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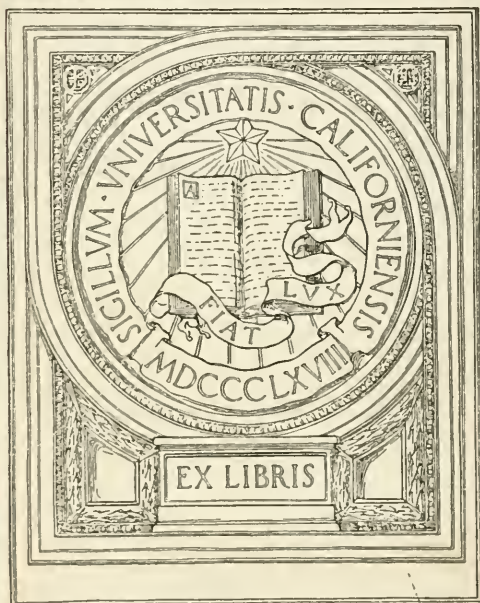
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The Passing of Plato  
By  
Oliver Peebles Jenkins

UNIVERSITY OF CALIFORNIA  
AT LOS ANGELES



ROBERT ERNEST COWAN

ADDRESS AT THE SIXTH ANNUAL COMMENCEMENT  
LELAND STANFORD JUNIOR UNIVERSITY  
MAY 26, 1897

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# THE PASSING OF PLATO

OLIVER P. JENKINS

*Professor of Physiology, Leland Stanford Junior University*

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PUBLISHED BY THE UNIVERSITY  
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1897



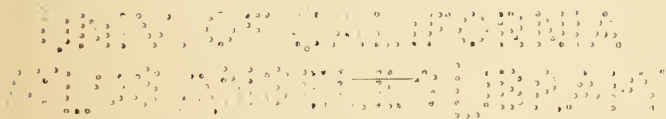
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AMERICAN POLITICAL  
SCIENCE REVIEW

# THE PASSING OF PLATO.

OLIVER P. JENKINS.

## I.

The stupendous changes that have been wrought in the material life of the civilized races in a short period of time by the progress of modern science have been generally recognized. We have to make only a casual investigation into the history of the production of the things that would come under our view at our first turn, to find complete revolution in production, manufacture, and distribution. We find further that it is not in each a single change, but revolution on revolution the most radical. For example, in less than twenty-five years the immense and complicated business of transit in our cities has passed from omnibus to horse car, from horse car to cable system, from the cable system to the electric car system, with special variations in the way of elevated railroads and pneumatic railways. Methods of lighting, heating, production and transference of power for motors, have passed through equal strides of change and improvement. Everything connected with the immense business of transportation, from the great undertaking of building a bridge or a steamship down to the sealing of a freight car or the excavation of a yard of rock, has in a like period passed through radical revolutions that are bewildering in their rapidity and in the greatness of the interests involved.

This change and this advance have appeared not alone in these large and conspicuous phenomena of activity, but in the countless other lines of human industry change has

followed change. Improvement and advance on what has been just past have been the constant movement of the time. On account of the complex relations that exist in a community, a single new invention may greatly affect many occupations other than the one in which the invention is used. Consequently, as matters are now going, it is beyond mental grasp to comprehend the breadth and depth of these changes. As the result of them, hosts of old occupations have been destroyed, innumerable ones have been completely and radically revolutionized, and hosts of new ones have been created. This has made a wholesale destruction of old relations and a wholesale creation of new ones. And with all this have come and still must come the most severe strains on the structure of the community in the readjustment of these relations.

This condition of the present time appears more striking when we consider that more and greater changes have occurred in the material life of the community, and in the adjustments these have brought with them, in the last ten years than have occurred in any thousand years previous to the nineteenth century.

It is agreed on all hands that all these marvels of change and improvement in the setting of our material life have been the result of the application of the scientific method to the study of nature. Even those who suspect science and decry the scientific method and warn the elect against both, acknowledge the service that science has done for what they style the material man. They, as promptly as others, demand of the hotels, railroads, architects, and publishing houses that they take advantage in every way of the latest that science has to offer. We have no longer, then, to contend for what science has accomplished for this side of human life.

These marvels are of profound interest and with an outcome impossible to foresee; but interesting and significant as these results of science are, it is still another phase of the effect of the modern scientific method that shall detain us



at this moment. Too large it is and too comprehensive—too far-reaching to be brought to more than mere notice in so short a time. It is the effect of science on the thought of the time, and more specifically its effect on higher education and the university.

