President Eliot and Dr Holmes leap forward

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President Eliot and Dr Holmes
Leap Forward

Mr Eliot became President in the late spring of 1869. Up to that time, the Medical School had pursued a serene and complacent course for many years, carefully avoiding any hazardous steps or leaps. As a result, Dr A. P. Peabody, Acting President, in presenting his report for the year before Mr Eliot's induction, was able to announce to the Overseers that the School had never occupied a higher position. Its chief weakness was an embarrassment at having to refuse all the new students wishing to enroll, since there was no room for them; their demands already had strained the capacity of the lecture rooms and within the past few years had twice required makeshift enlargements of the building.

Mr Eliot assumed command in the fall. At the Medical Faculty meeting on the first of November, Dr James C. White, a classmate of his, succeeded in getting through a resolution that the new President be invited to attend all future meetings. This was a radical departure from tradition because heretofore scarcely any member of the University in Cambridge had had more than bowing acquaintance with the doctors of the Medical School in Boston; certainly, no President had ever bothered to attend a Faculty meeting.

The President's reply was characteristic and rather more to the point:

Cambridge
3 Nov. 1869

Dear Sir,

I have the honor to acknowledge the receipt of your note of Nov 2nd informing me of the wish of the Medical Faculty that I preside at their meetings.


This and other information about the Faculty appears in the Faculty Records of the Medical School.

*This letter was found recently in the Medical School Library among some old papers.
President Eliot and Dr Holmes Leap Forward

I had proposed to attend those meetings in accordance with the Statutes of the University, and it will be doubly agreeable to me to do so in response to the cordial invitation of the Faculty itself.

May I beg you to send me notice of the Faculty meetings by mail a few days in advance?

Very truly yours
Charles W. Eliot

Dr. Calvin Ellis
Dean of the Medical Faculty

During the fall of 1869 and the spring of 1870, as judged by the Faculty Records, he came to meetings regularly, presiding with dignity, feeling his way carefully, listening to what went on, and making only occasional suggestions for better organization. Yet the force of his presence was felt at once. After only a few encounters, that very shrewd observer, Dr. O. W. Holmes, wrote a gossip letter to his friend Mr. J. L. Motley in England about affairs at home. Among other matters, he described the new President; how he attended every meeting of the Medical Faculty, keeping the doctors up until eleven or twelve at night discussing new arrangements and driving as if he were the first man who ever sat on the box. Dr. Holmes was entertained by his way of doing things although he confessed that he did not care much for some of the changes which the President apparently had in mind. To him, they seemed unnecessarily extreme and promised to be upsetting to so pleasant and smoothly running a vehicle as the School had been for the last fifty or sixty years.

The Faculty in those days was in the habit of meeting in the evening, not oftener than once a month, and at some member’s house; at that particular time at Dr. Henry J. Bigelow’s, 52 Beacon Street. To go from Cambridge to Beacon Hill on winter nights must have been no mean task for a man of even Mr. Eliot’s vigor. Yet he made the journey without complaint and as often as necessary.

In 1871, perhaps at his instigation, the general problem of medical education was brought up for discussion. On January sixth, Dr. White recalled the proposal by Dr. J. B. S. Jackson of a year ago that each student should be required to pass a satisfactory examination in every department before obtaining his degree; he asked that it now be accepted. This was a disturbing thought; to appreciate what it meant, one must remember that there were nine departments in the School.

1. J. T. Morse, Jr., Life and Letters of Oliver Wendell Holmes (Boston and New York, 1896), II, 186-188.
and that a man needed to pass only five of their examinations to have his work regarded as satisfactory. In other words, Dr White seemed to propose a hurdle nearly twice as high as had existed heretofore. Naturally, a long discussion followed, with leaders of the Old Guard -- Dr Bigelow and Dr Holmes -- opposing such a change. The upshot was that Dr White's resolution was tabled, to be reconsidered eight days later at a special meeting.

This meeting was fully attended and, now, a second bolt was stuck. Dr White's resolution was read once again, whereupon Dr Ellis, who besides being Dean was also Professor of Clinical Medicine, said that he had an idea which he would like to present for discussion along with Dr White's proposal. In his opinion, the present system of medical education at Harvard was astonishingly poor; it was little more than a series of false starts, sudden stoppages, and frequent repetitions. He thought that this should be corrected; all recitations and lectures should be blended together so that a systematic course of instruction should be offered which would follow a regular progression from beginning to end. Naturally, any student taking such a course must pass all its examinations before graduation.

