Book reviews

the Princess Margaret clinic in London and has published many papers on his research. In 14 chapters he reviews the existing knowledge of migrainologists and the many dilemmas they share with their patients.

The chapters cover a proposed classification, a clinical appraisal and investigation, a summary of organic and functional causes of headache and epidemiology. Most of the book is concerned with migraine. Peatfield describes in turn: clinical features, precipitants, pathophysiology and treatment. There is an adequate section on cluster headache but only very brief accounts of post-traumatic and tension headaches.

As an up to date account of migraine this is an excellent, well referenced work, highly suitable for postgraduates, neurology trainees and indeed any physician who is called upon to handle this very common symptom. We are provided with valuable summaries of recent drug trials, though perhaps the author's temptation to classify and impute mechanisms on the results of such empirical trials is to be resisted. As a text on the much wider subject of headache (as implied by the title), it has shortcomings. Despite the controversy about the separation of tension or muscle-contraction headache from common migraine, the former remains the most frequent source of headache and therefore merits a much more detailed and explicit description than is accorded here. Similarly, the important topic of cranial arteritis is only afforded a page and a half; and a much longer and more thorough appraisal might have been apportioned to the section on trauma and its common medico-legal complications.

The text is well written, and the author has plainly spent much time and assiduous effort in compiling a lucid, well referenced text. It is nicely produced with clear line diagrams, tables and illustrations. I would warmly commend it as a short monograph on migraine, and look forward to future editions which I would hope will be either confined to this topic or considerably expanded to do justice to the many other sources of pain in the head.

JMS PEARCE

Aspects of Epilepsy and Psychiatry. Edited by Michael R Trimble and Tom G Bolwig. (Pp 256; £24.50.) Chichester: John Wiley & Sons Ltd, 1986.

This is a further book dealing with the inter-relationships between epilepsy and psychiatry. Once again it represents the pro-

ceedings of a symposium, this one held in Denmark. It consists of a number of chapters each of which is followed by a brief discussion on the subject matter. At the very least it proves that those interested in this area meet regularly to discuss the issues involved. Those who have read *The Psychopharmacology of Epilepsy* edited by Dr Trimble and published by the same house in 1985 will be struck that some of the chapters and authors cover similar subjects, though in slightly different ways. The advantage of this particular publication is that the coverage is rather broader and the review articles rather more comprehensive, useful and well written. There is a good chapter discussing the controversy over the existence of the "epileptic personality" and a number of chapters that deal with the associations between hyposexuality, hypergraphia and other personality traits and temporal lobe disorders. The relevance of antiepileptic drugs to psychiatric disorder, and the association between psychosis and epilepsy are again exhaustively explored.

The introductory chapter leaves itself open to some criticism by using a classification for seizures which has subsequently been updated by the 1981 International Classification. This chapter also gets into difficulty when discussing the psychiatric disturbances associated with non-convulsive status. It appears to use the term petit mal status to cover all absence status.

This is overall a helpful book in that it is reasonably coherent and comprehensive in its coverage. On the whole neurologists will find it more useful than the previous *Psychopharmacology of Epilepsy* and those uncertain as to which book to purchase would be well advised to consider this rather than the former.

DAVID CHADWICK

Memory, Imprinting, and the Brain: An inquiry into mechanisms. (*Oxford Psychology Series No 10*). By Gabriel Horn. (Pp 315; £25.00.) Oxford: Oxford University Press, 1985.

In the long history of the physiological psychology of learning and memory, the mechanisms underlying the processes of storage and retrieval of information have been the most difficult to investigate and thereby remain poorly understood. This reflects at least in part the legacy of Lashley's well-known failure to find the "engram", and a number of often poorly-controlled studies in the 1950s and 1960s which purportedly, but

not convincingly, demonstrated changes in protein synthesis as correlates of memory. However, recent advances in the brain sciences with the consequent rapid growth in technologies available to explore brain function, together with the detailed descriptions of memory impairments observed in individuals (such as H.M.) with specific brain lesions, has encouraged a vigorous growth in research aimed at elucidating this vital interface between the brain and cognition.

In this volume, the latest in the excellent *Oxford Psychology Series*, Gabriel Horn reviews some twenty years of personal research directed towards this goal. The reader is led from a brief account of early studies of habituation to a novel stimulus, a simple non-associative memory, to a detailed, but still ongoing, analysis of the mechanisms of imprinting in the domestic chick, a process whereby the young chick will form an attachment to its mother or an artificial substitute. This comparatively complex behaviour proves to be particularly interestingly heuristic in the study of memory mechanisms as it contains a number of behaviourally dissociable components: the imprinting object will act as an unconditioned stimulus for approach in the naive chick; it will act as a reinforcer in other learning tasks; and it will lead to processes that form a recognition memory of the object.

The rationale behind the experimental approach taken by Horn and his colleagues is compelling. Carefully considering the necessary control procedures, they initially describe changes in uptake of radio-labelled amino acid and RNA metabolism in the forebrain roof as a consequence of imprinting. Subsequent autoradiography localises the protein synthesis and turnover as well as increased energy metabolism following imprinting in one part of the forebrain roof, the intermediate and medial part of the hyperstriatum ventrale (IMHV). In a later chapter, ultrastructural changes in the IMHV as a consequence of imprinting are discussed. There follows a detailed discussion of a large number of studies where focal lesions are made in this and other regions of the chick brain and their effects on the acquisition and retention of both imprinting and non-imprinting tasks are assessed. Parallels are deftly drawn between the behavioural dissociations observed following such lesions in the chick and the memory deficits and amnesias seen following cortical and subcortical lesions in primates and humans. Further, the excellent detailed description of the anatomical connections of the IMHV is considered in relation to anatomical connections and structures implicated in mammalian memory.

