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# MEDICAL EDUCATION IN THE UNITED STATES \*

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I ASSURE you that it is a great delight to me to have this opportunity—and I seize everyone that presents itself—of returning to my old home. I treasure the associations of those days when I was a part of the profession of New York, and it has been a delight to me to continue in contact with things medical and with my friends and colleagues of this city. I esteem it a high honor to be asked to give one of these lectures. I must pay tribute to the conception underlying the establishment of the Harvey Society. When one considers the purpose of these lectures, the opportunities which they offer, and the influence which they exert, it is an honor for anyone to be asked to be a Harvey Lecturer.

The purpose of the lectures is to present the results of original research. I am rather glad that Dr. Wallace relieved me of the responsibility of having chosen the subject I am to speak on. It would not have been one of my own choice and I question whether it is altogether suitable for this course of lectures. Nevertheless, it is not altogether undesirable that a lecture on medical education should come under this foundation, because everything that concerns research and the conditions favorable for it are dependent upon education, and surely the roots of scientific research lie in the educational system of the country. I think it is more clear than ever in these days, with the establishment of separate research institutions and the interests attaching to scientific investigation in general, that, after all, without a satisfactory foundation on the educational side, research cannot flourish.

It is enough, I think, to point out that such an independent, fruitful research institution as the Rockefeller Institute doubtless would not have justified its establishment twenty-five years

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\*Delivered April 20, 1916

ago. That is because improvements in medical education had to precede the foundation of such an institution, and I venture to say that themes which relate to all the conditions which affect the development of laboratories, all the material conditions so little understood in general which figure in the development of research, are not out of place in a course of lectures where the prime purpose is to present the results of research.

I am somewhat at a loss how to treat the subject of Medical Education in the United States which has been suggested to me. It is obvious that it is impossible to cover the whole subject and I must ask your indulgence for selecting certain aspects of it, not altogether connected, but such as seem to me to be particularly of primary, or, at least, of special interest.

Nothing is more remarkable in medical conditions in this country than the progress of the last half century in the development of medical education and of medical science, and especially during the latter half of that period. This progress came first in medical education, and as I have already indicated, I think it was a necessary condition for the subsequent development of investigation in medicine. The progress is remarkable when one contrasts it with conditions which had existed before; more remarkable when one contemplates how very far short we still fall of the ideal. We cannot contemplate with any great satisfaction the early history of medical education in America. Probably medical education had nowhere, at any time, fallen to such a low estate as it did during a large part of the last century in our country. The early traditions, which came from Scotland, were sound. They recognized that a medical school should be a part of a university and they also recognized the essential relationship of such a school to a hospital. But with the rapid development of the country, and largely as a consequence of that rapid development, new ideas, essentially novel, unheard of before or since, developed as to the organization of our medical schools. I refer to the establishment of independent medical schools without connection with universities, without vital connection with hospitals, with the power to grant the doctor's degree, and that degree carrying with it the license to practice.

We are so familiar with the existing system in this country that we hardly realize that there has been a distinctive problem in America, the fundamental evil resulting, of course, from the divorce of the medical school from the university and from the hospital, in that each followed its own line of development, with little or no heed to the other. Our problems to-day are, to a very large extent, the result of that condition. They consist to a very large extent in an effort to establish a relationship which should have existed at the beginning between the medical school on the one hand and the university and the hospital on the other. And it is not a little remarkable that on the whole it is much easier to establish the desired relationship with the university than it is with the hospital.

Now I do not wish to be too harsh in judgment of the old order of things in medical education in this country. The system was about as bad as it could be, but there were compensations, and these were undoubtedly due to the character and calibre of the teachers in many instances. Even the characteristic medical schools that are of historic interest in the frontier of America had a very remarkable class of teachers and professors—Nathan Smith, Daniel Drake, McDowell, Dudley. Mere mention of these names to one who knows about the history of medicine in this country is enough to indicate that any young man who came under the influence of such teachers as these must have derived great profit. In other words, the results were better than the system.

I received my own education here in New York before any marked change or improvement had taken place in these conditions, but I entertain and cherish a great feeling of gratitude to many of my teachers. I received stimulus from men like Dalton and Delafield, and later from Dr. Jacobi, my Attending Physician at Bellevue Hospital, and the elder Janeway. Mere mention of these names rouses enthusiasm and interest. We received a stimulus and were brought into contact with high ideals of the profession, notwithstanding all the defects in the system of medical education.

