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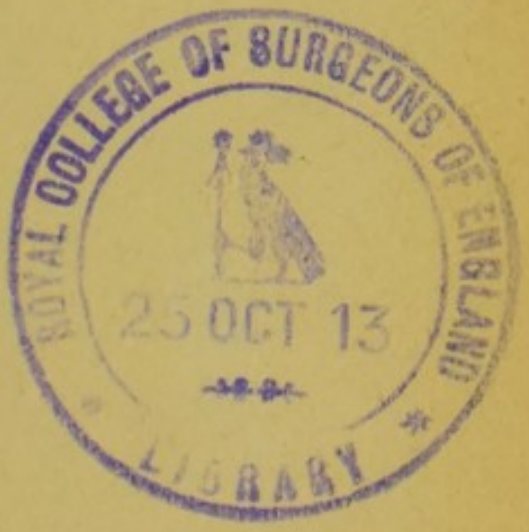

CERTAIN ELEMENTARY CONCEPTS IN EDUCATION APPLIED TO MEDICINE.*

By J. GEORGE ADAMI, M.D., ScD., LL.D., F.R.S.,

MONTREAL.

When your president honored me with an invitation to deliver the annual oration before your Society, and expressed the wish that I should take up an educational topic, I found on looking back that I had given expression to opinions upon divers aspects of general and medical education before various bodies—medical students, graduating nurses, educational experts, and even that distinctively Canadian institution, a "Canadian Club," but never before a general assembly of members of our profession such as this, never before the body which beyond all others is most vitally interested in the subject. I have arrived at very definite, not to say unorthodox conclusions, and now at the risk that some here present may have happened upon reports of those previous addresses—though I do not think that the chance is other than remote—and may recognize in what I say to-day very audible echoes of these previous pronouncements, it has struck me that it would be serviceable to put before you the opinions of an outsider upon modern educational methods, in vogue in this country, and more particularly in this State. It may be that as an outsider, of necessity not so intimately informed as are the in-

*Read at the annual meeting of the Medical Society of the State of New York, at Rochester, April 29, 1913.

habitants of the State, my impressions in regard to certain matters may be wholly wrong. I doubt, however, whether my knowledge of conditions be found very erroneous and that, because we in Canada are terrible copyists of Statesian fashions: we belong, after all, to the same race, and have before us the same difficulties. I trust, therefore, gentlemen, that you will not regard me as a Balaam and —to continue the parable—I trust that no one here present and so regarding me will turn balky. But, speaking seriously, it would pain me did anyone for a moment think that I ill repaid your hospitality by criticising educational conditions in this country. I can only say that I have been permitted to enter into the medical life of the States to such an extent that I have been made to regard myself as one of yourselves.

I want in the first place to put before you sundry basal considerations regarding education in general, to apply them to medical education, and then more particularly to the requirements of the State of New York as determined by that august body the Regents. It is because that august body lays such stress upon preliminary education and fences admission to the study of our subject with a series of such cast-iron requirements that I have to make so elementary a start. And as these requirements are based upon the primary and secondary school system of the State of New York, I have therefore the temerity to enquire into the value of that system. Wherefore, if you like so to consider it, of malice prepense, I may shock some of you. It is easy, in these days of general well-being, to hold with Candide that all's for the best in the best of all possible worlds; that the system of education which has been elaborated in this great country, the system under which most here present have been brought up, is

the system best adapted to the genius of your people; that there is no nobler system than the public school system of the United States, and coming nearer home, that there is no more perfect system of preparation, education, and examination in medicine than that devised and demanded in their wisdom by those grave and reverend seniors, the Regents of this State. Permit me to give you to think.