The expression "the thought of the time," as generally made use of, is not accurately descriptive. Strictly speaking, the thought of any time has its manifold expression in all that the people of the time do or produce, whether it be in the form of manufacture, works of art, customs, institutions, or the varied forms of written expression that have come from them. But the expression is more usually limited to those more formal products of mental activity represented by its literature, systems of philosophy, and formal sciences.

The enumeration of the triumphs of science frequently includes only the list of remarkable appliances for bettering our material life. But the scientific method has also begun to affect most profoundly the other side of human life. It is revolutionizing the methods of thought in all phases of mental activity.

The progress here has been more slow, uncertain, and unsuccessful. Men are more ready to change the appliances of a new home, the methods of travel and communication, and even their methods of thinking in business relations and active life, than they are to change in all those matters not immediately connected with material life in which there is a fierce and definite competition. But a brief examination will show the profound influence of this method.

Turning back to the most prosperous age of Greece, we find the Greeks sympathetic lovers of nature, as their life and art have shown. They were students, too, of nature, groping not wholly blindly, as demonstrated by many of their conceptions that have passed down to us. There arose among them Socrates and Plato—the teacher, and his literary executor and expounder. With the purest and best of

motives they unconsciously did the race a disservice that became a bar to progress for the ages that followed. They sought fundamental truths with the commendable purpose of settling all questions of ethics for all time.

If the universe is the product of fundamental principles, the long ages of succession of events, with their differentiation, synthesis, and evolution, have complicated matters immensely and buried fundamental principles so deep that it is impossible to discover them in the external universe. Consequently, not quickly finding their required principles and definitions in this external universe of nature, and without understanding why the universe could not furnish them, they turned their inquiries within. And the mind is so constituted that it can make any hypotheses and then proceed to build a system logically based on them. Hence they had no trouble to obtain the definitions required. These were of the mind alone.

Then to defend and hold these it was necessary to do away with the rest of the universe. So from that time on, mind was the universe; mind and matter had nothing in common. Nature was to be overlooked, despised, and shunned as gross, corrupting matter, and only flights of mind were real and worth any serious consideration.

This whole legitimate outcome did not immediately follow the innocent diversions of Plato. It was not until after Aristotle—whose genius won him a place of so large authority—had taken up these phases of thinking and put them in form to be used that they came to exert so extensive and powerful an influence. Aristotle was himself in a way a student of nature of great promise. But to his large line of successors, hardly followers, his mental flights were more attractive than his studies of bugs and fishes. So the world went into the occupation of what has been styled “pure thinking”; that is, thinking not conditioned by the presence of any fact of the gross universe.

Then arose one after another the so-called great thinkers—men who solved all things by introspection and contempla-

tion. Then systems of philosophy spread over Western Europe like cobwebs over a lawn of a summer morning. The early writers of the Christian Church, the Christian fathers, also wove a tissue of theology by the methods and with the inspiration of Plato. And thus the warp and woof of the intellectual life of ages came to consist of what has been styled the "lazy philosophy of Plato."

The church, the state, and the schools, literature and art, were dominated by the methods which seek fundamental principles by introspection, and on them build each its peculiar structure, by the conception that the mind of man was the center and content of the universe, and all else was either gross or unreal. Investigation and collection of facts were not only unnecessary, but they all belonged to that nether world which could only serve the purpose of interfering with the lofty movement of pure thought.

Through all this long period of pure thinking no contribution of value to progress can be pointed out. At long intervals protests appeared against the extreme conditions brought on by these methods.

These protests culminated in the Renaissance and the Reformation. These movements were the expression of the true instinctive love of man for nature and the real. They brought new life again into the world, but their leaders could never shake themselves clear of the very methods whose results they opposed. It was with them the instinct to return to the true position without the training to maintain it. Consequently their movements, refreshing as showers after a long drought, produced no far-reaching radical changes and but slow and diversified progress. They were rather a rush to the enjoyment of nature once more, and not a serious study of her, while the methods of thinking remained little changed.

Thus matters stood until the beginning of the present century; and with this immense past and the slavish reverence for the past, these conceptions and methods, like the "Old Man of the Sea," still hang upon the neck of the

present movement. But as this lusty giant grows, the "Old Man's" days are numbered.