Now a change has taken place, and, as I have indicated, a change so great as to mean a definite break from the old order, and it is worth while inquiring as to some of the factors which are concerned in this improvement. The enumeration of them will enable me to make a few comments of a somewhat general nature.

There has been, for half a century or more, an awakening of professional opinion on the subject, which, however, has had very little effect on medical schools. If one were to enter into a historical review, it would be necessary to go back as far as 1859 when the Medical Department of Northwestern University established a graded course. Later on, at Harvard and at the University of Michigan, improvements came in as regards standards, methods, and certain requirements for admission. But I trust that it will not be deemed immodest if I suggest some of the contributions which the establishment of the Johns Hopkins Medical School in 1893 made to medical education. It had no monopoly of contribution to progress in this direction, but there were certain conditions which enabled us to make rather distinctive advances. In the first place, we were fortunately situated, as things were at that time, on the material side. There existed the Johns Hopkins Hospital and the University, and an endowment, which, although not large, was larger than any existing at that time for the promotion of medical education. There was the standard set by the University in the promotion of a higher university education, as distinguished from college education, so that we realized that we had an opportunity. We felt that it was not worth while to start a new medical school unless we made an addition to the methods of medical education.

When the school was started it had certain preliminary requirements, which still exist, which were not altogether of our own free choice because they were a part of a condition of the endowment which enabled us to begin. I do not propose to discuss in detail the subject of the preliminary education for the study of medicine, but I would point out that the particular requirement which was introduced at that time represented an effort to adjust medical education to the existing, rather anom-

alous condition of general higher education in this country. We require, as you know, a liberal education as represented by a degree in arts and science. Recognizing that the college keeps the students longer than it should for entrance upon professional studies, we ask them to supply training in the sciences fundamental in medicine, Chemistry, Physics, General Biology, with a reading knowledge of French or German. These subjects—Chemistry, Physics, Biology—in the curriculum of European universities come under the medical studies, so that a comparison with these foreign medical schools represents at least a five-year period of study. We ask the college, then, to supply one at least, possibly two or three, subjects which abroad are included in the medical curriculum.

We did not think at the time, nor do we think now, that it is a standard likely to be generally adopted in this country. We have never urged it. It has worked well with us and we are not inclined to make a change. It is an adjustment to existing conditions of higher education. All other efforts to adapt medical education to secondary and collegiate education in America encounter many difficulties. A high school education is not sufficient, unless our high schools develop into something more comparable to the German gymnasium, as there is some tendency to do in the West. But we must try to find a place to stop between the high school and graduation from college. The tendency, which, however, does not seem to be the solution, is to require two years of college work; to bisect transversely, if you will, the college course, and very often associated with that is the telescoping of the last two years of the college course into the professional school, so that two years of professional study are counted both for the Bachelor's degree and for the Doctor's—obviously a make-shift arrangement. The result of this development of the medical school and college or university apart forms a condition which would never have existed if it had not been for the marvelous development on each side. I do not feel, whatever you may mean by a liberal education, that it is highly desirable that it should be demanded by the medical school. Of course the demand that is really desirable, the sort of education which we all feel is so

lacking in most of our medical students, the power of observation, the right attitude toward the subjects he is studying, the capacity to interpret and all of that which is talked of so much now by Mr. Abraham Flexner, may be met by possible improvements in secondary education.

Those of us who are interested in medical education must be very much alive to the possible improvements in secondary education. It is to be hoped that the time will come when the young man may complete his secondary education, have added to that the college education and be enabled to enter upon his medical studies when he is 19 or 20 years of age. This will be solved, I believe, rather by an improvement in secondary education than anything else.

Such, in brief, were our requirements for admission, which still hold, to the medical school. I think we can also point to the organization of the laboratory, or so-called pre-medical subjects, on a more adequate scale than previously existed in this country as a contributing factor in the progress of medical education. The anatomical laboratory, of course, had existed for centuries, from the time of Vesalius, and by virtue of the fact that anatomy was the only subject with which the medical student gained any sort of direct, personal contact with his subject, it had great educational value. It still remains, of course, a fundamental subject, but it has acquired undue prominence in the medical curriculum by virtue of the fact that it was the only subject which was pursued by laboratory methods until recent times. The physiological laboratory is traced, in this country, mainly to the work of Bowditch in Boston and Newell Martin at Johns Hopkins, but it cannot be said, I think, that physiology had taken the place which it should hold in medical education much before a quarter of a century ago. One of the great marks of progress in medical education is due to the recognition of the fundamental nature of physiological study for the training of the physician, so that the study of the activities of the normal body are, to say the least, just as important as a study of the structures of the normal body, and it is a rather distinctive contribution for American medical schools to have established good



laboratory courses for medical students. I see in the audience Dr. Porter of the Harvard School who has had such an influence and done so much in advancing these courses. It is still difficult to arrange an entirely satisfactory routine course for undergraduate students in the physiological laboratory, but we do more in that direction than is done abroad.

