the student, and, from master to pupil, there is a chain of heredity as real, if not as literally exact, as the bodily likeness that runs in the blood.

To the founder of a university a kindred satisfaction is given, and not for a day or a period only, but for "changing cycles of years." It is his part to exchange gold for abundance of life. It is his to work mightily in the affairs of men centuries after his personal opinions and influence are forgotten. The moral value of the possession of wealth lies in the use to which it is put. There can be no better use than that of making young men and women wise and clean and strong.

Of this right use of money your lives and mine have been in large degree a product. This fact gives me the theme of my discourse this morning, the work of Leland

Stanford Junior University as it existed in the mind of the founder before teachers or students came to Palo Alto to make it real.

Our university is now just ten years old. Of all foundations in America it is the youngest save one, the University of Chicago. Yet as universities go, in our New World, it has attained its majority. It is old enough to have a character and to be judged by it.

For the broad principles of education all universities stand, but each one works out its function in its own fashion. It is this fashion, this turn of method, which sets off one from another, which gives each its individual character. What this character shall be no one force can determine. Its final course is a resultant of the initial impulse, the ideals it develops, and the resistance of its surroundings. No one influence can control the final outcome. No one will can determine the result, where a thousand other wills are also active. Nor is the environment finally potent. Environment is inert, except as the individual wills are pitted against it.

In our own university the initial impulse came from the heart and brain of Leland Stanford. The ideals it has upheld were his before they were ours. They had been carefully wrought out in his mind before he called like-minded men to his service to carry them into action. It is well once in a while to recall this fact.

I need not repeat the story of Mr. Stanford's life. He was long the most conspicuous public man of California. He was her war governor, wise and patient, and respected of all men before his railroad enterprises made him the wealthiest citizen of the state. His wide popularity, the influence, personal and political, which he acquired, did not arise from his wealth. Wealth, influence, and popularity sprang alike from his personal qualities, his persistence, his integrity, his long-headedness, and his simplicity, which kept him always in touch with the people. "He was active," it was said, "when other men were idle; he was generous

when others were grasping ; he was lofty when other men were base." He was in all relations of life thoroughly a man, and of that type—simple, earnest, courageous, effective— which we like to call American.

The need to train his own son first turned his thoughts to educational matters. His early acquaintance with Professor Agassiz, perhaps the greatest of American teachers, helped to direct these thoughts into channels of wisdom. From Agassiz he derived a realizing sense of the possibilities of human knowledge and the impelling force of man's intellectual needs,— that hunger and thirst after truth which only the student knows. "Man's physical needs are slight," he said, "but his intellectual needs are bounded only by his capacity to conceive." In the darkness of bereavement the thought came to Mr. Stanford that the duty of his life should be to carry his plans of educating his own son into effect for the sons of others. After the long vigil of a dreary night he awoke with these words on his lips : "The children of California shall be my children." And with characteristic energy he made this vision fact. Articles of endowment were drawn up, lands and buildings and teachers were provided, and on the first day of October, 1891, the new university opened its doors to the children of California, and to those of the rest of the world as well.

With all bright auspices of earth and sky, of hope and purpose, of wealth and generosity, the new university began. In its history all who are here to-day have taken some part. With many of us it represents the best portion of our lives. Of this I do not now wish to speak, but rather to discuss the original impulse of the founder. What was Leland Stanford's idea of a university, its work and life?

We learn, first, that he would leave the university free to grow with the coming ages. He would extend no dead hand from the grave to limit its activities or to control its movements. The deed of gift is in favor of education pure and simple. It has no hampering clause, and the only end in view is that of the help of humanity through the

extension of knowledge. "We hope," he said, "that this institution will endure through long ages. Provisions regarding details of management, however wise they may be at present, might prove to be mischievous under conditions which may arise in the future."

As a practical man accustomed to go to the heart of things, Mr. Stanford had little respect for educational millinery and for the conventionalities which have grown up about the great institutions of the Old World. He saw clearly the value of thoroughness, the need of freedom, the individuality of development, but cared little for the machinery by which these ends were achieved. So it was decreed that the new university should be simple in its organization, with only those details of structure which the needs of the times should develop within it. If it must have precedents and traditions, it must make its own. "I would have this institution," he said, "help to fit men and women for usefulness in this life, by increasing their individual power of production, and by making them good company for themselves and others."

