

This book differs from previous works on the subject by the greater emphasis on physical and physico-chemical theories and methods due to the newer trends in the study of photosynthesis. Photosynthesis in relation to systematic botany or ecology has little place in it. It is essentially written for the research worker and should greatly stimulate work along these lines. The important literature from all sources is brought together and discussed and the book thus forms a very notable addition to the literature in this field. The appearance of Vol. 2 will be awaited with interest.

F. J. LEWIS.

## MEDICINE AND THE HUMANITIES

### The Art of Medicine in Relation to the Progress of Thought

A Lecture in the History of Science Course in the University of Cambridge, February 10th, 1945. By A. E. Clark-Kennedy. Pp. 48. (Cambridge: At the University Press, 1945.) 2s. net.

**T**HIS lecture, written in simple words and infused by a contemplative charm, is not designed to answer the age-old questions: Have we a soul? What is mind? and so forth. It briefly discusses these questions and suggests to us why they cannot be answered and why they probably never will be answered. But the purpose of the lecture is rather to consider how medicine, by bringing science and thought into intimate and personal relationship with humanity, "has resulted in science making a greater contribution to thought than otherwise would have been the case".

In his brief history of the development of medicine and his longer one of the developments of the last hundred years, the author gives, in a short space, a valuable dissertation on his general theme. Prominent in it is the new conception of disease which has arisen, a conception which is an advance upon Sydenham's useful conception of clinical entities, which has, the author thinks, tended to obscure the real nature of disease and to lead to a superficial attitude to problems of medical practice. In a similar way, it might be added, too much emphasis in all fields of inquiry on useful and, indeed, necessary, classification can have a similar effect. The medical man, however, is faced with problems of the mind as well as with those of the body. The body, says the author, has evolved as a physico-chemical machine. Within certain limits it influences and is influenced by the mind. To this the medical man must add the influences of genetic and environmental factors upon the production of disease; and consciousness, as distinguished by the author from the more general and unsatisfactory term 'mind', brings problems of pain, of deliberate thought and free-will and of moral and aesthetic judgment. Man is learning rapidly how to gain health, but is free, as the practising physician knows so well, to make himself as well or ill as he wills. The difficult problems for the medical practitioner which result from this and the repercussions of this view of disease upon politics, social planning, preventive medicine and State control occupy the bulk of this lecture.

On the whole, the author successfully sketches, in the brief space available to him, the main complexities of the modern medical outlook. Only here and there will the reader sit up and blink a little—as, for

example, when he reads that, since the studies of Vesalius, Harvey and Malpighi, biology "has limped along behind the mechanical sciences in the part-worn clothes of her elder sister, physics". The author seems to be quite unaware that biology has recently undergone a change not dissimilar from that which he indicates in medicine. The causes, indeed, of the changes in these two related fields of inquiry are, and perhaps must be, essentially the same. Many readers will, however, no doubt agree that the psychologists, even those who labour so earnestly and passionately to heal the disordered mind, have nothing to guide them but an imperfect understanding of the normal mind. It sometimes seems, indeed, that the sick minds studied by the medical psychologist have within them a capacity for self-destruction and for the destruction of society which is analogous to that contained by the unstable isotope of uranium used to make the atomic bomb. But does the psychologist know the stable isotope? If he does not, upon what does he base the theories of human education and conduct which are put forward for the direction of our youth and our society? The medical psychologist can, of course, not be blamed for this lack of knowledge of the norm; he is straining every nerve all the time to construct it. The only premature thing is that our future should be subject to any form of directive whatever which is still immature and uncertain of its foundations.

To return, however, to the main theme of this book, its main conclusions are that there is too much specialization in medical education (a point which is already widely recognized), and that the purely scientific education which medical students now receive is not enough for a profession which has to deal with human life and experience as a whole. It is half the art of medicine, says the author, to adopt a reasonable and practical attitude to the unknown. The power of modern medicine to prolong life, to relieve suffering, to influence endocrine secretion, to control birth, to dominate mind and even to modify personality is likely to increase; it should not be diminished; but in it there is a real danger. "There always is danger in power."

We live in an age when excessive anxiety over the health of the body has replaced pre-occupation with the welfare of the soul. Many problems, now decided upon ethical grounds, will, in the future, be decided entirely upon grounds of medical expediency and judgment. To meet this situation medicine could and should, the author thinks, be the connecting link which would reconcile the conflicting points of view of the humanities, on one hand, and the sciences on the other. Disease is not entirely genetic or environmental in origin; behaviour is not all conditioned reflexes and is not entirely due to deliberate thinking. There is a happy mean between too much individual liberty and too little external control; too great risk and too little security; too much pain and too little suffering. Medicine has not yet displaced the notion of the soul, and probably it never will. It is not irrelevant to remember that it is one of the privileges of medicine to handle the biological phenomenon of death, "and here we come into closest touch with the spiritual aspects of human life".

There should be few scientific readers who will not, if they look sincerely into their experience, endorse and welcome the main argument of this thoughtful and thought-provoking book.

G. LAPAGE.