

The Boston Medical and Surgical Journal

Table of Contents

June 22, 1916

MASSACHUSETTS MEDICAL SOCIETY	EDITORIALS
THE ANNUAL DISCOURSE.—MOVEMENTS IN MEDICINE. By David L. Edsall, M.D., Boston..... 891	AMERICAN MEDICAL ASSOCIATION..... 913
ORIGINAL ARTICLES	THE PROBLEM OF THE CONVALESCENT..... 914
RESPIRATORY EXCHANGE, WITH A DESCRIPTION OF A RESPIRATION APPARATUS FOR CLINICAL USE. PART II. By Francis G. Benedict, M.D., Boston, and Edna H. Tompkins, Boston.... 898	SMALLPOX IN GERMANY..... 914
CHOLECYSTOSTOMY VS. CHOLECYSTECTOMY. By F. B. Lund, M.D., Boston..... 909	MUTISM FOLLOWING TRAUMA..... 915
CLINICAL DEPARTMENT	MEDICAL NOTES..... 915
REPORT OF A CASE OF SACRO-ILIAC STRAIN FOLLOWING SYMPHY-SIOTOMY. By Charles F. Painter, M.D., Boston..... 910	MASSACHUSETTS MEDICAL SOCIETY
	ANNUAL MEETING OF THE COUNCIL..... 918

Massachusetts Medical Society.

THE ANNUAL DISCOURSE.

NOTE.—At an adjourned meeting of The Massachusetts Medical Society held Oct. 3, 1880, it was

Resolved, "That The Massachusetts Medical Society hereby declares that it does not consider itself as having endorsed or censured the opinions in former published Annual Discourses, nor will it hold itself responsible for any opinions or sentiments advanced in any future similar discourses."

Resolved, "That the Committee on Publications be directed to print a statement to that effect at the commencement of each Annual Discourse which may hereafter be published."

MOVEMENTS IN MEDICINE.*

BY DAVID L. EDSALL, M.D., BOSTON.

THE past two or three decades have been more important in certain ways to the medical profession than has any other similar period. There have been times when more deeply fundamental work was done in medical science than any which has come forth in this period, but there has been no time when there has been built, upon foundations already laid, a structure of such large importance and such sound value to the general public. Developing upon principles established before this time, and elaborated from them, there have been contributed a most remarkable number of facts, in many instances of very great individual importance. But, large as their individual value has been, it has been less significant than their influence as a whole, for this has been such as to alter the relations of the profession to the public at

* Delivered before The Massachusetts Medical Society, June 7, 1916.

large in a way that is extremely noteworthy. I mean, obviously, first of all that the developments have been of such character that they have demonstrated as never before was done to all open lay minds, and have emphasized in the medical mind the economic importance of the public health. But, I mean beyond this that these developments have made medicine a much more complex profession, and have added a new and very important character to the calling. It is not simply that the details of progress have made it necessary to acquire more varied and extensive scientific knowledge in order to practise medicine. It is also and even more largely because, far more than was ever true before, they have imposed upon physicians the need of looking upon their profession in its relation to many general economic and social problems of the community as a whole, quite as much as in its relations to the individual sick. These changes have already produced and will produce in increasing numbers, a breed of doctors known earlier only occasionally, and then usually developed by circumstance rather than by design. The times just past and those at hand are likely, in fact, to prove more significant in their influence upon the character of medicine as a calling than any previous time.

The doctor has always been somewhat cloistered from the world of affairs. Untrained in executive and business matters and traditionally unsuccessful in these as a rule, he has been separated by his unsuitable training and by the urgent character of his work from any active part in public affairs. Indeed, he has been excused by law from some public duties

that other men are obliged to do, and by common tradition has been free of criticism if he took less part in other such matters than do most men. Medicine has, in fact, attracted very largely men who temperamentally shun public activities. Besides this, one of the more or less definitely recognized large compensations in medicine, and one that has been most jealously guarded and perpetuated, is that the doctor owes obedience only to the law and to his own conscience, and is not subject to human masters. As a consequence, he has often avoided and even resented, anything that interfered with his freedom of action, and this, together with the fact that there were few positions of dignity open to medical men in which they were parts of a system or were subordinate to higher authority, has made the general idea of being part of a machine moving in necessary co-ordination with other parts, usually distasteful. Indeed, even a position on salary has been a thing that often suggested that the man holding it was, perhaps, a failure in his chosen career except in a few types of work.

