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*THE NORMAL
SCHOOL BULLETIN*

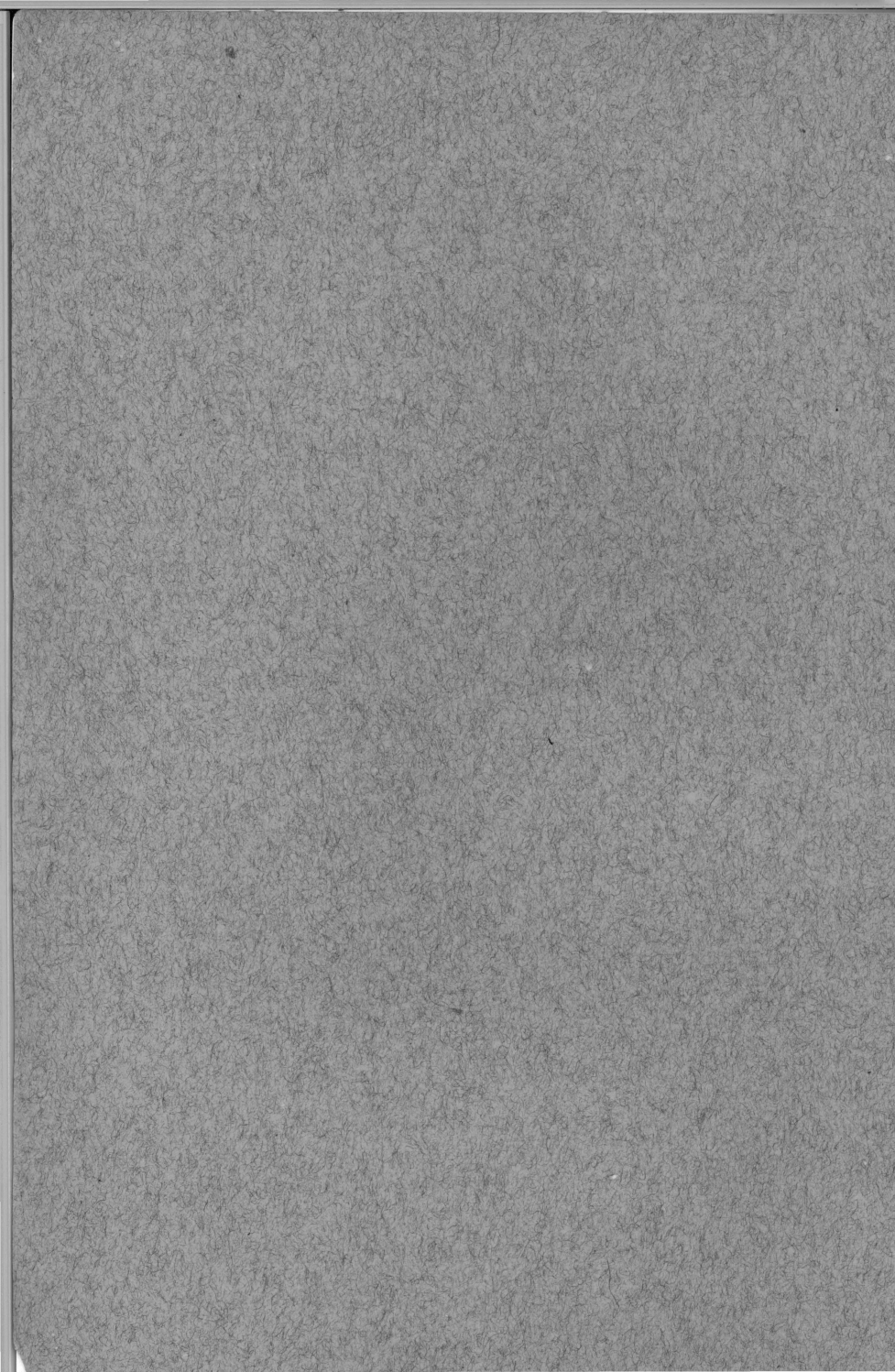
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SOME PROBLEMS IN EDUCATION

BY

JOHN M. COULTER, PH. D.



