Middle Articles

MEDICAL EDUCATION

Medical Education at the Crossroads*

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The medical profession is undergoing a painful reappraisal of ends and means. New scientific knowledge is accumulating so rapidly as to far outstrip the knowledge of its application and is often at odds with the current outlook of society. This applies specifically to medicine, and doctors are in a disquieting period, mainly because of the uncertainty which has arisen concerning their professional identity.

To-day everything in the training of a doctor works against intelligent comprehensive foresight and orientation. A mass of technical detail has to be learned and assimilated in a relatively short time. Anything which does not seem to have a direct concern with interests of the hospital scientists, who are the teachers, simply gets trampled underfoot in the rush for punctual qualification. The result is that medical training as directed by present-day academics is usually narrow for the want of larger cultural and social interests.

Definitions

It would be helpful if we get our definitions, and therefore our ideas, straight. In this country we use terms almost as catchwords, and they tend to conjure up mental pictures which are, in fact, quite divorced from what is actually the real thing. A good example of this is the term "university." Immediately most people imagine the two older universities, Oxford and Cambridge, with gleaming spires, men in gowns, and the cloistered calm of the quads, which is the back-drop for erudite discussions with tutors. With that mental picture there emerges a mystique which clothes every university student throughout England.

Yet all of us know full well that many of our students are not going to a university like that at all. In fact, they are often commuting from their homes or digs or halls of residence by the local bus to what is in essence the *local medical technical college*, where the main object is to acquire medical knowledge rather than intellectual development.

Then what do we mean by the term "doctor"? How many of our hospital scientists, or indeed how many of our learned professors, could answer with confidence the call—"Is there a doctor in the house?" and carry out the simplest first-aid measures with any degree of expertise? Indeed, I know many learned doctors who oft-times conceal the possession of their medical qualification for fear they may be embroiled in a simple medical problem which is right outside their ken.

I am saying this, not to debunk the British way of life and systems, but at least to try to get our baselines right, for today the medical profession is certainly at the crossroads. It would seem that 23,000 general practitioners in this country have

some measure of discontent, and I believe that much of the trouble lies in their medical education.

It is a sad commentary when only 7.6% out of 8,000 junior hospital doctors in a recent survey (*Lancet*, 1965) elected to go into general practice: yet 40-50% of them *must* inevitably do this if this service is to continue.

One of the first questions we must ask is, "What is the object of medical education?" The answer is a very difficult one, but I believe the aim and object of medical education is to educate a student to become a member of the *profession of medicine* rather than to become a mere medical scientist or a technologist.

Purpose of a Profession

And how do we define a profession? A profession, such as medicine, law, or the Church, is in fact an independent community of trained people who have a body of knowledge or art which it constantly seeks to expand. The drive to expand and develop comes from within the profession, and not from without on grounds of expediency or governmental dictation. Further, it has a standard of conduct and responsibility which goes far beyond the mere performance of the special duties which are the concern of that profession. In the present day there is a trend for more and more groups of people to claim professional status. Such people, many think, are more like the mediaeval craftsmen or guildsmen, but it is probably a good thing that the trend should be as it is, for, because of the inherent vitality within a profession, there is a constant demand to raise standards.

The dividing-line between a vocation and a profession is a moot one. Nursing is considered to be a profession. It is, of course, a fact that nursing is the application of techniques, and therefore can be said to be technical or vocational, but because of the heavy responsibilities and the manner in which they are performed it can truly claim professional status.

There are certain aspects of the State *vis-à-vis* medicine. I am indebted to my colleague, Mr. Qvist, for drawing my attention to the Beveridge Report of 1942, which said: "The primary interest of the Ministry of Social Security is not in the details of the National Health Service or its financial arrangements; it is in founding a Health Service which will diminish disease by prevention and cure, and will ensure careful certification needed to control payments of benefits at the rates proposed in this Report." This was a statement of intent; the State has need of certification, and this will be one of the important functions of doctors. But medical documentation in this sense is merely a craft, needing the minimum of medical training to interpret the regulations. Thus the State needs craftsmen, and, of course, it is the craftsmen it can control. It will *not*, however, control an independent profession, but it may be added that the profession should not opt out of its responsibilities to the State.

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Today it is therefore important to remember that medicine should truly be a profession as I have defined it, for it is the professions which give a balance to a society or government, and also add to its ethos. It is on these grounds that I believe that medical education should be directed to training its members for a *profession*.

