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, agraphia 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

Book reviews

paediatric neurologists. It is an unwise neurologist who neglects this aspect of his reading, not least because sooner or later a legal question regarding the behaviour of one of his patients will undoubtedly crop up. Good summaries of the long and tortuous literature of this subject are not easy to find and this little book provides value and easy access, despite some unevenness and gaps due to its method of gestation.

It is a product of the current vogue for setting up a conference to write a book, a technique which has resulted in some excellent productions. The editors not only invited specialists in epilepsy with a specific interest in cognitive function and behaviour, but also an audience to catalyse the chapters. In the main this has worked well but the editors acknowledge that it was not intended to be a complete manual of the cognitive and behavioural associations of epilepsy. The fourteen chapters are distributed rather unnecessarily in five sections with two or three chapters on methods of assessing cognition and behaviour in epileptics, on the relation between the EEG abnormalities and performance, on cognitive and educational aspects in children, on the effects of drugs and epilepsy on mood and memory and of the association between epilepsy and dementia. The offerings are concise, although there is a degree of overlap and repetition.

For such a common problem the authors' conclusions from reviewing the literature generally make for depressing reading. The numbers of epileptic cases in studies of cognition have been far too small, possibly unrepresentative and the results inconsistent. Too frequently studies have not been controlled, even for age, sex, education and IQ. The exception, the well-performed Veterans Study from Portland, to which one chapter is devoted, indicates the importance of well-designed multi-centre studies with strict entry criteria. However, in contrast to earlier reports, the performance of the epileptic group did not differ from the rest of the population and there were few meaningful differences in the performance of patients on different anticonvulsants.

Population-based studies are still needed to identify the small group of children whose cognitive performance deteriorates or who are underachieving, to elucidate the relationship between educational attainment and the interictal EEG and the role of parental attitudes.

A brief but provocative chapter on transient cognitive impairment by Binnie concludes that urgent research is needed to decide which, if any, patients with subclinical discharges should be treated. The findings

from depth electrode studies pertaining to behavioural changes in epileptics in relation to seizure discharges and type of epilepsy, are reviewed by Fenwick. The unreliability of the surface EEG for lateralisation is addressed and mention made (without detailed discussion or references) of the important problem of behavioural changes associated with seizures occurring only at depth, with no surface ictal EEG alterations. The final discussion at the end of the book ranges over diagnosis, treatment and even the definition of epilepsy in relation to depth discharges. However, for detailed information on surface negative seizures and behavioural change, the interested specialist will have to go elsewhere. The summaries of the effects of anticonvulsant drugs on memory and mood are useful, if rather short, for such important topics.

Although there is frequent reference to various studies of memory or cognition which utilized routine EEG methods, little of which is new, there is no discussion of recent research into the role of cognitive evoked potentials and the newer PET and SPECT imaging techniques in relation to behavioural aspects of epilepsy.

Despite the drawbacks and the cost, which must be rather excessive for a book of this type, this is a useful contribution to an important and common clinical subject and will be essential contemporary reading for anyone who carries out research, or treats or assesses epileptic patients.

LD BLUMHARDT

Neuropsychological treatment after brain injury. Edited by DAVID W ELLIS, ANNE-LISE CHRISTENSEN (Pp 420; £77.) KLUWER ACADEMIC PUBLISHERS GROUP, 1989.

Most neurologists and neuropsychologists give dynamic psychology a wide berth. A commonly held belief is that an organic "explanation" in some way invalidates the content and meaning of thought. Such a view of cerebral disorders is rejected by the editors of this book whose central concern is not cognitive and perceptual remedy as the title might suggest, but a psychotherapeutic approach to brain injury. The tone is first established by a chapter subtitled "psychiatric perspective". It describes a number of psychological (rather than medically psychiatric) issues and concludes that the ultimate goal of rehabilitation is "to re-establish a sense of self—an acceptable identity". The contributors assume that the behaviour of brain injured people is meaningful, and hence a legitimate focus for

structured therapy. This has important practical consequences, for example in the management of aggression. "Disinhibited" behaviour is often viewed as an embarrassing eruption from the Jacksonian underworld and as such devoid of content and meaning. Here, aggressive behaviour is regarded as meaningful in its social-psychological context.

There are difficulties in offering psychotherapy to brain injured patients. First, the efficacy of conventional psychotherapy is questionable even in intact people and one has to be sceptical about a case report which concludes that the subject was finally enabled through group therapy "to attain the minimum degree of acceptance of his disability and adaptability necessary to ensure his stable future adjustment". Secondly, there is a diagnostic problem: how do we distinguish psychological from neurobiological factors? A third problem relates to the cognitive demands of psychotherapy which requires patients to understand explicit psychological formulations about themselves, and to retain new patterns of thought and behaviour. How can a sense of "narrative" continuity be restored in amnesics? How does reduced insight—referred to here in terms of Goldstein's "abstract attitude"—affect therapy? Yet another problem is partly ethical, partly conceptual. In behaviourally disturbed patients there is surely a tension between psychotherapeutic and behaviourist methods of management. Can a person be a rat? Although one is left with an inevitable sense of philosophical and scientific dissatisfaction, the fact that such issues have surfaced is a strong recommendation for this book. It is surely true that the primary object of therapy in brain injury is a person, a Goldsteinian whole in whom the fundamental themes of individual and social psychology are represented.

The specifically neuropsychological assessment scheme is derived from Luria, and aims to facilitate a therapeutic re-integration based on the individual's needs. Unfortunately the description of Lurian assessment and treatment is insufficiently concrete. A fuller description would no doubt be found in Christensen's monograph. As with Jackson's ideas, one sometimes has the feeling that Luria's use of neurobiological language (efferents, afferents, levels, etc) has a partly metaphorical force—not so far removed from Freud's systematics, but not to be rejected for that reason alone. We certainly need a unifying vocabulary to describe brain injury and its effects. The old categories—psychiatry, behavioural neurology, psycho-