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*SOME PROBLEMS IN EDUCATION.**

BY JOHN M. COULTER, PH. D.

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Never in the history of education in America has there been such a universal movement towards change as now. Conscious that existing plans must be modified, all who are interested in education have a feeling of great unrest, and this feeling expresses itself at every educational conference. Discussions are endless, and often apparently fruitless, for opinions are as numerous as are the factors of the problem, and the mighty power of what *has been* over the frail form of what *might be* holds us with a death-like grip.

It is not probable that some great educational reformer will arise and lead us directly to the truth. In these days we are all searching for the truth so eagerly that it is not likely to come as a sudden revelation. It will probably come by a series of approximations, and it will not be recognized until it has been thoroughly tested; and when it is known and acknowledged, no one can tell who has been responsible for it, for it will have been evolved gradually from all our former

*An address delivered before the Eastern Illinois Teachers' Association, Oct. 16, 1908.

experience. There is no problem concerning which we can so ill afford to be dogmatic; and no one concerning which we are so dogmatically inclined. There is no question concerning which past experience may be so unsafe a guide, since what we have attained cannot be compared with what we hope for and have a right to expect. There is no problem in which theorizing may lead so far astray, and no problem which has been so covered up with crude theorizing.

We do not understand the structure we are seeking to develop; we do not know what we want to do for it when we shall understand it; and we do not know how to accomplish when we shall know what we want. Out of this mass of negations we are constructing our hypotheses, and even venture to hope that they may stand. That student of education has not advanced very far into his subject who has any great measure of confidence in his own opinions, or in those of any one else. The effect of all this should be, not a discouraged, but a receptive mind; not dogmatism, but liberality.

There need be no expectation that the true education is just at hand, and those impatient souls who cannot rest content until everything is settled, must cultivate the scientific spirit, which has learned to labor and to wait. It is no less a fact, however, that the true education is approaching, and that its coming will be hastened in proportion to our dissatisfaction with the existing order of things, and our rejection of that mind-numbing dogma that the past contains all that is best in education. Our educational growth should be like that of a vigorous tree, rooted and grounded in all the truth that the past has revealed, but stretching out its branches and ever-renewed foliage to the air and the sunshine, and taking into its life the forces of to-day.

The test of teaching is the *result*. As one examines the product of the schools today, has he a right to feel satisfied? The essential feature of the test is not to be obtained from school records, but from our social order. Are we contributing to society men and women who will improve it? Men and women who are not only sound morally, but who have

wide interests and are sane? Have we made them incapable of becoming victims of demagoguery, of superstition, of hallucinations of any kind? It has seemed to me that our educational schemes lack efficiency in just this direction; and that, judged by the results, we have not hit upon just the form of training that results in sanity among the greatest number of adults.

It may be that my experience in a great center of cosmopolitan population has exaggerated the situation in my own mind; but that such centers will become larger, more numerous, and more commanding seems certain. One of our fundamental problems, therefore, is to develop an attitude of mind that demands truth before action, that knows how to uncover truth and to recognize it, and that maintains the judicial equipoise until the facts are in.

I cannot presume to claim a solution to this problem, and I believe that no one can; for such problems are only recognized as solved when the results appear. And yet, with such a definite purpose in view, all suggestions that can be made to appear reasonable are worth consideration. In my judgment a larger development of the scientific spirit should have a strong tendency toward solving this problem. The scientific spirit is a certain attitude of mind, some of whose characteristics are as follows:

(1) *It is a spirit of inquiry.* In our experience we encounter a vast body of beliefs of all kinds, from trivial to important. We can recognize that this is composed of two elements: (1) the priceless results of generations of experience and (2) heirloom rubbish. The scientific spirit seeks to investigate these beliefs and to discover the truth that is mixed with the rubbish. The world needs a going over of its stock in trade now and then; not all at once, or once for all, but gradually as knowledge becomes more generally diffused. The scientific spirit certainly has nothing in common with dogmatism, but implies an open mind, a teachable disposition, and a responsive will.

