

# THE EDUCATION VERSUS THE TRAINING OF THE DOCTOR IN THIS INDUSTRIAL AGE

AS SEEN IN GREAT BRITAIN, AMERICA AND SOUTH AFRICA\*

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Dr. Davie said he proposed to discuss the merits of the current methods of medical teaching in the Universities, and to consider what modifications, or possibly only change of stress in certain directions, were desirable. He would refer to the position in Great Britain, America and South Africa as they appeared to him.

## HISTORICAL

The first production of doctors was in the age of the supernatural; today the mystical element was still prominent in primitive peoples and even in some sides of recognized medical practice. This was followed by the naturalistic age, when medicine (or, rather, therapeutics, which was then its chief element) was based on the natural properties of medicinal substances, and the principles of physiology were still mainly unknown. At a later stage professional training took the form of apprenticeship, associated with preliminary 'dissections', etc. This gradually changed to the medical-school system. Medical schools at first were not all associated with universities. Not long ago many of the greatest of them were not. Today all medical schools were faculties of universities.

The problem now before them included the question whether the University was the best place for the training of a doctor. In most medical schools the student found himself isolated from the rest of the university psychologically and socially—often physically owing to the distance between the different buildings of the one university. Thus the medical student often failed to get the full benefit of his membership of a university and, on the other hand restrictions within the university not

infrequently induced him to demand separation of the medical school from the university.

Dr. Davie spoke of the early basis of these developments. He said that in the earliest days medicine was purely therapeutic; primitive man did not go to his doctor for diagnosis, but for treatment. The study of diagnosis took its origin in the Italian schools, where dissection of the body on any scale first began, leading to some real knowledge on which treatment could be based. Thus anatomy and therapeutics (or pharmacology) were the original basis of medicine. These subjects had in some schools become worn out and dead but recently they had been re-vivified and in some of the medical schools, especially in Great Britain, Anatomy and Pharmacology were today amongst the most active departments. Modern medicine is based essentially on physiology—which arose primarily out of the work of the physicians of the 18th and 19th centuries. The physiological attitude led to a change of outlook in pathology, away from morbid anatomy to causation of disease. From this change many advances in surgery as well as medicine took their origin.

## THE PROBLEM

*Education v. Training.* These two conceptions were not always easily separated; yet the distinction was not entirely academic. Dr. Davie said he would speak from the University point of view, which tended to give a higher value to education than to training. This view might not be held by everyone.

Training meant equipping with techniques, both manual and mental; with manipulative skills in diagnosis, in surgery, in obstetrics, etc., plus certain knowledge and the use of 'log books' of diagnosis and treatment (Dr. Davie said that here he was over-simpli-

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fyng and exaggerating). That these skills were necessary no one would doubt, but the concept of the University was that it gave something more. It tried to develop (not create) the powers of reasoning, of criticism and unbiassed judgment, of initiative; that is to say, its aim was the culture of the individual. The student should have the opportunity of developing these qualities. In the light of these considerations they had to evaluate their methods in the medical schools. Both training and education were essential in medicine as in other professions. There were no universities where training was omitted, but there were a number of institutions where education was neglected because of the undue stress placed on training.

*Effect of the Industrial Age.* The use of this term (or Scientific Age, Technological Age, etc.) usually implied that there was something wrong with it. But it would be easier to enumerate the advantages of the age to medicine than its disadvantages. Why! said the speaker, during the last 25-50 years they had lived through the most breath-taking period in the history of medicine. Let them consider the advances in synthetic drugs, antibiotics, transfusion values, nutritional science, etc. These had come from the concentration on science and often from industry direct; so had enormous advances in the standard and variability of instruments, in mechanical aids to teaching, and in other directions.

What was there to the bad that came from the Industrial Age? It was something not easily measured—the 'materialistic outlook'. In research and teaching public pressure was for immediate utility. Immediate and direct usefulness was the sole criterion of value, and often money values predominated. It tended to stress the value of training in technique, mental and physical, and to deprecate the spending of time on other objects. This atmosphere promoted a sense of hurry and rush and militated against the leisurely study in which doctors had grown up in the past. It was perhaps symptomatic of this today that the stress in matriculation was on mathematics and not Latin for the medical student. The doctor used to be a cultural leader in the community, with the parson and the teacher; more and more he was losing this status. Those who knew something of the past from experience or reading felt that today there was a seeking of materialistic ends and a lack of spiritual and intellectual background. These seemed to be fruits of the present age; that the 'education' of the doctor was being replaced by mere 'training'.

#### THE REMEDY

Dr. Davie asked them to assume that the evil or the danger did exist. How were they to meet it? He made 4 points in particular:

(1) Medicine was an intellectual discipline in its own right, and in itself was cultural and intellectual. It did not need other studies to make it so (that did not mean that improvements could not be made). The study of medicine was as useful as that of philosophy or Greek, for instance, in making an educated man. (a) The 'basic sciences' were a sound foundation, and if the medical man failed to continue the studies to which

they were an introduction he would fail in his future development. Anatomy and physiology were for the doctor a continuous study throughout life. (b) The doctor's contact with patients involved a knowledge of psychology and sociology. Experts from outside might usefully be called in, but we mainly drew on the experience of our own profession in these fields. (c) Finally in our clinical work we derived the cultural and spiritual value of human contacts to an extent which applied in no other profession, short of the Church itself.