All through the darkest of this unproductive period, real students of nature, scattered here and there, more or less stifled by the atmosphere of the times, kept alive, smouldering and almost extinguished as they often were, coals of the true fire which was to blaze out in such a conflagration as we are now witnessing, from which is to come a new and more glorious world.

Before the beginning of the present century the number of students of nature was steadily increasing. The feeling was growing, and indeed was sometimes expressed by them, that no thinking or conclusion is warranted except that based on facts. Facts became of extreme importance; and no end of labor and pains was spent to obtain them. They again and again repaid all this labor by yielding the most wonderful discoveries, familiar to all acquainted with the history of science.

Thus slowly and surely grew into tangible shape what we know as the scientific method—a method which has been described by Huxley as the "method of common sense," a method which simply demands an accurate knowledge of the facts before describing their relations.

Its value plainly demonstrated and once clearly conceived, it has become the plain and simple instrument that has made these magnificent conquests in the world of our material life; and now we have the spectacle of its vigorous effect on the matter and methods of those things usually designated as of the mind.

We have but to pass in rapid review the state of the knowledge of today and that of the recent past to obtain our evidence.

All of the old nature subjects, physical and biological, have been completely revolutionized. Within them whole groups of elaborate sciences have been created, and all of these have progressed with remarkable rapidity. All those subjects not classed with the nature subjects have also felt

the influence of the creative power of the scientific method, for within the bounds of the humanities this breath of life is transforming everything and bringing into birth the healthy beginnings of many sciences.

The immeasurable success attained in a short period of years in the study of nature by the scientific method, contrasted with the absolute lack of progress which was the result of other methods, forced itself on the attention of those really seeking truth in other lines of thought. As a consequence students of history, of social institutions and problems, of language, of mental phenomena, and even of ethics and philosophy, to a greater or less extent have introduced the scientific method into their work.

A comparison of the state of each of these lines of human thought of today with that of fifty years ago shows astonishing changes.

To illustrate: History is no longer merely the more or less interesting accounts of the conspicuous persons and events of a nation's life, based on facts not accurately obtained, colored by the prejudices or literary ambition of those describing them; often, it is true, unified into a semblance of completeness by constructing the whole on a plan—a plan, however, which is the result of an attempt to illustrate principles which have been preconceived by the author. Indeed, the history of the past is chiefly the works of authors.

The history of the present is quite a different matter. The history of the past is to the historical science of the present what the interesting stories of dogs, elephants, and curious plants are to that complex of sciences which has for its object the explanation of the laws by which all living beings have come in their manifold forms to be occupying their diverse positions and maintaining their overwhelmingly complex relations with one another and all the world beside.

In like manner, history at the present time is a vigorous science. It proposes to solve a thousand problems of the\*

development of the life of the human race. Its material is of that broad extent that it includes every fact and every act of all peoples of all times. It views the earth covered with diversified peoples of different languages, customs, institutions, occupations, and beliefs. It sees these as innumerable differentiations of original common antecedents. It proposes to ascertain as far as possible the facts of the progress of this differentiation and development, and from these facts discover the laws that have wrought so many diverse forms of community life, so many forms of thought and activity.

The problems are vast. The material of the past too scant by far, it is true, still the scientific method of research is multiplying the material immensely. And the great respect that the scientific spirit has engendered has driven the present to begin to make most extensive records of its acts, so that the future historian will not lack for data. His labors will even be greater and more slow, but they will give real products.

Not all students and workers in history have fully caught the scientific spirit nor have comprehended the vastness and grandeur of the work that the method of science has demonstrated possible for them. History is still to them the source of themes for the production of literature, instead of being a magnificent structure to whose building they will contribute. Thus the lines between history and biology are disappearing, and history has become thoroughly a natural science with the most complex of all problems, demanding the most rigid methods. The scientific spirit has not changed the writer of history alone but has also affected his audience. We are no longer satisfied with the author's emotions in respect to Caesar's crossing the Rubicon, or Washington's crossing the Delaware. We wish from him a certified picture of the scene and an accurate determination of its place in the movement of which it is a part; and we will furnish our own emotions.

