

ductivity of the oil, the surface of the paraffine may be exposed to the air indefinitely without congealing; and, furthermore, since a film of warm oil adheres to the outside of the vessel when the latter is taken from the well, the paraffine remains melted off the bath for a considerably longer time than it does without this protection, thus making possible a much more leisurely process of embedding.

The advantage of immersing the vessel in oil is especially conspicuous in embedding free, minute objects, like small eggs, which have been saturated with paraffine while contained in glass vials and which must be handled by means of a pipette.

The oil which has been usually employed in the bath has been olive oil.

*A Case of Dibothrocephalus latus Infection Acquired in America (Minnesota):* W. S. NICKERSON, University of Minnesota.

The author reports the first known instance of locally acquired infection by the broad human tapeworm. A Finnish child, born in Minnesota, which had never fed upon imported fish of any kind, passed a specimen of *Dibothrocephalus latus* seven feet in length. Since infection from this worm can take place, so far as known, only from eating fresh-water fish that are infested with the larval form (plerocercoid), it is practically certain that American fishes have become the hosts of this parasite. In endeavoring to account for this condition the author suggests that the sewage from cities with a large foreign population may be sufficient to furnish the required infection of the intermediate host. Since at least ten European species of fish serve in this capacity, it is not unreasonable to conclude that there would be found in this country some forms in which the larvæ of the worm would thrive.

C. E. McCLUNG,  
Secretary.

TOWN AND GOWN.<sup>1</sup>

ON an old French sun-dial is a motto to this effect: All passes in time and time itself; but eternity does not, nor love. This last is the permanent thing, in which the universe and human society are founded. So these hundred and fifty years of our university, just past, being as they were but a moment in the morning of its life, compel us to look not backward, but at the present and the future. The Greek fool who ran so far to get a start that he could not jump when he reached the mark is perhaps a symbol of some university men who spend their lives in preparing to live; but not of the university itself, which renews its strength in action and endures forever, if true to itself. Founded in faith and devoted to liberal learning, Columbia has successively welcomed faculties of the learned professions and faculties of natural and applied science, fearless, persistent, aggressive. The boughs rival the trunk; action and reaction develop a wholesome struggle; the air hereabouts is keen and sometimes both tense and tumultuous. We have not merely renewed our youth, we have transformed ourselves and start afresh.

Among the questions of our new morning is this: Have we a new conscience and what about the moral sense of our community? For example, certain trademarks have a high commercial value. Such an one is the bachelor of arts. Its chief renown, however, is intellectual and social. The reason is that for ages it connoted a certain training. Those who held it have been the heirs of human experience; they have understood the continuity of thought, the organic nature of society and its institutions, the value of order and proportion, the charms of fancy and imagination, the interpretation of the past for use in the present and future. From them comes the birthright because among them were

<sup>1</sup> Address at the opening exercises of Columbia University, 1905.

the kings of thought  
Who waged contention with their time's decay  
And of the past are all that cannot pass away.

Somewhat more than a generation since, the cry arose for a training in the science of nature equally thorough with that in the sciences of man. The call was heeded because it was just. The machinery of scientific education was set in motion, and for nearly forty years the munificence of the American world has lavished untold wealth to improve it. Never was a movement better adapted to the humor of the time and to the designed end. The brand to be put on its product was either a technical degree or the newly invented bachelor of science. The world of to-day is grateful to the men who hold those proud and honest degrees. To them the world is indebted for incalculable well-being, and Columbia is proud of those she numbers among her children. The liberal elements she inspired and infused into their scientific training gave life to inert things and related matter to mind.

The spread of this education has been so rapid and its work so fruitful that its quality has been misjudged; unfortunate comparisons have been instituted; and at last the specious effort is making, here and elsewhere, to erase the name of science from the label. The hue and cry has gone up that so much work on any material is as valuable as the same amount on any other. If this were true, what a dull monotony would life and nature be! What is really meant is, however, even worse; because it is not merely untrue, but misleading. It is the demagogue's claptrap and soft-sawder, that all work and all subjects and all men are equal and identical and are to be designated by the same badge. If this really indicates the state of our minds, it is time for self-examination. The evolution which has brought us to this is strange indeed and the situation is so new and anomalous that the relation of Colum-

bia to her home, the duty of the University to the City, the service which Gown may render to Town, suddenly loom up, not as vague, intangible matters, but as concrete realities of the first importance.

