sculpt and skull tumours—only an operation for sebaceous cyst is given. The only operation of interest to the neurosurgeon which is included is that for cervical rib. This is inadequately described and the illustrations not very helpful.

For each operation there is a short section on indications and some clinical data. These are often not fully covered and in any case would be more appropriately placed in a work on clinical surgery. The operative descriptions are, in general, good and the illustrations adequate, though variable in quality and useful content. Many minor but essential details of technique, such as the closure of the platysma in neck incisions, are not stressed and the frequent advice for the use of catgut sounds strange in this day and age. The neurosurgeon will find nothing to help or interest him in this volume.

BRODIE HUGHES

BOOK REVIEWS


This volume is the first of a trilogy. The next two will deal with injuries of the spinal cord and of peripheral nerves.

The book sets a high standard and it augurs well for its successors. There are introductory chapters on anatomy, physiology, and pathology. Other chapters deal with the origin and effects of intracranial pressure, with echoencephalography, x-ray diagnosis, and anaesthesia if operation should be required. There are very useful and concise pages devoted to the care of the unconscious patient as well as the general diagnostic procedures to be undertaken.

Professor Kessel is to be congratulated not only for having chosen his contributors with extreme care, but also for his own presentation of operative and conservative therapy. Since the vast majority of injured patients turn out to have no need for major operative procedures or prolonged hospitalization, one misses in this volume the need to explain to patient and relatives that there is no need to fear any future complications: a most important part in the early treatment of skull and head-injuries.

There are, of course, several points on which the reviewer would take issue with the contributors whose chapters to some degree necessarily overlap. Not enough is said about the rarity of subdural haematoma occurring in adults without major brain damage, and the wisdom of ever excising a temporal lobe in the presence of a tentorial herniation is much to be doubted. The reviewer has never found it necessary or of any benefit to sever the middle meningeal artery at the foramen spinosum in epidural haemorrhage; such a procedure could only lead to further brain damage. In his experience of gunshot wounds during the last war the reviewer has not found it necessary to excise dura nor to close the dural defect. He was, however, much honoured to find on p. 367 a diagram which he had contributed to the British Journal of Surgery, Suppl. I (1947). His pleasure would have been enhanced had there been an acknowledgement of the source of this diagram in which, in fact, the dura had been left open. Excision of the dura may lead to the spreading of infection in the meningeal spaces which usually adhere soon after the trauma.

In spite of these criticisms, to which others could be added, the volume is to be welcomed. But it is difficult to know to what public it addresses itself. It is too specialized and too detailed for the general surgeon, while the practising neurological surgeon will find much of it too elementary and will be critical of some of the rest. There are 265 illustrations of varying quality.

There is an excellent bibliography and, in general, the volume recommends itself as a reference book, for it leaves little concerning the care of acute skull and brain-injured patients undiscussed.

J. SCHORSTEIN


This book is the published proceedings of a symposium held in Washington, D.C. and its contents are an indication of the progress made in the study of feedback mechanisms in the nervous system. This has required the collaboration of many disciplines, particularly those involved in the mathematical and biological sciences and computer technology, and contributions from these different fields have been brought together. Of the 18 contributions a number are concerned with information processing in the nervous system and the analysis of coding arrangements. In the opening section by Ross Adey these are considered as changes at cellular and molecular level; later in the book J. Ryland Mundie develops a system of communication logic to describe nervous activity. W. L. Kilmer and his associates consider the reticular formation in terms of a mathematical model which can be studied and tested by computer simulation. Other sections include an analysis of feedback mechanisms in the vestibular system by Laurence R. Young and there are papers on the mechanisms underlying speech and linguistics and the control of reflex activity. Much of the material in the book is dealt with in rigorously mathematical terms and may prove difficult for the non-specialist reader.

Sections which are of perhaps more immediate interest to the clinical neurologist include H. Hyden's review on the application of microtechniques to the analysis of nucleic acid in neurons and glia and L. J. Fogel's discussion regarding the development of a self-regulating prosthesis. N. D. Zavalova gives an interesting analysis of psychological responses to accident situations and H. L. Oestreicher discusses the problems involved in speech recognition by machine. The final paper by Ertl describes his concept of neural efficiency, which he has studied by measuring the latency of evoked cortical potentials.

The discussion following the papers has been reported fully, carefully edited, and is generally helpful. Each section has an extensive bibliography and there is a comprehensive index. The book provides a valuable account of current work in a rapidly growing field and can
be recommended to anyone interested in the mathematical analysis of nervous activity.