(2) *It demands an evident connection between an effect and*

its claimed cause. It is really in the laboratory that one begins to appreciate what constitutes proof. Most people seem to have the idea that every effect may be explained by a single factor operating as a cause; when the few simple cases that have been analysed show numerous factors interacting in a way so complicated as to be bewildering. In what condition must we be in such enormously complex subjects as the social order, politics, education, and religion? I presume that we are as yet playing with the fringes of these great subjects, and that all our conclusions are largely empirical. It is certain that here demagoguery gets in its sinister work and leads the unwary millions astray.

(3) *It keeps close to the facts.* One of my most difficult problems as a teacher is to check students who arrive at one fact and then disappear in a flight of fancy that is simply prodigious. Of course additional facts check this somewhat, for flight in one direction is checked by a pull in some other direction. Most people, however, are so unhampered by facts that flight is free. It seems to be a general impression that one may start with a single fact, and by some logical machinery construct an elaborate system of belief and arrive at an authentic conclusion; much as it was once imagined that Cuvier could reconstruct an animal were a single bone presented to him. A fact is without influence except in its own immediate vicinity. Facts are like stepping stones. If one has a reasonably close series of them, he may make progress in a given direction; but if he steps beyond them he flounders. The influence of a fact diminishes as the distance increases, like the rays of light from a candle, until the vanishing point is reached; but the whole structure of many a system lies beyond the vanishing point. Such vain imaginings have a seductive charm for many people, whose life and conduct are even shaped by them. This emotional insanity often masquerades under the name of "subtle thinking;" not a bad phrase if it means thinking without any material for thought. An active mind turned in upon itself, without any valuable objective material, is apt to result in mental chaos.

There must be a saner product from our educational system; minds with such poise that they do not lose their balance; with such training that no mirage can be mistaken for a reality. To me this seems to be the greatest of all our problems; how to produce rational, sane citizens in such numbers that they will dominate.

From among other problems I wish to select certain ones that have thrust themselves recently upon my attention. Naturally, my experience and yours may not have been the same in reference to these matters; but if they do not happen to be pertinent to your experience they will serve to illustrate conditions elsewhere.

Since leaving a state institution, I have had little occasion to visit high schools; but in the last few months I have had opportunity to renew my first-hand acquaintance with some of them. I recognized that during the last sixteen years we have been making tremendous progress in educational ideals and technique, and that in this general progress the high schools must have shared. I was not disappointed in this belief, for I discovered that in material equipment, in greater freedom and variety of work, in the closer articulation of work to the necessities and obligations of life, there has been very great progress. No student of education can fail to see in all this a genuine and most gratifying progress; and yet there are certain things that seem to me worthy of consideration, in fact quite fundamental.

I. THE ACT OF TEACHING.

There seems to be still a great deal of ineffective teaching. That there may be no misunderstanding, I hasten to say that there is more poor teaching in universities than in high schools, and the larger the university, the larger does the percentage of poor teaching become. This would be disastrous in higher education, were it not compensated for by the high schools, which turn over to the universities material that can stand the shock of a certain amount of poor teaching. There is an excuse for this in the universities

which does not obtain in the high schools, and it is so evident that I do not need to specify it. There is all the more reason, therefore, that the high schools should bring the technique of teaching to its greatest efficiency.

I do not refer to the subject-matter or to the equipment of the school in material things, but simply to the contact of teacher and pupil in the act of teaching. We construct a well-ordered machine that runs smoothly, and then at the point of application often get no power, and the trouble is so subtle that correction seems almost impossible. To catch by observation the qualities of an effective teacher is like trying to catch a personality. For such a one no rules can be formulated. He is like the real artist, born with a feeling for his work. And yet there are certain obvious things that can be observed, and these ought to be helpful.

