and these I have already mentioned. The second chapter contains electroencephalographic criteria for electrocerebral silence which is largely a restatement of the minimal technical standards for EEG recording in cerebral death as outlined by the American EEG societies' ad hoc committee in 1969. In chapter 4 a total of 81 pages is devoted to full page illustrations of various types of artefact which may occur in an EEG recording, and more specifically where electrocerebral silence is being investigated. With a few exceptions, these are artefacts with which any trained electroencephalographer will be familiar, and the vast amount of space and paper devoted to that section is for the most part, unnecessary. Chapter 5 is headed 'The significance of electrocerebral silence' (ECS) to which one page of discussion is allotted, and the other 56 pages contain EEG recordings from a variety of individual cases showing this condition. The authors state in this chapter that if drug intoxication and hypothermia are excluded the presence of ECS usually indicates that death is imminent and occurs within one week of the first ECS record. This seems definite enough, but the authors go on to conclude that the significance of the ECS as indicative of the irreversibility of brain dysfunction must be evaluated by the clinician in relation to the patient's entire clinical picture, a statement with which I agree but which seems to contradict the previous one. Chapter 6 is devoted to the electroencephalogram in coma, and illustrates a number of EEG abnormalities occurring in various types of coma. The authors point out that the EEG abnormalities do not correlate with the depth of coma or with the neurological abnormalities, which is somewhat at odds with the statement in the preceding paragraph that once the limitations are recognised the EEG can be a useful aid in this condition. Sixty-six pages of EEGs are then presented from patients in coma. If, as I understand it, the message in this chapter is that the authors have found no correlation between their EEG findings and the depth of coma and neurological abnormalities in these patients, then I feel that the illustration of this negative correlation could have been shown much more briefly.

This book is exceptionally well bound, and the illustrations are clear and easily assimilable. The use of the EEG in coma and related state is, of course, a controversial and difficult subject. However, I find the conclusions in this book at the best, vague, and at times contradictory. The copious illustration of EEG abnormalities that do not correlate with the clinical condition and page after page of EEG artefact that should not be unfamiliar to the competent electroencephalographer is not what I would expect in a book retailing at this price.

J. P. BALLANTYNE

REVIEWS OF NEUROSCIENCE VOL. 1 Edited by Seymour Ehrenpreis and Irwin J. Kopin. (Pp. 351; illustrated; Dfl. 76.00, \$25.00.) North-Holland: Amsterdam. 1974.

The most elementary concept of anatomy used to suffice for the neurophysiologist and the anatomist could manage with the modicum of physiology he learned for 2nd MB. All this has changed since the second world war, with the rapid growth of electronmicroscopy, neurochemistry, and neuropharmacology. Psychology has become more of a science with recognition of a need for anatomical precision. Interdisciplinary collaboration is only fruitful if one scientist has a good grasp of the other disciplines. The result has been the growth in the USA of a new breed of investigators who regard themselves as neuroscientists rather than anatomists and physiologists, with their science founded on mathematics and physics rather than on medicine. Clinical neurologists and psychiatrists may therefore be chagrined to find how little of this volume will be familiar to them. Conversely, the chapters reward careful study by all interested in the biology of the nervous system, but will not make any contribution to the diagnosis or treatment of disease of the nervous system. However, this is only the first volume of a series and the reviewer has no doubt that the subjects covered will in course of time be necessary for the understanding of neuropathology. For instance, an interesting chapter on 'the making of a synapse' includes a good account of current concepts on the stimulus for axon growth, and the determinants for its highly specific synaptic connections. Another chapter on the synapse discusses the evidence for synapse-specific proteins and their possible role in synaptic connection and transmission.

Neurochemistry is well represented by chapters on deoxyribonucleotide synthesis and DNA in brain (with brief reference to the influence of nutritional factors, hormones, viruses, and tumours). The chapters on lipids and specific brain proteins will be difficult reading for most clinicians but these and a chapter on neurotransmitter-sensitive adenylate cyclase systems in the brain point the way to the neuropharmacology of the future.

The authors of all seven reviews are well known in their fields, and the editors are to be congratulated on making a good start in what promises to be a first class series. They will need to guard against the possibility that few neuroscientists will be in a position to read all the reviews critically.

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