• The social sciences also have been greatly affected by the

example of the scientific method, although they are still largely in the hands of the theorists. There are arising among their students those who have a deep and earnest desire to come face to face with the real facts of social life and their relations and from these alone attempt to formulate the laws of its development. They are recognizing that these problems are of the most difficult and complex nature, and, above all, require for their solution accurate quantitative determinations. Theories in regard to products and their distribution, in regard to business and legislation, do not with them precede the knowledge of the real facts of these great occupations. They will show how such facts as the invention of a process of making steel has affected transportation, distribution, and business and other relations more than have all the works on the principles of political economy that have ever been written. May their tribe increase!

In the region of the study of language the scientific method has given us within the space of a comparatively few years the great and important science of philology, with its many departments—the first successful attempt at a rational view of language in all the long period of language study. The impetus thus given to active and vigorous research in a domain of knowledge that had become dead and profitless in the extreme, is in itself sufficient proof of the value of this method.

Time does not permit the account of how one after another the other fields of intellectual activity have come, or are coming, to feel the tonic influence of science. It would, however, be interesting to know what is to become of philosophy. But as indications point, the forecast would be an ungrateful task. Two or three things must happen. She must give up that solemn bluff that the philosopher knows more of each science than any of the specialists in the sciences know. She must give up her function of being the science of all sciences. The philosopher who would attempt to correlate all the sciences of today

might as well singly and alone attempt to digest all the agricultural products of America in a single year.

## II.

Science, its method and its products having furnished the environment of our life, having opened up to us vast fields of knowledge and thus permeating every form of literature, and having demonstrated the only successful method thus far hit upon for ascertaining truth, and thus compelling change in the general methods of thought—in short, having created a new heaven and a new earth—it was but a natural demand that it should form a part of the educational system, which might reasonably be supposed to prepare for living in this new universe.

At least in England and America nothing has been more conservative than the system of education. The schools for higher education in hardly any manner reflected the vital knowledge and the actual discussions of the times in which they existed. Their aims as far as they can be ascertained were such that they had no need to deal with any form of real and useful knowledge. It was claimed that they were to give training and culture. The training was mainly of a few specific forms of memory and feats of mental legerdemain, but the culture was undeniable, unmistakable, very unctuous, and glowed with a soft light. Its possessor was known as a scholar.

The subjects used for this training had become traditional and were for the most part conventional. These studies were in no way in touch with the active world outside. The occupations and methods of thought were precisely of that nature to make members of this community despise all material facts and shun all contact with material objects.

This isolated and narrow life created a community peculiar to itself and jealous of its peculiarities. They created for themselves an exclusive caste, the members worshipping one another and despising all the world beside, and in turn



mildly despised by the world when it happened to think of them.

All this did not seem so out of place in England, where still the land is dotted with Mediæval ruins, and people are still employed to keep fresh the blood-stains of many who were beheaded by a Mediæval faith. But in America, where poverty forbade the maintaining of the full livery of all this, the incongruity was very striking.

The more intense intellectual life grown up outside of the universities created a wider demand for a preparation to live it. Naturally the universities were sought to gratify this demand. But this old régime did not satisfy those who looked forward to a career not within the lines of theology and philosophy. Some inkling at least of those great conquests in the realms of nature was begged for in the short intervals between Latin prose and the grinding out of Latin verses. Thus science came in first as a sort of indulgence. She occupied the nooks and corners. She appeared only in the mild form of lectures on the most conspicuous and interesting phenomena of nature. It was not imagined that it did or could contribute to the training and culture which it was the peculiar function of the university to give. But these beginnings were the commencement of an awakening of a new university life. It was the opening of a cleft in the walls, allowing a beam of the light of day unclouded by smoke of incense, not distorted by stained glass, to penetrate into the great structure.

The mere statement of the conquests that had been made over nature carried with it the evidence of the great progress of the world outside and beyond the university. It showed that already knowledge and life had become so vast and so intense that the old routine could not serve for it. With a few of the meager facts of science first introduced came next into the university the methods of science. Then appeared the laboratories as a means of education. This made the connection between the university and the rest of the world. In the laboratories real and tangible

facts and the inquiring mind were in the university brought face to face, and the true method of the solution of the one by the other demonstrated. This touch of reality brought about a series of results in higher education which are revolutionizing and must continue to revolutionize our conceptions of its aim and content.

The real universe is vastly greater and more magnificent than any imagined one. The innermost recess of our nature vibrates to real contact with the actual universe. It is a part and product of it. It grew by the means of the external universe, and is still to grow by that means.