But the developments of recent decades have shown beyond peradventure that the broadest and most beneficent activities of medical men in preventing and eradicating disease have in later times been, and will mostly continue to be, not brilliant individual researches or individual struggles with disease, but organized systems of attack in which everyone, whether in senior or junior positions, will be no longer a free lance, but subordinate to the system, and dependent upon it for his success. In fact, in those activities that now give it its greatest public influence and power for good, medicine is not now an independent profession, but a part of a whole and dependent in accomplishing its aims upon firm executive control, whether this is exercised by a medical man or other. A very large proportion of the men who have won high distinction recently have won it because they have developed both their scientific capacities and their executive powers, and have employed organized rather than individual effort to accomplish their ends. This will be true to a still larger extent in the future, and the attractions of such a career will lead many of the ablest and most powerful minds into such work instead of into practice, and may readily attract into medicine many whose temperaments would earlier have led them into other forms of work.

What I have spoken of applies chiefly to the direct attack upon disease itself. But the character of the medical calling is being everywhere more or less profoundly influenced in another way. There have been among various peoples, especially among those highly cultivated for their periods, times in which very great interest was taken and valuable measures were adopted regarding the general social conditions that are largely responsible for the occurrence of distress and disease in the first in-

stance and that propagate and perpetuate them. These measures were largely confined to individual races or nations, however, and also with changes in the fortunes of the people who originated or developed them, they in large part ceased to be effective, and they had at most an indecisive influence upon the medical profession at large. But we have been, and still are, witnessing a remarkable wave of public interest of world-wide extent in the social causes of distress and disease,—a wave that may well become a steady current, and that has carried away in some of the most important parts of the world certain established medical relations, customs and traditions. What I spoke of earlier you may well say is having an extremely interesting and highly important influence upon medicine as a whole, and upon a limited number of men in the profession who engage in research or enter into national, state, or municipal health services, or who are in other ways in a somewhat separate sphere, but has no immediate and acute bearing upon the life of the vast bulk of the profession who are engaged in practice. What I would refer to now, however, has the most intimate possible bearing upon the relation of most individual physicians to their patients. In dealing with disease it was customary for many years to adopt an attitude almost solely of defense. Even when hygiene became widely established, it had as its main object the control of existing disease, and, chiefly, epidemic disease. It took up the prevention of disease in limited degree only, owing to limited knowledge. In recent times knowledge of the immediate causes of disease, especially of infectious disease, has been so largely added to, that we recognize clearly that the whole matter has assumed an aggressive instead of a defensive aspect, and the great object now is the progressive destruction of diseases through eradication of their causes. A massive and organized attack upon the immediate causes that are most accessible—bacteria and the like—has been well begun. We have long realized that these immediate causes are only part of the story, and that the attack upon them must have but limited success so long as conditions favorable to their activity exist widely. Physicians more than others have appreciated that the manner and conditions of life largely determine the occurrence of disease, and they have been active in philanthropic and other movements that aim at the betterment of these conditions; but none realize better than they the difficulties of improving these conditions in any general and permanent way, and the slight and often transitory character of the results of local and especially of unorganized efforts.

The most brilliant and broad-visioned attack upon this problem—upon the social conditions that start and continue disease—that has come from medical men is one that originated here in the mind of Richard Cabot. I mean, of course,

medical social service. The rapidity and force of its progress over the country within a few years show not only its value, but also that the need has been so great that a workable system of attacking the problem was grasped at at once. But no one sees more clearly than the originator of this excellent plan that it is only partly preventive and chiefly curative. It is a pruning away of growths that have become harmful or are likely to be so, but so long as the roots flourish the outgrowths will occur and recur and frequently increase. A few years ago it sounded almost original to say that inefficiency, improvidence, distress and vice are the greatest of the causes of disease. Now it seems very familiar, but it has seemed a somewhat Utopian dream to consider that there would be anything but gradual improvement in these factors as the world rolled on. Throughout the last thirty years, however, many people have been wondering whether a promising method of influencing these factors rapidly had not been devised, and as experience of results accumulated, the opinion of many persons engaged in medical and social work and in statecraft has been turning more hopefully towards this system.