Perhaps the most difficult work of the teacher is to appreciate the exact mental condition of the pupil in reference to any subject. Unless there is complete adaptation in this regard, the contact is a failure, leading to mutual disgust and distrust.

In much of the teaching I have observed in the schools, the impression left upon me has been one of astonishing lack of simplicity and directness in the presentation of subjects, resulting in utter confusion. My own conclusion has been that this indicates either ignorance of the subject, or lack of teaching ability, or a wooden application of some pedagogical refinement which has been learned somewhere, and which is either not worth applying in any case, or is woefully misplaced. Hardly can there be imagined a worse combination than wooden teaching by one ignorant of the subject. In a great mass of teaching, instead of using clear expression and direct presentation, the effort seems to be to use most unusual phrases, as far from an ordinary vocabulary as possible, and to approach the subject in such a devious way that its significance is in danger of being missed. The philosophy of teaching is well enough as a background, but philosophical teaching is usually out of place. To inject

the abstractions and phrase-making of normal training into the school room is to dismiss clearness and all intellectual contact with pupils. This is no criticism of pedagogical training, for I would be the last to suggest that any profession should be attempted without professional training; but it is a criticism of those teachers who do not know how to apply their training, and follow what they regard to be rules, rather than principles.

Probably the greatest factor in this result is the fact that far too many teachers have learned more of the form of teaching than of the subject matter to be taught. There is no flexibility, no power of adaptation, no ability to depart from a fixed routine, and hence no adjustment to the very diverse mental conditions they must meet and are expected to stimulate. Necessary flexibility in method is impossible without a broad grasp of the subject to be presented. The amount of meaningless drudgery that this senseless formalism has forced upon pupils has long been recognized by parents, whose indignation occasionally breaks out in condemnation of the schools as places where method has run to seed.

It is very fortunate that the human mind is so tough a structure that it will develop in spite of teachers, and all of our educational experiments have not succeeded in sensibly stunting it. I have about concluded that the great problem in the act of teaching is not how to impart instruction, but how to oppose the fewest obstacles to mental development. The human mind has a mighty way of overcoming obstacles, but, as teachers, we have no right to attempt to make them insurmountable. I have almost cried out in indignation when witnessing some pupil whose quick mind has discovered short cuts to results, ruthlessly forced upon the procrustean bed of method by some teacher who knows only one way. It is such things that bring the profession into deserved contempt, as one that has not yet emerged from blind empiricism.

I know that this is imposing a tremendous burden of preparation upon teachers, but how is it to be avoided? In

no part of educational work is flexibility in presentation and in material so necessary as at its beginning. Truth is many-sided, and it is always a question as to which side shall be presented. The teacher who knows only one side is hopeless.

The whole situation results in a kind of paradox. If teachers develop such a grasp of the subject as to handle it with the greatest flexibility, will ordinary school positions content them? The question can be answered in only one way, and therefore we must come to this way sooner or later. The schools must be recognized as the greatest opportunity for *teaching*, as the universities are recognized as the greatest opportunity for *research*; and positions in the two must become equal in public esteem, in scholarly esteem, and in income.

II. THE RELATION OF UNIVERSITY TRAINING TO HIGH SCHOOL INSTRUCTION.

This topic grows out of the last one, and in fact is a part of it, but it seems to need special mention. The high schools have developed to the point where not only university training but often graduate training is demanded of the teachers. This is inevitable and desirable, for it will secure that grasp of the subject and facility in using it that were spoken of under the previous topic. It is to become increasingly true that the great field of our university masters and doctors is the high school; for they are becoming too numerous to provide for in any other way. Comparatively few of them can find places in universities and colleges; and most of those who do would be better off in good high schools. The lot of an assistant in a university or even a professor in a small college is not so happy as it may look from the outside. In the former position, promotion is apt to be exasperatingly slow; while in the latter position it is impossible.

