pictures which convince. An interesting chapter summarizes the conclusions from experiments with electrical models of the circle of Willis, showing the anticipated redistribution of flow when obstruction is imposed at various sites on the afferent side and when peripheral resistance is likewise varied. There follow a number of chapters reporting work already published on the effect of controlled ventilation on angiography, the effect of angiography on blood flow, and the comparison of angiographically estimated circulation time with blood flow methods, and a heat clearance method. Under 'New Techniques' very specialized methods are described and considered in considerable detail, most of them even today confined to their inventors or their own departments.

There is much of interest in this book, if only in the ingenuity of the gadgetry, and references are fairly generous. Although there are 38 authors from various countries the number of centres represented is much fewer, because a few laboratories each had several representatives at the discussion. None of the editors is a native English speaker and it is hardly surprising that the prose is sometimes a little tortuous and occasionally mystifying.

BRYAN JENNETT


The medical profession is intimately associated with the problem of amphetamine abuse, both as the body expected to produce a solution and, less happily, as being at least partly responsible for the present magnitude of the problem. A solution will come only with more information and a better understanding of the socio-logical and pharmacological basis of the phenomenon of drug dependence. There is, therefore, a need for an authoritative, concise description of the action of the amphetamine group of drugs, the extent to which their various central and peripheral effects can be separated in newly-synthesized drugs, and the dangers of dependence on these new variants. This is not that book. Not that it lacks authority; on the contrary, it suffers from an excess of them. In 58 chapters, 122 contributors, and 960 pages, almost all is said that could be said about amphetamines.

The book is the collected separate papers given at an international symposium held at the Mario Negri Institute, Milan, in 1969. There is little evidence of editing in the interests of uniformity of treatment or balance or elimination of repetition. Though papers are grouped into sections, there is still considerable repetition—for example, structure-activity relationships stray far beyond their opening section, and the interaction with biogenic amines is a recurring theme in every section. To some extent, repetition is both unavoidable and desirable, but in this instance it has resulted in a volume which, regarded as a book, is quite indigestible.

Having made these criticisms, it should in fairness be said that this collection of papers represents an invaluable reference source, essential for anyone working in this field. Many of the individual articles are excellent, bringing together observations at present scattered in the literature, and combining these with unpublished work.

In summary, this is a book for aficionados and libraries, but hardly one which could be recommended for the average medical practitioner in any branch of medicine.

J. S. GILLESPIE


This small volume has some admirable qualities. It is in the classical tradition of neurology by relating clinical signs to disturbances of normal physiology. This is very successful in the chapters on motor control, which are very well done, incorporating the author's own valuable contributions. The quandary of order of presentation is not solved. To present the physiology in logical order it is necessary to distribute the material on Parkinsonism over three chapters.

Sensory functions are less well covered and the role of the cortex surely requires more space than it is allocated.

The physiological approach to neuromuscular transmission and muscle disease is quite inadequate. Many illustrations are of poor quality. These criticisms must be made of a book with this title and cost, but it does have some outstandingly good parts which make it worth buying.

J. A. SIMPSON


This book is mainly about the limbic 'system' of the brain, and summarizes its anatomy, its electrical activity, and the effects of ablation and stimulation. Dr. Smythies has been thorough and critical in reading the literature of the last decade on these subjects, and has set out his knowledge in an orderly way. I found his book easy to read, accurate where I already knew the subject-matter, and interesting where I did not.

G. S. BRINDLEY


In 1868 Hering and Breuer showed in their paper 'Self-steering of respiration through the vagus nerve' that mechanical changes in the lung can initiate nerve impulses which reflexly modify the pattern of breathing. The centenary of this event provided an appropriate occasion for this symposium reviewing present knowledge of this aspect of respiratory control. Participation in the symposium of both physiologists and clinicians was also appropriate, since Hering was essentially a physiologist, Breuer essentially a physician. Its inter-disciplinary nature is reflected in the main topics, which include the afferent pathways from the lungs and their reflex effects, the origin of the rhythmic respiratory drive, the role of various afferent pathways in respiratory sensation, and the application of these findings to patients with breathlessness.