Now, how are members of a profession trained? It is important that the medical profession, while being technically competent, should also have such an intellectual and social prestige as to command the respect of the community and of other professions. Historically, from mediaeval times in most countries, the medical profession has been associated with university education, and this has given it prestige. But this was not always so in England, and indeed, from a licensing aspect, is not currently so. In this country, when the majority of practitioners of medicine were trained by apprenticeship and dissociated from the universities, there is no doubt that the general run-of-the-mill doctor, whether he was apothecary or surgeon, had little professional status within society; the rivalry and demarcation disputes between the apothecaries, the surgeons, and the physicians were most damaging to our public image. It is salutary to remember that the apothecary, the general practitioner of a former day, often came in at the tradesmen's entrance when he was not dispensing drugs over the counter.

In England there was little university education, certainly up to the middle of the last century, and what there was was found at Oxford and Cambridge, but this was very much of an intellectual exercise and the conferment of privilege, rather than any practical training in medicine.

The firm general association of English medicine with the universities is only of relatively recent occurrence, and I suppose it was the resolution of University College, London, in 1892, in proposing their "Association for Promoting a Professorial University," in which they put forward their three-point programme of research, postgraduate teaching, and undergraduate teaching (in that order), that was the beginning of the present pattern of university medical education (Newman, 1957).

University Education

The role of the university as the primary body responsible for undergraduate training has become more firmly established since the beginning of the century, and it would be well to consider just where this is taking us at the present day. Everyone is clamouring for university education in all fields, and after the Robbins Report (1963) this clamour has grown to a crescendo.

Very few people have asked themselves what we really mean by university education, which, in the popular mind, is the only synonym for higher education, leading to the possession of a piece of paper called a degree and a place with status in our meritocracy.

Maybe we are all hypnotized by the name *university*, which in origin probably meant the union of a community of scholars. By and large, university education has developed by the efforts and activities of the academics, who often tend to reproduce themselves, without any relation to the needs of society, of which, indeed, the university is only a part. The universities pride themselves on giving a liberal education, but, as Cardinal Newman implied, a liberal education is simply the cultivation of the intellect, and as such its object is nothing more nor less than intellectual excellence.

Now, is this sufficient in itself, particularly as applied to medicine? Again, to quote Cardinal Newman (1852): "Knowledge is one thing, virtue is another. Good sense is not conscience, refinement or humility, nor is largeness and justness

of view, faith." Applying Cardinal Newman's views to medicine, his comments would read that medical education as conducted by the universities to-day is primarily the scientific study of disease; where it is deficient is that it is not studying the *patient* with the disease, so as to improve the quality of life and its greater fulfilment for human beings; the universities are taking the "heart" out of medicine.

Let me enlarge on this. As a profession, each member must have some basic knowledge of disease, but he must also know something of the patient and of the society or environment in which the patient, who has the disease, is living. This to my mind is education in the true sense, rather than being a mere training in a technology.

Look at what is happening at the present time in medicine. We repeatedly hear about the balanced teaching hospital centres, where huge collections of patients are gathered into one centre so that they can be studied. No longer are the teaching hospitals the community hospitals as of old, where the day-to-day sickness of the country can be seen, but they will be the centres where disease for itself will be studied in depth, with relatively little regard for the sociological, psychological, and economic aspects which are so important.

It is with pride that the universities report the increasing number of chairs which have been established. But professors are appointed, not because they are good teachers, not because they are good generalists in medicine, but often because they have studied one subject in depth. Many of them have little practical knowledge of general medicine. Many of them have not had the time, nor the encouragement, to obtain this. We need such people in order to advance the frontiers of medicine. But what occasions me great concern is that such people, many of them with international reputations, attract young postgraduate doctors who often have not had the opportunity to know what a sick patient looks like outside the confines of the ward.

A Narrow Field

Most of these young doctors study in depth on a narrow field and are brainwashed into believing that this is the only important thing in medicine. They will know much about the electrolytic balance; they will know much about the nucleic acids; but they will know very little about the whole spectrum of disease as seen by the general practitioner and the district hospitals, and possibly will be unable to spot it if they see it. There is thus generated an intellectual arrogance and narrowness which is reflected on the impressionable undergraduates, who inevitably gain a sense of values which is wrong. They are led to believe that the ethos of medicine is sickness-orientated, as is seen in the hospitals, and are given little chance to study other aspects, such as the prevention of diseases and the alleviation of social situations—for example, the ethical and moral implications of abortion.