The other subjects which we were able to establish upon a fairly adequate basis were pathology, bacteriology, pharmacology and physiological chemistry, and perhaps in the first instance, because this great group of pre-clinical subjects, designated now as laboratory subjects or medical sciences (as if the clinical subjects were not a science), for the first time were adequately organized with laboratories, with a group of teachers as heads of laboratories, with their staff devoting their entire time to the work and with an emphasis upon the practical and laboratory training as compared with didactic lectures or demonstrations of the subjects.

These first two years of the medical course were founded upon certain principles. In the selection of the teachers, they were ever the best to be found or available, but emphasis was made, in that selection, upon the productive capacity of the men. That qualification of the teacher, the productive capacity, is, in a medical school, the important thing and headships were given to men who had earned them by their contributions, and in general their published contributions to their subjects. This guided us at that time.

As regards the clinical side, we at the beginning made slower progress. To Osler, especially, we owe the plan which was adopted. The main thing perhaps was the introduction of the English plan of teaching the fourth year students in the wards of the hospital by the system known as "clinical clerks," a marked advance, I believe, in clinical teaching. The change from the old order was not so striking on the clinical side as on the laboratory side. At once, you might say, the laboratory side of medical education passed from being the weakest, almost non-existent side, to the strongest side of the medical curriculum.

The plan of the organization of the hospital which was estab-



lished at this time, in 1893, was, I think, a considerable improvement. It consisted mainly in the introduction of a higher professional staff over the internes, so-called house officers; that is, there were resident physicians, surgeons, gynecologists, obstetricians, over the interne. I have often wondered that this system has not been more widely adopted in this country. It offers a very great advantage. It affords opportunities for the prolonged advanced training of the young men and also the young women who are so fortunate to obtain these positions. The positions are for an indefinite period. The young men devote their entire time, of course, to hospital work and are expected to undertake some investigative work. If you recall the names of those who have held these positions as resident physicians and surgeons, I think you will feel that by the time they have left they have established their reputation, and that the value of that system of organization of the professional staff of the hospital is very clear.

More recently we have come to hope that we shall be able to initiate a very great reform on the clinical side, in the placing of the clinical portion on the university basis by which the heads of the departments may give their entire time to the work. I shall touch on this point later.

These various points, then, I think, mark and set an example for a very considerable improvement in the medical educational system. I do not desire to claim any monopoly on the part of Johns Hopkins University for these advances, because other universities have contributed largely, such as the University of Michigan, but we happened to be first in the field in many of these directions, and I think the plan adopted by Johns Hopkins is one factor which has advanced medical education in this country.

The State Licensing Boards have had great influence in exerting pressure on the inferior medical schools, crowding them to the wall and very often driving them out of existence. The principle, of course, is that the license to practice should go with the granting of the degree of Doctor of Medicine, especially when one considers the system and the conditions under which the degree is granted. The influence of these State Licensing Boards

has thus been very good in bringing up the general average. They have been of no particular assistance and some time ago almost threatened to be a handicap to the better medical schools. Of course we all recognize what such examinations should be. The character of these examinations falls very far short of the ideal, especially in the lack—although there is an improvement with time—but in general, in the lack of a practical examination, so that it is not any real test of the power of the student to use the implements of his profession or of his real living knowledge of the subject. They will improve, doubtless, and it is to be expected that in time conditions will be such that those on the Examining Board will be also teachers in our schools.