Vagal block experiments show the classical Hering-
Breuer reflex to be unimportant in man except possibly in exercise, while in pathological states impulses from epithelial irritant receptors in the intrapulmonary airways and from juxtapulmonary capillary receptors may dominate in producing abnormal respiratory patterns. Investigations into the central control of breathing, facilitated by microelectrode recording of activity in individual neurones, reveal that, in addition to neurones firing with inspiration or expiration, there are neurones whose firing is more related to the change of respiratory phase and these may be significant in determining respiratory rhythm. The studies on normal and abnormal respiratory sensation stress that this results from the interaction of several afferent inputs of which the vagus is one, others including afferents from the chest wall, and, of apparently greater importance, afferents in the phrenic nerve. This interaction is emphasized by the finding that vagotomy benefits only a proportion of dyspnoeic patients.

Thus both basic research workers and clinicians will find much of interest in this book. Moreover, each should gain greatly from the insight it affords into the ideas of those who approach the problem of breathing from different viewpoints.

N. JOELS


In the last 20 years there has been an outstanding growth in knowledge about diseases of muscle. As the main flood of new descriptive work subsides, leaving the hard task of understanding, the time has come for the illustrative atlas and brief review. A number have come to our attention. This one, from the Laboratory for Neuro-pathology, Academic Hospital, Amsterdam, is by far the best. The illustrations, all in colour, are so well selected and beautifully reproduced that one has the immediate sensation of direct confrontation with the microscope. The 61 pages of text are a masterly condensation of the subject. The selected references are well chosen.

Colour printing is expensive but entirely justified in this small volume. The general pathologist or neurologist studying this book will rapidly learn the essentials of muscle pathology.

J. A. SIMPSON


This book of review essays should be considered against the background of the communications crisis in medicine, which is causing increasing concern. The pace of progress in medical technology has made it almost impossible to produce a comprehensive textbook that is not seriously out of date in parts by the time it is published. Formation of interdisciplinary teams leads to new work being dispersed more and more widely in specialist journals beyond the regular reading of any one clinical discipline. Conference proceedings abound, but they have not been refined by the editorial eye which acts as a watchdog for the journals which enjoy sufficient reputation to allow them to reject material below a certain standard, and to demand modification of what they do accept. In this context the review article is assuming increasing importance and this book consists of 13 such chapters ranging over a variety of topics.

That on cerebrovascular disease (by McCabe) is an outstanding contribution to one of the most controversial fields in contemporary neurosurgery and with its 150 references it should become a standard source for a few years. Head injuries, intracranial tumours and infections, and paediatric neurosurgery are competently reviewed in varying styles. The next few chapters deal with what some neurosurgeons might still regard as minority interests but they promise to claim more attention as neurosurgical services in general become less austere and papilloedema, coma, or subarachnoid haemorrhage are no longer the only respectable reasons for admission to a neurosurgical unit. They deal with stereotaxis, surgery for pain, epilepsy, and for mental disease. The first chapter in the book deals with neuroradiology and is the least successful. It was probably a mistake to try to cover the field of neuroradiology in a chapter on its own, rather than in the context of the appropriate clinical problem. Moreover, this chapter includes too many brief and didactic statements which reflect personal views rather than current thinking in general. It is also dated in several of its comments.

There are limits to how much an editor can impose his wishes in a book of invited contributions. It might have been helpful to have indicated to authors how fully references were to be given (they vary from 5 to 150), and to insist on a uniform style (only some chapters give titles). Only an editor, too, might have pointed out how uninformative are whole brain sections in black and white as a means of conveying pathology—elsewhere in this book there are good examples of the value of line diagrams, which tend to be much more helpful.

BRYAN JENNERT


Early exploitation of the cathode ray oscillograph by Erlanger and Gasser laid the foundation to all our present knowledge of the electrophysiology of the peripheral nervous system. The 1922-1941 volumes of the American Journal of Physiology must among the most frequently consulted in the library of a neurophysiological department and all senior workers treasured the synoptic review provided by the Johnson Foundation for Medical Physics of the University of Pennsylvania in 1937. Though much has happened since then and some of the work has required amendment, the present generation is indebted to David P. C. Lloyd for making this landmark in neurophysiology available again. This second edition has complete bibliographies of the works of both Erlanger and Gasser.

J. A. SIMPSON

ASSESSMENT AND TEACHING OF DYSLEXIC CHILDREN

Lectures given at a training course organized by the ICAA Word Blind Centre for Dyslexic Children.