To begin with, what is the main object of State-controlled education? Is it to ensure that every citizen is provided with a certain common or minimum stock of information upon various subjects, or is it, on the other hand, to ensure successive generations of citizens capable of serving the State? This last possibility may be a new thought to some here present, but on consideration I think you must agree with me that this, and not the benefit of the individual, is the primary object. However much it may matter to the individual to be an efficient scholar, it matters little or nothing to the State that a given proportion of its boys and girls know the Latin irregular verbs, or only so much as it affords evidence that these have gained the habit of application; it matters everything that during the labile years their characters be developed and brought out, that the State be provided with capable citizens. *Instruction,* the pumping-in process, is of use only so far as it provides a basis of data for *education,* the drawing out of what is best in the individual. And I would bring two indictments against the public school teaching of the State, and doing this I indict equally the teaching of other States, and of the Canadian provinces, including my own benighted province of Quebec, namely, that there is too much instruction, too little education, with the resultant danger of the production of a race that is thoughtless and characterless.

In the words of one who has done very much to raise the standard of medical education on this continent, who may indeed be regarded as today the leader in the movement: "Where you have a weak secondary school system, you cannot expect to improve the schools above it until you have made the secondary school all it ought to be." We university professors have presenting themselves before us what I suppose are the pick of the products of the public school system. What do we find? It is a painful admission, but the majority when they reach us are fair poll-parrots; they can pump out what has been pumped in; but it is distinctly the minority, and let me say, a small one at that, who can utilize their frontal lobes and put two and two together. Now it is right that training should begin with respect for authority, that the pupil should begin with a respect for the written word, that he should look up to his pastors and masters and accept their statements as true and sufficient. The instilling of respect for authority is the first step in education. But this does not mean that the pupil is only to memorize and not to think; that by the time he is seventeen or eighteen he is still to be fearful of testing conclusions for himself; that he is not to be drawn to use his brain and make his own conclusions. And yet I am credibly informed that so essential a part of the present system have become the methods of the University of Cairo, that these extend to certain American colleges and universities, and in them it is forbidden to put examination questions which, for a correct answer, do not immediately refer to the *ipsissima verba* of the lecture and the recommended text book, but require some correlation of the data afforded in the course, some application of thought and not merely of memory. Now for us medical men, each case, as we know,

possesses factors which make it a different problem from all that have gone before; each case to be correctly diagnosed and treated requires thought. I may be wrong, but it seems to me that the youth should be trained to think before reaching the medical school. I feel this very strongly: I feel that the secondary education is seriously defective in permitting such lack of thought; that the system of examination is wrong which makes entrance to medicine depend purely upon knowledge of facts, which is based wholly upon the capacity for the recollection of unrelated statements, which does not by an essay, or still better, by an oral examination, test the intelligence as distinct from the memorizing power of the candidate. Naturally what appeals to examining boards as most appropriate is that system of examination which can be carried out most simply and most economically; and if a board, instead of employing expert and highly paid examiners, places the actual reading of examination papers in the hands of clerks who have no intimate knowledge of the subject of examination, but who automatically mark according to a schedule which is provided to them, it is evident, in the first place, that those questions only can be set which afford a stereotyped answer and call for no thoughtful weighing of *pros* and *cons,* no evidence of the power to balance evidence, and, in the second place, that a heavy penalty is by this method exacted against teachers who in their classes encourage anything beyond exact poll-parrot memorizing. If this be the case—and I sincerely hope that it is not even partially true—there is likely to be opposition to the suggestion that there be appointed examiners who are truly examiners, experts in their respective subjects, men capable of judging qualitatively as well as quantitatively.

