normal/abnormal as well as light/electron microscopic. The major bonus is the mini-atlas in the middle of the book which has 53 colour lithographs of high quality. There are the usual pros and cons of a multi-author book by experts: pro is the rich diversity, con is the overlap (although slight in this volume). On balance, I found it a very readable book and it is clearly a must for anyone seriously interested in CSF. I would echo what they say in their preface "in most instances, the extent of sophistication in the use of cerebrospinal fluid trails our use of other equally valuable body fluids (such as blood and urine) by several decades".

This book goes a long way to redress the balance in favour of the more sophisticated outlook

EJ THOMPSON

Vision and the Brain: The Organization of the Central Visual System (Association for Research in Nervous and Mental Disease, Vol. 67). Edited by B. COHEN and I. BODIS-WOLLNER. (Pp 364; Price \$156.50). New York, Raven Press, 1990.

This is the latest in a long line of research publications from the Association of Research in Nervous and Mental disease which go back as far as 1920, and is the first specifically on the subject of visual physiology and its disorders. It gives a systematic account of recent work in the experimental field on the organisation and functioning of the visual system and related oculomotor control. Some clinical aspects are also touched on.

The book begins with two chapters on recent advances in the physiology and pharmacology of the retina notably the two types of bipolar cells and on the function of the amacrine cells. A long chapter on the lateral geniculate nucleus describes the two parallel systems: magnocellular and parvocellular, with their separate projections and functions.

The chapters on the visual cortex are more relevant to the clinician and review the recent work on plasticity. It is now established that the cortex develops in a way which will ensure an effective information processing system appropriate to the visual world in which the organism is reared in early life, and that disturbances in the visual input during this early critical period may have permanent effects. There is an excellent chapter on parallel processing in the prestriate cortex for form, colour, movement and depth perception, and evoked potential techniques are applied to the clinical problems of loss of object recognition or facial recognition. There is also an important chapter on neuronal mechanisms underlying eye movements occurring in response to a movement stimulus, emphasising the importance of two separate regions in the temporal lobe. There is an interesting chapter on the ability of PET to explore high level processing in the normal human brain by means of small variations in regional blood flow. The concluding chapters describe visual disturbances in Parkinson's disease, Alzheimer's disease and multiple sclerosis and attempt to explain these in terms of specific cell loss or a breakdown in parallel processing.

This book is an excellent source of reference for neurologist and psychologists concerned with how the brain looks at and sees the visual world.

RW ROSS RUSSELL

Comprehensive Neurologic Rehabilitation Vol 2 Traumatic Brain Injury. Edited by PAUL BACH-Y-RITA, MD. (Pp 331; Price \$59.95.) New York: Demos Publications. 1989.

This book is based upon a conference held in 1987. There are 26 contributors—all from North America. Most of the contributors are specialists in Rehabilitation, or Psychologists.

The book is divided into five sections comprising 21 chapters. The sections are: Patient Management Issues, Neuropsychological and Behavioural Issues, Neural Recovery, Rehabilitation Issues, and Community Integration Issues. As is to be expected of all books of this type—the chapters vary greatly in quality and length and tend to be repetitive. Some chapters have no summary.

Some of the contributions are of considerable interest. I enjoyed the section on the Persistent Vegetative State, by White and Glen. Topics discussed include bladder problems, severe spasticity, and heterotopic ossification. Curiously, there is no discussion of the topical problem of whether or not such patients should be segregated in hospital. Indeed, there is really very little discussion of organisational issues—for instance, what should be the components of a locality Head Injury Service.

I enjoyed the chapter on Pathology and Structural Change following Head Injury, by Povlishock. The classical work by Strich is critically re-examined and the hypothesis that axons are immediately torn at the time of injury is challenged. The author suggests that traumatically-induced stretch is the important initial event. Over a period of 12–24 hours there is a local accumulation of organelles with focal axonal swellings. This process of focal lobulation leads ultimately to the formation of a retraction ball. This remains in continuity with the cell body, but Wallerian degeneration occurs in the detached segment. The findings described challenge the concept that tissue tearing with immediate axonal disruption is the necessary consequence. The significance of this finding is unclear.

The section on Neurotransmitters, by Boyeson includes a brief account of Luria's work showing the effects of treating motor deficits with neostigmine, and aphasia with galanthamine. There is then the work of Boyeson and others showing the beneficial effects of norepinephrine infusions into the cerebellum in rats with injury to the sensory motor cortex. It seems clear that multiple neurotransmitter disturbances occur after a traumatic brain injury. The therapeutic significance of these is not yet clear.

This book does not contain very much mention of work from the United Kingdom apart from repeated references to the Glasgow Coma and Outcome Scale. I liked the quotation from Sir Charles Symonds, 1937—"It is not only the kind of injury that matters, but the kind of head".

Overall—interesting and valuable for those working in the field of head injury. A reasonably good "state of the art survey" for the rest. There are many useful references.

R LANGTON-HEWER

Alzheimer's Disease. Treatment and Long-Term Management (Neurological Disease and Therapy Series/4). Edited by J L CUMMINGS, B L MILLER. (Pp 390; Price \$125.00 (US and Canada) \$150.00 (All other countries). New York, Marcel Dekker Inc. 1990.

Most neurologists and psychiatrists I know, if asked what is the treatment of Alzheimer's disease, would say that there is none. If asked again, they may say that several pharmacological strategies have been tried in the past without startling results. Those interested in management rather than diagnosis, may say that some troublesome symptoms could be palliated by medication or by environmental modification, and all will express the hope that new scientific advances will change this grim perspective, but the more pessimistic among them will add that this is unlikely to occur in the foreseeable future. When confronted with this title, they could be forgiven for thinking that some major breakthrough had been reported in that copy of the learned journal they forgot to take on holidays with them. Unfortunately this is not the case; palliation and hopes for the future are all we have.

This American book is part of a series entitled "Neurological disease and therapy" and follows a volume dealing with the molecular genetics and clinical aspects of Alzheimer's disease. In its 400 pages there is a lot of redundant information as one expects when there is little new or useful to say, and it may have been better to extract the small kernel of interesting information and add it to the previous volume. The book contains four main sections dealing with pharmacological treatments, behavioural management, long term care and future treatment directions. In the pharmacological section a chapter entitled "unsuccessful treatments" could certainly have been expanded to include most of the other approaches mentioned under different headings. The practical management of common problems such as incontinence and wandering behaviour, and the chapter dealing with family-directed therapy are better value, and those in charge of the everyday management of patients will find them useful. The final section, with a tangible science fiction element in it, deals with such lofty themes as genetic engineering, intracerebral grafting, the future use of neuropeptides and strategies to prevent amyloid angiopathy. If we are lucky, it may be possible to write a riveting book with the same title sometime in the 21st century. I hope I am still here to read it.

MARIA RON

A Colour Atlas of Brain Disorders in the Newborn. Edited by L S DE VRIES, L M S DUBOWITZ, V DUBOWITZ, J M PENNOCK. (Pp 199; Price £50.00.) London: Wolfe Medical. 1989.

Thirty odd years ago Beaumont's *Applied Medicine* was essential reading for the "Membership". Austerly illustrated in black and white, it consisted of a number of case studies in the form of an interlocutory Grand Round. As a vivid portrayal of the diagnostic process using real patients, in its day it couldn't be bettered. Its success owed