All this means that there is to be an increasingly large injection of university trained men and women into the high schools, and on account of this we are confronted by a distinct educational danger. I have noticed a distinct tendency

on the part of teachers so trained to transfer the methods of the university into the high schools, which goes so far, in some cases, as to duplicate the elementary courses of universities. In my judgment nothing could be more out of place in a high school, where the university atmosphere is a distinct disadvantage. There must be developed a clear understanding that the university training is to give to the high school teacher a grasp of the subject, but not at all a method of presentation. Such factors as the maturity of the pupil, the time at command, the size of classes, the purpose, all differ in the two cases, and presentation becomes a totally different problem.

I grant it is easier to *repeat* a course than to *construct* one; but the teacher's problem is a constructive one, for it involves the power to *initiate* rather than the ability to *imitate*. It seems to be a hard lesson for university graduates to learn, that a high school is not a college, and that it demands its own peculiar kind of teaching.

Naturally my attention has been directed especially to the instruction in science, and I have been amazed to see the large number of miniature college laboratories organized in high schools. The laboratories are well enough, but the courses given in them are college courses.

I recognize that probably no subject has been more discussed than science in secondary schools. School teachers and university teachers, in committees and conventions and addresses and periodicals have wrestled with this problem. The school teachers knew their pupils and their facilities, but not too much about the subjects. The university teachers knew the subjects, but very little about the pupils, and still less about the facilities. It was hard for both to occupy the same standpoint, and both were inclined to be somewhat dogmatic, the university teacher perhaps a little the more so. School patrons, with their demands, have been a factor also.

The sciences are all in a state of extremely rapid evolution, and the schools are often finding themselves strangely

at variance with the universities, and are plainly and repeatedly told that their science is an absurdity. These unpleasant statements are usually received with becoming meekness, as coming from those who are supposed to know, but they have led to nothing or to chaos.

This situation has been intensified by the numerous textbooks and laboratory guides, bearing the favorite legend, "for high schools and colleges," and written by college men, from the college standpoint, which calculates upon time and equipment and a reasonable amount of intellectual maturity. I must not be misunderstood, for I believe that these books are immensely useful, as keeping current the material and the point of view. My criticism is directed against the too slavish use of them. They are designed, or they ought to be designed, to simplify the problem of material for the teacher, but beyond that lies the teacher's own problem of presentation, which no one else can assume to solve.

In my judgment, therefore, there should be included in the preparation of the university graduate, who proposes to teach in the high schools, a study of the conditions and purposes of these schools, especially with reference to the differences in the factors entering into the educational ideals of high schools and of universities. Unless this is done, the the majority of university graduates will attempt to repeat their university courses in the high schools. The minority are the born teachers, who adapt instruction to pupil and material instinctively; but they will always be in the minority.

The problem is in the hands of the high school teachers, for it cannot be solved by any schemes imposed upon them from the outside. They may look elsewhere for material and for suggestions; but the important features of the problem do not enter into the experience of the university instructor.

III. THE SCHOOLS AND THE UNIVERSITIES.

This problem, so far from being solved, is getting into a condition so involved that its future status is very uncertain. Questions of entrance requirements, of examination

or certificate, represent the border line problems that interest high schools and universities alike. As a rule, so far as the high schools are concerned, the state universities have determined these standards; and as a rule the other universities, in self defence, have followed them. From the standpoint of the university, the high school exists to prepare the university students. From the standpoint of the high school, its primary function may be somewhat different. The university, and especially the state university, cannot afford to disarticulate itself from the rest of the school system; on the other hand the high school cannot afford to lose the uplift of the university.

Universities, as a rule, are great storehouses of educational precedents, which have descended from mediaeval times, when there were very few subjects organized for study, and these few held little or no relation to the problems of intelligent living. They were the possession and pastime of a favored few. Heredity has filled the blood of most universities with this so-called scholastic spirit, so that they find it hard to adapt themselves to the new conditions. It should be remembered that the old selection of subjects was a matter of necessity rather than of choice; but since the opportunity for ample choice has come, the old necessity no longer exists, although it is the tendency of most universities to regard the older subjects and the older methods as possessing a peculiar relation to education.