He who studies the Public Health Law of the State of New York as it refers to medical education and the regulations for the admission to medical practice, cannot but be impressed by the rigid rules laid down in regard to preliminary training. Thus, according to Section 165, the candidate must submit evidence that prior to the beginning of his second year of medical education he has acquired that "general education required preliminary to receiving the Degree of Bachelor or Doctor of Medicine in (the) State." In other words, no university in the State can determine for itself whether a candidate is of proper standing, not for the State license, but for its own degrees in medicine. That is determined for it by the Regents, and is dependent primarily upon the nature of the education the candidate has received prior to entering the medical school. If a student has graduated in arts in another state or country, such graduation is only accepted if from a registered college, and then on the conditions that "such college course shall have included not less than the minimum college requirements prescribed by the Regents for such admission to advanced study." If he possess a diploma or license conferring full right to practise in some foreign country, that diploma or license is not sufficient, he must also submit evidence that "he is a graduate in arts of a registered college in that other country, or that he has satisfactorily completed a full course in a registered academy or high school" (registered, that is, by the Regents); "or had a preliminary education accepted by the Regents as fully equivalent." Then there are regulations providing for the conditional matriculation of a student deficient in not more than one year's academic work of 15 counts of the preliminary education requirements, provided that the deficiency is filed at the Regents' office with-

in three months after matriculation; provided, also, that on and after January 1, 1913, such conditional matriculation shall not be permitted. At the present moment, therefore, no student can enter medicine unless his preliminary training conforms with the requirements of the Regents to the uttermost jot and tittle.

The preliminary requirement determining admission to registered medical schools is the completion of an approved four-year high school course or its equivalent. The official evidence of the fulfilment of this requirement may be secured in various ways: By certificate to this effect from an approved secondary school; by passing the Regents' examination in the schools; by presenting evidences of the successful completion of one full year's work in an approved college or university, or of work in another state or country equivalent to this four-year course in a New York secondary school; by presenting evidence from a registered school of theology, law, dentistry, pharmacy, or veterinary medicine of the completion of work equivalent to one or more year's work in an approved secondary school, together with sufficient additional credits to make the full equivalent of a four-year course in an approved high school; or if by any one of these means the candidate is unable to enter, then he must pass the Regents' examination, but doing this must gain a rating of 75 *per cent.* in each of *nine* subjects, namely, in English, algebra, plane geometry; two out of three following subjects, chemistry, physics, and biology; one second year foreign language, ancient history with civics, and two or more (15 counts) of a long series of electives—English, ancient and modern languages, advanced mathematics, history, geography, economics, bookkeeping, shorthand, drawing.

As to what constitutes an approved secondary

course, the Regents are thoughtful enough to lay down a time table for each of the four years, giving the number of periods which they regard as essential in each subject, even down to manual training and vocal music. As I say, it is most thoughtful of them. For a medical school to be approved by the Regents, all matriculants must afford evidence of a general preliminary education equivalent to at least a four-year high school course after eight years of preliminary education. Any medical school that matriculates a student who has not completely complied with the admission requirements must be forthwith excluded from the list of approved schools. "A medical degree from a registered institution does not meet with the educational requirements for admission to the licensing examination; evidence of preliminary education as well as evidences of required attendance at a registered medical school are essentials."

I have recited to you in detail all these bald regulations of the Regents that I may impress upon you what is evidently the main premiss of the Regents, namely, that the requisite standard of medical education can only be attained by rigidly fixing the minimum preliminary training of the student; however distinguished has been his record as a medical student, unless that preliminary standard has been attained, it is hopeless for any one to seek to practise medicine in this State, save under conditions that are tantamount to exclusion. If the matriculation examination of a university outside the State of New York does not in the opinion of the Regents exactly conform with that demanded by them, that university cannot be registered. If that university influenced by different ideas and different traditions has evolved a somewhat different matriculation standard and medical curriculum from those re-

garded as right and fitting by the Regents of the State of New York, either it must humbly submit to the dictates of that august body, or must incur the penalty of seeing its graduates prevented in perpetuity from practising in the State, and that however thorough their medical education, however distinguished their Alma Mater, however excellent their degree; their preliminary education requirement was not such as to satisfy the fastidious tastes of the Regents.

