BOOK REVIEWS


This book has many excellent features. It deals with the anatomy of the autonomic system in man from its highest representation in the cortex down to the periphery in viscera and vessels. This in itself makes it unique in the literature of the subject published in this country. The author's personal experience in many of the problems concerned gives it an authenticity often lacking in a textbook. Moreover Professor Mitchell has no hesitation in calling on relevant material from the physiological and clinical fields to support his arguments, and thus adds depth and perspective to the work. It is beautifully produced; the printing and paper are of pre-war luxuriance. The illustrations, including the photomicrographs, call for special commendation. Full references are given both to classical and contemporary literature. It is likely to become a standard reference work, and will certainly prove of value on many occasions to practising neurologists, as well as those engaged in the "institutes of medicine". All those concerned are to be congratulated on this production.


This book contains an expanded version of the Waynflete Lectures given at Oxford in 1952. Most readers will probably consider the subsidiary title more accurate than the main one, for it is not until the last lecture that the relation of mind and brain is developed at all fully, although passing reference is made to the general problem in earlier lectures when the nervous system's function in transmitting and storing information is considered. Nevertheless, the intimate neurophysiology of the neuron must be an important part of the brain-mind inter-relation, as the author emphasizes: and in this sense, the earlier chapters do lead up to the final one even though much of this could have been written without reference to them. An exposition of the modern principles of neurophysiology—perhaps electrophysiology would be more accurate—by an acknowledged authority on the subject will be widely welcomed, and as the book deals with the fundamental background of the subject rather than with an assemblage of related but segregated pieces of research, it fills a very noticeable lacuna in the literature.

In his preface the author suggests that a re-examination of the problems of Cartesian dualism has become profitable in the light of recent neurophysiological advances. This may be so, but the problem of how mind "influences" brain, seems to remain at the end of the book as stubbornly insoluble as it did for Descartes or Sherrington.

Professor Eccles delivered these lectures to crowded audiences, of which physiologists, biochemists, clinicians, general biologists, psychologists, and philosophers, all formed part. The book will have just as wide an appeal, though its main readers will probably be those preparing for an honours degree in physiology, for whom it will be a cosa qui non.


Those neurologists who rely on someone like Professor Katz to translate into simple language the discoveries of the neurophysiologist will appreciate this lecture. It gives an easily understood account of much of what is known about conduction in both the peripheral nerve and in the central nervous system.


It is probably desirable that a new textbook in most medical subjects should be produced every five or 10 years, for authors or those who later edit their texts, find increasing difficulty in representing, by revision or new editions, the changed climate of opinion that pervades any growing clinical subject in a decade or so. This book is therefore welcome and will fulfill a useful purpose. It is significant of the changes that have occurred recently in neurology that a surgical neurologist should be one of the joint authors.

The book is divided into two main sections. In the first and shorter, general points, such as the anatomical and physiological background and methods of examination, are considered. It is a welcome addition to the usual texts to find a chapter here devoted to syndromes characterized by pain. Painful states form a large part of any neurological practice, and it is in conformity with
BOOK REVIEWS

present trends both of investigation and treatment that they could be grouped together as is done here. The second section is concerned with systematic neurology. Here the usual forms of neurological disease are adequately covered, though the rationale of classification is not always clear. Thus a chapter on demyelinating disease includes disseminated sclerosis while Parkinsonism, motorneuron disease, and rheumatic chorea are under a special heading of diseases of uncertain nature. The book is well produced, and has adequate introductory references and a good index. It will be of value to students in their later clinical years and to practitioners as a source of up-to-date information on current neurological practice.

Polioyelitis. By W. Ritchie Russell. (Pp. 84 ; 14s.) London : Edward Arnold. 1952

This short monograph deals only with certain aspects of anterior polioyelitis. The author says little about the methods of spread or the morbid anatomy of the disease and concentrates on the more clinical aspects. The account of the natural history of the disease is most readable and the division into "minor" and "major" illnesses valuable, although when more is discovered about the actual events in the nervous system better terms for the various phases of the illness might be devised. The increasingly important question of differential diagnosis in the early stages might with advantage be discussed in greater detail in the next edition. The most valuable part of the book is the full account of the methods of management of the patient; this section will be of the greatest practical value to all those, whether nurses or doctors, who have to treat patients suffering from polioyelitis. The author has thought deeply about methods of treatment of bulbar palsy and the use of breathing machines in respiratory paralysis, and if careful attention is given to the methods described lives should be saved. It is interesting to find the author, whose pioneer work on the importance of complete rest in the early stages of the illness is well known, advocating very active exercises within two to three weeks of the acute illness and stating that "physiological fatigue of weak muscles should provide the best natural stimulus to hypertrophy", but the case he makes for this method of treatment is convincing and if further work confirms this view, Ritchie Russell will have made two valuable contributions to the treatment of polioyelitis, based on clinical observation. This essentially practical book should be read by any doctor who is likely to see cases of the disease, and if the principles so plainly described are acted upon, his patients will benefit.