When Bismarck and William I introduced the bill which carried in it the beginnings of compulsory sickness, invalidism and accident insurance, it was presented as a means of relieving and forestalling distress, but it was recognized to be a means of preventing both the distress that produces disease and the disease that produces distress. It is a very remarkable fact that the beneficent purpose was so clearly put forth that the bill passed without opposition, radical and new as its provisions were. It is similarly remarkable that the principles underlying the action, its bearing upon the control of disease, and its vital importance to the medical profession, not only in relation to the livelihood of the doctor, but in relation to his powers of accomplishing results, have been so little appreciated by the profession in general. Even now that the system has been adopted in extensive form in Great Britain and, at least, suggestions of it in many of the countries of Europe, and it is here at our very doors for discussion, it has had very little attention from medical men in this country, and in so far as it has been discussed it has been in considerable part in a suspicious and defensive spirit. That some antagonism has been shown is not surprising, since medical knowledge of this system has in this country come chiefly through knowledge of the contests that it has excited from medical men in Germany and England. But it is the most important question of legislation bearing upon medical men that has ever come up in its relations to their incomes, in relation to their freedom of action, and in relation to the good that they may do in their work, and as such it must be approached with an intelligent knowledge, and demands study from med-

ical men. Furthermore, it seems highly probable that whatever medical men may or may not wish, it will soon come in this country.

In Germany it has meant that, even previous to 1911, over 14,000,000 of the 64,500,000 of the inhabitants were participants in the sickness insurance and over 15,000,000 in the invalid insurance, and the medical and surgical care of the insured was provided for by the system and not by them as individuals. The new law has increased the participants by about fifty per cent. In regard to accidents, there were already about 24,000,000 participants. A similar proportion of the population is included in England in so far as the system has developed there, and a similar proportion would be included in the legislation proposed in this state and in New York during the past winter, and about to be proposed in other states. Manifestly, this is important to doctors. It is equally manifest that if doctors are not treated with scrupulous fairness such a wholesale control of their work and incomes is bound to do them injustice and perhaps great harm. It was chiefly because of lack of fairness in some instances, in others because, apparently, of a lack of understanding of the effect upon physicians, that contention arose with them abroad. This was partly due to the medical men themselves in that they did little in the matter until prospective or actual financial pressure led them to act. But it had the unfortunate effect of giving a wide-spread impression that medical men were bitterly opposing what, to a great proportion of thoughtful people, seemed profoundly benevolent legislation, on purely mercenary grounds; and when in any disagreement the question under contention is clearly one of emolument, it is very difficult to avoid the impression—whether it is a correct or a wrong one—that the basis of contention is not justice but self-interest. Bitterness at the thought of being under control, and sometimes under unfair control, has largely overshadowed the whole medical consideration of the matter; but it has come to the point with us where this system must be discussed, and, I believe, where it will before long be adopted; and I trust that, warned by previous experience, we shall be able to approach it always with the desire to secure justice for the profession, but equally with the desire to show that we wish justice for others, and with recognition of the fact that the system is capable of being carried out in such a way that it will not only preserve the rights of physicians but also, in some ways, may safeguard them, as compared with present methods, that depend upon the frailties and irresponsibilities of many individual patients.

