Book reviews

However, none is quite like this one. Who would have thought of publishing an atlas on multiple sclerosis? What use could it be and to whom?

This book is a product of Colin Adams' thirty years' research in the field of myelin and multiple sclerosis; the illustrations have been collected over this period. The atlas forms a unique record of techniques which are still highly relevant for today's research. Most of the illustrations are in colour and they are, on the whole, well reproduced by the printer. There is a tremendous range of histological, histochemical and immunocytochemical techniques and there are scattered electron micrographs and some CT and MRI scans.

The word "atlas" in the title is slightly misleading. It is rather more than an atlas as there is substantial text in the form of succinct up-to-date summaries in each section which are well referenced and refer to the illustrations. Although blocks of text precede the illustrations and are separate from them, there is enough information in the captions of each illustration to allow the reader to browse through the pictures and to gain much valuable information. I recognise many of the photographs that I have seen the author project on a number of occasions and they really are good illustrations of a wide range of histochemical techniques. They show the standards that can be reached with some of the more difficult histochemical methods.

The book is divided into 10 chapters. In the first four the text and illustrations cover the general principles of myelin structure and demyelinating diseases both in man and in animals. There is also a chapter on experimental and laboratory studies of myelin diseases. The last six chapters deal with the epidemiology, pathology, histology and cytology, vascular aspects, immunology and complications of multiple sclerosis in a logical manner.

Although the account of multiple sclerosis in this book is very much an individual view, it does cover a wide variety of ideas and techniques and, as such, forms an excellent record of methods by which multiple sclerosis can be investigated pathologically. The text greatly adds to the atlas so that the book will be of interest to neurologists, pathologists and neuroscientists interested in the pathological and research aspects of multiple sclerosis.

RO WELLER

Linguistic Investigations of Aphasia, 2nd Edition. By RUTH LESSER (Pp 207; £17.50.) London, Cole & Whurr, 1989.

This is the second edition of an influential and useful introductory book on linguistic approaches to aphasia. The book is concerned with the contributions of linguistics to our knowledge of aphasic disorders and the central chapters are reproduced with little change from the earlier edition. The author starts with an introduction to the medical and clinical background to aphasia and by giving an account of the areas of linguistic theory relevant to aphasic disorders. Retained in its previous form is a review of the application in aphasiology of De Saussure's contrast between selection and combination and Chomsky's distinction between competence and performance. The cognitive impairments observed in aphasic patients other than aphasic difficulties are then briefly reviewed. Disorders of primary functions and disorders secondary to language dysfunction are covered, as are impairments associated with lesions outside the language areas. However, the amount of space allocated to these areas is inadequate to provide a sufficiently detailed review.

In the next two chapters the role of semantic relationships is explored and the significance of these to the difficulties experienced by aphasic patients. Unfortunately much of the work published more recently on category specific deficits is either not included in the text^{1,2}, or is added in a summary at the end of the chapter. Similarly, the two subsequent chapters on investigations of syntax and phonology have not been brought up to date. In addition, many of the references published several years ago are quoted in the text as still "in press".

More recent studies in neuropsychology and psycholinguistics are collected in a final chapter entitled "Psycholinguistic and sociolinguistic applications of linguistics to aphasia". Areas covered here include further developments of what I presume to be Morton's logogen model of lexical processing, PET (Positron Emission Tomography), studies of regional blood flow during lexical processing and recent work on sentence processing. The final section is concerned with clinical measures and applications and should be of use to the practising clinician.

The contribution of the second edition of this book is to include new techniques and findings as well as recent theoretical developments relevant to aphasia. Overall, the book provides a comprehensive review of linguistic approaches to aphasia. I would particularly recommend the two chapters on syntax and phonology. Here the author gives a stimulating and readable account of the grammatical and phonological difficulties in aphasia, the latter being considered both in

terms of neuromuscular incoordination and as a central linguistic dysfunction. The book as a whole provides a good starting point for students and professionals interested in language pathology. Some prior knowledge of linguistics or aphasia would probably be an advantage in that the information is fairly condensed, but this serves to enhance its value as a reference book. Neuropsychologists and neurologists should find the bibliography useful. It would have been even more valuable had the information and references in the text been brought more up to date.

E KRISTIN BREEN

References

- 1 Sartori G, Job R. The oyster with four legs: a neuropsychological study on the interaction of visual and semantic information. *Cognitive Neuropsychology* 1988;5:105-32.
- 2 Warrington EK, Shallice T. Category-specific semantic impairments. *Brain* 1984;107: 829-54.

The Wernicke-Korsakoff Syndrome and Related Neurologic Disorders Due to Alcoholism and Malnutrition. 2nd Edition. By VICTOR, R D ADAMS, A COLLINS. (Pp 231; About \$55.00.) Quest-Meridien Ltd, 1989.

In 1971 after a meticulous study of the clinical records and neuropathological findings in alcoholics, Maurice Victor and Raymond Adams produced a monograph on Wernicke's disease and Korsakoff psychosis. They described their experience of 20 years first at the Boston City Hospital and later at the Massachusetts General and Cleveland Metropolitan General Hospitals. Now some 18 years later they review their original experience and include further more recent cases where alcohol has not been implicated as a pathogenetic factor in the development of the neuropathological changes.

The reviewer's impression is that this remains, and will remain, the definitive work on the effects of alcohol and malnutrition on the human nervous system.

The original descriptions by Wernicke and Korsakoff are reviewed and a very detailed account of the clinical phenomena is presented based on the original study of 245 patients and autopsy examinations of 82 of these. Since the first edition of the book the authors have reviewed a similar number of cases. The account of the clinical symptomatology is meticulous and detailed. The majority of the patients studied were alcoholics with alcohol related neurological

problems in addition to the signs of the Wernicke-Korsakoff syndrome. Many of the patients were closely examined over long periods and the authors make the point that repeated examinations for as long as ten years in some instances allowed them to describe the natural history of the syndrome, and this they do in their third chapter.