Surely there is "something rotten in the State of" —New York and its educational system that this should be, that the Regents must thus force all the universities of this continent to bow to the graven image which they have erected. Of course, I know the basic reason for this conduct: that the education afforded in certain medical schools in the State has, in the past, been deplorable, that these schools have to be brought into line, that in the past every illiterate Tom, Dick, and Harry could enter as a medical student; that this had to be stopped; that to prevent any backsliding on the part of these weak schools the regulations have to be of the sternest and there must not be even the appearance of making concessions to universities outside the State, however admirable the courses they provide and however great their reputation, lest, doing so, precedents and loopholes be afforded to these weaker brethren for evasion of the regulations, and opportunity for their alumni to creep or intrude or climb into the fold.

This, it will be observed, is an argument of expediency, not of right. The Regents will not pretend to say that theirs is the only correct ideal, that they do well in hampering other universities outside the state in their endeavors to evolve a sound course of medical education along lines which in important

respects differ from the New York regulations, or do they? and is there a belief on this continent as indicated by their action, and to some extent, I think, by the first Carnegie report, that it is possible to plot out the whole working years of the would-be practitioner from the age of sixteen until his graduation—to construct an ideal time table, any departure from which is an intolerable step from grace. Such hidebound rules are, to say the least, unscientific and bound to fail. Education is a progressive science; while what is admirable in one community may be disastrous in another. Let me give you an example. The quality of the instruction in elementary science in the secondary schools is still a matter of debate. I think all will agree that those secondary schools can usefully afford instruction in the very elements of science, the student, for instance, should arrive at the medical college knowing of the existence of elements, and the nature of a chemical reaction. I have serious doubts whether, save in the rarest cases, the teaching of the secondary schools is according to the right ideals of education in elementary science. To quote my colleague, Dr. Ruttan, "You will never acquire a scientific training from a mere literary acquaintance with chemical facts and theories; in this way you will acquire only scientific information, an altogether different thing." Even if laboratory courses are afforded, the method of following an accredited text book has practically no educational value. What is needed is that each experiment in the laboratory is made an exercise in rigid observation, and in the solving of problems, the answer to those problems being observed and recorded by the student, and not discovered from the text book, or announced by the teacher. Obviously he will be in a better position to grasp the fundamentals of chemistry, physics, and

biology in the laboratories of the medical school or university under university teachers than in the too often imperfect surroundings of the high school. In one hour under these more favorable conditions, the student should acquire more chemical and biological knowledge than in five spent in the high school. But the grave Regents, with their vertebral ankylosis, think otherwise; they demand the same number of periods wherever and whenever the instruction be gained. They penalize the medical school which seeks to afford the more thorough course.

Instinctively, when it is placed before you in all its baldness, you realize that there is something inherently defective in these regulations, and if I may place my finger upon the weak spot it is this: that the fundamental conception upon which the whole superstructure of the primary, secondary, and university training is sought to be built is false. The whole system, you will observe, is based upon "periods" and "counts," upon the *quantity* and not upon the *quality* of the teaching. The quality is of secondary importance. No matter how excellent the training to which the applicant for a license has been subjected, if he cannot afford certificates that he has undergone so many periods, so many hours of instruction, equivalent to eight years' primary schooling and four years' secondary, he cannot enter into the State of New York. The outward and visible sign of the inward and spiritual grace is not intelligence but "counts." The machine has become of higher value than its product.

Do you see what this aspect of affairs signifies, not merely for our profession, but for the upbringing of all the inhabitants of the State? And here let me again emphasize that I am using the State of New York as a text, not as the one and only

malefactor. This precise laying out of every hour in every public school throughout the state means intellectual perdition. It means, if logically followed out, that at the present hour in every secondary school throughout the State every boy and every girl who is in, say, the second class, is having identically the same facts doled out to them. It means that at the conclusion of the school course every individual has one common set of ideas. If there be individuality among the scholars, the State has done nothing to foster, but on the contrary everything to discourage it. It means that we are drifting to a Chinese civilization, with official arrest of all initiative. This may be gloriously socialistic, but does not make for the progressive development of the people. Where all the members of a community have a common dead level of training, they manifest the same character, or, more accurately, become manifestly characterless.