As a matter of fact, Dr Ellis was in no way exaggerating. The School offered two series of lectures a year, one in the fall and the other in the spring. A man could get a medical degree by taking two such courses in a three-year period (they might or might not be the same lectures repeated -- as chance directed), and in addition he must have three years of clinical work under a preceptor who need have no connection with the School but might be practicing poor medicine in some remote and obscure district. The system could not have been much worse.

Once again a long discussion followed and the result was the appointment of a special committee to render a formal report on two such important and debatable suggestions. The Committee, which the President nominated, comprised Dr White, Dr Ellis, and Dr David W. Cheever.

The Committee worked industriously and in about two months' time circularized the Faculty with a small pamphlet which expressed their views as clearly as possible. In brief, they proposed that the School provide a systematic three-year course of medical education of two terms each year: anatomy, physiology, and chemistry were to be taught in the first year; pathology, medicine, and surgery in the second year; and pathology, more advanced medicine and surgery,
therapeutics, and obstetrics in the third year. Each student was to
do laboratory work in anatomy and chemistry, and clinical work in
the hospitals. None could advance with his class until he had passed
at least a majority of the examinations in the studies of the year. The
examinations were to be conducted, in part, by questions and answers
upon paper—another departure, since heretofore the examinations
had been oral. And finally, no student should receive a degree until
he had passed a satisfactory examination in all subjects.

The discussion and conflict of opinion which the pamphlet pro-
voked is most interesting. The proposed plan met with whole-hearted
approval from a few members of the faculty. Two conservative pro-
fessors—Dr E. H. Clarke and Dr J. B. S. Jackson—liked it in prin-
ciple but felt that times were not right to experiment with it. In those
days the School was a proprietary affair, practically dependent on stu-
dent fees for its upkeep. Both Dr Clarke and Dr Jackson feared that
so long a process of education as was contemplated, carried on entirely
in Boston, would cut down the number of students who could afford to
enroll and the result would be fewer Harvard Medical School gradu-
ates practicing medicine in New England. Such an eventuality, they
believed, would be unfair to the people. Dr Bigelow, apparently, was
against the proposal.

Dr Holmes had formed definite views which he took pains to express
in writing. Why he did this is not wholly clear; he was a facile speaker,
quick-witted in conversation, and not at all shy. The Faculty meetings
were informal, not more than seven or eight men ever being present.
He could easily have said what he had in mind wittily and forcefully;
yet for some reason he prepared a manuscript which covers six pages
of foolscap. It is written in his own unmistakable hand, contains only
a few corrections—illustrating how readily his pen flowed when it
touched paper—and gives a clear picture of his ideas on medical edu-
cation at that particular time.

The Faculty Record for the evening of 16 March 1871 states that
among other happenings Dr Holmes read a paper which he had pre-
pared. Therefore, one must imagine oneself among a group of seven,
sitting in an easy chair, in Dr Bigelow’s drawing-room half-way up
Beacon Hill overlooking the Common, and listening to Dr Holmes as
he stands beside a table with a lamp on it.

*This manuscript came recently to light among papers in the Medical School
Library.
I ask your permission to read a disquisition of ten minutes in length, and
four minutes of comment on the printed plan in our hands. —

My general opinion as to the proper character of medical education is so
well expressed in the language of a distinguished medical teacher, Dr. Latham,
that I beg leave to read a short extract from one of his Clinical Lectures.

In our day there is little fear that students will be spoiled by the recom-
mandation of their instructors to be content with a scanty knowledge, and
trust to their own sagacity for the rest. They are not likely to suffer harm by
having Sydenham held up as an example for imitation. The fear is of another
kind (and it is well grounded), namely, that many men of the best abilities and
good education will be deterred from prosecuting physic as a profession, in
consequence of the necessity indiscriminately laid upon all for impossible
attainments.