On the other hand, the American school system is peculiarly a modern institution, developed out of the necessities of our own civilization, and seeking to meet the demands of the time. The schools are handicapped by no precedents, and have no heirloom rubbish to intercalate among their modern furniture. To the thoughtful student of education it is intensely interesting to watch the progress of the effort to articulate the very old, as represented by the universities, with the very new, as represented by the schools. It was necessary that it should lead to clashing opinions, and that the old and the new should scoff at one another.

The old had the advantage of that dignity and influence which belong to years and an honorable history; the new had the advantage of numbers and of public opinion. Neither could dictate to the other, although both wanted to. It is really quite remarkable that the two have gotten along so well together, and this argues well for the deep-rooted belief of each that it must have the other. In the main, however, the universities have imposed more upon the schools than they have conceded; as is very apt to be the case when the weight of educational authority is largely upon one side.

It is hard for the universities to lay aside the thought that the high schools are primarily preparatory schools. If this be conceded, then the universities must be permitted to dictate the courses of study. But it is not conceded, and still the universities have in effect dictated the courses. They have done it by making the entrance requirements so specific and so numerous that the four years of high school are absolutely filled with them. If there is anything for a high school to do besides preparing students for college, it either has no time for it or it is compelled to organize a separate and independent curriculum which does not lead to college. Most schools are so situated that they cannot do both. The colleges are honest in their opinion that their entrance requirements represent the very best education for a student of that grade, whether he is to enter college or not. I have helped express and enforce this opinion, and so cannot be accused of any prejudice if I now venture to dissent from it. I still think that a larger part of the university entrance requirement represents the very wisest subjects that can enter into the curriculum of the high school; but when these requirements become so large and so specific that they destroy the educational autonomy of the high school, and convert it into a university appendage, then I am constrained to dissent.

The increasing standards are to permit more advanced work in the university, and this is a magnificent purpose, to be encouraged by every true lover of education; but it must

not be done at the expense of the schools, the great mass of whose students never enter the university. It is wise to introduce into the high school studies which may be of no special benefit to the pupil preparing for college, for they are of great benefit to the lives of those whose educational career must end with the high school. As I understand it, the high school is intended to train for better citizenship, to enlarge the opportunity for obtaining a better livelihood, to open broader views of life and its duties. In order to be of the greatest benefit to the greatest number, its course of study must be constructed as though there were to be no further formal education for the pupil. Subjects must be related to the needs of life and society, but this need not and should not exclude those subjects or those methods which prepare and stimulate for further study; for there should be constant recognition of the fact that the secondary school is but an intermediate stage in educational progress.

I regard the recent tendency of universities to increase their demands upon the schools as unwise, and as fraught with danger. It has long been my theory that the specific demands may be very few, and these so self-evident that a school would not be likely to omit them. What the universities need is not a specific kind of preparation, but a certain degree of intellectual development, a development which is usually much broader than that obtained from the average college preparation. I may be allowed to say, as the result of many years of experience, that this average college preparation presents to the universities the most narrow and unevenly trained material that can be imagined. Nowhere are the evils of specialization so apparent as in the entrance preparation demanded by many colleges. If this specialization results in comparatively poor college material, its results may be regarded as simply disastrous to the high school in its primary purpose. This is not a plea for a multiplication of studies in the high schools, for one of their great weaknesses today is their tremendously congested condition. It is a plea for the relief of this congestion by reducing the uni-

versity demands, not in quantity, but in specific assignment, leaving the schools freer to exercise their own judgment in the selection of special subjects.

The time has long passed when any aristocracy of subjects has any right to claim the privilege of standing guard over every avenue leading to a higher education. Any student who has successfully pursued a well-organized and coherent course for four years in a high school should be able to continue his work in the universities. There are differences of opinion as to what constitutes a well-organized and coherent course, but it could be outlined by principles rather than in detail, and the schools themselves should be responsible for its construction. A minimum of subjects and a maximum of time, continuous rather than scattered work, a range broad enough to touch upon all of the fundamental regions of work, methods that will secure precision in thought and expression, contact with the life and work of the times in which we are destined to live, are certainly principles that are sufficient, but concerning whose details none should dogmatize, for they may well vary with the teachers and with the local conditions.

