epilepsy?, The different types of epileptic seizure, The causes of epilepsy, The first seizure and the investigation of epilepsy, Treatment, Longterm outlook, Living with epilepsy—practical points, Febrile convulsions, The promise of the future. His chapter on Living with Epilepsy comes nearest to dealing with many of the questions raised by the Laidlaws.

Both books are aimed at patients and their relatives, the former is best for dispersing their anxieties, the latter for providing more detailed factual information about the disorder. Indeed the latter could be read with profit by any physician looking for a concise account of epilepsy and its treatment. The books complement each other and can be warmly recommended.

EH REYNOLDS

Organization in the Spinal Cord—The Anatomy and Physiology of Identified Neurones. By AG Brown. (Pp 238; \$77.30, DM 170.) Berlin: Springer-Verlag, 1981.

The relationship between structure and function lies at the heart of classical physiology. This book is a summary of the most recent and elegant example of this approach to the neuronal organisation of the spinal cord. Dr Brown and his colleagues at Edinburgh have been pioneers in perfecting the technique of injecting and staining electrophysiologically identified afferent fibres and cell bodies, and they have collected the results of the past six years into this volume. There is a profusion of beautiful diagrams and photographs of stained neurons and although the great majority have been published elsewhere, it is only when they are brought together that the full impact of the diversity and specificity of their types becomes clear.

This book is not a survey of the field as it stands at present: it is a monograph devoted to the results of one group. Other workers are mentioned, but only in passing and some differences in results are glossed over rather quickly. Nevertheless, there is an enormous amount of information here. There are two main sections to the book. The first deals with cutaneous afferents and the spinocervical tract cells, describing the pattern of termination of the various classes of receptor fibres within the dorsal horn. A useful summary chapter describing the general features of dorsal horn organisation marks the end of this section. The rest of the book is devoted to muscle afferent fibres and the

morphology of their terminations in the intermediate zone and mononeuron pool. The section is completed by a detailed anatomical analysis of Ia contacts with stained motoneurons, which provides remarkable confirmation of structure deduced from electrophysiological experiments. A short appendix describes the details of the methods used.

This is a striking, but expensive, book which should ensure that the results of these careful neuroanatomical studies reach the wide audience they deserve.

J ROTHWELL

Neurofibromatosis (Von Recklinghausen Disease) Genetics, Cell Biology and Biochemistry. (Advances in Neurology, Vol. 29.) Edited by Vincent M Riccardi and John J Mulvihill. (Pp 302; \$40.12.) New York: Raven Press, 1981.

Raven Press has attracted a deserved reputation for publishing the proceedings of excellent conferences in their Advances in Neurology series. Many have become standard reference works, for example, in my own field, Volumes 1 and 23 on Huntington's disease, Volume 14 on dystonia, and Volume 26 on cerebral hypoxia. Volume 29 on neurofibromatosis may fall into the same category, at least as an extensive source to contemporary scientific approaches to this condition. It reports the proceedings of a workshop held under the auspices of the National Cancer Institute, the National Neurofibromatosis Foundation, and the Baylor College of Medicine Neurofibromatosis Program to commemorate the centenary of von Recklinghausen's description, a translation of which is appended. A recurring theme throughout the book is the lack of agreed criteria for the diagnosis of the condition (how many café-au-lait spots are required?). Be that as it may, figures for incidence of 1 per 3000 live births and for prevalence of 30 per 100 000 are suggested, making this one of the commonest single gene disorders affecting the nervous system. Some 15 to 20 000 people are affected by the disease in the UK. Benign tumours become malignant in some 3-5% of individuals, 12% become epileptic, and at least 10% exhibit mental retardation. Eldridge marshals substantial evidence to suggest that neurofibromatosis consists of at least two distinct genetic diseases, the classical peripheral form and a central form characterised by bilateral acoustic neuromas and elevated levels of

nerve growth factor (as estimated by serum radio-immunoassay). The clinical features and pathology of the disease are dealt with briefly, but one of the editors, Vincent Riccardi, recently has published an extensive clinical account in *The New England Journal of Medicine* 1981;305: 1617-27. The bulk of the present book concerns neurobiology relevant to neurofibromatosis. In particular, the regulation of neural crest development and growth factors affecting the nervous system receive considerable attention, so this volume probably will appeal more to the research worker than to the clinician. Its publication reflects the media impact of the rediscovery in print and film of the Elephant Man so vividly recorded for posterity by Sir Frederick Treves in 1923. Now an association for patients with neurofibromatosis has been formed in the UK and anyone interested has been invited to write to Mrs Trish Green, 14 Willow Way, Sherfield on Loddon, Basingstoke, Hampshire.

CD MARSDEN

Manual of Spinal Surgery. By DHR Jenkins, RD Weeks, AYC Yau, RR Du. (Pp 106; £15.00.) Sevenoaks: Butterworths, 1981.

This brief guide to the surgery of the spine has been written by two orthopaedic surgeons and a neurosurgeon. A third orthopaedic surgeon has illustrated it with a large number of line drawings which are clear, helpful and relevant to the text. Only the surgery of the skeletal structures of the spine is covered. Intradural operations (with the exception of lumbar rhizotomy and the transdural removal of large central disc protrusions) are not described, and thus the book will be of more interest to orthopaedic surgeons than to neurosurgeons and neurologists. The prime purpose of the book appears to be to provide a guide to the techniques of carrying out standard operations on the spine. In this it undoubtedly succeeds. The text is clear, crisp and succinct, although, as in any surgical manual there are bound to be certain points which will not meet with universal agreement. The present reviewer would dispute that Cloward's operation cannot be carried out at the C 3/4 level, and that the prone position is more satisfactory than the lateral for the removal of unilateral lumbar disc protrusions.