The Council on Medical Education of the American Medical Association and the Association of American Medical Colleges have done a great deal in improving conditions, especially in leading professional opinion on the subject and inciting to a very considerable degree a moral pressure. There have been at times, I am frank to say, certain tendencies in the Council on Medical Education to make one pause. I refer to the efforts to "standardize the curriculum." I think it a very horrible thing to attempt to indicate the number of hours, for example, to be devoted to the study of a subject, and at one time our State Licensing Boards seemed inclined to introduce some such scheme. Of course we want as elastic a condition as possible. When one considers the importance of adjusting medical education to the changes and advancing conditions of medical knowledge, how absurd to attempt to specify the number of hours to be given to any subject, bacteriology for example. Only a few years ago the subjects of immunology and serology were not thought of as belonging in the medical curriculum, but to-day things have changed and they should be a very important part of the medical curriculum. We owe our great working policy in medical education to the conferences held annually in Chicago, attended by leading educators, not only in medicine but other subjects as well. Such conferences are very valuable and the publications very interesting and often important.

• Another great factor is Dr. Abraham Flexner's report for

the Carnegie Foundation. I consider it to be one of the most remarkable and influential publications in educational literature. It has had not only a large influence upon the professional opinion, but especially a large influence on universities and upon public opinion. It is to be characterized as one of the important factors which illustrate this remarkable advance in medical education.

But of course the progress of medicine lies back of it all. The face of medicine has changed greatly in the last thirty or forty years, although it is the same medicine in many ways. That medical education should continue without advance during all the great discoveries characteristic of this era, would hardly be conceivable.

I have run briefly over the history of some of these factors, because I wish to make some comments of a more general character. I have already spoken of the development of the laboratory subjects. It is worth repeating, perhaps, that it was a consequence of the organization of the laboratories of anatomy, physiology, pharmacology, bacteriology, etc., and the selection of men devoting their entire time to the work, selected on the basis of scientific ability, that these great sciences have progressed to the point which they have in this country and of which we are so proud. To give an instance of the close relationship between the progress of medical sciences on the one hand, and of our educational system on the other, it was only two or three years after our medical school had opened that we started the *Journal of Experimental Medicine*. It was the pioneer journal devoted to the publication of papers of a more or less technical or monographic character in these sciences. I recall so well the doubt expressed as to whether there existed enough material of the sort which was desired to keep the journal alive. We never dreamed of limiting it to any one of these so-called laboratory subjects. We endeavored to select a title which excluded merely practical, clinical medicine, and was not restricted to any one line of research. I cite all this as an example of conditions which existed only a short time ago. It was within two or three years that Dr. Porter found the time had come to establish a *Journal of Physiology*, which was the first offshoot from the

*Journal of Experimental Medicine*, and then came in rapid succession, the *Journal of Anatomy*, *Journal of Biological Chemistry*, *Journal of Medical Research*, *Journal of Infectious Diseases*, *Journal of Pharmacology and Therapeutics*, and still more recently the *Journal of Bacteriology* and the *Journal of Immunology*. Is it not wonderful that in a comparatively short space of time these subjects should have developed to the height of which we are so proud?

America to-day, as a contributor to the various sciences of medicine, stands in a position to medicine commensurate with the size and importance of the country. We lay, I believe, probably greater emphasis upon the teaching of undergraduate medical students in the laboratory than is done elsewhere; we devote more time to the teaching of undergraduate medical subjects by laboratory courses in certain subjects particularly—I have already cited them—than is done abroad. There are already developed certain distinctive characteristics of our American medical schools, and this is one of them. Of course it makes us inquire whether we are possibly giving undue prominence to some subjects, but I would be the last one to admit that, although at the same time we should bear in mind certain things. We cannot teach in the laboratory more than a very small fraction of the contents of the subject; only a part of it, and that not necessarily the most significant and important. In other words, is there not some risk of acquiring too restricted and limited a conception? Is there not some risk of a loss of perspective in the subject by exclusive emphasis upon teaching in the laboratory? I believe so firmly in the laboratory method in imparting that kind of knowledge which is really vital, a knowledge that gives power, that I do not wish to be misunderstood and be thought to minimize its value, but I think we must supplement the laboratory teaching by efforts to secure these broader conceptions and this clearer perspective. I have never been willing to give up altogether the lecture. If one does not believe in lecturing, I think he had better not lecture. I think there is some value in a lecture, and I think proper emphasis in lectures and recitations will enable teachers to

stimulate the student and exert some pressure to make him read. The students do not read enough. As a rule they know only the subjects which are taught in the laboratory. I will not labor the point, but I would emphasize the fact that we should consider it very carefully.

I turn now from the laboratory side of medical education to the clinical side. That, of course, is the central feature. The teaching of the clinical subjects should be carried out along the same general lines. At the start there were efforts in this direction, especially in the use of students in the wards of the hospital, acting as clinical clerks and surgical dressers. I shall not attempt to discuss this system. The plan of organization of the professional staff shall always remain a controversy between the clinical and laboratory side.

