

## Book reviews

FURTHER CRITICAL STUDIES IN NEUROLOGY AND OTHER ESSAYS AND ADDRESSES By F. Walshe. (Pp. viii + 248; illustrated. 30s.) Edinburgh: E. & S. Livingstone. 1965.

In this successor to *Critical Studies in Neurology*, published in 1948, Sir Francis covers a wider range of subjects and there are 'modest excursions into the philosophy of medicine'. In the past half century his scientific papers, essays, addresses, lectures, letters, and comments on diverse themes have revealed him as a brilliant scientific thinker, a master of the English language, and a critic of unremitting and devastating genius. It is altogether exceptional that the same man should also be a clinician and author of a textbook which has been described as 'one of the classics of medicine'. That book, *Diseases of the Nervous System*, notable for its clinical narrative and prudent advice, shows its author to be a gentle humanist, compassionately aware of the manifold difficulties of practising the art of medicine. Reservations notwithstanding, his main influence has been on the mind or soul of the medical profession and not on its body politic.

The interpretation of experimental studies of cortical motor function, the Babinski plantar response, and the origin of the pyramidal tract are lucid analytical papers well known to neurologists and neurophysiologists. That on the centrencephalic integrating system of Penfield must be one of the most withering assaults on scientific doctrine that has been made in the twentieth century. The two most recent essays, on cortical localization and neurobiology and 'neuropsychology', published only last year, are bursting with ripe wisdom and constructive thought, telling phrases and analogies. Thinking is made to appear so enjoyable—whereas we all know how irksome it can be. Twenty years ago what might be called Walshe's First Law was promulgated, namely that, '*As new facts increase in number and diversity, the need for their interpretation and synthesis increases in corresponding degree.*' Today his Second Law might be stated thus: '*In experimental studies of nervous function it is essential to adopt consistent principles of interpretation.*'

That the scientific materialist has no acceptable philosophy to offer Sir Francis is evident, as might be anticipated, in his eloquent essay on mind-brain relationship. His standpoint is that of Sir Thomas Browne who affirmed, three centuries ago, that 'Man is a Noble Animal'.

For the clinician, the value of this book is in the explanation and reminder that 'clinical observation stands upon its own foundation' and is not in any way dependent upon 'confirmation' by animal experiments. For the physiologist, there is the critical assessment of the 'operational view' of experimental procedures: for us all, the enchantment provided by a fine exponent of English prose.

J. D. SPILLANE

THE EFFECT OF USE AND DISUSE ON NEUROMUSCULAR FUNCTIONS Edited by E. Gutmann and P. Hnik. (Pp. 576. 100s.) Amsterdam: Elsevier. 1963.

This is the proceedings of a symposium held at Liblice near Prague during September, 1962, under the sponsorship of the International Union of Physiological Sciences. Perhaps it is due to this sponsorship that contributions from clinical scientists are extremely sparse. Nevertheless, this book, which is an extension of 'The Denervated Muscle', edited by Gutmann, is of profound importance and interest to all clinicians who deal with disordered neuromuscular function. Over sixty members present short, excellent accounts of their work, dealing with the trophic interactions between nerve and muscle cells, the effects of use and disuse on nerve and muscle cells, and the specific adaptation of metabolism accompanying this. Each paper is followed by a verbatim report of the discussion, which was very lively and rather lengthy.

The general production of the book is good. Line drawings are well reproduced but, unfortunately, not photomicrographs.

This book is warmly recommended as a landmark in the assessment of knowledge on the relationship between muscles and the nerve cells that supply them. It does not deal specifically with disorders of the neuromuscular junction.

GEOFFREY RUSHWORTH

ACTUALITÉS NEUROPHYSIOLOGIQUES. Cinquième Série. Edited by P. Laget and A. Monnier. (Pp. 301; 176 figures. F.75.) Paris: Masson et Cie. 1964.

This is the fifth volume of essays on various aspects of neurophysiology, and, in common with the previous volumes, it presents beautifully written, up-to-date reviews of selected topics of current interest. The series as a whole aims to cover aspects of the biophysics and biochemistry of nerve fibres, the physiology of muscle, the physiology of the central nervous system, the physiology of sense organs, and applied neurophysiology.

In spite of the modern trend in neurophysiology to over-stress the relative importance of cellular biophysics and its comparative aspects, the present volume deals, in addition, with various integrative actions of the nervous system, some of which are of considerable interest to the experimentally minded clinician and even the electroencephalographer.

Professor Monnier is to be congratulated in producing such an interesting five-volume series of neurophysiological topics, and Dr. Laget and Mme. Monnier for their clear and concise presentation.

GEOFFREY RUSHWORTH

PHYSIOLOGY OF THE NERVOUS SYSTEM, 2nd edn. By E. Geoffrey Walsh. (Pp. xv + 615; illustrated. 50s.) London: Longmans Green. 1964.