The financial side of the matter unquestionably needs especial care in this country, not only in its relation to physicians, but in its general aspects, and particularly in justice to the insured, because our political morals are admittedly looser in this country than in Eng-

land or Germany. If adopted, the system means that astonishingly large sums of money will be handled by it, and the opportunities for and temptation to graft and the dangers of financial mismanagement will be very large. But granted that just provisions are made, we need to look upon the matter first of all as the largest social community problem that has appeared, and one in which medical men are peculiarly vitally interested because it so vitally influences their powers of accomplishment. I am quite convinced of the value and wisdom for people of narrow incomes of compulsory insurance, merely from the standpoint of automatically protecting them against times of stress through their own efforts with added aid from employers and the state. From the standpoint of the public health there can be little doubt of its powers for good. To be very brief, let me quote but two remarkable facts: first, that over 100,000,000 persons had been given benefits under the system previous to 1910; and, second, that even before the additional income was provided by the new law, about half a million dollars a day were being spent in Germany through this system, and that, with the numbers of people in this country and with the American scale of wages, this sum would at least be doubled here under similar conditions. These facts show the financial power in the system. In Germany this money has been in large part spent, not only in benefits and other necessary, though more or less temporary, but vastly important things. Much has, in a remarkably broad spirit, been devoted to constructing and maintaining hospitals and other institutions for sick and invalid persons, and to a great variety of other purposes; including, for example, the constructing of, or the lending of money at low interest for the building of, public baths, water and sewer systems, and similar hygienic advances; building houses of hygienic character to rent at moderate cost to working people,—in fact, for the money available above the benefits necessarily paid, all broad uses that would strongly tend to improve health and diminish sickness, have been sought out energetically as peculiarly sound investments because tending to decrease progressively the outlay of the insurance societies by decreasing the need of benefits. One can scarcely contemplate the use of such large sums of money without being convinced that if only reasonably wisely used, an enormous and relatively rapid influence in improving health must result, through eliminating many unhygienic conditions and still more through doing away with the acute distress that sickness and invalidism bring to those affected and to their dependents. So important a problem needs broad and friendly consideration. I believe it can be arranged with entirely dignified relations to the medical profession, and even with actual benefit to the profession. One of the most successful ways of avoiding disagreements is

through not forcing regulations, but agreeing upon them; and the more largely arrangements with medical men are made through friendly understandings rather than as bargains, the more successful they will be. Indeed, I believe that it would greatly help in avoiding contention, and beyond this in establishing in wide form many of the details of the system in which medical advice is highly important, if the local medical men involved had direct representation on the governing bodies of these insurance societies if they come to be formed, just as both employees and employers must be so represented. This has not been done abroad, but it seems to me eminently just, since physicians are, of course, essential to the system, and they are quite as vitally affected by it as anyone. And it is not only just, but would accomplish more efficient results in a variety of ways. It appears to me, at any rate, that this body may well take means to carry out a study of the matter and to determine upon a plan of action, before the need of hastily determined action perhaps arrives precipitately. If it arrives, it will at one step turn a large part of medical practice into part of a great system, instead of a purely individual relation with individual patients.

Many other factors are tending to make medicine more important as a public profession, and relatively less so as a private relation in its main activities and emolument. The decrease in infectious disease that has already occurred has distinctly lessened the total demand for family doctors. Also the state has taken over a very definite share of the actual management of some cases of infectious disease, and will necessarily exercise a gradually increasing control. It will, I am sure, not be many years before an appreciable influence will be exercised upon venereal disease by public action, difficult though this question is and demanding, as it does, cautious and unimpulsive measures in order to avoid doing harm. In the world at large the alcohol question has shown remarkable progress, and to me the time seems clearly ripe in this matter, not for joining prohibition movements or other drastic types of action, but for a frankly aggressive stand on the part of those who see its effects, and especially those who have responsibility for the public health,—a stand that does not need to ally itself with the emotional side of the question, but should rather be definitely educational, and with improved health and efficiency as its objects. When we see what such methods have done for tuberculosis we can scarcely doubt they can do similar things in controlling the effects of alcohol and venereal disease, especially when the changed and increasingly positive attitude of employers and of the public at large toward alcohol, in particular, is considered. With a decided drift toward the control of these enormously important causes of disease, a large effect upon the

sum total of the doctor's individual repair work and upon his purely palliative treatment must be exerted.