A friend once argued with him that there is already too much education, and that to increase it further is simply to swell the volume of discontent. "I insisted," Mr. Stanford said, "that there cannot be too much education, any more than too much health or intelligence. Do you happen to know any man who has been too well educated? Where does he live? What is his address? If you cannot find such a man, you cannot speak of over-education." There has been unwise education, or misfit education. Some highly educated men are neither wise nor fit, and there is a kind of education that comes from experience and not from books. But with all this, too thorough or too good a training no one ever had. Ignorance is shadow. Education is light. Nothing is more unpractical than darkness, nothing is more practical than sunshine.

Mr. Stanford believed that no educational system could be complete in which entrance to the university was a

detached privilege of the chosen few. He believed in the unbroken ladder from the kindergarten to the university, a ladder that each one should be free to climb, as far as his ability or energy should permit. He believed, with Ian Maclaren, in keeping the path well-trodden from the farmhouse to the university. He asked that this sentence be placed on the University Register: "A generous education is the birthright of every man and woman in America." In Emerson's words, "America means opportunity," and opportunity comes through training to receive it. To have such training is to be truly free born, and this is the birthright of each child of the republic.

Science is knowledge tested and set in order, and each advance in knowledge carries with it a corresponding increment of power. A machine to Mr. Stanford was not a mere saver of labor, but an aid to labor, increasing its efficiency and therefore adding to the value of men. By greater knowledge of the forces of nature we acquire greater skill in turning these forces into man's service through the harness of machinery. In increase of scientific knowledge he found the secret of human power. An education which does not disclose the secret of power is unworthy of the name. "We may always advance toward the infinite," was a favorite saying of his. He could find no limit to the development of civilization. The possibilities of human progress expressed to him the measure of infinite goodness. In his own words, "The beneficence of the Creator toward man on earth, and the possibilities of humanity, are one and the same."

But in his forecast of the myriad triumphs of applied science, he did not forget that knowledge itself must precede any use man can make of it. Pure science must always go before applied science. The higher forms of thought have their place in mental growth as necessities in the concrete preparation for action.

In the new university he decreed that "the work in applied sciences shall be carried on side by side with that in

the pure sciences and the humanities, and that, so far as may be, all lines of work included in the plan of the university shall be equally fostered."

No other university has recognized so distinctly the absolute democracy of knowledge. The earlier traditions of Cornell pointed in this direction, and for this reason Mr. Stanford found in Cornell, rather than in Harvard, Yale, Johns Hopkins, or Michigan, the nearest existing approach to his own ideal. It was Ezra Cornell's hope "to found an institution where any person could find instruction in any study." Cornell and Stanford, in so far as they are loyal to these traditions, know neither favored students nor favored studies. No class of men are chosen to the exclusion of others, and no class of studies is given a fallacious importance through force of academic pressure or through inertia of academic tradition. While various kinds of knowledge are of varying worth to different persons, each has its own value to the world, and the value to the individual must be determined in each case by itself. The university should be no respecter of persons. It is not called on to approve or condemn the various orders of genius that come to it for training. There has been no greater hindrance to educational progress than the hierarchy of studies, the fiction that certain kinds of work had an invisible value not to be measured by tangible results.

Mr. Stanford shared with Agassiz the idea that the essential part of education was a thorough knowledge of some one thing, so firmly held as to be effective for practical results. He believed in early choice of profession, in so far as early choice could be wise choice. The course of study, however broad and however long, should in all its parts look toward the final end of effective life. The profession chosen early gives a purpose and stimulus to all the intermediate courses of training. He saw clearly the need of individualism in education, and that courses of study should be built around the individual man as he is. The supposed needs of the average man as developed by a consen-

sus of educational philosophers do not suffice for the actual man as he is in actual life. We must be fed with the food that is good for us. It is for us that it must be adapted, not for some average man in some average age. The ready-made curriculum belongs to the same category as ready-made clothing. It is something cheap and easy, for the man without individual needs.