It is a pleasure to welcome the second edition of

Dr. Walsh's book on the physiology of the nervous system. There are many students of neurology, both undergraduate and postgraduate, who find modern neurophysiology a rather forbidding subject involving a great deal of difficult biophysics. To such readers Dr. Walsh's book can be warmly recommended as giving an excellent picture of the range of enquiry of the neurophysiologist, without burdening the reader with unnecessary detail. At the same time the numerous references to original papers provide a stimulating guide to further reading.

In a book of this sort, which provides only an introduction to a highly complex subject, it would be ungenerous to refer to omissions; the balance of the book reflects Dr. Walsh's personal view of what is important in neurophysiology, and indeed it is this quality which makes the book such an interesting and readable one. It might be suggested, however, that in the next edition the physiology of the basal ganglia should receive more detailed treatment. When the first edition of this book was written, it may have been true that we knew only a few fragmented facts about the basal ganglia, and had no coherent theory of their function; in recent years, however, this situation has been greatly changed by the neurosurgical procedures which are now used for Parkinson's disease, and a new chapter on this subject is clearly required.

R. W. GILLIATT

OEUVRES CHOISIES I AND II By G. Marinesco. (Pp. 589 and 561; illustrated. Each volume Lei. 63.) Bucharest: L'Académie de la République Populaire Roumaine. 1963.

These two volumes of selected works of Georges Marinesco cover papers published from 1895 to 1937. The earlier volume (Volume I) contained papers dating from 1895 to 1923 and Volume II contains papers from 1924 to 1937. Thus in these two volumes we have the whole selected works of this great contributor to modern neurological science. Marinesco, born and educated in Bucharest, began his neurological studies in Paris under Charcot at the Salpêtrière. There he worked with Marie, Babinski, and Raymond; at Frankfurt-am-Main he studied with Weigert. In 1897 he was appointed to the Chair of Clinical Neurology created at Bucharest, which he was to occupy for 41 years, for him a period of intense activity in both research and teaching. It is a pleasure to look through this book and note the landmarks of discovery in neuropathology, neurophysiology and clinical neurology for which this great man was responsible. As a reference source to the period of neurological science spanned by Marinesco's working life these two volumes will be invaluable.

J. TREVOR HUGHES

PAVLOV'S TYPOLOGY Recent Theoretical and Experimental Developments from the Laboratory of B. M. Teplov. Compiled, edited, and translated by J. A. Gray. (Pp. xv + 480; illustrated. 84s.) Oxford: Pergamon Press. 1964.

It is well known that Pavlov in his later years expressed a number of views regarding the different 'types' of nervous system displayed by his experimental dogs and was wont, informally, to extend these conceptions to human tem-

perament and personality and to their disorders. A 'weak' nervous system is one which possesses such a constitutional balance of excitatory and inhibitory tendencies that, with increasing stimulus intensity, the point at which increasing response is replaced by protective inhibition is reached sooner than in the type labelled 'strong'. Studies of human behaviour based upon these ideas have been carried on in the Moscow laboratory of B. M. Teplov since before the last war until the present day, and views current in Soviet scientific circles regarding human personality in both normal and pathological connections cannot be understood without access to this work.

Such success Dr. Gray provides in this volume. Unlike many other efforts to mediate between Russian and western science, this work is marked by outstanding scholarship and admirable clarity of language and concept in the English rendering. Relevant original sources seem to have been fully and faithfully explored. The greatest care has been taken to avoid misunderstandings which might arise (as so often they have in the past) through conceptual incompatibilities between the two languages. In these respects the results of Dr. Gray's labours ought to be taken as a model for others moved to similar undertakings.

The book falls into three parts. The first is a translation of an extended essay by Professor Teplov which provides the reader with an interpretative summary of Pavlov's theory of the constitution of the nervous system and of the animal experiments on which it was based. Much of the material referred to and elucidated (notably the records of Pavlov's 'Wednesday Discussions') is not available anywhere else in western translation. This sets the stage for Dr. Gray himself, who contributes a lengthy section in which he critically examines and elucidates the enormous literature of research, Western and Soviet, that is relevant to an extension of Pavlov's ideas on human temperament and personality. Finally we are given a selection of papers from Professor Teplov's laboratory relating to the 'dimension of strength of the nervous system in man'.

Anybody who peruses a book such as this, or who has the opportunity of close discussion with Russian colleagues will probably be struck by two reflections. The first is, 'How strangely different, and difficult to feel one's way into, is the framework within which they think.' The second, 'How oddly similar to many of ours are their preoccupations at the level of actual experiment.' The outcome is immensely stimulating and no psychologist or psychiatrist should fail to profit by the well-conceived and admirably constructed window provided by Dr. Gray.

R. C. OLDFIELD

A MODEL OF THE BRAIN By J. Z. Young. (Pp. vii + 348; 111 figures. 35s.) Oxford: Clarendon Press. 1964.

In 1960 Professor J. Z. Young gave the William Withering lectures at the University of Birmingham. In this book he gives the substance of these lectures developed in accordance with his thinking to date upon the mode of action of the brain. He views the human organism as a self-teaching homeostat, the computer for which is the