Let us take care then what we are about, and beware how we change the
character of the English practitioner of physic. He is sound and unpretending
and full of good sense. What he wants is a little more careful, and a somewhat
larger instruction in what bears directly upon the practical part of his pro-
fession. Give it him (indeed we are giving it him) and he will become more
trustworthy and more respected every day. But for all that is beyond this,
we may recommend it, but we must not insist upon it; we must leave it for
each man to pursue according to his leisure, his opportunities and his capacity,
and not exaggerate it into a matter of necessity for all.

Apart from clinical instruction nine tenths of what is taught in our medical
schools is soon forgotten, because never wanted for any practical purpose. Few
practitioners of any eminence could pass a decent examination in Anatomy,
Physiology, Chemistry, or even Materia Medica. They forget most of the
details of these branches; they retain the knowledge which they got at the beds-
side and use at the bedside.

Clinical teaching is the essential of a city school. All the other kinds of
instruction, even anatomical, can be successfully given in the small provincial
schools by young men without experience or standing in the community.
But clinical teaching comes with authority only from men who have made a
reputation as wise and successful practitioners. The time of such men is very
valuable, and if their services are wanted they must be well paid. A city school
must therefore have endowed professorships or large classes.

This school, which has only a single endowed professorship has, after three
generations of labor with partial success, at last obtained classes large enough
to pay tolerably well those who are engaged in instruction. If it adopts
measures that diminish its classes and in the same proportion its receipts, it will
lose its best instructors and become a withered branch of the University, as is
the Medical Department of Yale.

Dartmouth, Bowdoin, Yale, the University of Vermont, and the Albany Medical
College were helping to furnish New England practitioners. Presumably, Dr Holmes
regarded these as ‘provincial schools.’

Shortly after 1800 the Yale Medical School became an active and growing de-
It may lose its classes in two ways: by teaching too large a proportion of what is called 'science' in distinction from the Art of Healing, which is the chief object of the school, and secondly by insisting on too hard terms for graduation.

If the so-called 'scientific' training is carried too far there will spring up another school having clinical teaching as its chief object, and making all other teaching secondary and subsidiary, as it should be. The Science and Art of Medicine are now so extended that they must take most of their outside knowledge ready made, as the agriculturist takes his chemical and geological knowledge. I think the profession is fast filling up with chemical, microscopic and physiological experts, who are clinical and therapeutic sciolists. The Bellevue Hospital College with its twelve hundred beds, confesses by its name what is the true point of departure of training for real work.

I agree that Chemistry, Anatomy, Physiology, Pathology and Materia Medica, Lecture-room branches, wholly or in part, must be taught systematically, and that this involves many details in themselves merely curious and interesting. But the greatest care should be taken to insist on the essentials. Every course should be based on a syllabus containing only the vital parts of each branch, and the examination should require, as a minimum, only leading principles and portable and applicable knowledge of details. There should be, so to speak, A shorter Catechism, for each of these auxiliary branches, in which the essentials for Academic salvation should be succinctly laid down. If the student does not have it in print, the Professor should have it in his head. The weight of the examination should fall where it belongs; on thorough fitness for all the branches the candidate professes to practice. Let it be understood that we will not tolerate ignorance of any part of science we undertake to teach but that our requirements in all but the practical branches are within the reach of moderate intelligence and reasonable industry.

The Lecture courses should include a great deal more than the meagre amount of knowledge absolutely required. They must be worthy of the attention of the best class of students and at the same time brought within range of the average mind of the class.

In one word full instruction and rigorous examination in the great practical branches; full instruction, with emphasis on leading facts and principles, and limited demands in the examination, on the subsidiary branches. We must consult the interests of two very different classes of students; first those who study for their degree, that they may be in condition to earn their living by
practice, which includes many good men, and second those who study to learn thoroughly so as to be best fitted for practice, which includes the best men. As for the semi-scientific dilettanti who hover about medical schools, the course of instruction cannot be arranged with reference to their particular preferences. Neither are the Academic chairs places to display the accomplishments of young students of specialties who have not been toned down by practical experience. All such instruction should be voluntary on the students’ part, like the University courses, and not allowed to interfere with thorough drilling in the practical branches. François Poupart, made famous by the ligament which Fallopius described before him, passed a brilliant examination at the Hôtel Dieu, and then confessed that he did not even know how to bleed a patient. So he cheerfully went to work and began his studies all over again.