When one considers what should be the functions of the head of a principal department of medicine, when one considers that he is responsible for the teaching, responsible for stimulating investigation and for having the right sort of men for the conduct of investigation in his field, responsible for the study and care of the patients in the hospital, and the whole organization of the department, it seems to me that it requires no argument that whoever assumes that responsible position as head of a clinical department should be prepared to devote his entire time to it. There is no time to engage in an outside practice. I know that it is urged that the clinical teacher who limits his experience to patients in the hospital is deprived of a very valuable experience to be derived from outside practice. It is a valuable experience undoubtedly. I think it would be more valuable if he had a rural practice. I doubt if anything in the ordinary conditions of a consulting practice in the city is as likely to develop resourcefulness in a physician as a rural practice. In a word, of course, the more varied the experience of the clinician is to be, the more must he be brought in contact with patients and unusual conditions, but there are limits to human endurance, time and energy, and the question is, what is the best use of his time? Can we doubt whether it can be successfully maintained that the expenditure of time in seeing

patients in consulting practice is as valuable to him as the study of cases of diseases in the hospital under all of the opportunities which exist there? The time has gone by when a man can do both competently and with justice to his position as the head of an important clinical department in the medical school.

How this condition is to be brought about is, of course, very important. We endeavored at Johns Hopkins University to do this by making no compromises. Through a generous appropriation from the General Education Board, we have been enabled to place three of our main clinical departments, those of medicine, surgery and pediatrics, upon the so-called "university basis," or, as more commonly called, the "full-time" system. I do not particularly like the name; for teachers under this system are the only ones who have any leisure time.

Of course the heads of departments should not be prohibited under the new arrangement from seeing private patients, but they are paid such salaries through this endowment that there is no necessity for them to earn a livelihood through private patients. They can see them if they like, but not having any financial difficulties, they will see only those that are of special interest to them. Now, our experience thus far shows that the amount of this private practice is kept within pretty narrow limits by the withdrawal of financial necessity. The patient, of course, pays a fee, but the fee goes to the fund for the promotion of the system. I do not see very well how one could justify the raising of a large sum for clinical heads on the university basis if they should supplement their income from private practice. This would be a great injustice to the laboratory men. The salaries which they receive are much larger than those received by the laboratory men. I do not think outside salary limits desirable for university professors, at least I think university professors who are of the calibre of the men occupying these positions ought to receive similar salaries, but, as a matter of fact, I think you can justify a somewhat larger salary to the heads of clinical departments on the ground that they are serving the hospital as well as the university; that they have very responsible duties in the care of the patients and that after



all a clinical department, with its staff and hospital branches of clinical and investigatory laboratories, is a larger undertaking than a single laboratory, so that one can defend the paying of larger salaries. But it is sufficient, I think, to say that the opportunity has been presented to us and we have been glad to initiate this system and to pay these salaries. How widely the system as we have adopted it should be generally applied, I am unable to say. It has no saving virtue in itself; it is the men who operate it who are fully responsible for its failure or success. To introduce it where conditions are not suitable, where the hospital does not afford the requisite patients and laboratory facilities, and the staff of full-time young men, would be useless. It is only where conditions are suitable that the system should be adopted, but when it is carried out in the uncompromising way that we have done, it undoubtedly marks, I think, one of the greatest improvements in medical education of recent times, and is bound to exert a very great influence on the character of organization of the medical school. We have had it for two years and we like it. I think it has passed the experimental stage as far as we are concerned. I do not wish to say that we are satisfied with our conditions, but it gave us the opportunity to make a very great improvement and we were glad to seize that opportunity. The plan does not necessarily do away with the services of part-time men in the school. Whatever faults there may be in this condition, the outside work is very valuable for a man and makes him a better teacher. He finds a place in the school, only he is no longer the head of the department. I take it that this marks a new career for young men. The very fact that what seems to so many a serious objection in a curriculum, the difficulty of filling positions with men who are qualified for this kind of work, is in itself something of a criticism of the existing system and I believe that one of the great dangers of the new order of things would be the opening up of a most attractive career leading to that of consulting physician. But I do not know what could be better than to enter into such an opportunity as is now offered, devoting one's time to the study of problems of disease as they are presented by the living tissue, to work in the laboratory and study at the bedside.

