

Papers and Originals

Thoughts on Teaching Medicine*

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The students I enjoy teaching most are those who after two or three years of university education are confronted for the first time by a real patient. They are fascinated, if given the chance, by the infinite variety of human personality and experience which is presented to them. The first staggering fact about medical education is that after two and a half years of being taught on the assumption that everyone is the same, the student has to find out for himself that everyone is different, which is really what his experience has taught him since infancy. And the second staggering fact about medical education is that after being taught for two and a half years not to trust any evidence except that based on the measurements of physical science, the student has to find out for himself that all important decisions are in reality made, almost at unconscious level, by that most perfect and complex of computers the human brain, about which he has as yet learnt almost nothing, and will probably go on learning nothing to the end of his course—this computer which can take in and analyse an incredible number of data in an extremely short time. And the data are mostly not of the hard crude type with which that simple fellow the scientist has to deal, but are of a much more subtle, human, and interesting character, each tinted in its own colours of personality and emotion. All this the student has to discover for himself while his teachers strangely pretend to believe that the secrets of medicine are revealed only to those whose biochemical background is beyond reproach.

Having a great respect for the unconscious mind and its computer qualities, I deliberately gave it a problem to solve some time ago, when I was presiding over a committee making some decisions on the support of medical research. In one case there was a conflict of opinion, and after much discussion we were still divided as to what action to take by about five to three. At this point I said: "Let us forget about this case and go on with the others until lunch time, and after lunch we will think again." It took us then only a few minutes to reach a conclusion in which the five had come round to the views of the three, and I think we were all satisfied that it was the right decision.

It seems incredible that what we have accepted for a few hundred years as the basic training for medicine should exclude almost any reference to the unconscious mind and human behaviour; for, although most universities give some lectures in psychology to their medical students, academic departments of psychology are all too often concerned with precise methods of measuring the irrelevant rather than with exploring the origins of human emotion.

Learning of Skills

With my junior clinical students I have lately made it a habit to point out that there are two kinds of learning. The learning of basic principles and the learning of human skills are

two quite different things, whether the skills be of judgment or of technique; and this learning of skills savours of technology, which, as Lord Snow was pointing out recently, has been non-U in British universities since their very origin, to the great detriment of scientific progress in this country.

Given a few lectures and diagrams the principles of lung function could be grasped by anyone with a scientific background. Given three lectures on the violin, with suitable illustrations, the student wouldn't be able to play a note. (Of course, if university departments of music ever did stoop to such irrelevances as actually teaching people how to play, they would start with a year's instruction in physics and mathematics.)

Of course you cannot teach medicine merely as an apprenticeship, like teaching someone to work on a lathe. You must give the student a background of scientific knowledge so that he can use his skills in a rational and logical way, and above all you must inculcate into him a knowledge of the principles of medicine and a way of thinking so that he will be able to assimilate the new knowledge of the future. One can almost hear the echoes of these parrot-like phrases which are regularly relayed to the General Medical Council by every medical school. But what principles and what way of thinking? Is his image of man to be that portrayed by the anatomy and physiology books? Is he not to know what great men say about the human mind?

New knowledge is not generally very difficult to use. Those of us who lived and practised before the days of antibiotics and even of sulphonamides did not have to go back to the university to study organic chemistry or pharmacology in order to know how to use them. I doubt if there is one person in this room who could tell me the chemical structure of tetracycline. If there is, I wouldn't know if he was right. Of course, if we were devoting our lives to pharmaceutical research the skills and facts required would be different; but the discovery of new drugs has mostly come from the drug firms, and most of their research workers have in fact graduated in science and not in medicine. And knowledge has been accumulating so rapidly in recent years that you just cannot teach it all, and you must be prepared to pass over much of it superficially. One of our professors of physics has calculated that if you follow the growth curve of publications in physics you have to conclude that by the year 2000 there will not be room for them on the whole of the earth's surface. This, of course, will solve a few problems of population.

Medicine consists of science, wisdom, and technology. We teach the science; we ignore the study of human behaviour

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from which wisdom could derive; and we profess to despise technology though we see it all around us.