This is why, in my opinion, 23,000 general practitioners are discontented. The present recruits to general practice were never trained, and seldom given any inkling of what goes on in the world outside the teaching hospital. When a person has had a long and arduous training, and then is pitched out into another field of activity, for which he has not been prepared, it is not to be wondered at that he suffers some measure of frustration and bewilderment.

It is worth recalling that Clifford Allbutt (1920), some 45 years ago, said: "The duty of the full-time professor will be not so much to instruct the younger pupils, who may find indeed more advantage in the various qualities of other teachers, but rather to organize and inspire the riper home and foreign graduate visitors. The tentative, sceptical method of the investigator is barely profitable to the junior students."

N.H.S. Consultants

The university departments are increasingly taking over the training of medical students by the expansion of academic units within the teaching hospitals. They are doing so because of the vacuum created by the part-time N.H.S. consultants, who are torn between private practice and multiple appointments at different hospitals, so that they have too little time to spare for the teaching hospital. Thus the situation is developing by default on the one hand and increasing homage to academic research on the other.

The answer would surely be to create more maximum part-time consultants within the N.H.S. and, as a further incentive, to make provision for private consulting-rooms and wards within teaching hospitals. I would even go further and create professorships within the N.H.S. in order to break down the hierarchical structure of university departments. This is not a wild suggestion. It is well recognized in many countries, and, in conformity with many British paradoxes, we are already doing this in London; during the last few years N.H.S. consultants associated with the various postgraduate institutes of the University of London have been given university professorships. Indeed, until a few years ago the University of Durham gave the title of professor to practising consultants. This was in the best tradition of British clinical medicine, and such appointments brought to the academic sphere some domiciliary knowledge of the patient, rather than that limited to the precincts of a hospital as at present.

That there is a place for full-time academic professors I would be the first to admit. But let their emphasis be at the postgraduate hospitals such as that at Hammersmith and so take the pressure off the teaching hospitals. It is an indictment that there is only one such hospital in England. Let there be many more "Hammersmiths" where Allbutt's "Tentative, sceptical methods of the investigator" is fully exploited, and let the teaching hospitals return to their function as community hospitals, rather than be emulating the "Postgraduate at Hammersmith" or trying to outdo each other by the duplicating of special units (especially prevalent in London).

I have implied that in order to achieve the status of a profession it would seem that a university training is essential. Yet it would appear that the present university training seems to be turning out hospital scientists. How then can we reconcile these factors? It seems to me that a university, like a living healthy organism, should change and redistribute its balance of activities and adapt itself to changing circumstances.

Training the Doctor of the Future

Perhaps we should just forget the term university for a moment, and consider the training of the doctor as a part of the higher education of this country. To my mind he should be highly educated, and he should also have a vocational training. The education will be a liberal one, and, as Cardinal Newman has said, will aim at intellectual excellence. But his vocational training—and one is tempted to use theological jargon and say his *pastoral training*—will give him those other qualities which we have in all our minds as necessary in a doctor—integrity, sympathy, and love of his fellow men within society.

How, then, can this be achieved? This brings me to the nub of the problem of how the training of the doctor for the future should be planned.

Briefly, I would split the training into two parts. The first would be a basic study of the natural sciences within the university precincts; the second would concern clinical studies, combining scientific methodology taught by academics with vocational training taught by practising physicians.

Basic Study of Natural Sciences

Let me enlarge on this. With regard to the first part, a Working Party Study Group (Report, 1963) have recently suggested a three-year course for the B.Sc. in Human Biology. Their suggestions have much to commend them. The curriculum is a broad one, and gives the embryo doctor a chance to study, for example, the newer sciences of genetics and biochemistry, a knowledge of which is so essential to the doctor of today. But, more important still, basic scientific methods will be so inculcated that the student will be prepared intellectually for the rapid changes which will be taking place in science generally, and in medicine in particular, in the years to come.

On this course, and it is hoped that so far as possible it will be residential, the student will enter the community of scholars—the old concept of university education. Here he will meet people of various disciplines—and this in itself will have an educating effect—for unfortunately at the present time the medical faculties of the provincial universities are out on a limb, and in London they are even separate autonomous schools.

The suggested course is designed not only for doctors but for dentists, veterinarians, biochemists, teachers of biology, sociologists, and also nurses, so that the doctor-to-be will leave university having at least made contacts with other professions—and, as we all know, such contacts may be lifelong. But there are other advantages. Much of medicine has been taken over by the pure scientists in the field of chemistry, physics, and biology. Better by far that these non-medicals should have their preliminary training with doctors, rather than in the laboratories of pure science divorced from medicine as in our present university set-up.

