their perceptual problems as he pursued a research project supported by the Department of Education and Science. He proposes to present his scientific data and conclusions in another book in which he suggests that: 'The informal and slightly vitriolic style permitted by the title of the present volume would be inappropriate'. It would indeed, but no reader of *Dyslexia and the Individual* will fail to be stimulated by it; at times to rage; at times to mirth; and most often to sheer admiration for the author's ability to write excitingly clear English prose. At times this is a little too 'flashy' (Professor Meredith considers the question of jargon on pages 60 and 61 of the book), so that the full extent of his erudition is concealed; but there is a useful list of references presented in a rather unusual order, some suggestions for further reading, a number of which seem typically somewhat out of context, and an adequate index. The book is nicely produced.

All teachers, doctors, psychologists, and therapists interested in the nature of the problems encountered by children who have specific difficulties in learning to read and spell should read this very 'Meredithian' book.

T. T. S. INGRAM

NEUROLOGY CASE STUDIES By S. M. Wolf, T. L. Munsat, and P. B. Dunne. (Pp. 309; illustrated; £4.50.) Kimpton: London. 1972.

The title of this loose-leaf book does not indicate its nature unless one is familiar with the *Case Studies* series. It is in fact an account of 55 different neurological cases, covering a very wide spectrum of disorders, recorded in the conventional manner of history, examination, investigations, and diagnosis, but interrupted at each stage, sometimes several times, by a sort of multiple choice questionnaire, so that one can give oneself a critical self-examination of one's train of thought at each approach to the problem. The answers are given at the end of each case with quite elaborate discussion at times of why a particular investigation was ordered or decision reached, and why certain diseases are included or excluded in the differential diagnosis. This is followed by a number of references relevant to the particular problem under discussion. It is a neurologist's natural reaction to this type of exercise to think that he wouldn't approach it like that at all, but the more of the cases one reads, the more one realizes that indeed, with minor variations, these are the thoughts that pass through the mind at different stages of managing a case, and gradually the book developed a fascination that made it extraordinarily difficult to put down. While it is an immensely enjoyable exercise to test oneself and one's colleagues out in this way, yet a fair knowledge of the practice of

neurology is needed to appreciate the reasons for certain conclusions, and it is open to question whether this is a very good method of teaching or learning the subject for the novice. The other main criticism is that in many of the cases it is not made sufficiently clear at the end what diagnosis was arrived at. However, if the other books in this series are as good as this they must make an enviable collection for a physician to possess. There are some curious simple spelling mistakes which have nothing to do with transatlantic variants, and it is a pity that an unbound book printed by offset must nowadays cost so much.

EDWIN R. BICKERSTAFF

BRAIN DISEASES By A. Biemond. (Pp. 879; 228 figures; £24.00.) Elsevier: Amsterdam. 1970.

Authors of comprehensive textbooks on clinical neurology have been baffled by the problem of presenting a comprehensive picture of neurological diseases in a single volume. Textbooks in English have been unsatisfactory for the trainee. If they are comprehensive they are too condensed to give a good picture of the evolution of disease or of the problems of differential diagnosis. If the author prefers to give an introduction to neurology as it is practised the book is rarely suitable for reference. Professor Biemond has confined his book to cerebral diseases, thus giving himself space to write elegantly about these disorders with sufficient detail and reference to diagnostic problems to make this book really valuable for the learner and still useful as a reference book.

The first part of the book discusses localizing syndromes with indication of the main lesions likely to be encountered at each site. The second part discusses diseases from the pathological point of view, supported by statistical data carefully recorded from the University Clinic, Wilhelmina Gasthuis, Amsterdam. The book contains more detail on neuropathology, EEG and neuroradiology than other similar textbooks but lays emphasis on diagnosis by clinical methods. The sections on treatment naturally reflect local preferences, some of which will be unfamiliar to British readers.

J. A. SIMPSON

THE BIOLOGICAL BASES OF BEHAVIOUR Edited by Neil Chalmers, Roberta Crawley, and Steven Rose. (Pp. 318; illustrated; *.) Harper and Row for the Open University Press: London. 1971.

