

Book Reviews

NERVE HISTORY

The Human Brain and Spinal Cord

A Historical Study illustrated by Writings from Antiquity to the Twentieth Century. Edited by Edwin Clarke and C. D. O'Malley. Pp. xiii+926. (University of California Press: Berkeley and Los Angeles; Cambridge University Press: London, August 1968.) \$25; 237s 6d.

THE authors of this weighty contribution to the history of neuroanatomy and neurophysiology have taken as their model the kind of scientific anthology of which the late John Fulton's *Selected Readings in the History of Physiology* is one of the best known examples. Covering a more restricted field, it is about three times as long as the enlarged second edition of Fulton, a comparison which will enable the reader to judge its specialist character. The excerpts have been arranged under broad headings representing the main anatomical structures such as the spinal cord and the cerebellum, and basic physiological principles such as those of cerebral localization and the reflex. Each of the selected texts is preceded by a brief account of the author, with an assessment of his work and its relation to that of his predecessors. The passages quoted are all in English, many of them being translated for the first time, and the authors, some of whom are quoted more than once, total 176. Of these no fewer than 133 published after 1800 and 47 after 1900, a fact which emphasizes how long it was before attempts to understand the central nervous system and its intricacies began to be rewarded. The latest passage included dates from only a decade ago, in 1958. The authors allude to this in setting out the purpose of their book, as they see it:

"In some instances we have brought our material nearer to the present day than is perhaps wise, but only to illustrate general principles that we judge will continue to be influential into the future. We have preferred to run the risk of being proved incorrect in our choices among current materials in order to connect the more distant past with the present and with the future. After all, the main role of a book of this sort is not only to indicate the birth of modern concepts, but also to trace forward the lines of progress from their more distant roots."

Despite the inevitable preponderance of modern work, an introductory chapter deals with antiquity and the mediaeval period and particularly with the age-old controversy about which organ—the heart or the brain—was the seat of the soul. An appendix on neuroanatomical techniques and a substantial bibliography of 53 pages are also included.

No collection of this kind could possibly be complete—and the authors are aware of the pitfalls likely to be

encountered in making a choice. Although there may be general agreement about the majority of the individuals who are regarded as important contributors to our knowledge of the human brain and spinal cord, the lesser figures who are included may depend very much on personal opinion. Even so, it is rather a surprise to find no mention whatever in this very large work of Jean Fernel. Fulton, for example, gives three pages in his chapter on the central nervous system to an extract from his discussion of the nerves of sensation and motion, accepting Sherrington's conclusion that Fernel had "an appreciation of the concept of reflex action a century before Descartes". Other kinds of omission are regretfully acknowledged, for it was found impossible to include material on the basal ganglia, thalamus, hypothalamus, pituitary, cranial nerves, meninges, the embryology of the nervous system, the autonomic nervous system, the physiology of the special senses and sensory modalities.

The combination of great industry, neurological experience and historical erudition which has gone into this work must be applauded, for it is an important contribution to the history of neurology which should be in every library which serves the needs of workers in this field. Dr Clarke is a former clinical neurologist and he is now head of the recently founded sub-department of the history of medicine in University College, London; Professor O'Malley is well known for his many learned studies of medicine in the 16th and 17th centuries, and particularly as the author of the best biography of Vesalius yet published. The publishers have produced a handsome and easily consulted volume, although the price may well put it beyond the means of the neurological registrars for whom this should be a bedside book. Although the authors set out to avoid a "condensed history", a later reprint of their own comments, brought together as a continuous narrative without the texts, and published in a handy form at a modest price, would be an invaluable guide for the many individuals whose interests lie in the more general field of medical history.

F. N. L. POYNTER

GENETICS FOR DOCTORS

Selected Topics in Medical Genetics

A Review from the Nuffield Unit of Medical Genetics, Liverpool University. Edited by Cyril A. Clarke. Pp. 282. (Oxford University Press: London and New York, January 1969.) 80s.

So many disciplines are involved in medical genetics today that it is hard for any doctor to keep abreast with developments even if he works in the field. Professor C. A. Clarke was asked to assist by writing a review for the *Quarterly Review of Medicine*. He chose to share the task with the staff of the Nuffield Unit, and when the material was collected there was too much for the review. So this monograph was born. It is largely a book by doctors for doctors. The term medical genetics is interpreted in a broad sense, with greater cover of the cellular and biochemical aspects than of the more mathematical side.

In the first three chapters, Clarke deals with pitfalls and problems in genetic studies (with R. B. McConnell), polymorphism, and linkage and association (with A. L. Jones). These chapters are comparable with a "Recent Advances" series, using his own *Genetics for the Clinician*, or *An Introduction to Medical Genetics* by J. A. Fraser Roberts (which incidentally is recommended as an introduction to the series of monographs of which this is one), as a basic text. Then comes a long and comprehensive chapter on pharmacogenetics by D. A. Price Evans. D. J. Weatherall and J. B. Clegg contribute a section on disorders of protein synthesis (almost all concerned with haemoglobin, as a model system). There follow two most