Those in the university who felt the tonic of a breath of a real atmosphere soon demanded reality in other knowledge than that of nature. The student after seeing and trying the careful method of the scientist, who patiently and with great labor and with every guard against prejudice gathered a great number of facts, and looked to these and these alone for his conclusions, and when these conclusions thus produced seemed somewhat real, could no longer with patience listen to an historical discourse which was the work of imagination, an announcement of the most profound and far-reaching conclusions in economic science which had their source only in principles assumed in the beginning by the author, or a course in the science of the mind which did not deal with ascertained real facts of the mind; and least of all could he listen with patience to the expounding of a system of philosophy which assumed to comprehend all sciences and correlate them without a knowledge of a single one of them.

The student from the laboratory who has felt its meaning and caught its spirit knows that all these things are thin air thrown into vibrations, and that the same air might as well have vibrated in any other combination. Consequently he demands the same sort of knowledge and the same certainty in it in other lines of study. He who has felt the keen pleasure and satisfaction of a quantitative determination of a piece of knowledge can not but look with some-

thing of contempt on mere opinion and effusive statement. It is these demands that have shaken up many of the old subjects and the old methods.

Another extremely important effect has been the introduction and strengthening of other lines of study not generally classed as scientific which were practically outside the system of education; that is, the group known as the humanities, subjects which are often wrongly assumed as opposed to the sciences.

While the teaching of Plato that separated mind from matter still influences largely the thought of our time, yet the time is fast approaching when all lines of separation will disappear, and man in all his phases will be considered and treated as a part of nature. There is now every day wider extension of the demand of real knowledge in regard to all things pertaining to man. This is the direct result of this taste for reality that the scientific spirit has begotten. In consequence there are now in the universities side by side with the sciences the great studies, history, economics, literature, and art. These with the sciences were almost unknown in the higher schools in their true sense fifty years ago in this country and in England.

Science has also discovered, dignified, and given a deeper meaning to still other phases of human activity. The mechanical and industrial arts have felt in the most wonderful manner its creative influence, and to this they owe the positions they are coming to take among the results of productive thinking. The prejudice bred by the long use of a narrow definition of culture kept these subjects out of the educational courses, but it is beginning to be realized that it may be as much worth while to understand the making of the complex and finished products of the present age as it is to contemplate the rude implements of a past one; that it may contribute as much to one's culture to study a steam engine or an electric light plant as to contemplate a corroded curling iron, or a broken beer mug from the ruins of Troy.

Today still, in the courses in the elementary and secondary schools, the most conservative and Plato-ridden institutions that remain to us, there is given a meager place to the knowledge of man and of nature; that is, the sciences, history, literature, and art. But the time is at hand when that self-sufficient philosophy which so largely dominates the thought in our lower schools must succumb to the movements of the times. Then the children and youth, through the very periods of growth and development, when they can best catch the spirit and form the habits of the advanced age in which they live, instead of being systematically hedged in from all contact with it, will be intelligently induced into its spirit, made familiar with its product, and drilled in its methods. When they leave the schools they will be immediately at home in the world about them, and can successfully face it.

Theologians, Hegelians, and Platonists of whatever twist have cause to fear the scientific method; but least of all should the student of the humanities make faces at the scientist, and become emotional, not to say hysterical, at the scientific method, as was recently the case with an earnest student of history. There is, of course, an opportunity sometimes for the historian to be moved with the spirit of the antiquarian, and as he comes upon some of the admirable figures that have crossed the stage in the past, to bemoan the times that no longer produce in exact detail these fine old characters.

The dignified scholar, the fine old gentleman glowing with the culture of the old school, awakens our enthusiastic admiration, and even love, as we unearth him from the times in which he lived; still we need not mourn that no one now who is strong enough to become such a one is willing to do so, any more than he would desire to wear a queue, a three-cornered hat and shoe buckles, and hunt ducks with a blunderbuss. Then we may console ourselves with the recollection of the many other things which of necessity were

contemporaneous with this fine old gentleman, and happily have passed away with him.

How inane in any case are these wails against science and the scientific method and the changes they are working out. The scientific method is so constructed that it can overturn nothing but error, and if one's investments do not lie in that direction why worry any longer about it?

The plea that science unfits one for the enjoyment of that side of nature and life which it is the office of art and literature to express is an equally shallow one. How can knowing the truth more deeply cause us to see less of beauty, or to have less of feeling in all that appeals to us?