The university should always be called upon for advice as to courses and methods, but it should be from the standpoint of the schools, a standpoint best determined by the schools themselves. For instance, I would not presume to dictate to any school the way in which botany must be taught; but I would count it a privilege, upon being made acquainted with the preparation of the teacher, and the facilities at command, to suggest certain lines of work, from which, as a rational being, knowing the conditions better than any one else, he could make his choice. I would regard it as my chief function to guard inexperience against waste of time and energy, rather than to direct specifically. If the teacher does not know enough to make a choice in such matters, I would advise the selection of some other means of making a living. I must confess to being a great stickler for individual independence and responsibility, and that school or

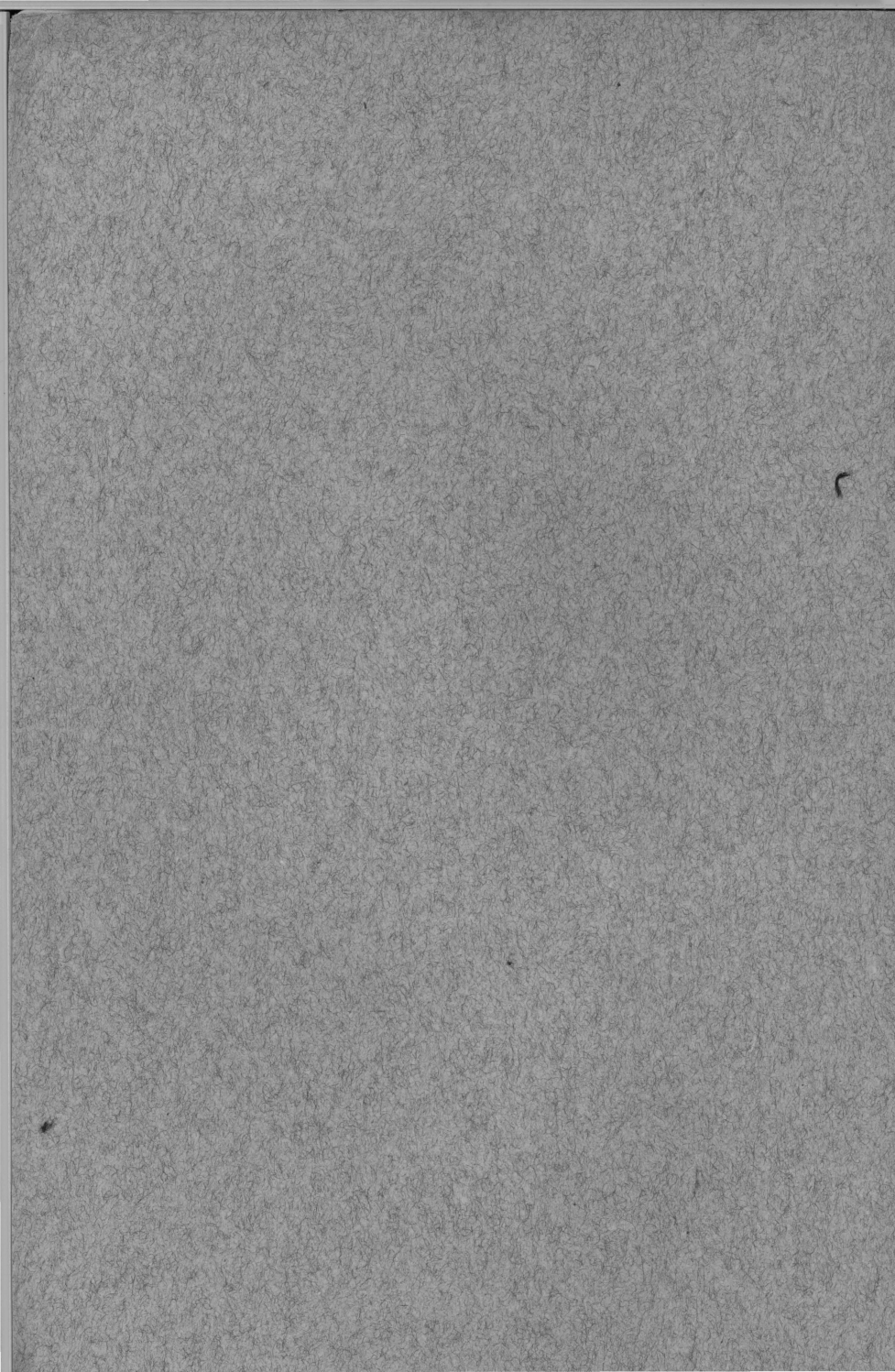
that teacher which is held in the dictatorial grasp of some higher authority that permits no expression of individualism in methods, which sternly represses all spontaneity and originality, which demands an automaton-like service, is pedagogically blighted. The vast machinery of the schools which enters into every petty detail, rides them like an old man of the sea, and is converting schools into factories, and teachers into drudges.