Where and when was there an imperial city so heterogeneous in population, with the masses in absolute control through the free ballot, with equal rights of every sort guaranteed and enforced by the nation, with ignorant and unskilled mechanics in charge of the most delicate and complex social machine hitherto devised—an organism which has been the evolution of centuries, the frail heir of the past, the ancestor of ages yet to come? The reaction of the university and its environment under such conditions must be something powerful for untold weal or woe to millions. Let us not be blind fatalists; the battle is to the strong. Our example is just as subtle and our responsibility just as great, as is the moral force of this anomalous aggregation of mankind upon us. What we do in our own affairs may change the course of empire; and if we say that white is black, that the potter is the clay, that one sort of training is identical with another, and so on through the whole weary round of quibbles and evasions, we stultify ourselves and lead our blind followers into the ditch. Is it for this we have renewed our youth? Are these great throngs of students, is this great community, to learn such lessons, far more important than the learning of the schools? Does the outward splendor of this acropolis house faculties and professors who change with the winds of doctrine that blow from off the broad expanses of untilled social alluvium around what ought to be our mountain of sacrifice? Certainly not; our opportunity to till these fertile fields is almost too splendid, if we can seize it.

Here is the Orient, projected into the West; the earliest and the latest East, un-

changed and unchanging in its own lands, thrown into a society whose highest ambition is change. The Jew, the Levantine, the Mongolian; these are all here in a countless host with all their virtues and all their faults. *In seinen Göttern malt sich der Mensch.* Their religion is their all; their jurisprudence, their politics, their morals. If they lose their awe, their trust, their national cult, their lords of battle, their great prophets—what do we give them instead, bread or a stone? Here is not only the ancient world, but the middle age; a political feudalism, a social hierarchy, almost as perfect as those of the thirteenth century; a medieval church in unsurpassed majesty, festivals of an age-worn creed and system that vie with our national holidays and even surpass them in the interest of the celebrants. And thirdly, in regard to numbers at least, we have to search with a lantern for the Dutchman, the Huguenot, and the Briton, English, Scotch or Irish, who were once in control of this metropolis. But they can be found, few as they are; they are here and in power; responsible still for the moral standards which guide this civic life; responsible too for the immorality that seethes beneath the surface of commercial life, responsible, let us hope, for the lance and probe which open the periodic sores of both to the healing light of day and airs of heaven.

How are we to perform our *rôle*, to do our imperative duty, in the midst of this amazing congeries of unrelated parts? How are we to reap the rich harvest which may be garnered for ourselves and for humanity in this the most fertile social field ever enclosed? The mixed races of the world have been its conquerors. What Greece devised, Rome, that imperial compound of Latin, Celtic, German and Oriental ingredients, imposed by force on the then known world. Another mixed race,

the Turks, overwhelmed Byzantium; and in the Western Empire, the blend of Angles, Saxons, Jutes, Danes and Celts, a mingled drift flung afar on the rocky confines of Gaul and Britain, established its sway, disseminating the heritage of Rome, Christian and Pagan, to the ends of the earth. So we, in turn, a still more wondrous conglomerate of all peoples, nations and languages that dwell upon the earth, may grasp a still larger inheritance, and in our turn transmit it to all mankind; the United States of the world.

In Lessing's great dialogue on free-masonry, he shows how every individual man has secrets and aspirations which he can not reveal, even if he would. Those on which he touches are largely political and belong fortunately to history. But, for a familiar example, here is the mystery of our very being. Do we really exist or are we phantasms? We can prove nothing absolutely, one way or another; but for all that we do exist, we do live and think; and we behave according to that conviction. Where is the proof of sense-perception? Yet we do perceive; and behave accordingly. What can we know? Nothing absolutely, perhaps, but something, even though relatively, something actually, because we conduct ourselves according to convictions based on reality, as the test of action proves. Man can not live without political organization, yet it is the bloody struggles of states that destroy men, physically and morally, as does no other cause. We have discarded the doctrine of races as unscientific; yet race-struggle is an uppermost question in the mind of every serious man. By analogy with these instances, university theories and ideals reduce themselves when carefully considered to matters of conduct, to an attitude of mind and a course of behavior. Theories and ideals, much vaunted as they are, seem very unreal and elusive; morals are concrete and vitally important.

The hour for discussion, profession and experiment has passed, our works must now speak for us.