I consider that the Hospitals, Infirmaries and other public charities of this city owe the Profession something like a hundred graduates yearly, and that if Harvard University means that these hundred students shall have her seal on their diplomas, she must remember that what her scholastic teaching gives them is mainly for the purpose of rendering the clinical instruction given in these charities effective.

I am ready for a step onward, perhaps for a stride, but not quite ready for a leaps, . . .

I am ready for a progressive programme, which is the course I have recommended for many years to those who have time and means.

I would examine annually or twice yearly on the studies of each year, and turn the student by in any branch in which he was unfitted to pass, giving him credit for all in which he succeeded. No student, whether he advanced with his class or not, should be examined a second time on a subject in which he had passed. This is a very grave measure, but I do not see how we can teach a branch and give the student a certificate of fitness when we know he is not fit so far as one department is concerned. Better make the study of that branch voluntary at once.

As to the requirement of a year in our school, I am ready to consider the matter further before deciding how to vote.

I would try to keep our classes large, first by giving a maximum of clinical instruction at the expense of the scholastic branches and secondly by making the examination in these branches turn on their simplest principles and most important facts.

After Dr Holmes completed this 'disquisition of ten minutes in length, and four minutes of comment,' the Faculty voted, after a little further discussion, to adopt the new plan. This action proved to be no mere stride or step but a tremendous leap forward.

The Records do not show how individual members of the Faculty cast their votes, but Mr Eliot’s vivid reminiscence may well apply to this occasion.
I found that certain members of the Faculty were resolutely opposed to any change whatever in the policies and programmes of the School, and particularly to the institution of a two years' course or a three years' course of progressive studies. Soon I saw the Faculty divide itself into two parts; one intensely conservative, the other open to suggestion and change, some of them looking for progress. Now Dr. Holmes was an extreme conservative for about four months, during which this debate went on. At last, one night he voted against Dr. Bigelow, who was advocating standing still in all respects, to my great surprise and to Dr. Bigelow's greater. The Faculty soon adjourned. . . . As I was standing by the centre table in the parlor Dr. Holmes came up to me and said, 'Mr. President, you have undoubtedly seen what is the matter with me.' I could not say that I had. Screwing the ball of his thumb round on the top of the table, Dr. Holmes went on — 'I have been under Dr. Bigelow's thumb so long, that I have not been able to get out from under.'

If this vote was indeed on the adoption of the new plan, Dr Holmes leapt then and there, in spite of his well-expressed caution.

In any case, the Doctor's Declaration of Independence turned him into a steady advocate thereafter for improvement in the School. The President appointed him to the committee to give effect to the new plan, and he had a great deal to do with perfecting the final details prior to its launching. The Boston Medical and Surgical Journal said, when this radical departure was first brought under public scrutiny:

'It marks a new era in the history of American medicine, and gives a value to the medical degree which it has never yet known in our country. . . . The University, by these changes, throws off the imputation of seeking to turn out a large number of doctors; on the contrary, it has the honorable distinction of leading the van among American medical schools in substantially elevating the standard of education. It will send forth medical men inferior to none in the land, and will receive the respect of the profession both at home and abroad.'

It is interesting how far-sighted our predecessors proved to be. The curriculum of medical education which was established in this manner during the early days of Mr Eliot's Presidency has largely persisted, so that as one reads 'A Plan of Instruction in the Medical Department of Harvard University' prepared in 1871, it still seems a good model for 1947.

One would like to believe that by its adoption the School has suc-


*From an editorial, 'Important Changes in the Medical Department of Harvard University,' Boston Medical and Surgical Journal, LXXXIV (1871), 284–285.
ceeded in fulfilling the prediction of the *Boston Medical and Surgical Journal*. For the School continues to develop good doctors, year after year, who receive the respect of the profession both at home and abroad. This must, in part at least, be due to the fact that so much of the advice of Dr Holmes has survived. Teachers in the School still appreciate the essentiality of good clinical instruction; lecturers and demonstrators always offer a great deal more than the mere amount of knowledge absolutely required, and the enthusiasm of the students who become interested in some special subject is carefully guided, never being permitted to interfere with their thorough drilling in the practical branches. Basically, as Dr Holmes said, the seal of Harvard University on a medical diploma continues to mean that its owner has been competently trained to render effective service to sick people.

Reginald Fitz
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