The increasing interest in 'behavioural science' has centred mostly on its 'soft' or sociological end. Its neurobiological components have been very much neglected, even in medical schools, despite the fact

that developments within them have already yielded advances in therapeutics. The Open University is therefore to be congratulated on introducing, early in its existence, a course on the biological bases of behaviour which ignores conventional interdisciplinary boundaries: this volume is the course reader and contains papers reprinted from general scientific journals or texts.

Thirty-four papers cover the structural and physiological substrates of perception, emotion, motivation, memory and learning, their sociological aspects, and certain philosophical and ideological problems generated in this area of knowledge and inquiry. Fourteen of these papers are reprints from *Scientific American* and the authority of the text and excellence of its presentation are therefore assured: in general this can also be said of the other contributions.

Even a balanced selection, as this is, of such a small number of brief articles covering a very large field inevitably leaves the novice with a rather tachistoscopic impression of it, but the authors have helped the reader by giving him his bearings in a brief introduction to each section. Though intended for those taking a specific Open University course this book would interest the neuropsychiatrist wishing to remind himself of the scientific background to his clinical work and some articles can be read for their humour or for their provocativeness.

R. N. HERRINGTON

* Price not stated.

GLYCOLIPIDS, GLYCOPROTEINS, AND MUCOPOLYSACCHARIDES OF THE NERVOUS SYSTEM By V. Zambotti, G. Tettamanti, and M. Arrigoni. (Pp. 334; illustrated; \$17.50.) Plenum Press: New York. 1972.

Although as much as 10% of all cerebral proteins are glycoproteins little information has hitherto been available on their properties in the nervous system. Rather more is known about glycolipids but study of the mucopolysaccharides has been limited. The publication of the proceedings of a conference on the topic indicates that some advance has now been made.

The first section deals with the chemistry and metabolism of glycoproteins and mucopolysaccharides of the nervous system. This is a very new field and many of the contributions include details of experiments necessary for the separation and identification of these complex substances. Mechanisms for transglycosylation are clearly discussed. Some evidence suggests that glycoproteins are important in information transfer at neuronal and synaptosomal membranes. It has, for example, been proposed that these macromolecules are involved in

memory processes and glycosaminoglycans may be important in axonal flow and in myelination.

The next part deals with the chemistry and metabolism of brain gangliosides. A lot of information is provided on the participation of enzymes in these various complex reactions. Techniques for isolation of brain subcellular structure including synaptosomal plasma membrane by differential centrifugation are discussed. This could well have been placed before the interesting account of glycoproteins of synaptosomal plasma membrane found in the first section.

The final part of the book deals with the chemical pathology and diagnosis of lipid and mucopolysaccharide storage diseases. Much original data is provided, mostly on the rare storage diseases.

Although there are obvious advantages in publication of papers presented at a conference this may be detracted from by delay in production and by the uneven quality and lack of editing of contributions. In addition, it is almost impossible to maintain continuity and prevent overlap of subject matter, so that although research workers already familiar with the field will find a book of this type useful the general reader may be confused. For these reasons perhaps publishers would consider producing cheap paper-back editions instead of printing durable and expensive books which frequently largely duplicate material found in journals.

A. N. DAVISON

NEUROLOGICAL UROLOGY By Ernest Bors and A. Estin Comarr. (Pp. 454; illustrated; £9.50.) Karger: Basel. 1971.

The authors are well known for their contributions to the management of patients with spinal injury based on their experience at the Long Beach Spinal Centre, California, Dr. Comarr succeeding Dr. Bors on the latter's retirement. It is particularly appropriate that they have chosen to write upon disorders of the urinary tract as many of their studies have been related to problems of micturition. The authors have made their text of more general interest by going beyond the paraplegic situation by considering urinary disorders in a wide range of neurological diseases. The book is divided into two parts: the first deals with basic concepts of anatomy and physiology, and the second details the investigation of urinary tract disorders, their classification and their management. It concludes with a very full bibliography extending to 94 pages of references.

There is a wealth of information in this book, but the problem is how to get at it as there is no index. This extraordinary omission causes the reader to rely upon the arrangement of the sections and the way they are detailed at the beginning of the text.