Understanding of Man

The university whole-time clinical departments have helped the scientific understanding of disease, but it can hardly be said that they have helped the understanding of man. Patients are selected to illustrate the scientific aspects of medicine in which the teachers are interested. Nobody studies man himself. Even the psychiatrists often seem to be as afraid of human emotion as the rest of us. Future generations, paying tribute to the medical advances of our time, will say: "Strange that they never seemed to realize that the real causes of ill-health were to be found largely in the mind, and that even in 1965 there was hardly a teacher who could talk about sex except in biological terms" (which I must say takes most of the interest out of it).

A leading article in the *Observer* last Christmas said:

"Over the last 70 years the workings of the unconscious mind have been systematically studied (almost entirely outside academic institutions) and the knowledge gained offers for the first time an intelligible explanation of man's difficulties in following his own good intentions.

"It might have been expected in an age devoted to science and troubled by human destructiveness that the same sort of organized study that has been applied to the control of matter would have been applied to the control of human behaviour. . . .

"Can it be that this is the frontier where man's heart fails him; is it possible that he finds it easier to look into the composition of atoms than into the basis of his own emotions? Is it that his undignified inner feelings concerning sex and violence disturb him too deeply so that he prefers to study almost anything rather than this?"

This I believe is where the universities have failed, and will go on failing if they recruit their teachers solely from those who would reduce the whole of medical knowledge to a series of hard scientific data. In all this I must share the blame as a medical teacher. Like others, I have been too involved in my own tasks and have too late come to see some of the absurdities and shortcomings of medical education.

The danger of saying these things is that I may be overheard by the universities. The danger is not that they will disapprove of me, but that they may agree with me but will find a way out in characteristic academic fashion and turn even the study of human behaviour into something in which man as a statistic is recognized but from which man as a personality is excluded, and find new reasons for facing anything rather than the facts of life.

Medical Education and Medical Practice*

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Medical education has recently been so much debated that you may wonder that a Bradshaw Lecturer should wish to say anything about it. But in spite of everything that has been written and said there is much confusion and much dissatisfaction with the existing state of affairs. Teachers in a number of branches of medicine, especially perhaps in psychiatry and social medicine, frequently draw attention to the archaic character of the present system. Articles and correspondence in the medical press and even in the leading national newspapers express both professional and public concern at what appears to be a growing separation between education and the needs of practice. The teaching hospitals are frequently criticized and represented either as the last strongholds of the dying authority of Harley Street or as clinical museums where university professors practise and teach medical science in defiance of the principles of good doctoring, and where the investigation of rare pathological conditions takes precedence over the care of those who are really sick.

Curiously enough, most of the criticisms have been directed against undergraduate education, which even now seems to be regarded as the beginning and the end of a doctor's training, while graduate and postgraduate education attract little attention. The failings of the preregistration year have passed almost unnoticed, and the need for special training for all forms of practice, including general practice, has, until recently, been scarcely recognized. For the most part this criticism indicates a failure of the profession as a whole and sometimes of teachers, to agree upon the objectives of the various stages in a doctor's

training, and to recognize the changes which modern medicine is forcing upon undergraduate education. The traditional fallacy that doctors on qualification must be fully fashioned for practice leads many to complain of their lack of clinical experience as house officers and of their failure to understand the subtleties of patient management as trainees and assistants in general practice. It is said that they have been taught too much science and too little medicine. There are many and divergent demands for reform, proposals for new curricula, and for new outlooks in teaching. Over and above these doubts about the effectiveness of the course, it is possible to discern a more radical difference of opinion about the function of a doctor. Distinctions made between individual and social medicine seem to picture the doctor of the future as a benevolent father figure concerned more to regulate the environment and to shepherd his flock through the hazards of life than to diagnose and treat their diseases.

Conflict Between Ideals and Technical Demands

There must always be a conflict in university medical education between the ideal of a broad education in science and the technical demands of a medical career. It is first felt in the preclinical course where there are two general patterns. One is designed as the first stage of an undergraduate course in the faculty of medicine; the other is an honours degree course in natural science which includes enough of the preclinical subjects to satisfy the requirements of a 2nd M.B. examination. The course in the medical faculty is generally shorter and occupies five or six terms. It is devoted largely to anatomy and physi-

* The Bradshaw Lecture delivered to the Royal College of Physicians of London on 8 February 1965.

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