(2) Materialistic tendencies were unconsciously countered by the enthusiasm and idealism not only of the students but also of those who controlled their training. In this the full-time staff were of especial value because they were not subject to certain counter-interests, and by their full-time devotion to scientific and clinical service they provided powerful resistance to the materialistic attitude.

(3) The idealism and enthusiasm of university staffs kept alive 'fundamental research'. Materialism born of this rushing age demanded that research should be directed to a practical aim. All over the world there were Councils and Departments of Industrial Research, which were the children of the Industrial Age—they were essential for Industry and the State, but their aims were commonly entirely different from what we thought of as 'fundamental research'. Any institution which was fostering fundamental research was countering the pressure of this material age.

(4) There was an awareness on the part of students and staff that man 'does not live by bread alone'; no one seemed more aware of it than the students. It might almost be said that the students looked after their education while the university attended to their training. The speaker referred to the students' initiative in establishing art courses, dramatic clubs, discussions, social gatherings, social service, etc. and said that these were direct and conscious efforts towards the development of the cultural and intellectual life of the young medical student.

#### GREAT BRITAIN AND AMERICA

Dr. Davie then passed on to influences in Britain and America that were operating against materialistic tendencies.

*In Great Britain* certain aspects of the 'welfare state' and the full-time health service, with their concept of community service rather than self service, told in favour of ideals rather than material gain. On the other hand these same trends tended to remove certain incentives to individual expression, and the frustrating effect of bureaucracy sometimes led to a degree of apathy. The 4 influences he had just cited as operating in South Africa applied also in Great Britain.

*In the United States of America*, where the influence of the industrial age was more developed than elsewhere, certain active measures were being taken by many of the universities to counteract its influence.

1. The young man or woman who wants to be a doctor must, on leaving school, spend 4 years at a 'college of liberal arts' (or 3 years at some) and take his A.B. degree. Only then may he proceed to the graduate

school, where he spends 3 years over his medical course, after which he becomes an intern. The colleges (there are hundreds of them) go no further than the A.B. degree, and have no faculties of medicine, engineering, etc. Every university is a college surrounded by graduate schools of faculties such as medicine, law, engineering, architecture, fine arts, education and commerce. In college the students who are preparing for medicine take the 'basic sciences' (Chemistry, Physics, Zoology and Botany) in their first year, but then they 'major' in classics or a science or any other A.B. subject they choose. In the graduate school they start with Anatomy and Physiology. They spend less time there on the clinical subjects than the South African universities require, but they carry on their studies into the intern year. When Cape Town University was giving its 'B.A. med.' it was doing something similar.

2. To obviate the isolation of the medical school from the rest of the university in the manner with which we are familiar in South Africa, the teaching hospital of the University of Chicago opens on to the University campus itself, near the buildings for theology, botany, etc. A similar policy is pursued at the other university in Chicago, viz. the North Western University, where Medicine, Commerce and Law are all on the same campus (in the City). (Dr. Davie remarked that the Chicago Hospital was staffed entirely by salaried staff, and the N.W. Hospital entirely by honorary staff. Both were first-class places.)

3. At Rochester, Duke and certain other universities the medical student is required to attend a course in one non-medical subject in each of his 3 years in the graduate school.

4. At Johns Hopkins the student must spend one half-day a week (a) attached to a research worker by mutual arrangement, or (b) attending an elective course in a medical subject not included in the formal curriculum (a number of such courses are available), or

(c) in a non-medical subject (such as philosophy, economics, etc., etc.). All this is additional to the obligatory items in the medical course. Yale and Duke have similar requirements.

5. Yale University does not require its medical students to sit for any examinations. It concentrates on a high standard of staff and the staff's relations with the students.

#### CONCLUSION

Dr. Davie ended with a consideration of what practical steps might be taken in the South African medical schools, more particularly at the University of Cape Town. He concluded that at present there was no undue stress on 'training' (technique) and that if the present balance were preserved they were not likely to suffer prejudice in that respect. In future it would be necessary to take care to avoid being so engrossed in technique as to lose the cultural side of medical education; yet they must also beware of leaving too much of the necessary training to the intern year—it would not do to devote all their time and attention to 'education' (e.g. principles, theory and philosophy).

He suggested that consideration should be given to the following proposals:

1. More stress should be given to what he had called 'fundamental' research!

2. The possibility should be explored of introducing the Johns Hopkins idea of attendance on elective courses outside of and additional to the formal curriculum.

3. Idealism should be encouraged by the inspiration and example of the staff.

4. Students should be assisted to assist themselves in their cultural and idealistic activities, but without detracting from their initiative. An excellent medium was lunch-hour addresses, in which the medical staffs could play a bigger part than was the case at present.