I am not one of those who feel that the health millennium is at hand, nor do I comprehend within my vision the time when medical practice will be a matter in which the doctor and the patient—as they have long been known—will no longer exist, and the treatment of disease will be carried out through government bureaus and public institutions. Doctors and patients have too human a relation to make this possible, however efficient it may appear to some persons. But I do see increasing influence of the doctor as a public servant; and with this an increasingly large proportion of the strongest and most important men in medicine will go into other forms of work than ordinary practice, so that the attractions of the newer forms of activities, as well as the influential character of the problems that they deal with, will tend to make them a great power in determining the character of medicine as a calling, whereas, until recently, its character has been determined largely by the practice of the art of medicine. All these movements will lessen the total number of the sick, and probably the number of practising physicians, but need not lessen the influence of the latter in the community. On the contrary, they will tend to increase it, for when wisely taken advantage of, they give physicians, not only their very strong human influence with individuals, but also an influence as public councilors and leaders, that the calling did not until recently carry with it.

The changes in the character of a calling and in its ideals, aspirations and traditions usually come chiefly from two sources: from the pressure of the demands upon it and from the visions that those entering it see. That medicine has greatly changed, not merely in knowledge, but in the demands upon it, we know well. That it has changed in the visions that it carries with it must be very apparent to anyone who has frequent occasion to advise young men, of especially earnest and ambitious type, who are just entering the profession, in regard to what was, not very long ago, a relatively simple matter, namely, as to the character of work that they may wisely take up at once. Twenty-five years ago there were few things to choose from. Few men thought at once of anything but some form of practice—of caring for the sick. With most men then it was a choice of the particular form of practice that most attracted. In fact, in most instances, even specialization in some particular form of practice was a future prospect to be worked up to through early general practice, rather than an immediately necessary choice; and the advice was often flatly given that experience in general practice should precede specialization of any sort. Some men who were hard pressed financially, or who looked merely for a berth that was fairly secure, put aside practice, tempo-

rarily at any rate, and went into institutional work or into the government services, though a small number were keen enough to see real opportunities in the latter. There were at that time relatively so few positions in teaching, and especially in research, available, and particularly so few that could be had very early in one's career and that carried a living with them, that only an occasional man could go directly into such work. Indeed, until recently, even the full-time senior positions in laboratory branches have been in large part filled by men who had earlier been, to some degree, in practice; and had by choice, or sometimes by circumstance, later been led into this work as a career. It was, I think, at that time usually somewhat of a shock to a man who had gone through a medical course, even almost like a confession of failure to measure up to the career that he had planned, to see before him the definite separation of his activities from the care of patients. It was something like the conditions in Dr. Weir Mitchell's youth in regard to research. You may remember that when he told his father, after he got through his hospital work, that he would like to spend several years in research, his father somewhat hotly told him that that would be looked upon by the public very much the same as if he had joined a circus. At present things are vastly different. The great majority of young men, of course, still go into practice, but very often now they make an immediate choice of some particular line of practice. The most striking difference now, however, is that there is no longer a suggestion of shock in considering the choice of some form of work that does not involve private practice. It no longer means a distinct shifting of purpose and detachment of one's self from the real medical career. The great majority of the most alert and most ambitious young men are loath from the first to feel that their work will be limited to practice. Much more frequently than was the case they look forward to doing, at least, some research and teaching as collateral activities. A considerable proportion of them seriously consider whether they will not go definitely into other things than practice, and a noteworthy and constantly increasing number are doing so. There is no reason to think that the proportionate number in the latter group will decrease. On the contrary, there is every reason to think it will increase. This changed viewpoint has been brought about by several main factors. What I have been discussing has had much to do with it. An interestingly large number of young men of the best type are beginning to have yearnings toward direct public service in some form, partly because they frequently feel a conscientious desire, widely growing in many other professions, for such service, but partly because they see the possibilities of fruitful work in these lines. The national services already offer attractive careers. If the tenure of

office and the opportunities provided in state and municipal work were only more frequently adequate, many would go into these lines, and more men of good caliber are greatly needed in them. It is very interesting to see the change in attitude. Such positions now appeal to young men directly as opportunities. We have only slowly realized that they are not chiefly sleeping berths.