Mr. Stanford's belief that literature and engineering should be pursued side by side was shown by his wish to provide for both with equal generosity. And the students of each are the gainers by this relation. The devotee of classical culture is strengthened by his association with men to whom their college work is part of the serious duty of life. The student of engineering stands with both feet on the ground. His success in life depends on the exactness of his knowledge of machinery and of the basic principles of mechanics and mathematics. He must be in dead earnest if he would succeed at all. On the other hand, the student of realities gains by his association with the poet, the philosopher, and the artist. The finer aspects of life are brought to his notice, and from this association results tolerance and breadth of sympathy.

That women should receive higher education as well as men was an axiom to Mr. Stanford. Coeducation was taken for granted from the first, and the young women of Stanford have never had to question the friendliness of their welcome. "We have provided," Mr. Stanford says, "in the articles of endowment, that the education of the sexes shall be equal—deeming it of special importance that those who are to be the mothers of a future generation shall be fitted to mold and direct the infantile mind at its most critical period."

The leading argument for coeducation is akin to the one just indicated for the union in one institution of the various lines of literature, art, science, and applied technology.

In women's education, as planned for women alone, the tendency is toward the study of beauty and order. Literature

and language take precedence over science. Expression is valued more highly than action. In carrying this to an extreme, the necessary relation of thought to action becomes obscured. The scholarship developed tends to be ineffective, because it is not related to life. The educated woman is likely to master technique, rather than art; method, rather than substance. She may know a good deal, but be able to do nothing. Often her views of life must undergo painful changes before she can find her place in the world.

In schools for men alone, the reverse condition often obtains. The sense of reality obscures the elements of beauty and fitness. It is of great advantage to both men and women to meet on a plane of equality in education. Women are brought into contact with men who can do things—men in whom the sense of reality is strong, and who have definite views in life. This influence affects them for good. It turns them away from sentimentalism. It is opposed to unwholesome forms of hysterical friendship. It gives tone to their religious thoughts and impulses. Above all, it tends to encourage action governed by ideals, as opposed to that resting on caprice. It gives them better standards of what is possible and impossible, when the responsibility for action is thrown upon them.

In like manner, the association with wise, sane, and healthy women has its value for young men. This value has never been fully realized, even by the strongest advocates of coeducation. It raises their ideal of womanhood, and the highest manhood must be associated with such an ideal.

It was the idea of the founders that each student should be taught the value of economy,—that lavish expenditures bring neither happiness nor success. "A student," it was said by one of the founders, "will be better fitted to battle with the trials and tribulations of life, if he (or she) has been taught the worth of money, the necessity of saving, and of overcoming a desire to imitate those who are better off in the world's goods. For, when he has learned how to

save and how to control inordinate desires, he will be relatively rich. During the past three and a half years of close observation on my part, the importance of economy has impressed itself forcibly upon me, and I wish it to be taught to all students of the university. Nature has made the surroundings of the university beautiful, and the substantial character of the buildings gives them an appearance of luxury. I wish this natural beauty and comparative luxury to impress upon the students the necessity of their preservation for the generations that are to follow. The lesson thus taught will remain with them through life and help them to teach the lesson to others. The university buildings and grounds are for their use while students, in trust for students to come."

The value of the study of political and social science as a remedy for defects of government was clearly seen by Mr. Stanford. "All governments," he said, "are governments by public opinion, and in the long run every people is as well governed as it deserves." Hence increase of knowledge brings about better government. For help in such matters the people have a right to look to their universities and university men. It was his theory that the art of government is still in its infancy. "Legislation has not, as a rule, been against the people, but it has failed to do all the good it might." "No greater blow can be struck at labor than that which renders its products insecure." In the extension of voluntary coöperation he saw a remedy for many present ills, as he saw in the law of mutual help the essence of our Christian civilization. He said, in laying the cornerstone: "Out of these suggestions grows the consideration of the great advantages, especially to the laboring man, of coöperation, by which each individual has the benefit of the intellectual and physical forces of his associates. It is by the intelligent application of these principles that there will be found the greatest lever to elevate the mass of humanity, and laws should be formed to protect and develop coöperative associations. . . . They will accomplish all that is

sought to be secured by labor leagues, trades unions, and other federations of workmen, and will be free from the objection of even impliedly attempting to take the unauthorized or wrongful control of the property, capital, or time of others."

