is now accepted as a routine form of neurosurgical treatment. In large measure this is due to the pioneering work and industrious follow through of Irving Cooper. As so often before in neurophysiology, the detailed observations of clinicians have led to a new evaluation of the concepts of motor control. Indeed the term ‘extra-pyramidal system’ hardly appears in the book.

There is an interesting and valuable section on the pathophysiology of hyperkinesis and hyperkinesia. Cooper’s views on tremor are personal. They resemble that proposed by the reviewer but many will feel that the role of the cerebellum in resting tremor remains in doubt.

There is a synoptic review of the author’s experience of the surgical treatment of Parkinson’s disease, intention tremor, dystonia, hemiballismus, hemichorea, and the dyskinesias including valuable practical details.

A feature of the book is the use of superimposed serial tracings of cinematographic records to illustrate movement disorders before and after surgery. These drawings by Mary Lorenz provide wonderful teaching material. Macdonald Critchley has provided a concise historical foreword to a book which is a landmark in neurology.

J. A. SIMPSON


This volume is a very welcome addition to the atlases already available because it is a statistical approach to the variability of the thalamus and adjacent structures. It will be of practical usefulness to the surgeon and, indeed, grew from a need to determine the variability in size and position of the centro-medial nucleus in which stereotaxic lesions were to be placed in the treatment of intractable pain. With the accumulation of considerable information, other thalamic nuclei, the borders of the thalamus, and related structures of importance in stereotaxic surgery were also included in the variability study. The method of preparation of the 38 cerebral hemispheres used for the initial studies on the reference points is described. The reasons for selecting the posteroinferior margin of the foramen of Monro and the posterior commissure in preference to other reference points are given. Twenty-six hemispheres from 14 brains were selected in the preparation of 1 mm coronal slices, from which the measurements were made for the statistical analysis of the nucleus and other structures. It is important to realize that these measurements were made of the most medial, lateral, superior, inferior, anterior, and posterior limits of each structure and not of its total outline. The first of the two main sections of the book deals with variability and probability studies of many structures including the main thalamic nuclei, the subthalamic nucleus, substantia nigra, red nucleus, zona incerta, the geniculate bodies, amygdala, globus pallidus, and the internal capsule. Coronal and sagittal variability profiles of each structure are given at the level of peak incidence to show the mean limits relative to the original reference points.

The second main part of the book consists of an atlas of line drawings and photographs. The line drawings are based on the statistical analysis. However, it is not immediately clear how the continuous outline of each structure was derived, particularly for the more complex shapes. Both coronal and sagittal line drawings are constructed and are displayed along with appropriate photomicrographs. The authors point out that the line drawings provide only a general guide for the selection of coordinates for target points, and that reference to the appropriate variability studies should always be made.

The terminology used is a modified version of Hassler’s classification.

The book will be of considerable value to the stereotaxic surgeon by providing statistical information concerning the limits of each structure in relation to the basic reference points. It will enable him to select the coordinates for a target with predictable accuracy. However, the precise localization of the structure in an individual patient must incorporate other methods—for example, electrophysiological techniques—but they are outside the scope of this useful book.

J. W. TURNER


As it is 20 years since Brodal’s Neuroanatomy first appeared, the second edition is virtually a new book (including most of the references). It does not replace standard textbooks on the gross anatomy of the CNS, but every neurologist or experimental neurophysiologist should own this one because of its unique qualities. The author has contrived to present an amazing amount of detail about the connections within the nervous system without losing the reader in detail or obscuring the functional significance. Indeed, the correlation between structure and function and the clinical implications are constantly stressed. Conclusions which are tentative or unconfirmed in the human are suitably indicated.

Naturally, the sections on the reticular formation, vestibular system, cerebellum, and cranial nerves are outstanding, but the whole book is good. Many will share Brodal’s feelings about ‘the limbic system’.

This is a book to buy for frequent reference. It is worth every penny of its cost.

J. A. SIMPSON


This book is written by a thoracic surgeon primarily for colleagues in the same and allied fields. He deals with problems of blood gases and acid-base balance, but one of his principal interests is in the mechanics of pulmonary function, how the lungs move, what the compliance and air-way resistance are due to and what alters them, what determines distribution of gas in the lungs, and what problems affect expiration more than inspiration. The chemical and reflex control of the respiration, the work involved in breathing and the effect of age, chest injury, and lung disease on pulmonary function are also described. There is a chapter on respirators in which the author