The main factor, however, that has changed the viewpoint of young men has been the change in the character of the teaching of medicine, and the increasing complexity of the study and practice of medicine. Important as it has been, the change in the public relations of medicine, the long quick stride ahead in its economic and social relations and dignity, has been of secondary importance. Without the former, these men would not have seen or been prepared for the latter. The placing of the laboratory branches of medical study in this country in their proper positions of dignity and influence has, without doubt, had more effect than anything else in developing both the standards and the visions of the young men in medicine. This movement was begun before the period of which I spoke, but reached a general and satisfactory development only during that period. When these branches were looked upon by the men teaching them as collateral interests, and very often merely as stepping-stones to practice or to clinical chairs, it was natural that they should have relatively little influence. With the recognition of the need of laboratory teaching of laboratory branches by men highly trained in them and devoting themselves to them, came not only the result mainly desired, namely, the opportunity for the prospective practitioner to get sounder fundamental training, but also the opportunity for those whose bent lay that way to learn early the charm for them that there is in hand-to-hand work in those subjects,—a charm that without this intimate contact with them was often never recognized, or was felt only through later chance. The work in course in the laboratory now leads a considerable group to think of life work in these branches; and the comparatively large and constantly increasing number of available senior and junior positions in teaching departments, in hospital laboratories and in other places, that carry a living with them, give opportunity for a noteworthy number of men to take up such work at once. But, besides this, the result of having a group of able and devoted men engaged, not simply in casually teaching fundamental branches, but in spending their whole time in energetically developing knowledge of them, has been that enduring contributions to knowledge have come very largely from men in these branches; and also, men so well trained as to be stimulating and inspiring to young men who are intellectually ambitious, have in such large proportion been developed in these subjects that it has led into them a large share of

that group of young men, always small in number, but always of dominating importance in any profession, those, that is, who are gifted with the desire and the power to contribute to progress. In recent years, men capable of judging have repeatedly said that in the past generation there have been a larger number of men of first-rate mind in the laboratory subjects in this country than in the clinical. Whether or not this statement is correct we do not now need to determine. We may, nevertheless, well reflect upon the fact that conditions are such that it is difficult to disprove it. A point that interests me very much, however, and one that is, I believe, certainly true, is that a large proportion of the very best young men shrink now much more than they did in earlier years from going quickly into practice. Some of the reasons that they give are interesting and need attention. In considerable part it is because they feel that the standards of practice do not meet what they desire; that they are less exacting, less reliable than those of the medical sciences, and they often feel that it is very difficult to avoid taking a step downward in regard to thoroughness and accuracy of effort when they detach themselves from work in the medical sciences and take up practice. Some of them frankly confess that they fear that they must turn away from the standards that they have come to cherish, which demand that the intelligence must be satisfied before accepting anything, and that, instead, they must in practice flounder among impressions and speculations and unproved theories. Much of this is youthful exaggeration, and much of the shrinking from practice is due not to such feelings, but to a natural desire to become better fitted for work that the last few decades have made much more complex than it was. Much of it is due to the fact that indefinitely continued work on problems is more fascinating to many able minds than practice, and as I have already said, the present method of teaching medicine presents it and its problems much more intimately to the student, and makes these problems much more engaging than did the older method. Some of it, a good deal perhaps, is due to the fact that at present students come into contact with patients so much more closely than they did, but see them chiefly in hospital wards, where, like those who are in consulting practice, they meet so large a proportion of persons who, through disease or distress or vice, seem beyond help, that they occasionally become oppressed by it and by what practice seems to mean. They have had little opportunity to experience the cheerful things that practice brings, and have had but a small share of the grateful human side of medicine, that comes in its best and most frequent form in the relation between family physicians and their patients. I have known repeated instances of hospital internes becoming completely shattered emotionally by the strain and discouragement of a prolonged succession of