This book is thus of interest to all who are concerned with mechanisms of memory, both from a fundamental research and from a clinical point of view. In spite of a wealth of detailed experimental and methodological discussion, it is entirely comprehensible to the non-specialist reader.

JD SINDEN

Cranial Nerves: A Systems Approach. By David W Garrison. (Pp 139; \$20.75.) Illinois: Charles C Thomas, 1986.

This small volume is dedicated "to the concept of efficient, accurate and functional educational processes" and attempts to replace the traditional approach of "memorising long lists and pieces of information" about individual nerves by a discussion of cranial nerve anatomy and function on a systems basis. The introduction provides an elementary overview of basic neurological terms (such as axon, afferent and efferent) and a brief summary of the anatomy and function of each cranial nerve. The remainder of the volume is divided into short tersely written chapters on motor innervation, sensory innervation, visceral sensory innervation, motor nuclei, sensory nuclei, etc. and is supplemented by abundant simple line drawings, tables and aspects. While the systems approach advocated in this book may be of value as an introduction to the cranial nerves for undergraduates in all branches of medicine, the presentation of the text appears to offer no great advantage over the traditional approach and appears merely an alternative way of compiling unending lists. The low price of the book would naturally attract medical undergraduates, but the oversimplified and sometimes confusing line drawings are of limited value to clinicians requiring a detailed working knowledge of cranial nerve anatomy.

DAVID JEFFERSON

Clinical Neurophysiology in Peripheral Neuropathies. (*Restorative Neurology Vol 3.*) Edited by PJ Delwaide and A Gorio. (Pp 173; \$130.00.) Amsterdam: Elsevier Biomedical Press, 1985.

This slim volume includes contributions from one of the sessions of a meeting on Restorative Neurology held in Venice in 1983. Its title is somewhat misleading since part of its contents relates to animal work and includes neuropathological and biochemical studies. It straddles uneasily the

vast field of neurobiology concerned with peripheral nerve responses to injury and the mechanisms of repair and regeneration, and the use of physiological techniques as a clinical tool in human disease. Some contributors have assumed a fairly sophisticated readership while others adopt a tone more appropriate for medical students.

There are considerable areas of overlap even though the chapters are rather short, and it is a pity that its distinguished contributors (who include Arrigo, Burke, Desmedt, Millesi and Ochoa) were clearly asked to give a brief over-view rather than to deal with restricted areas in rather more detail. This means that although it contains some interesting material the book does not really succeed either as a definitive text or as a well-focused synopsis of new ideas.

DL MCLELLAN

Manual of Neurologic Therapeutics. Edited by Martin A Samuels. (Pp 424; £15.90.) USA: Little Brown Inc; UK: Churchill Livingstone, 1986.

The author appears, in this text, to aim at providing a vade mecum, a small volume to carry and dip into to refresh one's memory as needed. Certainly it provides no new information for the experienced neurologist.

The book is provided with an adequate index, an essential for this type of volume. For the amount of information it contains it is cheap. Unfortunately, in some places the differences in neurological practice on either side of the Atlantic are all too evident. For example few neurologists in the UK would adopt the policy "Most patients who suffer their first seizure should be hospitalised for the initial evaluation". Similarly, I doubt whether most English neurologists would necessarily perform angiography "once a presumptive diagnosis of ischaemic infarction had been made."

G HARWOOD

Microsurgical Anastomoses for Cerebral Ischemia. Edited by Hajime Handa, Haruhiko Kikuchi and Yasuhiro Yonekawa. (Pp 393; £87.75.) New York: Igaku-Shoin; UK: Williams and Wilkins, 1985.

This is a beautifully printed and produced book containing the papers presented at the Sixth International Symposium on Microvascular Anastomoses for Cerebral Ischemia, held in September 1982, in Kyoto. It is

particularly unfortunate for all those concerned with the publication that it has taken so long for the book to appear because in the interim, the multi-centre trial on the efficacy of extracranial intracranial anastomoses has been published indicating that the operations are of no value in patients with degenerative cerebrovascular disease. As one might expect from a Japanese publication, there is an interesting section on moyo moyo disease. Blood flow studies seem to indicate that there is an improvement in flow after anastomoses in moyo moyo patients. Whether this proves to be of clinical value remains to be seen.

It seems unlikely that this publication will have wide appeal now. If it had been published two years ago it would have sold very well.

DJ THOMAS

Evoked Potential Primer: Visual, Auditory, and Somatosensory Evoked Potentials in Clinical Diagnosis. By Rainer Spehlmann. (Pp 400; £62.00.) Sevenoaks: The Butterworth Group, 1985.

It is with sadness that one reads of the death of the author of this book as it went to press. Sadness because this is a useful book and one which would have appeared in several subsequent and updated editions. The book was written for those who want to learn how to record and interpret evoked potentials and for those who are not directly involved in evoked potentials but who wish to become familiar with the methods and diagnostic abilities of the tests. It is for the latter group that the book has most to offer.

There are five sections; technical, visual, auditory and somatosensory evoked potentials and event and other potentials. Each has a substantial list of references to original work totalling 1560 in all and constituting a most valuable part of the book. However the novice might have hoped to be directed to established and authoritative works for his further reading especially to some of the excellent texts dealing with technical matters. Most of the technical limitations and pitfalls are described but with a brevity which will induce some learning but no understanding. The short section on how EPs are generated is the least satisfactory part of the book.

The clinical sections have the virtue of setting down in one short space the findings in all diseases so far studied with references to the original work. Some critical assessment of the publications is included and