It means that with this emphasis upon the necessity of completing so many periods in each subject teachers and taught are alike discouraged from effort and ambition. I believe that all who have inquired into the subject will absolutely uphold me when I lay down that a reasonably intelligent youth can easily master the subjects demanded in the four years' secondary school course in three years; some tell me, in two. But no, he must not do so; he must remain so many months in this class, so many in that—that he may complete the required number of periods; he must be kept back so that he does not advance beyond the others of his year; he must acquire habits of mental sloth. And this all because of this precious belief of the powers that be in the virtues of a pernicious system. The minimum of encouragement is given to the teacher to enter into the highest joy of teaching, that namely, of stimu-

lating and pressing forward the promising scholar.

It means, also, gentlemen, the domination of the female teacher. Such precisely devised system is exactly suited to her inherent genius, it is wholly alien to the genius of the ordinary male; I do not here refer to those who evolved it; they are extraordinary.

Do not regard me as digressing, if as a *vox clamans in deserto,* I proclaim my opinion of the female teacher as an educator of male youth. Now that I am embarked upon a criticism of secondary education it is essential that I refer to this other weakness that is overwhelming the continent. Once again we revert to the main thesis that the pedagogues who have developed and are still developing our system appear to be absolutely blind as to the all-important distinction between instruction and education. Even so distinguished and well-meaning a body as the Carnegie Foundation in that report upon medical education to which I have already referred, was tarred with the same brush. In criticising and laying down what they regarded as the elements of a good medical education, not one word was said by the authors of that report regarding anything beyond the acquirement of a knowledge of medical facts and technique. It is tacitly assumed that this is everything. And yet you, gentlemen, who are in practise know perfectly well that in life such knowledge does not count fifty per cent. It is the man within the medical shell that is all important. What J. Pierpont Morgan said but a few weeks before his death regarding business credit is equally true of professional reputation and success; it is character that counts, character that makes the man. What a man teaches is not half the game; how he teaches it counts, I would almost say, everything. Of greater value than mere facts is the attitude of

the medical teacher towards life, his method of approach toward the patient, all those traits of manner, expressive of the inner being, which at the most receptive period of life appeal to the student, are imitated and become in turn a part of his being. Of prime value also is the university education outside the classroom, the laboratory, and the ward; so valuable is this that the medical school must be an integral and intimate part of a university of several faculties, in order that the student may mingle with men of other ideals, other habits of thought and modes of life. Your medical man to be of service to this kind must have an education in, and must know humanity. Unfortunately all these aspects of his training were completely ignored in that most important and otherwise most stimulating report.

But this education is the man's duty to his neighbor, this training in service to others must begin in the secondary school—aye, in the primary school. Heaven save the youth who between the years of twelve and eighteen is in the hands of women—women only—as teachers, who is devoid of practical training in manliness. It is the right and proper thing that the early teaching of the little boy should be in the hands of women; it is well that there be a gradual tansition from the mother's influence at home to the rougher world outside; but there comes the time when the boy begins to "feel his oats," when the budding youth fast becomes restive, when if the boy is to develop aright a masculine hand is needed at the reins. Of course, there are "sissies" and boys of phlegmatic temperament who remain eminently docile under feminine guidance; your boy with any vigor and initiative, the boy who is going to do something in the world, must be under a man. For otherwise he soon recognizes that he is too strong for his teacher, he sees that she is power-

less to compel him, recognizes that owing to her physical weakness she has to appeal rather than to compel, that she has to gain her ends by oblique methods—by persuasion and not by command. He learns thus to get around difficulties without facing them manfully; does as he pleases heedless of others; becomes a selfish individualist. You may say that this is too strong a statement. I only know that a few months ago I was discussing this very matter with a remarkable woman, one whom I may without exaggeration describe as the foremost woman educationalist in Canada. "Yes," she said, "you are right. Only last week a bright school teacher admitted to me that the one means she had discovered whereby she could manage hulking youths was by indulging in a mild flirtation with them." The aboriginal woman's way, but, oh, God; the miserableness of it all! Is that how we want our boys brought up?

