Book reviews

the time of clinicians and investigative departments is occupied in diagnosing, excluding and managing these common disorders, and a novice would not get any clear idea how good are the results of surgical removal of benign intracranial but extracerebral neoplasms. Manganese intoxication on the other hand seems to crop up in many chapters. The list of conditions producing dementia is, quite correctly, a forbidding one, but I wonder how helpful such a small-print list is to the reader. One had also hoped that syringomyelia had by now graduated from the degenerative diseases into the realm of CSF hydrodynamics—which leads me to wonder whether the CT scan (fig 25-1) said to illustrate hydrocephalus with "extraordinarily dilated ventricles" isn't really an example of marked cerebral atrophy, bearing in mind the sulcal enlargement.

Despite these criticisms this basically is a very good book, and would have a great appeal to young doctors entering the field of neurology, but either the allied services in the USA require a far higher degree of knowledge of neurological minutiae than they do here, or the book is too detailed for them. Certainly I would heartily recommended it to my junior staff.

EDWIN BICKERSTAFF

Divided Visual Field Studies of Cerebral Organisation. Edited by J Graham Beaumont. (Pp 306; £18.00.) London: Academic Press, 1982.

Divided visual field studies, in which a stimulus is displayed in one or other of the half-fields, are designed to compare the processing power of the two cerebral hemispheres. Comparisons have been made with regard to variables such as verbal and non-verbal material, split-brain and psychiatric patients, sex, development and hand preference. This book provides a realistic appraisal of these seven areas of research as well as a detailed consideration of methodological and theoretical issues and electrophysiological studies and the effects of hand preference. The editor contributes three chapters as well as an Introduction and Conclusion, and seven other authors each contribute a chapter dealing with their own speciality.

The chapter on methodology contains an unfortunate—yet common—error in the description of the optic pathways. The connections, described in relation to the hemiretinae are wrong but would be correct if "hemifield" were substituted for

"hemiretinae". Fortunately, the cover of the book carries a clear diagram of the visual pathways which contradicts the written description.

The reliability of reported data together with an emphasis on adequacy of methodology and strictness in interpretation of results are recurrent themes throughout the book. Indeed, in some applications it is clear that the proportion of credible findings is low. For example, Fairweather assesses studies of sex differences in laterality of processing. He finds that 103 of the 129 experiments reviewed produced non-significant results and a larger proportion of the remaining studies showed slight rather than clear differences between the sexes. Similarly, Beaumont in his chapter on split-brain studies emphasises that the majority of data are derived from two patients and that there is always the possibility of extra-callosal pathology in this type of case. On the other hand, there are consistent results in the literature showing that verbal tasks produce a left hemisphere advantage, whereas non-verbal tasks favour the right hemisphere. However, although this is true for simple cognitive tasks, more complex tasks do not consistently produce clear-cut hemisphere advantages. Individual differences in processing strategy could be responsible for both this inconsistency and the dearth of convincing work in the electrophysiological studies discussed by Rugg.

I recommend this book to anyone interested in divided visual field studies for two reasons. First, it provides a comprehensive review of the literature with about 1000 references, mostly from the last decade. Secondly, the emphasis on methodology and data analysis provides a realistic assessment of the literature as well as guidelines to new researchers in this field. The text is dry in parts because of the large body of work reviewed in a limited space, but it should prove invaluable as a source of reference.

G BARRETT

The Neural Basis of Behavior. Edited by Alexander L Beckman. (Pp 337; £29.95.) Lancaster: MTP Press Ltd, 1982.

The book comprises presentations from a symposium covering a wide range of disciplines and including several distinguished authors. The book attempts to integrate electrophysiological, physiological, psychological, biochemical and pharmacological approaches to the study of neural factors controlling behaviour, and much of its

appeal lies in providing a refreshing multi-disciplinary insight into specialised areas. The book suffers from an unhelpful compartmentalisation of chapters into overlapping sections and an artificial weighing of certain aspects of behaviour by unrepresentative examples. Thus, the section covering "Learning and Memory" deals with neuronal growth in the hippocampus, escape locomotion in the marine snail, and float-training in goldfish, whilst other crucial issues in the understanding of learning (arousal, emotion and motivation) are dealt with in separate sections. However, the book contains noteworthy review articles by Iversen and Fray, and Nauta and Domesick, as well as several impressive contributions on sleep and pain which together give a useful overview of the CNS and behaviour.

NMJ RUPNIAK

Psychosurgery: A Scientific Analysis. By MAJ O'Callaghan and D Carroll. (Pp 332; £24.95.) Lancaster: MTP Press Ltd, 1982.

This book's chief virtue is an extremely thorough re-evaluation of the literature on psychosurgery since the 1940s, the Freeman and Watts era. No-one interested in the techniques and possibilities, the indications, dangers, claims and counterclaims, and, increasingly, the ethical complexities of the subject can possibly ignore it.

The authors' general conclusions about psychosurgery are unfavourable; if this view is justifiable, it is as well that the treatment is becoming less popular. It appears that in the United Kingdom in 1981 only about 70 operations were carried out, 60% of them in one centre. This is a far cry from the 12,000 prefrontal leucotomies done before 1955. Nevertheless the book and its conclusions are open to many criticisms, starting with a disagreement about the definition of "psychosurgery". The authors' insistence, emphasised in the blurb, that its purpose is to modify behaviour belies its main use in Britain. This is to treat intractable depressive illness, to relieve serious suffering and to help to prevent suicide. A more important objection is to the authors' claim that there is a spontaneous recovery rate of 40% in the unoperated (page 280). This glaringly unrealistic figure ignores the fact that surgery is hardly ever thought of before an extended trial of antidepressant drugs and ECT has failed to do any lasting good. In such patients the chances of spontaneous recovery must be very much smaller than two-fifths.