Far and near throughout the country this university morality, this mental pose and whatsoever proceeds from it, have in a high degree displaced the older sanctions and been erected into a sort of cult. This will prove a disaster, unless we are most conservative. Our standards, though not very precise as yet, are very genuine and very real. As yet, too, they have engrossed attention from the inner circle only, and have not engaged the critical attention of the great world. But the transition is on us and is beginning; here we stand. We make our appeal for support in the new era, no longer to sympathetic friends alone, but to all givers—to the community, for money and for sympathy. The community asks: what do you want it for? Because of the service we render. And, pray, what is the service? We furnish the best citizens. Is that so sure? Many worshipers of the main chance are university men. We advance knowledge: Give the items. We mould opinion: That is an open question. And so on, and so on. On all these points we can offer proof and make a stand; but the proof is not convincing to every one. We are compelled to go further back and state our principles; to say, what we exist for is the maintenance of standards; the service we render is the creation of ideals by faith and sympathy, and, far above this, the practice of what we profess, the realization of those ideals in education, citizenship, politics and religion. Our banner is a tricolor and its stripes are three: firmness, tolerance and temperance.

No wonder that men worship at the shrine of natural science. Before and since Pilate, men have been asking: What is truth? As the world understands it, science professes to tell us first that the

search is vain, there is no absolute truth; and secondly, that what relative truth there is, she alone has discovered and of it she is the sole guardian. This is a proud claim, and science, like many men, has been largely taken at her own estimate of herself; especially since by her means the face of nature has, within a century, been changed more than in all the centuries preceding taken together. Especially since further, the man of science, fearless, dauntless, adventurous, self-confident, steps forth with an imperious demand for leadership. Faith and ideals seem to be hollow terms in his ears: reality, investigation, knowledge, utility, these are the staple terms of his vocabulary. Yet his firmness is not that of which we speak and for which we plead, or at least not all of it, nor even much of it. In no period known to me, throughout the course of history, has the 'cocksureness of science' aroused such antagonism. Just in proportion as it has seemed to say: all truth is relative and material, the common soul has cried louder for pity, for sympathy, for balm in suffering and for the sustenance of love. Never have we known such a recrudescence of superstition, nor a longer catalogue of mysteries, each and all protests against the limitations of natural science and its scanty supply of food for the soul. A starved soul is, as the Romans thought, a malignant ghost, the most dangerous disturber of the public peace. When fed on negations, or on materialism, or on any husks which human experience has long since rejected, the natural, kindly, human mind becomes either a credulous dupe or a wolfish freebooter. Both sorts abound among us in dangerous proportions.

This, I suppose, is what my predecessor on this stage intended, when he wittily divided the field of knowledge into humanities and inhumanities. If I caught his idea, I can not altogether agree, for the contrast is not so alarming as that. One with-

out the other is like bread without salt, and both are necessary to a wholesome intellectual diet. The heart-searchings and modesty of the great souls in science are unknown to the world. The leaders need interpreters. The cocksureness of science is its danger; to be cocksure of different things at such short intervals does not inspire confidence in the conclusions, which have to be adjusted accordingly. It is the admixture of scientific research and the historical sciences—philosophy, philology and politics—that will produce the type of assurance which properly characterizes the university spirit. Here stands either a pharos or a wrecker's beacon; do we cast athwart the storm a broad beam of firmness in maintaining tried and tested expedients of life; or does a sputtering arc-light of novelty gather the moths and gnats to wonder and stare and perish?

'*Aurum accepisti,*' said Vincent of Lerino, '*aurum redde.*' Ages ago the standard yardstick was deposited in the Tower of London. It is, if you like, a clumsy, arbitrary standard; but it has kept order in the affairs of millions, generation after generation. Its value is in its permanence: fixed, true and immutable, though imperfect as other mundane things are, it has been an invaluable guide and has not been superseded, because nothing better has been found for homely daily use. So with the value of other standards and measures; their value is partly in their accuracy, but far more in their homely honesty, their maintenance of an intelligible and familiar standard. Some may desire for excellent reasons to substitute the meter for the yard, but no one has suggested that the yard be called a meter or the meter a yard. If the public desires one and rejects the other, very well; but it will have no juggling with the name.

Like other living organisms, Columbia needs new resources every day and hour.

She was richly endowed for certain definite purposes by the founders; the deposit she received from them of learning, of morality and of religion, she must guard as talents entrusted to her by her master; and, like the faithful servant, she must win therewith other five. In the painstaking performance of this duty she has appeared to the thoughtless quidnuncs to be a very weather-cock of public fickleness, sensitive to public clamor in the never-ceasing adaptation of her course of study to public demands, a sort of department store of knowledge, with wares for every customer. It is estimated that even now by the doctrine of permutations and commutations and probabilities, we should be compelled to take fifteen thousand bachelors of art in order to find two who had done the same work for that degree.