I feel in this relationship most heartily in sympathy with a colleague of mine—incidentally a Presbyterian minister—though I doubt if in that audience I would have had his noble temerity. It was a few weeks ago, at a meeting in support of our University Settlement, and my friend was called upon to address the assembly, a large one, composed almost entirely of the gentler sex, there being but three or four of us men present. "And don't get into your heads," said he, "that you are going to run this settlement, that you are going to reform these street urchins and potential hooligans by 'lev' —'Lev!' Bah! If you try that they will fool you every time. No! It must be by manly guidance and by manly methods, even including an unhesitating knockdown blow when need arises. It's the manly man they will look up to, and by whom they will most surely be influenced. They will not 'lev' him,

they will worship him. I hold it to be the supreme argument for design in this universe that the boy is so constituted that the greatest number of nerve endings of the greatest number of nerves find themselves in that portion of his anatomy where knowledge can most neatly and effectually be instilled and that with absolutely no harm to the rest of the economy."

I freely admit—we all admit—that in those qualities which are the common property of both sexes, the woman is demonstrably man's superior; but in the matter of enforcing authority on the growing youth of the male denomination she is hopelessly and helplessly behind. To the present exaltation of feminine and lowering of masculine influence in the home and in the school I would ascribe both the growing increase in juvenile crime, and the appalling increase in domestic misery in this country. Boys and girls spoiled in the training, undisciplined, not to say encouraged to carry out their own wishes, become immoral individualists, cannot bear with patience the necessary give and take of married life, and the divorce court is the result.

Once again let me repeat that education is much more than the instilling of facts into the brain. It is the whole proper development of the individual. In the playground, even more than within the school, the masculine influence is needed, that the boy be instructed to play not for himself, his own advantage, and his own glory, but before all other considerations to act as one of a team, for the good of that team and for the honor of the school. How can the female teacher participate and direct the game of football, of hockey or baseball? How can she practically instil these lessons of obedience and willing subordination of the individual for the common good which constitute the essence of all games

worth the name, which constitute the essence of civic virtue and public spirit. It is not in her. Better an unlettered drill sergeant. The playground teaches civics better than any number of periods in class, and the master is needed to enthuse the right spirit. You know how things are going in this State; the situation is notorious. But it is as bad, and worse, elsewhere. Last year in the Protestant Normal School of our own Province of Quebec out of an entry of 150 prospective elementary teachers there were just three males.

But, it may be urged, what is the use of all this destructive criticism? Well, gentlemen, I freely admit that destructive criticism *per se* is worse than useless if there be nothing constructive afforded. I believe that these defects are one and all capable of a remedy. And to begin at the beginning, and take the last first, I would urge that it is in the power of the State to obtain the male teachers so absolutely essential for the training of male youth. By all means let female teachers be given a proper wage, but surely the logic of stern facts must lead us all to realize that under present conditions there is little to attract men into the public school teaching profession, and must equally convince us that for the good of our youths, men have to be attracted; nay, must convince us that, if necessary, in order to attract them, greater inducements must be afforded to them than to their sisters. That profession to-day is a blind alley. No man with any initiative, with any self-respect will undertake the automatic duties laid down by the Regents and the educational departments of the States of this Union, with every hour's work scheduled, with its precise limitations to the scope of certain text books, with its painful lack of encouragement of higher effort.