And how shall well-prepared material be recognized at the university? Lately the entrance examination system has thrust itself upon my attention afresh. I do not know whether this ghost of a dead past stalks into your educational banquets or not, but it is rampant in certain universities that rather pride themselves upon being haunted. A better scheme to show how not to do it was never devised. At the present day it is peculiar to the Chinese theory of education, and that nation should be allowed its exclusive use. It is both barbarous and unscientific. I would make no serious objection to its barbarity, if it were scientific; that is, if it obtained the information it seeks. What teacher does not recognize that the estimate of the ordinary examination must be tempered by knowledge of the daily work, or grave injustice may be done? How much greater the need of this tempering in the extraordinary entrance examination! If the tempering is necessary to obtain the facts, why not substitute the tempering entirely for the examination? Which means, of course, the substitution of the daily knowledge of the teacher for the ignorance of the university examiner. I wish no better evidence concerning the intellectual equipment of a candidate for entrance into a university than the judgment of the teachers with whom he has worked, for I can get no better, nor any other half so good.

It is strange that universities are more concerned about their raw material than about their finished product. If they would be a little less sensitive concerning entrance requirements, and a little more particular concerning graduation requirements it might be a better expenditure of energy. It has

always seemed to me that the fine meshed seive is set at the wrong end of the university.

In conclusion, it must be repeated that no complete change in these matters which I have presented, and in others of equal importance, can come suddenly. We can be dissatisfied with the results, and can point out defects here and there which in our judgment are responsible for them, but certainly no single opinion should be followed. The subject is too vast in its importance and in its ramifications to be grasped by any one man. Its many sides confound our best judgment. It is always easy to rail at the existing order of things in a pessimistic way, and such railing is only productive of evil, but criticism, born of the intense love of the cause of education, and longing for its best development, is always helpful. Such thoughts are at work like leaven, and when they shall have permeated sufficiently, movements will begin, quietly and moderately it is to be hoped, but persistently, and out of the movements there will slowly arise new methods, which upon trial have met with general consent. No student of our educational institutions can fail to observe that the general progress toward better things recently has been very rapid, probably as rapid as is safe for wise organization. We can afford to be optimistic at the outlook, and need only concern ourselves with recognizing and attacking the points of weakness; some of which will always exist to give us occupation. There is within our educational system, not perfection, unless it be in its ultimate purpose, but a wonderful power of endless development. We are to establish an American system of education, not copied from ancient times nor from other countries, but drawing from them all that is appropriate; and, adding our own ideals, we are to meet conditions for which we find no precedent. To such great service are you called, and it will demand not only your enthusiastic and unselfish devotion to the cause of education, but your best thought and calmest judgment as educators, and your most competent work as teachers.



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