While we may be wrapt in admiration at the grandeur of a mountain, and watch with awe the effect of changing tint and color of mountain, sky, and darkening valley, as the painting of a setting sun carries them all through a most wonderful program, our emotions will be none the less, nor expansion of soul less great, if we also see that mountain a monument erected as the resultant of great forces that have through ages been at work on its structure and form. Science does not prevent our seeing the beauty of the scene, but lends vastly to the effect by making it, instead of a momentary display of color with no more meaning than we can conjure up, a veritable height from which we get a glimpse of the real living universe greater than any imagined one. So with every bird, flower, or gem, and every phenomenon of nature. Science does not do away with beauty of form or color or grace of motion, but gives to all these a deeper meaning. It may be true that scientists do not usually rave about these things, and do not particularly enjoy the ravings of others. They have passed the raving period, and have reached that of deep self-sacrificing devotion. All such talk as abusing Newton for the "analysis of the rainbow," or shuddering because "science teaches the youth to analyze his mother's tears," and the like, are either hysterical or sensational.

The same quantitative study and rigid application of the

method of science must give a deeper meaning to the facts within the realm of the study of man; nor can it lessen feeling in regard to him. It will surely often change our point of view and change our conceptions of the value of things. The scientific method is not going to deprive us of the power of crying, but will clear up things so that we can cry over the right things—in other words, cry more intelligently.

The scientific method has been correctly described as the method of "common sense." And to say, as was recently said in a prominent address, "beware of the scientific method" in studies of history, is to decry the extension of common sense into these regions.

The new evils of which we are hearing so much as the result of science arise rather from those who have taken up the name and somewhat of the language of science, and not its real method and spirit. In all times there have been those who, seeking to gain somewhat of prominence and authority for what they have to say or do, have posed as members of a strong or popular party. Science has become popular and much respected, consequently there have come to attempt to enroll with her votaries great motley crowds of those who write and speak, who catch up some of her language, take on something of her air, and with them promulgate as her teachings all the various vagaries that the human mind is heir to. There result in this time of change and lack of scientific education much confusion and distrust of science.

This is increased by still another group of quite a different stamp. They are honest and earnest and in their work wish to use, indeed think they are using, the scientific method; but unfortunately for all concerned they have no true conception of it, nor have they ever rationally attempted to gain such a conception. These people would not think of attempting to calculate an eclipse or build a steam-engine without the years of preparation for such work; but they do not hesitate to attempt far more difficult problems, which only

the scientific method will solve, without any preparation for the work.

But evils and confusion arising from these causes will right themselves in time, for the tests are so clear that those who know how to employ them may with reasonable certainty distinguish the true method from its imitation, and the number of such good judges is rapidly increasing. The warning then should be, not to beware of the scientific method, but to beware of attempting to proceed in any direction without its being most rigorously applied. And while it is true that the scientific method applied to the study of chemistry and physics "has not made history a whit easier to understand," the application of the scientific method to history has already begun to unravel some of its problems, and it seems sure nothing else will accomplish this. While it is too much to expect that the habits of thought that have dominated for two centuries will pass promptly and without many sorrows, yet they are passing as the unprofitable must pass. The scientific method does not promise panaceas, but it insures a healthy life by showing that they do not exist. As we see things now the scientific method can do all that can be done, and that seems to be the conclusion of the whole matter.

### III.

While viewing with great pleasure the service that science has done higher education, we can not escape the fact that the scientific spirit has suffered somewhat by its contact with the university. When science was conquering the world, it was living its heroic age. Its followers were true heroes. Devotion, love, self-sacrifice, and courage, without hope of any reward from the world outside, constituted their life. Their motives were of the purest and loftiest. With the success of science there have come other conditions, and now there are also other motives for the pursuit of science. In the universities the science subjects

have been compelled more or less to conform to the routine already existing in them. The subjects in the universities form parts of formal courses, which are of more or less artificial groups. These lead to degrees and other distinctions. Thus motives are created for the study of science which are entirely foreign to the spirit and content of any science. Indeed, the rivalry of schools has become such that many forms of bait have been resorted to in order to lure people on to further study in the university courses, such as prizes, degrees, scholarships, fellowships, and distinctions of various kinds. Thus there come to be mingled together with those who study science for its own sake many who pursue it for some ulterior motive. This has brought out a host of unscrupulous little intellects who in the various departments of science are boring in every conceivable direction and are describing with the most tiresome details their minutest chips, and often with it wasting good money in expensive lithographs. Their products are becoming so numerous and intermingled with real works that it requires great labor to sift them out. But this is not the greatest harm. The most serious evil is the robbing of the true spirit of science of the power it possesses when it alone is the motive.