Again the description of the pathological findings is precise and comprehensive and the authors stress the periventricular distribution of the lesions and their bilateral symmetry. The authors consider specifically the neuropathological substrate on which are based the defective memory, ocular motor signs, the ataxia, the global confusional state and the occasional disturbance of olfactory and gustatory function. They argue a unity between Wernicke's disease and Korsakoff's psychosis and discuss the relationship between these two and alcoholic cerebellar degeneration, central pontine myelinolysis and other myelinolytic syndromes and interestingly discuss the problem of "alcoholic dementia" concluding that the nosological status of alcoholic dementia is by no means proved. They believe the majority of so-called "alcoholic dementia" patients have suffered Wernicke-Korsakoff syndrome with lack of recognition of the clinical features during life. The post-mortem findings together with various traumatic lesions of the nervous system, related or unrelated to alcoholism, confuse the picture. They conclude that there is no need to invoke a separate entity due to the toxic effect of alcohol on the brain. Typically they write that despite their comprehensive and authoritative monograph "there is still a great need for careful pathological examination of cases that have received thorough clinical and psychological examination".

This volume considerably enhances the already high standard of the Contemporary Neurology series.

JB FOSTER

Medical Therapy of Acute Stroke. Edited by Mark Fisher. (Pp 294; \$69.75 US and Canada, \$83.50 all other Countries.) Marcel Dekker Press, 1989.

This is a compendium of 15 chapters on a number of different subjects by a series of contributing authors. How could there be so much to say about the Medical Therapy of Acute Stroke? The answer is simple. Crammed into this smallish volume is not only a discussion of currently accepted practice but in addition it covers the scientific basis for the several therapies which are now attract-

ing the energies of experimenters and clinicians. Single chapters are devoted to hemorheological measures, antiplatelet drugs, fibrinolysis, calcium entry blockers, neuropeptides, barbiturate protection, steroids and antihypertensive agents. The rationale for the use of these is discussed in full and the results of trials in animals and man are reported at length.

There are excellent chapters on anticoagulation, angioplasty and intracerebral hemorrhage. The section on aneurysmal subarachnoid hemorrhage deserves special mention. And prefatory to all of this is a lucid discussion of present day knowledge of the basic mechanisms in cerebral ischemia. The whole is of high caliber. Opinions with which one disagrees may be expressed but for the most part divergent views are fairly presented.

Neurologists interested in strokes will find this book a most useful 1989 reference to which they will turn repeatedly for information and instruction.

C MILLER FISHER

Neuropsychology Mental Structure. Edited by Tim Shallice. (Pp 462; £40.00 h/b, £15.00 p/b.) Cambridge: Cambridge University Press, 1989.

Neuropsychology, as with all aspects of neuroscience, has seen a rapid evolution in recent years. One aspect of that evolution has been the fragmentation of neuropsychology into a number of different disciplines, linked only by a shared interest in the study of the behavioural consequences of brain dysfunction. Tim Shallice's book is devoted to one of these disciplines, cognitive neuropsychology. Workers in this field come from two main sources. First, neuropsychologists who try to understand the processes underlying the disordered cognition following brain dysfunction; second, cognitive psychologists who have wished to test the structure of human cognitive processes in cases where those processes have been disrupted. The synthesis of ideas which result from this dual perspective has made cognitive neuropsychology one of the major fields of behavioural neuroscience. Reflecting this, Tim Shallice has written a scholarly and thought provoking book. The book is divided into four sections, each sufficiently structured to be read as a separate unit. It is in considering them together, however, that the book's real strength lies. Section one serves as an introduction to cognitive neuropsychology which covers the evolution of cognitive psychology and an exposition of the fundamen-

tal principles of the approach. In section two the author "fleshes out" the skeleton of theory with examples from five areas where the cognitive neuropsychological approach has been widely applied. These are in the study of short-term memory, the peripheral and central dyslexias, agaphia and in the study of language. As the author himself acknowledges, no attempt is made to provide a review of all of the relevant evidence. Indeed, each area could serve as a topic for a book in its own right. Rather the section illustrates the value of a cognitive approach to the study of neuropsychological disorder. A central theme throughout the book is a consideration of the potential limitations as well as the strengths of cognitive neuropsychology. In particular there is a detailed consideration of the nature of inference. What exactly can be said about the brain and cognition from the study of patterns of ordered and disordered behaviour? In the section on Inference Neuropsychology, the book makes a potential contribution to the discipline equal to that of Teuber. Indeed, the author illustrates how even that touch-stone of modern neuropsychology, the double-dissociation, may fail to provide the conclusive test of which so much contemporary theory is based. For this section alone, the book is essential reading for all neuropsychologists whether they work in the clinical study of single cases or in experimental group studies. All are concerned with drawing inferences from behaviour, and all could benefit from the insights offered by the book. The final section draws together many of the themes which have been developed earlier in the book. It considers whether central processes in cognition are best represented by a single equipotential system or by a series of modular systems. Once again, the author's approach is to present a theoretical framework, illustrated by a few well chosen examples. The final chapter addresses the issue of consciousness. However, while this chapter has often been a postscript, disconnected from the rest of the text, in the present case it serves to bring to a close the logical and reasoned discussion which runs throughout the book.

RICHARD BROWN

Epilepsy, Behaviour and Cognitive Function. Edited by Michael R Trimble, Edward Reynolds. (Pp 214; £32.00.) Chichester: John Wiley & Sons, 1988.

Questions relating to the behaviour and cognitive ability of epileptics are a common almost everyday problem for both adult and