The cast-iron drudgery and servitude of it all, and its highest reward the very moderate income and status of the principal of a secondary school! Make the profession not a blind alley, but an open highway! The State has appointed for the taught a graded course from the primary school through the secondary to the university. Why not also for the teacher? I would suggest that, in the first place, promising youths be tempted to undertake teaching in the primary schools on the condition that two years thus spent in the service of the State shall entitle the teacher to one year's free tuition at the State university, that each subsequent year of teaching shall entitle him to a year's free university education. Nay, more, the State might well establish a residence at the State university where such State servants might board at a minimum cost. The young teacher should be free to choose his university course in such a way that he might undertake four or five years of State service as a means of putting himself through any one of the faculties and entering any one of the professions. If, on the other hand, he determined to make teaching his vocation, then after gaining his degree in arts and, earlier or coincidently, promotion from a primary to a secondary school appointment, it should be imperative that every few years, as in the army medical service, the teacher return to headquarters, in this case to the university, for advanced work along some special line, he becoming for the time being a junior member of the university staff. Every encouragement should be given to the good teacher to become an expert in some one or other department of learning, and it is but right and proper that he be given the hope and the opportunity to secure eventually a permanent university post in the subject to which he has specially devoted himself. He

should be encouraged to realize that it is open to him to reach the top of the educational tree.

Next, as to the curriculum, and here my recommendations apply both to the schools and to the medical course, I would here repeat what I said two years ago at Chicago, that the finest national education known to me—no longer, alas, in existence, for the growing wave of State socialism has changed everything—was that established in Scotland by the dour but powerful reformer, John Knox. There were in it no school-marms, but every village, or more accurately every parish, had its school house and its dominie, wherever possible a university graduate, even if only a "stickit minister." There were in it no State-regulated schedules of hours, but the dominie was expected to bring all his scholars up to a sound familiarity with the "three R's" and was stimulated to advance the more promising pupils up to university standing. To matriculate it was necessary that those scholars had a wide teaching, but beyond this the dominie gained his great triumph by securing for those scholars university prizes and bursaries. If the master was a classical scholar, then the school excelled in classics, if a mathematician, in mathematics, if a Hebraist, then, even, in Hebrew. Each school, thus, was distinctive, and the result was not a tame level of commonplace knowledge, but the production of scholars of varied attainments and, what is more, of character. For its size no country in the world has during the last two centuries turned out more men of distinction in the varied walks of life, more men of character, more leaders in the different departments of human endeavor than has Scotland, and this, I am convinced, is due to John Knox and his dominies. Demand, I would say, that every entrant to the university

have a competent knowledge of a definite schedule of subjects, nay I would say, demand a higher standard than that at present in vogue, but do away with this deadening system of compulsory periods. Encourage the rapid promotion of the intelligent boy: encourage him to rise rapidly through the secondary school; give him the time to spend two years in the arts department of a university. For otherwise, if we carry out the programme as at present recommended, namely, eight years primary school, four years' secondary school, two years in arts, four years in the medical school, a year, or better, two years in hospital—the man by the time he enters practice has become so steeped in academic methods that he has lost all the elasticity of youth, is incapable of adaptation to the wear and tear of practical life; brilliant and accomplished as he may be as a student, he owes to something in himself beyond his training if he is not a failure as a general practitioner.

It is a matter well worthy of debate, whether in place of a matriculation examination on the part of the universities, there should not be a "leaving" or "Abiturient" school examination controlled by the State, an examination which youths should be invited to undertake, not when they reach a particular age, or when they have accomplished a given number of periods, but when they have gained the requisite knowledge. Such an examination would afford a standard test of the teaching afforded by the secondary schools throughout the State, a standard to which they should raise themselves, and certainly, as I have already noted, it should include some test of the candidate's intelligence as distinct from his memorizing ability. Let me sum up here as regards school and university training, that it is contrary to common sense to appraise

the tree by the amount of manure with which its roots have been dressed and the number of times it has been watered: it is rather more usual as it is more sane, to estimate its value by the crop it produces. "By their fruits shall ye know them." Indeed I believe that those of you who are arboriculturists will confirm the statement that too rich a soil, too abundant manure and excessive irrigation, instead of giving a good crop, have the opposite effect. Would that the Regents of the State took this to their hearts.