Many wonder whether we do not respond too easily to the zephyrs of novelty blown every hour from off the Mars Hill of education in the American Athens. The idea is baseless. It is but fair to ourselves and our great community to announce from the housetop that, after three years of stock-taking and careful analysis of all the results of our experiments, we have reached a decision as to the meaning and nature of our degrees which shows us still fixed on the rock of our inheritance, accepting the old responsibilities as well as the new and performing the duties they entail. In this we want, as we believe we have, the enthusiastic support of all intelligent New Yorkers. Our society is not asking for revolutions or devolutions, but demands just such a trained leadership, bold and steady, loyal to tradition and history. The latest arrival among us is proud of the city's past and eager to catch its spirit.

And tolerance! What does this mean and how are we to exercise it? Does a tolerant spirit mean an indifferent one? Specialization and devotion mark the great

men of the age. Bismarck was a narrow person, a Pomeranian squire; Tennyson was a devoted man, a Victorian Briton; Lincoln was a Kentucky frontiersman, and Gladstone a devout Scotch boy with a passion, not for the British empire, but for Britain within the four seas. Moreover, one and all, they changed but little, keeping their character and standpoint to the end. It was by the leverage of their intense personality that they moved the world of the nineteenth century. But from the impregnable fortress of their convictions their outlook was sympathetic, and such prejudice as they began with gradually yielded to the catholic temper which made them world-heroes. Religious tolerance is an anachronism in the noon-time of complete religious liberty. Is this equally true of race and social tolerance in a world of full civil and political liberty? Alas, no. Close association with Americans of the old stock, with those of the newer stock and with the latest throng of eastern immigrants—either personal experience or the best evidence proves the existence of a sorry bigotry and fanaticism. In this, Columbia has had and can have no share. An examination of our statistics shows how accurately our students and graduates are proportioned among the race and denominational elements of the great town and greater country. Let it be our purpose to banish prejudice and so to reap from the ripe harvest field at our door, for the benefit of the whole community, the fruits of the known world; from the Orient, ever old and ever new, its repose, its simplicity, its sense of unity, its imperious permanence; from medievalism its chivalry, its order, its trusting faith and its imperial sway; from modern Protestantism its free spirit and critical temper, its political and legal instinct, its powers of administration and disciplinary self-restraint. With such an ideal, we may be

true to ourselves, keep academic peace with honor, command a catholic support and press onward to the goal of complete efficiency.

It might seem as if firmness and tolerance were incompatible virtues; to the stern logician they are, but in the moral order they are not. There is a sister grace which, though a third and separate one, enfolds and harmonizes the other two: the grace of moderation, temperance, patience. As the pure reason and the judgment, though equally potent and almost antipodal in their workings, are united in the mind by a faculty higher than both, viz., the practical reason, just so the moral force of temperance combines constancy and meekness into the very foundation of society. Not far from here is the home of reckless avarice, of self-indulgent greed. As long as the millions toil and save, the enormous aggregate of their economies will tempt the adventurous and the unscrupulous. Just so long must moderation be preached and practised by all who claim that mere mass and numbers count nothing beside contentment and the resources of a trained mind; the mind which, in Macaulay's definition of education, has acquired self-knowledge, accuracy and habits of strong intellectual exertion. Think of the door wide open before men so equipped! Of the grain nodding and drooping for the sickle! In one pivotal, fundamental point every human being of our island-city becomes an American, almost in the twinkling of an eye. Rationally or instinctively, every soul is aware that his civil and political rights in this commonwealth are inherent in his own manhood, not a matter of inheritance or of privilege either bought or granted from above. They are not the gift of ancestry or the grant of organized society, but the term and mode of life itself.

Equality? no, except in opportunity;

fraternity? only in embryo, and in principle as yet; liberty? yes, with only the effort of emancipation from old-world thralldom and old-world, old-time prejudice. The conflict is hard, there are fierce lions on the path, the road is rough and steep. But courage! the devil of feudalism is dying, the student and the scholar mean to keep watch and ward, to fight if need be for the right. The struggle for social and economic liberty is quite as grand as that for political independence or liberty, and in it the meanest sweatshop worker or humblest day laborer acquires the dignity of his standard, narrow and selfish as his personal motive may be. Moreover, he knows his chance, slight as it appears; though the morning sun may never rise full on the plodding recruit, yet its struggling beams are rays of hope, and if he perish it will be in the dawn, with his face heavenward, and with the full assurance that his children may stand before kings. This and only this is the reason for our national and civic existence. There is truth in Hume's contention that all the king's state, his armies and fleets, his offices and treasuries, all the paraphernalia of government, existed only to get twelve good men into the box, and enforce their decision. Is our property to be safe? be just to the millions; are our lives to be secure? give the common man his chance; is education to thrive? share it with all. Open every door to every career.

