Book Reviews

PROGRESS IN BRAIN RESEARCH Vol. 25. *The Cerebellum*. Edited by C. A. Fox and R. S. Snider. (Pp. 355; 280 figures. £6 10s.) Elsevier: London/Amsterdam/New York: 1967.

During the past few decades a considerable amount of experimental research, both anatomical and physiological, has been done on the cerebellum in a number of laboratories in several countries. With increasing refinements in technique the more puzzling and difficult gaps in our knowledge of this part of the brain have been filled, and with the recent application of electron microscopy and microelectrode recording striking advances have been achieved. The present volume, the proceedings of a symposium held in Amsterdam in 1965, provides a comprehensive and up to date survey of present knowledge. Most of the ten contributions contain original observations but are also reviews of the respective subjects; there is an even balance between anatomy and physiology. Brodal, summarizing the work of the Oslo group, gives a most useful review of the extrinsic connexions of the cerebellum and incorporates recent work to clarify the organization of the efferent fibres in relation to function. The chapter by Fox and his associates on the primate cerebellar cortex is original and authoritative; it is undoubtedly the best account available. The difficult subjects of the physiology of the climbing fibres and of the inhibitory systems in the cerebellar cortex are discussed lucidly by Voorhoeve, the functional organization of the cerebellar influence upon the spinal cord is dealt with by Pompeiano, and Snider summarizes the evidence for cerebellar effects upon the sensory areas of the cerebral cortex. The price may appear high, but most chapters are profusely illustrated, both with line diagrams and half-tone reproductions. In a review of this volume, mention should also be made of another book which has recently been published, *The Cerebellum as a Neuronal Machine*, by Eccles, Ito, and Szentagothai, in which these authors synthesize the results of their anatomical and physiological research on the cerebellar cortex and efferent Purkinje fibres. The two books are, however, to a large extent complementary, and together they strongly support the claim that the cerebellum is now one of the best understood parts of the brain.

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PROGRESS IN BRAIN RESEARCH Vol. 27. *Structure and Function of the Limbic System*. Edited by W. R. Bradley and T. Tokizane. (Pp. 489; illustrated. £8 10s.) Elsevier: London/Amsterdam/New York: 1967.

Those parts of the cerebral hemispheres which together form the limbic system—including the cortex of the hippocampus and cingular gyrus and their fibre connexions—have been the object of considerable attention ever since it was suggested that they are concerned in emotional expression. The more recent evidence in-

dicating that the hippocampus may be part of the neural mechanism responsible for the elaboration of recent memory has provided a further stimulus for research. In the present volume appear the proceedings of an international symposium on the limbic system held in Japan in 1965. In the twenty or so studies reported here a wide variety of techniques have been used and many aspects of the limbic system have been considered these include investigations on its possible participation in sleep mechanisms, reproductive functions, and learning as well as pharmacological studies and detailed microelectrode recording of hippocampal cells. The contributions reflect the widespread interest in these regions of the brain, but they also demonstrate how little we really know about their functional significance. The volume is useful in providing a fairly representative account of ideas and work at the present time. Even after allowance is made for the large number of figures, the price seems high and will probably mean that the book will be obtained mainly for libraries.

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CEREBROVASCULAR DISORDERS By J. F. Toole and A. Patel. (Pp. xv + 280; illustrated.) McGraw Hill: New York. 1967.

The increased interest in cerebrovascular disease reflected in the number of recent monographs devoted to this subject; the present volume will certainly have a respected place among these. Its strength lies in the excellent anatomical and physiological background it provides, much of it illustrated by first-class diagrams. This presentation makes it much easier to understand how cerebrovascular accidents, with their accompanying symptoms and signs, develop. The book scores further by the description of how clinical and ancillary methods should be used in order to elucidate the pathogenesis of a cerebrovascular incident. This section was obviously written with the general physician (who treats the majority of strokes) very much in mind. Stress is laid on what can be achieved by simple diagnostic methods, the more complex investigations available to special units receiving less attention.

It is therefore surprising that this rational yet practical attitude should evaporate to some extent when therapy is considered. The excellent diagnostic approach loses a little of its point when therapy seems to some extent to be a matter of rule-of-thumb.

It might for instance have been made more clear that the prime indication for anticoagulant therapy is emboli and the administration of anticoagulants to patients with transient ischaemic attacks is based on the assumption these are due to emboli—an assumption which may be justified only when all other causes have been rigorously excluded. This weakness, however, reflects to some extent the many uncertainties which still handicap the treatment of cerebrovascular disease; it does not detract from the