Vocational Training

After the first stage of university education embracing a basic study of the natural sciences, then what? The next phase should be, I believe, vocational and should last for two years, under the aegis of the university, followed by a two-year period of pre-registration.

The first two years of this training would need a complete reorganization of the clinical syllabus. It was suggested by a group of my colleagues at Durham over two years ago (University of Durham, 1964) that a number of peripheral hospitals be incorporated with a central university clinical school, to form a network teaching hospital system. The university school would form the intellectual power-house of the area, and also deal with the organizational side, but the peripheral hospitals would form centres of clinical instruction, with emphasis on the vocational aspects of the training.

The university centre is necessary because the academics are dedicated to the intellectual pursuits of the study of disease *per se*. Further, they have the organization and the paraphernalia for instruction—that is, libraries, museums, teaching laboratories, etc. The peripheral centres would have a more pastoral or humanizing, or vocational, function. Here the student would see the routine cases of disease of a district hospital, so that he was familiar with what are the main trends in the country at large. The students would not be in large numbers, so that they would achieve some measure of responsibility in the care of patients and receive bedside teaching from practising consultants not unfamiliar with seeing patients in their own homes. It is essential that such hospitals should be part of the teaching hospital system in their own right, and not be hospitals to take the overflow from the university centre. It is interesting to note that this system is currently being contemplated by some London hospitals, who are proposing an association such as has been described above.

Besides, working with the consultants as apprentices in the network of hospitals, within the "meshes" of the network the student would have an opportunity to see the practice of medicine within the community, whether it be public health, social medicine, or general practice.

General Practice

University hospitals, by their present nature, have little contact with general practice, but the opportunities are better in the district hospitals. Further, it is desirable that the student should savour general practice, whether or not he intends to pursue it eventually. It would be interesting to know just how many hospital specialists have ever done general practice? General practice is now at a point which also is at the crossroads. Is general practice to survive or not? It seems to me that the community will always need a generalist—a doctor who can spot a sick patient when he sees one, and knows how to treat him if he can and where to send him if he can't.

Perhaps the future lies in health centres, where the general practitioner is the leader of a medical team composed of paramedical personnel. And these health centres need not be divorced from hospitals. I have said I believe that a spell of general practice is essential in the vocational training of a doctor. Whether this should be as clerkship at a health centre or as an apprentice for six weeks to three months with a general practitioner, I am not experienced enough to say, but certainly some such measure of training should be instituted.

And what of the two years' pre-registration? The first year could be spent at the peripheral hospitals, in rotating house-officer posts, and the second year in a specialty of the doctor's own choosing. Thus he would begin to specialize in a clinical subject, whether in hospital or for general practice, or he might elect to work in the laboratories or take up some other branch of medicine. During these two years the main consideration would be that, while still under the guidance of the teachers, he would attain some measure of increasing responsibility, as well as enlarging his field of experience and studies.

It is by these methods which I have outlined that I hope that medical education will conform to the canons of acceptability, educationally, and, on the other hand, to the philosophy of utility in this modern technological world.

Summary

The aim of medical education is to inculcate not only a technical proficiency and the desire for its continued develop-

ment, but also a sense of responsibility to society—in other words, it must aim at a professional rather than an academic education.

In recent years the influence of the universities has become increasingly dominant, and by their present nature they have produced the false notion that a doctor should achieve academic perfection as a medical scientist rather than become socially useful as a generalist.

The universities should re-examine their role, and include more of the vocational aspects of medicine alongside their pursuit of intellectual excellence.

It is further suggested that more postgraduate schools, such as that at Hammersmith, should be instituted, so as to take the pressure off the undergraduate teaching hospitals, and that these latter should, in fact, be staffed by more maximum part-time N.H.S. consultants.

It is proposed that the medical curriculum should consist of two parts. The first, lasting three years, should be training in the biological sciences within the university community, leading to a B.Sc. In the second, lasting four years, and including two years' pre-registration, the emphasis should be not only on the academic clinical sciences as seen in the present teaching hospitals but also on the more humanizing studies obtained by contact with teachers practising within the community.

To this end, it is proposed that a "network teaching hospital system" be organized, consisting of a central university hospital (acting as the intellectual powerhouse), with a number of district hospitals in the area. Within the meshes of this network the student would also come in contact with the various important aspects of the Health Service, such as general practice, public health, and social medicine.

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