RENAL FAILURE IN PARAPLEGIA By C. R. Tribe (with additional material by J. R. Silver) (Pp. ix + 107; illustrated, 70s.) Pitman Medical Publishing: London. 1969. This book is a valuable record of the pathological changes leading to renal failure in paraplegic patients. It is mainly for pathologists but there is a section on diagnostic tests for urinary tract disease in chronic paraplegics by the Director of the Liverpool Regional Paraplegic Centre. Both writers were formerly at the National Spinal Injury Centre, Stoke Mandeville Hospital, and write with authority on their subjects, drawing their material from both units.

The type of presentation—a statistical review with comments on unique cases—makes for difficult reading and tends to be repetitive. This book will be a valuable source of reference for many who look after paraplegics in one way or another, but the general neurologist will find it worth glancing over the chapter summaries for a reminder that the most important late cause of death in paraplegia, of whatever cause, is urinary infection with its many complications.

Dr. Tribe has made valuable contributions to the study of amyloidosis leading to a nephrotic syndrome in paraplegics. The many causes of hypertension in the paraplegic are discussed briefly. The book is not concerned with special techniques of radiology, treatment of renal failure or infection, or with the management of the paraplegic bladder; all subjects which should be better understood in neurological and neurosurgical depart-

J. A. SIMPSON

THE ROOTS OF INDIVIDUALITY By Sibylle K. Escalona. (Pp. x + 547; illustrated. 100s.) Tavistock Publications: London. 1968. This important book is the result of Dr. Escalona’s work over a span of 20 years. She tries to relate the early life experiences and behaviour of young infants with the behavioural characteristics which they manifest in later childhood.

The book is divided into three parts. In the first of these she discusses the theoretical basis of her research and reviews a massive amount of literature on the subject of handling of young infants and the effect this has on their later behaviour development. She provides a detailed description of the theoretical basis of her work. The description is intense, complicated, and accompanied by very numerous footnotes in which references are given to a large amount of pertinent literature.

The second part is devoted to a description of the activities of infants aged between 4 and 32 weeks showing that even at this early age very different patterns of behaviour can be identified and described. She examined, with colleagues, 128 normal infants and describes their behaviour at rest, in contact with their mothers, and in other different situations.

In the third part Dr. Escalona examines the correlation between earlier life experiences and their later behaviour in the family and the larger socio-cultural setting in which they live. As she says herself ‘case presentations, therefore, had to be very specific; yet they had to conceal identifying information’. In fact, each case is described in great detail according to the child’s behaviour in certain specified situations.

The author talks of an ‘adaptation syndrome’ which determines the later adjustment to social circumstances of individual children. Dr. Escalona’s approach to the study of infant behaviour is a broadly based one. She bases her theories on those of the psycho-analytic school and on Jean Piaget and his disciples.

It is a difficult book to read, for the author’s style is at once intense and convoluted. For example, on page 25 a footnote reads ‘Bergman and Escalona (1949) reported on a group of children who in early infancy showed marked hyposensitivity and who in childhood developed psychiatric illness or deviant development. They suggested that such infants lacked an effective “stimulus barrier” so that ordinary levels of stimulation proved overwhelming to them. In speaking of high and low perceptual sensitivity in the present context we refer only to variations within the normal range’. This makes sense after one has read it once or twice in the context of the text but reading is never easy and though the book contains a mass of information about studies of infant behaviour, it imposes considerable demands upon its readers.

The book is well produced, contains a mass of useful references and has a good index. At £5, its price cannot be considered high in present-day conditions.

T.T.S. INGRAM

SENSE AND SYMBOL: A TEXT BOOK OF HUMAN BEHAVIOURAL SCIENCE By Paul R. Miller. (Pp. xviii + 398; illustrated 65s.). Staples Press: London. 1969. This book covers, in under 400 pages, an extremely wide field, and is packed with information. The English in which it is written is economical and efficient; it uses more special technical words than are really necessary, but in a textbook this is hardly a defect, since students must learn the jargon in which, for good or ill, most research papers are written, and in Dr. Miller’s book it is not only used, but well explained. The views expressed are those of one author throughout, the plan is orderly, and there are excellent indexes.

Sense and Symbol is about the psychology of normal human behaviour. The core of this subject necessarily consists of observations such as anybody without special training can make in everyday life; thus any work that sticks closely to the core runs the risk of seeming to be a mere assembly of anecdotes. Some writers try to avoid this risk by digressing extensively in borderline fields (ethology, experimental psychology, abnormal psychology, neurophysiology) that are less subject to it. Dr. Miller does not, on the whole, take this easy way out. He does, I think, digress too far into neurophysiology, which occupies about a sixth of his book (most of chapters 4, 5, and 6). Here he is often uncritical, and far too apt to quote general theoretical statements that have no precise meaning, but will suggest to the inexpert reader a rough meaning that is ill supported by the facts. The omission of these statements—for example, on the reticular activating system, the limbic lobe, electro-