Dr. Courville's name is well known to those who study head injuries, and this small monograph will be read closely by many. After interesting chapters on the history of the subject there are some closely reasoned and authoritative sections on the mechanism of concussion, the vascular reaction to concussion, and on the author's special contribution to the subject—the cellular pathology of commotio cerebri. Apart from a somewhat unconvincing attempt to distinguish concussion from contusion, the book to this stage is both stimulating and instructive. The later clinical chapters are, however, less inspiring, and the insistence on rest as the keystone of all treatment will surprise British neurologists who discarded prolonged rest as a desirable method of treatment during the late war, and adopted progressive physical exercises as the best means of removing symptoms and preventing the development of psychoneurosis. However, notwithstanding these few comments, neurologists interested in head injuries will like to have this beautifully produced book in their library.

The Biology of Mental Health and Disease. 108 contributors, with Foreword by Stanley Cobb. (Pp. 624 + index ; 213 text figures, 58 tables. 75s.) London : Cassell & Co. 1952.

This symposium contains an enormous amount of recent factual information about many aspects of cerebral function. The emphasis is on the preclinical sciences, and biochemical and physiological contributors are prominent. This is in keeping with the recent tendency for psychiatric research to call more on workers in these fields, as investigation on the psychological side seems more difficult and less profitable. The result is a book which will be a valuable source of reference to neurologists, psychiatrists, and many working in related fields. Reading some sections of the book, especially on biochemical and pharmacological aspects, will inevitably suggest direct implications for therapeutic trials, in both psychiatric and neurological disease. It is very desirable that treatment in this field should be based on rational premises, and it is one of the values of this work that it will supply a basis of fact for clinical thought and experiment.


This volume comprises 20 papers read before the Psychology Section of the British Association at Edinburgh in 1951. It falls into two equal parts: in the first, some applications of psychology to problems in industry, personnel selection, education and medicine are considered. In the second, concepts and methods in present-day psychological research are outlined. The distinction is not, however, sharp and in some cases allocation of a paper to one or other part appears distinctly arbitrary. Although much of the work discussed is somewhat pedestrian, this book does serve to give a picture of what British psychologists are doing and the major fields covered by their investigations. The borderlands of medicine are represented by four papers. Trends in clinical psychology are reviewed by Miss M. A. Davidson, objective psychological studies in
psychiatry by Dr. S. Crown, and psychological research in the field of neurology by Professor O. L. Zangwill. In addition, Dr. J. D. Sutherland contributes a provocative essay on scientific tasks for the psychological clinic. Although these papers solve no major problems, they at least testify to the growth of fruitful collaborative study in the clinical field.

The only paper to offer a real theoretical challenge is Professor R. C. Oldfield’s essay on “The Place of Experiment in Psychology”. If, as this book suggests, the modern trend in the subject is to apply on an ever-wider scale what is already known, it is reassuring to learn that there is one British psychologist, at least, who cares about finding out something new. As so little is known in psychology anyway, it may be hoped that Professor Oldfield’s paper will be closely studied by all who believe in fundamental science.


This work contains a detailed, comprehensive, and up-to-date review of the psychological experiments on visual perception. The author has considered a variety of approaches, and although her final conclusions regarding the nature of perception are not very different from those put forward by Bartlett in 1932, the more recent work has enabled her to clarify the concept of schematization which Bartlett took over from Head. The author has concentrated on systematizing the psychological aspects of perceiving. She does not herself attempt to connect these with physiological processes. Indeed, in the final chapter she suggests that something other than a purely experimental approach to the psychological data will be necessary before the connexions between psychological and physiological mechanisms can be understood.


The author describes the development of the Industrial Neurosis Unit at Belmont Hospital from earlier experiments of a similar kind. At this Unit patients are treated who have been incapacitated for work by neurotic symptoms, often of prolonged duration. Nevertheless about 44% of men make a satisfactory adjustment to work after discharge. The main mode of treatment is social and psychological, and involves getting the patient to participate actively and productively in the hospital community as a step to social participation in the world outside.

The most interesting section of the book, contributed by Joseph Sandler, relates to the statistical analysis of follow-up data. Many factors which one might have expected to have a prognostic value prove not to be significantly related with the degree of adjustment after discharge. This applies to age on admission, length of stay, wage level, skill, education, amount of unemploy-

ment, delinquency record, intelligence. Factors which did have a significant relation with after-history included marital status, amount of previous psychiatric treatment, diagnosis and other types of temperament assessment, and recorded behaviour while actually in the hospital. Some suggestive comments are made about what is meant by “employability” and the ways in which it may be assessed.


This book will be welcomed by those who have so far withheld definite opinions regarding the value of mechanical models of the brain, as it is written for the major part in non-technical language by one who knows what he is trying to explain. But although mathematics are confined to a separate appendix, considerable concentration is still required to follow many of the arguments, even though the principles are illustrated by familiar events such as a cat creeping up on a dying fire.

The author starts by analysing the essentials of animal behaviour, and deduces that the most fundamental characteristic is that of adaptation to environmental changes. Similar activity is demonstrated by the homeostat, a device long known to engineers and used in automatic steering and heating apparatus. The author shows that it can be reproduced by a number of electro-magnetic cells interconnected at random. Such a design bears many more similarities to what is known of the structure of the brain than the much criticized and complex calculating machines.

There are many aspects of mental activity, even some of adaptation, which the author leaves unexplained, but which readers who feel they can profit from model building may themselves be able to find analogies for in the activity of Dr. Ashby’s model. Others may remain of the opinion that they are more likely to further knowledge of cerebral activity by direct study of the brain itself and of its functions.

BOOKS RECEIVED

(Review in a later issue is not precluded by notice here of books recently received.)