As regards the establishment of the proper relations of the hospital to the medical school, there is much that can be said, but the time has gone by when it is necessary any longer to emphasize the great service which the hospital devoted to education and scientific work, as well as the humane care of the patients, does for the community. But it is necessary to dwell on the character of organization of the university clinic, as distinguished from the general hospital. You know, those who are familiar with medical education abroad, especially in Germany, that part of it is the clinic, the rest a general hospital. In other words, the mere saying on the part of the trustees that you can use the hospital, is not enough. It is a very considerable undertaking to transform it in whole or in part into a general university clinic, meaning by that that there is one man in charge with a staff of men, assistants or associates, with a chemical and biological laboratory available for the study and investigation of problems of disease, and all the necessary arrangements for teaching and the treatment of patients grouped as a single department. That is, in a word, what I conceive to be the proper organization of the true university clinic. I understand that efforts are being made here in New York to establish a clinic on that basis and everyone must realize how important it is to have the right conception of what a true university clinic should be.

I have jotted down a great many things, but let me just give them in a word. Certain of these other topics are of especial interest to me. I would like to say something on the general subject of research and teaching and also on the relationship of the independent research institution to educational institutions in general. There is a little apprehension, particularly on the part of the university, that the independent research institutions, like the Carnegie Institute of Washington and the Rockefeller Institute, are getting too much attention; that they draw the able investigator from educational institutions; that they tend to create dissatisfaction. I think, on the other hand, that these research institutions have abundantly justified their existence by their contributions to science. That is, indeed, quite

obvious. But I think as time goes on that they will supplement the educational institutions. Anything that increases the opportunities and rewards for the scientific worker is undoubtedly of very great advantage. One reason why Germany has obtained such a high stage in scientific investigation has been because the career of the scientific man was made attractive. By rewards I do not mean so much the pecuniary ones as the satisfaction which comes from contributions, the esteem in which the worker is held by the community. I think the opportunity for these careers in this country are enormous and rendered more attractive by the establishment of these institutions. It is true, of course, that some of the very best trained men are withdrawn from the educational field by their work in the research institutions, but it is of very great advantage to the teaching institution to know that such positions are available for students. It increases their value, I think, in that way very much. It acts as a stimulus on the educational institution to further research. As time goes on there will begin to return to the educational institutions men who have had this very superior training in research. I believe, on the whole, that over-multiplication would be unsatisfactory. The future relation between the independent research institution and the educational institution—of course we are speaking of the medical school and medical research institution—the mutual relations, will be advantageous and each is going to be of great help in the end to the other.

I must omit a great many topics, which I should like to have touched upon. I wanted to say something about the medical curriculum, optional courses, and many other things.

I do not wish to leave the impression that there are no great deficiencies in our own medical school. I have enlarged upon the progress which has been made more in contrast with the past than from a feeling that we have begun to approach the goal. It would be interesting to point out and to dwell upon some of the deficiencies, but time allows an enumeration of just a few.

We are lacking in the proper cultivation of legal medicine, a very important subject and one of importance to the clinician.

Of course we all recognize that one of the great needs of medical education is the establishment of institutions of hygiene. I would like to have said a few words about the teaching of the history of medicine in our medical schools. It adds greatly to the attractiveness of medical study, and I believe also to the enjoyment of the physician later in his professional work, to find how knowledge came to be. I do not advocate systematic lectures on this subject. I do not know of anything that would be more definitely dull and uninteresting, but there are other ways of cultivating this subject.

Are we training men to serve the community in the treatment of disease any better than they did in the old days? From the beginning the aim in medical training has been to enable the physician to prevent and cure disease and injury, to relieve suffering, and to preserve health. These aims are the same to-day as they were forty years ago. It is this consistency of purpose which gives the wonderful interest and continuity to the study of medicine. Notwithstanding all of the wanderings of the past, we are striving for the same aim as before. There have been opened out new fields, new vistas, new methods, so that what was suitable for a training to meet these great aims in the past is no longer the best available. The fundamental thing, the fundamental problem in medicine, is to train men to use the resources of the medical science and art most efficiently for the prevention and cure of disease, and I believe that while many of the commonest ailments of mankind are no better treated to-day than in former days, we are acquiring a new kind of knowledge of disease more important in its practical values. We feel that the existing knowledge and resources of the medical art are only imperfectly realized, and my belief is that the newer methods of medical education can be most useful in enabling the student to acquire a better scientific knowledge of the nature of disease and enabling him to apply this knowledge more successfully in the treatment and prevention of disease.