Unfortunately an otherwise excellent book has been spoilt by an arrangement of

its contents which makes it difficult for the reader to find his way around and by introductory sections to some of the chapters which are frankly confusing. Clarity of exposition seems to have been sacrificed for the sake of brevity, a sacrifice which need not have been made for such a short book. As the book is presumably (the authors are not clear on this point) intended for the surgeon who operates on the spine relatively infrequently, the indications for the various operations, and postoperative management and complications, could perhaps have been dealt with at greater length. Especially in the field of degenerative disease and trauma, the occasional spinal surgeon can do a great deal of mischief and nothing would have been lost by devoting more space to spelling out the complexities and problems involved in assessing patients prior to surgery. Many patients remain dissatisfied after spinal surgery and this is more often because they should not have been operated on at all, or the wrong operation was performed, than because the technique of the actual operation which was carried out was faulty.

RSM WILLIAMS

Mental Retardation and Congenital Malformations of the Central Nervous System. By Josef Warkany, Ronald J Lemire and M Michael Cohen, Jr. (Pp 459; £47.50.) London: Year Book Medical Publishers Ltd, 1981.

This handsomely set out reference book provides a valuable adjunct for both pathologists and clinicians to the already available atlases of mental retardation syndromes. Based on a series of review articles previously published in the annual review of "Mental Retardation and Developmental Disabilities" on topics such as microcephaly, hydrocephaly, hydroanencephaly, megalencephaly and anomalies of the corpus collosum, it has been extended to include other congenital abnormalities of the central nervous system malformations with an account of the most important dematoglyphic findings and chromosomal syndromes.

With the increasing use of CT scanning in the diagnosis of mental retardation and the early detection and prevention of in-born errors of metabolism and other environmental causes, it seems likely that we shall continue to see a change in the differential pattern of morbidity in severe mental retardation with a resurgence of

interest in congenital malformations of the central nervous system of a non-lethal type which will present an increasing challenge both diagnostically and from the point of view of prevention. For this reason this volume is assured of a place as a standard reference for paediatric neurologists and other clinicians and teachers working in the field of mental retardation.

It is difficult to evaluate the coverage of such a work until it has been well used in practice, but the extensive and up to date bibliography augurs well. Perhaps the most obvious criticism of such an expensively produced volume is the poor quality of some of the illustrations, but hopefully as its reputation becomes established this will be rectified in future editions.

JOHN CORBETT

Psychopharmacology of Sleep. Edited by David Wheatley. (Pp 256; \$39.44.) New York: Raven Press, 1981.

Somnopharmacology! The title is a little misleading. The book is really a symposium proceedings from the British Association of Psychopharmacology meeting in Exeter in 1980. The contents are divided into two equal parts, the first concerned with the nature of sleep, and the second with the effects of drugs on sleep. The book is not a comprehensive manual of the pharmacology of hypnotic and central stimulant drugs nor a practical prescribing guide but a selection of well-edited essays on topics as diverse as sleep peptides, air travel, benzodiazepine receptors, and new hypnotics. It begins with a marvellous account of sleep in animals by Bruce Durie. Of the snakes, EEG records are available only for the African python, whilst only the small caymans of the crocodillians have been investigated, perhaps not surprising facts! Durie points out that much of the animal data is fragile, as with the Brazilian tapir's sleep which was characterised by observing two animals for one day with twitching taken as evidence for paradoxical sleep. The search for sleep-inducing substances has taken three approaches, the investigation of herbs and plants, the study of conventional neurotransmitters, and the search for endogenous hypnotoxins, peptides, or sleep factors. Koella and Druker-Colin discuss the last of these topics although it is sometimes difficult to evaluate all the evidence such as the injection

by Pavel *et al* of 10^{-6} pg of either synthetic or partially purified pineal vasotocin into the third ventricle of cats who then curl up in the corner of the cage and fall asleep. It is evident that the existence of a specific peptide that causes sleep has yet to be conclusively shown. Alain Reinberg discusses chronopharmacology; thus purgatives and enemas are most effective given in the morning, whereas narcotic drugs are usually best at night. The second section of the book is a little more pedestrian although of greater clinical interest with stress on the value of the new short acting benzodiazepines and a discussion by Scott of daytime drowsiness, concentrating on EEG findings rather than practical therapy of narcolepsy, hypersomnolence and sleep apnoea. The book ends with the question "do we need hypnotics?" The night worker who lives in Concorde's flight path answers "Yes". A curate's egg book, not essential but fun.

JD PARKES

Electrical Stimulation Research Techniques. Edited by Michael M Patterson and Raymond P Kesner. (Pp 370; £25.80; \$39.00.) London: Academic Press Inc, 1981.

The articles collected together in this volume present refreshingly straightforward and clear summaries of various electrical stimulation techniques from microstimulation of the cerebral cortex to grid shock stimulation of the whole animal. Only two chapters (one of them co-authored by one of the editors) stray into a literature review of experimental results. The other authors limit themselves to detailed explanations and descriptions of the techniques involved, with much useful discussion of the limitations of each method. The advice in most instances is the result of many years of experience in the field and one finishes the book with the feeling of having attended eleven good undergraduate lectures on nerve stimulation. As a result, this volume should be of interest to anyone about to begin research in this field, and will be refreshing to those who have become so familiar with the techniques they use that they overlook some of their limitations.

The book can be divided into four main sections. It begins with two chapters on the theoretical aspects of extracellular and intracellular stimulation, presented at a level that will be intelligible to anyone unfamiliar with the subject. The next three