What will be the final outcome? Will science, which has already done so much to make rational the university courses, which has pierced so many bubbles and corroded so many baubles, be able finally to make all conventional trivialities of the university disappear? Already a large number of those who enter the universities do so for the preparation for work they have in mind. To such the artificial stimuli count for nothing. May we not hope for the time when it will be seen that the university does a great harm in proposing either directly or indirectly any other motive than those its subjects carry with them? Should the university encourage in its students such an absurd class of questions as "How much chemistry or his-



tory shall I take to get one degree, and how much add to this to get another?"

And then when one has increased in knowledge or grown in spirit why should he wish a certificate to that effect or receive a distinguishing mark? Most curious of all is the millinery method of designating stages of intellectual development. For example, a certain development of soul, shown by a hood with a yellow border; cap carrying a rectangular figure on top probably indicates the mind having reached two dimensions; a certain refinement of spirit, indicated by sleeves of gown neatly edged with gold braid; certain very lofty aspirations realized, collar turned up, gown long, cut bias and gored with black darts of velvet; a combination of all those grandmotherly qualities that allows one to preside over this gentle throng, and thus be a true *alma mater*, gown very full with plenty of white lace. Now it is thought vulgar for one to display his material wealth, or for an Indian to boast of being a big one. Can one with any greater propriety assume a halo because he has learned a certain group of things that any one can learn?

The systems of education which we have, both elementary and higher, are in great part an inheritance from times long preceding our own. Whether they were suited to those times and what were the reasons for their forms are of little consequence to us now as far as the organization of a system for our own times is concerned. But as a matter of fact it is made of great consequence from the unreasoning fear and distaste to changing what has once been in such matters. We have here too much reverence for the past, simply from the halo that the past often gives things, incongruous as they may have been when they existed.

Indeed, the fact that any system belonged to the past, should in itself lead us to suspect it, as it was adapted to times that, from the nature of things, could not be like our own. From their hallowed associations, to attempt to use the wooden plough that the Romans used, to plough the great ranches of California would not only be an example

of maudlin sentimentality, but would reduce California to the condition in which it was when it was formerly under control of a Latin civilization. The wooden plough and its contemporary ideas may properly find a place in the museum of a university, but should not form any part of its working organization.

Nor should the conception that the educational system is the result of an evolution be made the excuse for retaining useless parts that have come to us from the past as sort of rudimentary organs to remind us of its origin. The laws of organic growth and heredity do not hold here. But as the builder of a steamship is free to ignore all the steps in the evolution of the parts of a modern vessel, and choose the best material and latest devices that mechanical engineering has to offer, so in our educational system there is nothing in its nature to prevent our making it what we please.

When we come to consider the vastness of well-ordered real knowledge at the present time, the intensity of intellectual activity, the great number of important problems thrust upon us, the crowds of errors as well as the multitudes of truths that crowd upon our judgment, and the fierce competition on every hand, requiring the best equipment in modern knowledge and method, there is the most urgent reason that our educational system be cleared of everything that interferes with its cleanest action.

The elementary system needs no longer the endless patching up of its motley mixture, the strange result of necessity, empiricism, and accident. It has had enough of the fanciful apologies of the philosophers for its existence, and of mystic pictures of its fancied relations to an imagined soul. It needs to be completely reorganized from the foundation and put in relation to the life of today.

As for our higher schools, the universities, they have become freer to react to the times. They are every year becoming less under the influence of the inane and inactive scholasticism which made the most narrow of definitions of

culture and set her up as a goddess and established about her a puerile ritual and a bigoted hierarchy. First in Germany and then in America the university broke away, or is breaking away from these bonds.

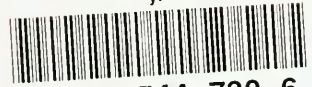
The university is no longer to be simply the conservator of the past. It should be the leader and stimulus of the present and the prophet of the future. Every phase of intellectual activity should have its place in the university, where will be gathered its literature, where may be collected its facts, and where will be grouped masters in its science who stand ready to impart its spirit and drill in its methods. Throughout the whole will prevail thoroughly the scientific spirit and method, and that complete freedom in choice of subjects and career absolutely necessary to strongest development.





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