One result of voluntary coöperation, in Mr. Stanford's view, would be the development of the spirit of loyalty, the most precious tribute of the laboring man in any grade, in any field, to the interest or cause which he serves. One great evil of the present era of gigantic industrial organizations is that it takes no account of the spirit of loyalty, without which no man can do his best work. The huge trust does away with the feeling of personal association. The equally huge trades union, in many of its operations, strikes directly at the personality of the individual workman. It makes him merely a pawn to be moved hither and thither in the current of industrial war. In the long run, no enterprise can flourish, unless those who carry it on throw themselves, heart and soul, into its service. On the other hand, no one can do a greater injury to the cause of labor than to take loyalty out of the category of working virtues. It is one of the traditional good traits of the healthy college man to be loyal to his college. This virtue Mr. Stanford would have cultivated in all effective ways, and in loyalty on both sides he would find a practical solution of most of the labor troubles of to-day. That he carried his ideas into his own practice is shown by the unflinching devotion of all his own employees of whatever grade throughout his life. They were taught to believe in him, to believe in the worth of their own work, and thus to have respect for themselves. Much of the discontent of the day has its origin in lack of self-respect. The pawn that is moved in the game of sympathetic strike has no control over his own actions, and therefore no respect for his own motives. The development of intelligent, voluntary coöperation, in the long run, must make the workman more than a machine. If he is such, in the long run again, he

will receive whatever he deserves. He will be a factor in civilization, which the unskilled, unthinking laborer is not.

The great economic waste in labor often engaged Mr. Stanford's attention, and he found its remedy in education. "Once," he said, "the great struggle of labor was to supply the necessities of life; now but a small portion of our people are so engaged. Food, clothing, and shelter are common in our country to every provident person, excepting, of course, in occasional accidental cases. The great demand for labor is to supply what may be termed intellectual wants, to which there is no limit, except that of intelligence to conceive. If all the relations and obligations of man were properly understood, it would not be necessary for people to make a burden of labor. The great masses of the toilers now are compelled to perform such an amount of labor as makes life often wearisome. An intelligent system of education would correct this inequality. It would make the humblest laborer's work more valuable, it would increase both the demand and supply for skilled labor, and reduce the number of the non-producing class. It would dignify labor, and ultimately would go far to wipe out the mere distinctions of wealth and ancestry. It would achieve a bloodless revolution and establish a republic of industry, merit, and learning.

"How near to that state we may be, or how far from it, we cannot now tell. It seems very far when we contemplate the great standing armies of Europe, where over five millions of men (or about one for every twelve adult males) are marching about with guns on their shoulders to preserve the peace of the nations, while hovering near them is an innumerable force of police to preserve the peace of individuals; but when we remember the possibilities of civilization and the power of education, we can foresee a time when these soldiers and policemen shall be changed to useful, producing citizens, engaged in lifting the burdens of the people instead of increasing them. And yet, extravagant as are the nations of Europe in standing armies and preparations

for war, their extravagance in the waste of labor is still greater. Education, by teaching the intelligent use of machinery, is the only remedy for such waste."

That the work of the university should be essentially specialized, fitting the individual for definite forms of higher usefulness, was an idea constantly present with Mr. Stanford. He had no interest in general education as an end in itself. He had no desire to fit men for the life of leisure, or for any life which did not involve a close adaptation of means to ends.

That the new university would in time attract great numbers of students, Mr. Stanford believed as a matter of course, although he found few California teachers who shared his optimism. But he was never deceived with the cheap test of numbers in estimating the value of institutions. He knew that a few hundred men well trained and under high influences would count for more than as many thousands, hurried in droves over a ready-made curriculum by young tutors, themselves scarcely out of college. So it was decreed that numbers for numbers' sake should never be a goal of Stanford University. And he further made the practical request that not one dollar directly or indirectly should be spent in advertising. The university has no goods for which it is anxious to find customers.

Mr. Stanford insisted as a vital principle that the university exists for the benefit of its students, present, past, and future. It has no existence or function save as an instrument of education. To this principle all others should be subordinate. In his opening address Mr. Stanford said to the students of the Pioneer Class: "You are the most important factor in this university. It is for your benefit that it has been established."