In other words, let the university set up its standards and maintain them; let it conquer, not by the rude force of assertion nor by the leverage of society, commerce and athletics, but by the soft influences of precept and example, of tolerance, patience and endurance. Only with regard to temperance and moderation must there be an imperious voice. Among the doctrines of natural science which have become winged words is 'the struggle of life.' It is true

as the law of unregenerate nature; so is the practise of gluttony, luxury and idleness. But no discipline has been so untrue to itself as science in this regard; witness its untiring efforts in medicine, penology and philanthropy generally, to preserve and save the unfit in their struggle for existence, when by its own profession it is exactly these classes who ought to perish from off the face of the earth. It is in this law of regenerate nature, in this supernatural and moral law of moderation and contentment, that the equal chance to all may be secured. A fair field and no favor is all that the toiling millions ask. This moderation is not, as many seem to think, a structural ornament of our social edifice. It is the cornerstone of the building; the university which hews and lays it truest is the architect of a temple, not merely fair without, but solid and foursquare like the walls of the new Jerusalem in the Apocalypse.

There is no finer definition of life than that it is the reciprocal interchange of relations. In this exchange the university attitude must be neither conventional nor artificial. To combine the fixed maintenance of undeviating standards with tolerance and self-sacrifice, we must be ever alert, adroit and versatile. The habit of the community must not enchain us, nor its fickleness divert us. The university man in the professions must be aggressively honest, intellectually as well as otherwise; in citizenship he must be watchful, unselfish and unsparing; and above all else in commercial life he must be temperate and self-denying. The extremes of shallow optimism and hopeless pessimism are the Scylla and Charybdis of university life, of university character; we must keep the middle course or we stultify ourselves. The excuse of legality must not be the defense of our dealings, nor the taint of expediency rest on our honors and degrees.

Columbia must open wide the flood gates of knowledge, but it must not sully the stream of education. It must be no mere department store for the delivery of intellectual commodities; there are bargain-counters for that elsewhere. Graduate or undergraduate, liberal or professional, male or female, every holder of a Columbia degree must be stamped with a hallmark of genuineness; must be sterling, or at least exactly as represented, if we are to serve the community which maintains and supports us.

Finally, though our task be a very hard task indeed, the hardest of all tasks, the task of setting a good example, let us still take courage. The history of our country is not one of degeneracy from noble origins. We are not like the potato, with the best of us underground. Just as our tasks have become more and more complicated and our responsibility heavier and heavier, our wits have grown keener and our shoulders broader. Never yet have we shirked when Apollyon offered us battle. Sound money, the civil service, the emancipation of the slave; these are some of the problems which the fathers bequeathed and we solved. Our Anglo-Saxon universities have made the new Japan, the new Egypt, the new Balkan kingdoms; at least their makers were men with the inspiration of either English or American universities—and other men of like training seemed destined to regenerate the whole Orient. At home the great offices in church, state and industry are held in the main by those who are trained to the flexibility of the university mind, men who, with the few exceptions which emphasize the rule, practise at the same time the firmness, toleration and moderation which have been our theme. What others have done and are now doing we may do in even higher measure; but only by keeping the fountain pure. If we are to deliver to New Yorkers the goods

which New Yorkers need, we must not stand nor recede, but improve both the quantity and the quality; we must make them attractive and trustworthy; we must label them as they are; and as we succeed or fail, we show our viability or our unfitness.

Platitudes are a stumbling block to the shallow novelty hunter, and axioms are a weariness to the multitude; but to the earnest they are the renewal of wisdom every morning; they rekindle and illuminate the common sense of humanity which at times burns very low. Those which we have considered are among the most helpful. Three things are vain in our university life: faith without works, morality without religion, and precept without example. All our investigating and teaching and professing; all our sapience and assurance and mannerisms, will go for naught without a labor which is worship, a sympathy which is self-denial, and permanent standards which we adopt only for the better realization of the ideals which they express. Complexity without confusion is essential to high living; the wonderful organism of Columbia seems made for the task of harmonizing the discords in its urban home.

WILLIAM MILLIGAN SLOANE.

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*THE ORGANIZATION OF UNIVERSITY  
GOVERNMENT.*

THE ideals and methods of university government have received considerable attention of late, stimulated by the recent discussions at the Conference of University Trustees at University of Illinois. There have been several able presentations of different points of view respecting the relative functions of trustees, president and faculty in the control of the university. From these discussions it would appear that while the responsibility for financial and legal affairs, and, in certain emergencies,