distressing and hopeless cases, and have known them repeatedly to resign impetuously, and even to quit the profession at once. Nevertheless, when all the factors mentioned are allowed for, it seems to me that the proportion of first-rate men whose feelings are more or less deeply colored with regret when they take up practice is worthy of study when we consider that the great *raison d'être* of the medical profession is still, and will long be, to treat the sick. It would seem to be evidence of some incompleteness in development of our present system, especially when we consider that almost all young men a few years ago looked happily forward to practice at first, and if they became detached from practice, did so only later. There are but few I am sure who believe that the cause of this lies in the greater development of the teaching of the medical sciences. Long before the medical sciences were given so much time and attention as they now are in the curriculum, there were critics, conspicuous among whom were John Brown and Oliver Wendell Holmes, who feared that these subjects were being overdone, to the disadvantage of the clinical. But it is very difficult to believe, so long as the clinical branches are given the large amount of time that they are now, that the better teaching of the fundamentals of medicine is a fault. Paradoxical as it may seem, it would, on the contrary, appear that the line of advance that has perhaps produced this condition must, in a certain sense, be forced further to overcome it.

The trouble does not, I think, lie in the fact that practice involves working so much in things of which we are ignorant. Bolder and more inquiring minds enjoy the unknown. It is rather, I think, that there still exists a chasm between the laboratory and the clinical branches, with only occasional bridges between, and these not very secure. The persistence of this chasm is due partly to imperfect efforts on each side toward its effacement. The divorce of the laboratory men from practice and their alliance in manner of life with pure science, led many of their number for a time, as occurs so often after any important readjustment of principles of life, to a somewhat deliberate and ascetic detachment from the practical. This reached its most marked stage when a group of them advocated that these branches be taught outside the medical school as a part of general university courses, so as to remove any taint of utilitarianism from them, a plan based in part at least upon what may, I think, without injustice, be called a kind of intellectual snobbishness that considers the practical use of science much the same as its prostitution. In recent years there has been a strong opposite current, and co-operation between the laboratory and clinical departments has become the recognized goal. But there is still opportunity to make teaching in the medical sciences more directly illuminative of clinical study, though not simply utilitarian. The chief cause of the sharp division

between the clinical and the laboratory years, however, is, I believe, that observation and speculation are much more dominant methods in the activities of the clinician in both his teaching and his practice, than they need to be. Habits are strong factors, and clearly as we may recognize the relations of the medical sciences to practice, it is extremely easy to fall into the methods that we were taught, and these were chiefly observation and speculation, and I fear that those of us who are clinical teachers and practitioners must bear the chief blame if the keen student feels critical of clinical methods. Furthermore, few clinicians have sufficiently intimate and prolonged training in any of the medical sciences to be able to teach their relations to medicine in any adequate way, and yet they must do it if it is done, for the laboratory men have, as a rule, little or no clinical knowledge nowadays.

This is one of the reasons why, after some consideration, I not only do not feel opposed to the much-discussed plan of having a group of clinical teachers, who practise little or not at all outside hospitals, but, on the contrary, feel it will do good. What I have mentioned regarding the not uncommon attitude of the student and recent graduate, as well as experience of other kinds, lead me to feel that one of the things we most need in training young men is to stop the gap between the laboratory and the clinical years. I think this can best be done by having a group of clinicians so long and continuously engaged in the investigation and study and teaching of clinical problems that they naturally and efficiently bring into play all the relations between the fundamental and the clinical branches. This would undeniably be valuable to the student in his formative years. It would dispel any feeling that practice must be a disappointment to those of scientific temperament, and it would add what the laboratory departments have had to their advantage,—a group of men devoting themselves so completely to the study and development of their branches that they would attract many keen and inquiring minds into clinical work that have tended to go into the laboratory subjects. This again is one of those things that is probably coming in varying extent in various places; that has, in fact, already come in considerable degree, not in one place alone, but in a noteworthy number in a very few years. And, a point that has greatly influenced my feeling as to its probable spread, one finds again, that, in clinical medicine at any rate, a large proportion of the ablest young men not only do not resent the idea, as some older men have, but welcome it heartily. It will, of course, not displace the customary type of clinical teacher. It will simply, like some of the other things I have mentioned, add a new breed that will have its own peculiar function,—a function developed from the progress that medicine has made.