And so with the test of the fitness of the university graduate to practise. It is absolutely false to imagine that by a cast-iron curriculum and a written examination, and that alone, it is possible to assure and determine the quality of a candidate. What do we see as the result of this policy? Why this, that the products of night schools and other wretched so-called institutions of learning are admitted into the profession as readily as are the alumni of the highest and best schools on this continent—men whose preliminary scientific training has been a farce, who have learned their anatomy not from dissection, but from quiz compends, who have not been within the wards of a hospital, but at the very most have seen patients from the seats of an amphitheatre, men who to save their souls could not percuss a heart or recognize normal breath sounds through a stethoscope. You know, we all know, gentlemen, that these written State examinations, with papers set and passed upon by those who are not experts, with no adequate oral and practical examinations are wholly rotten. I have used this word before, I do not hesitate to use it again. I know that the Regents are seeking to remedy this state of affairs, but they have

not gone far enough. But how is this to be corrected?

I am going to make a bold recommendation, but I am convinced that the time is ripe for it. This matter of medical education is no longer a State matter only; it is one of interstate concern. If a man of this State wishes to pursue his medical studies in one of the great universities outside the State, why penalize him in order to bring the weaker schools of this State up to a higher standard? If a man from another State seeks to increase the population of this, why be so mediæval, so chauvinistic as to erect unworthy barriers against his entrance? We are apt to run down the Old Country as unprogressive, but after more than twenty years upon this continent I am slowly coming to believe that there is an extraordinary amount of hard, common sense in many of its methods. These methods may not have been arrived at by pure logic—they never have!—but by compromise. Nevertheless they fit the case. It has not attained to the one portal system: we are just about to try that in Canada as an optional method, and now that we are endeavoring to put it into execution we realize its difficulties. It is at the least an interesting experiment. But there has been established for now many years a General Medical Council for the United Kingdom. That council registers all duly qualified medical men. And here is the significant fact: that council conducts no examinations. What it does is this: from time to time it sends to the various schools a small and select committee of two or three experts, men high in our profession. That committee reports upon the quality of the instruction provided at those schools: it is present at the examinations and reports upon their scope and efficiency, and accord-

ing to the report given, so does the council as a body approve of the school, in which case its diploma is accepted as qualifying for registration, or disapprove of the school, in which case specific reasons are given, and the representatives of the school are afforded the opportunity to present their side of the case. Finally if the recommendations of the committee are supported by the council as a body, either the school has to modify its procedure forthwith in agreement with those recommendations, or it has to cease to exist. Certain common regulations are laid down as to length of curriculum, essential subjects for preliminary and professional training and so on, to which all schools must subscribe, but the final approval rests not upon quantity but upon quality of the education and examination afforded.

The time, it seems to me, is ripe for a similar procedure here in the United States, for the appointment of a Federal Medical Council, subsidized by the government at Washington, and formed of representatives from all the States, a council which should appoint well-known leaders of the profession to act as committees or assessors to visit, report upon and make recommendations regarding the efficiency and deficiencies of the individual medical schools of this continent, the expenses of such inquisitions to be met by the schools visited. The Carnegie Foundation has prepared the way, but we need now, not a private but a national institution, an institution authorized not by the profession alone, by the American Medical Association, for example, but by the nation at large, which shall act authoritatively in these matters. I would say, let each State control and direct its own educational methods. We do not want, we must fight against, any dead level of sameness in procedure and outfit.

But let the Federal assessors test the results and make sure that they reach the desired standard of quality. If this be asking too much at the present moment, at least the State might take action, might appoint committees of inquisition to inquire and report upon the quality of the instruction afforded and the examinations of the schools within its boundaries, and might accept the graduates of those schools without the present farce of an examination which does not educe the capacity of the examinee.

I shall be satisfied, gentlemen, if I have impressed upon you that education is something beyond mere instruction; that we are every whit as much interested in the quality of the secondary school education as in medical education proper; that both in secondary and medical education there must be more elasticity, more freedom allowed for the individual school to control its own development; that sameness means not perfection but intellectual death. I shall be satisfied indeed if I make you think over these matters. I have said, and am content, even if after me comes the deluge.

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