The greatest need of the student is the teacher. Mr. Stanford said: "In order that the president may have the assistance of a competent staff of professors, we have provided that the best talent obtainable shall be procured and that liberal compensation shall always be offered." Again

he said: "Ample endowment may have been provided, intelligent management may secure large income, students may present themselves in numbers, but in the end the faculty makes or mars the university."

Compared with the character of the faculty every other element in the university is of relatively little importance. Great teachers make a university great. The great teacher must always leave a great mark on every youth with whom he comes in contact. The chief duty of the college president is the choice of teachers. If he has learned the art of surrounding himself with men who are clean, sane, and scholarly, all other matters of university administration will take care of themselves. He cannot fail if he has good men around him. And in the choice of teachers the element of personal sanity seemed of first importance to Mr. Stanford,—the ability to see things as they are. The university chair should be a center of clear seeing from which right acting should radiate.

That the university should be a center of coöperating research was a vital element in Mr. Stanford's plans. A man content with the truth that now is, and without ambition to venture into the unknown, should not hold the chair of a university professor. The incentive for research should be within, not without. Its motive should be not the desire of individual fame but the love of knowledge.

In proportion to the extent to which it widens the range of human knowledge and of human power, in that degree does an institution deserve the name of university. The value of its original work is the best single test by which a university may be judged; and as it is the best, so is it also the severest.

In its public relations, the university stands for infinite patience, the calm testing of ideas and ideals. It conducts no propaganda, it controls no affairs of business or of public action. It is the judge of the principles of wisdom and the ways of nature. The details of action it must leave to men whose business it is to guide the currents of the moment.

When Leland Stanford Junior University was founded it was provided that in its religious life, as in its scientific investigations, it should be wholly free from outside control. No religious sect or organization and no group of organizations should have dominion over it. The university should exist for its own sake, to carry out its own purposes, and to bring out its own results in its own way.

In this regard the die is cast, once for all. The choice of the founders of the university was deliberate and final. They chose the path of intellectual and religious freedom, in the very interest of religion itself. Religion is devotion in action. In its higher reaches it must be individual, because it is a function of the individual soul which must stand in perpetual protest against the religion that finds its end in forms and ceremonies and organizations.

Religion must form the axis of personal character, and its prime importance the university cannot ignore. To attain its culture it may use indirect rather than direct means, the influence of effort and character rather than the imposition of forms. To accept ecclesiastical help is to invite ecclesiastical control toward ecclesiastical ends. In the Grant of Endowment it was required that the trustees should 'prohibit sectarian instruction, but have taught in the university the immortality of the soul, the existence of an all-wise and benevolent Creator, and obedience to his laws as the highest duty of man.'

