THE DIAGNOSIS AND TREATMENT OF DISEASES AFFECTING THE NERVOUS SYSTEM (Two volumes). By Frederick Lees. (Pp. xxix + 982; illustrated; £8 per volume.) Staples Press: London. 1970.

One can only admire the industry of an author who tackles a two volume textbook of neurology intended for non-specialists. Unfortunately, this work is unlikely to reach the intended readers owing to its length and price, and it is doubtful if the determined reader would finish his long task with a real appreciation of the neurologist's approach to diagnosis. One can read the four pages devoted to nystagmus and still be ignorant of the general principles, and the concept of the difference between paralysis of movement and paralysis of a muscle is sought in vain. The description of clasp-knife rigidity (*sic*) is unorthodox. The postgraduate student requires sound instruction on fundamentals rather than a sketchy outline of many extremely rare diseases.

J. A. SIMPSON

FIRST AND LAST EXPERIMENTS IN MUSCLE MECHANICS By A. V. Hill. (Pp. xv + 141; illustrated; £2.75.) Cambridge University Press: Cambridge. 1970.

Regrettably this is an account of the last experiments by the grand old man of muscle mechanics introduced by the author's classical paper with H. S. Glasser (1924). It concerns studies on the active state of muscle, the force-velocity and tension-extension relations, and the series-elastic component.

The early paper (in which the convention of the rest of the book for numbering figures is not followed) is modified by omission of Hill's discarded elastic viscous model of muscle. Throughout the rest of the book the scientific matter is illuminated by a commentary on his earlier and revised views and the reason for making certain experiments. It is fascinating reading and contains suggestions for further experiments that he would have liked to make, but it is difficult to follow without considerable knowledge of the subject. This is not an introduction to the subject for the general reader but essential reading for the specialist.

J. A. SIMPSON

THE PHARMACOLOGY OF SYNAPSES By J. W. Phillis. (Vol. 43, Zoology Division *International Series of Monographs in Pure and Applied Biology*). (Pp. xi + 358; illustrated; £6.) Pergamon Press: Oxford. 1970.

For many years we have had to depend on the neuromuscular junction and sympathetic ganglia for knowledge about the pharmacology of cholinergic and adrenergic synapses. Extrapolation to central synapses could only be tentative. It has been frustrating to have the clear electrophysiological evidence of inhibition without the possibility of isolating an inhibitory transmitter. In the last decade the position has been transformed by the development of fluorescent histochemical techniques for the detection of monoamines and their antagonists. These have already revolutionized the treatment of mental disorders and the rapid insight into their actions points the way to even more valuable therapeutic advances. The prostaglandins already find a place in this book.

This is not a book for reading but rather a reference monograph. There will certainly be demands to keep it up to date.

J. A. SIMPSON

SYNAPTIC TRANSMISSION By Hugh McLennan. 2nd edition. (Pp. vii + 178; 154 figures, £7.45.) W. B. Saunders: Philadelphia. 1970.

The first edition of this book was well received and the second is sure of a further welcome. It gives more detail on electron microscopy than the other recent books on the synapse reviewed here, and there is a welcome reassessment of the non-cholinergic synapses of the mammalian central nervous system. Invertebrate synapses are not neglected and the general account of pharmacology and electrophysiology of synapses is very good. This is not a laboratory monograph like the recent one published for the Physiological Society but, as a concise account of synaptology for students, it is the best on the market.

J. A. SIMPSON

ELECTROPHYSIOLOGICAL ANALYSIS OF SYNAPTIC TRANSMISSION By J. I. Hubbard, R. Llinás, and D. M. J. Quastel. (Pp. 372; illus.; £5.25.) Edward Arnold: London. 1969.

In this monograph of the Physiological Society three experts in the field have provided a systematic basis for the investigation of synaptic transmission. Their insight into general principles has made it possible to discuss methods and conclusions of general applicability while drawing examples from many types of synapses.

They do not go deeply into other aspects of the synapse, such as ultrastructure and pharmacology, for which other books are available, but within its field this book is supreme. The first three chapters summarize the structure and function of synapses, the electrical properties of nerve and muscle (mathematical treatment), and the measurement of cell electrical properties. Further chapters are on the investigation of presynaptic function, analysis of subsynaptic events, central synaptic transmission, and extracellular field potentials in the central nervous system. There is also a useful appendix on methods and a valuable bibliography. This is an outstanding book destined for constant reference.

J. A. SIMPSON

RECENT ADVANCES IN THE STUDY OF CEREBRAL CIRCULATION Edited by J. M. Taveras, H. Fischgold, and D. Dilenge. (Pp. xiii + 199; illustrated; \$18.00.) Thomas: Illinois. 1970.

This slender volume reports a round table discussion from Symposium Neuroradiologicum in Paris in 1969. Most of the authors are, naturally, radiologists and this gives the volume a slightly odd perspective—that of comparing the value of various ways of measuring cerebral circulation with the information to be derived from angiography. The first two chapters very fairly outline the limitations of angiography. But in a book pitched at this level we might have been spared many of the radiographs, because it is arguments rather than