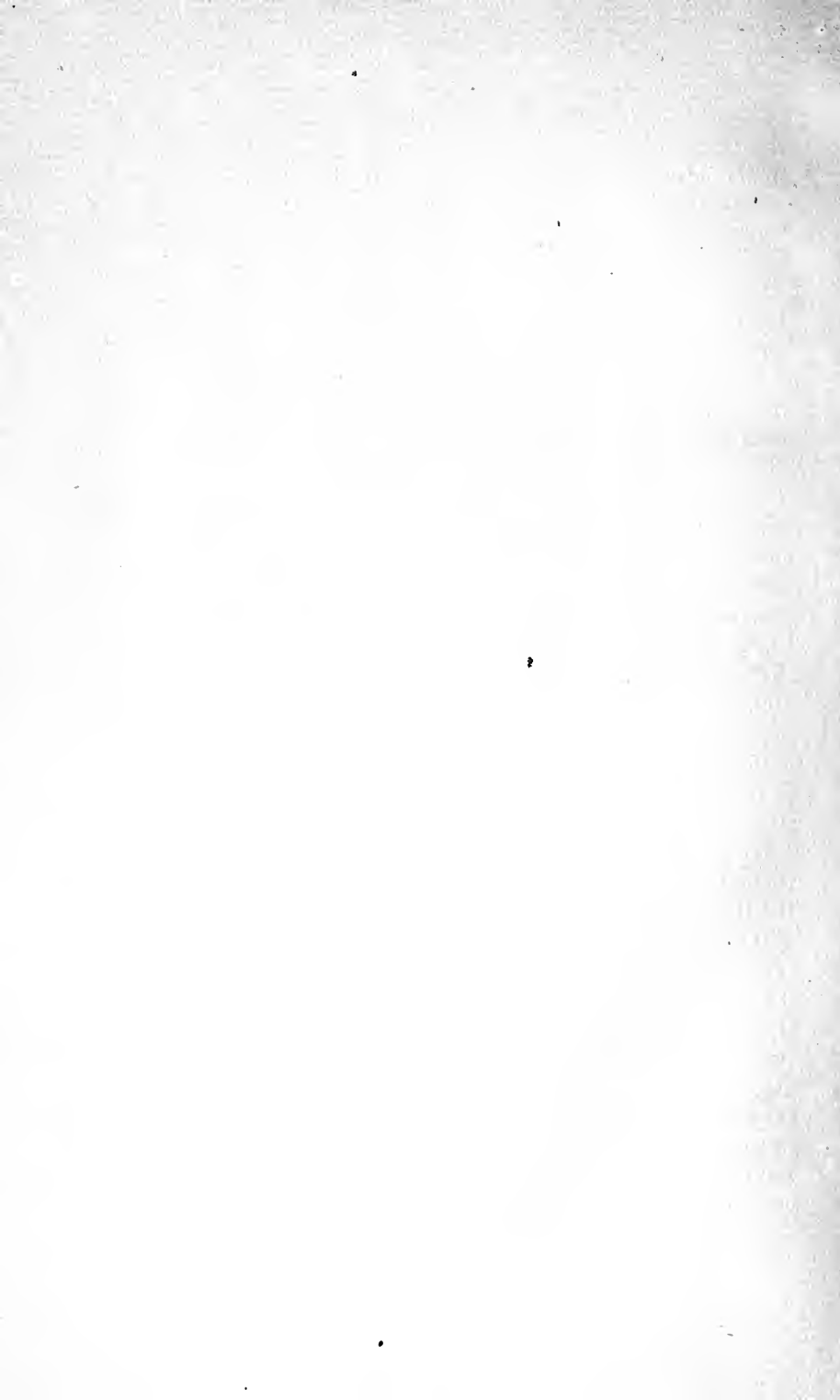
This requirement was a simple reflection of Mr. Stanford's own religious character, as expressed in the words of one very near to him: "If a firm belief in a beneficent Creator, a profound admiration for Jesus of Nazareth and his teachings, and the certainty of a personal life hereafter, constitute religion, then Leland Stanford was a religious man. The narrow walls of a creed could not confine him; therefore he was not a professed member of any church, for in each confession of faith he found something to which he could not subscribe. But for the principles of religion he had a profound veneration; in his heart were the true senti-

ments of Christianity, and he often said that in his opinion the Golden Rule was the corner-stone of all true religion."

The founders believed truly that freedom of thought and action would promote morality and religion, that a deeper, fuller religious life would arise from the growth of the individual, that only where the "winds of freedom" blow will spring up the highest type of religious development. For character is formed from within by the efforts and strivings and aspirations of the individual. It can never be imposed from without. The will is made strong from choosing the right, not from having right action enforced upon it. The life of man is "made beautiful and sweet through self-devotion and through self-restraint." But this must be chosen voluntarily, else it fails of its purpose.

The growth of Leland Stanford Junior University must remain the best evidence of its founder's wisdom. He had the sagacity to recognize the value of higher education and the patriotism to give the rewards of a successful life to its advancement. He had the rarer wisdom to discriminate between the real and the temporary in university organization and management, and his provision is for the genuine and permanent, not for that "which speedily passes away." Still more rare, he had the forethought to leave to each succeeding generation the duty of adapting its details of administration and methods to the needs of the time.

If the founder we love and the founder whose memory we revere had said, "We will found a university so strong that it may endure for all the centuries, and whose organization shall be so free and flexible that in each age it shall reflect the best spirit of the time," they could not have given it greater freedom of development than it has to-day. For the glory of the university must lie in its freedom, in that freedom which cannot fall into license, nor lose itself in waywardness,—that freedom which knows but one bond or control, the eternal truth of God.



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