

## Book reviews

**Corticospinal Neurones Their Role in Movement** By C. G. Phillips and R. Porter. (Pp. 450; illustrated; £16.80. \$32.85.) Academic Press: London, New York, San Francisco. 1977.

Few would seriously question the major role of the corticospinal neurones in control of voluntary movement in the human subject, and recording of motor output from the nervous system is simple and quantitative. Nevertheless the role of the "pyramidal tract" is still an enigma. As lower animals seem to manage their affairs very well without it, the function of the pyramidal tract neurones in the human cannot be determined by animal studies, and (by definition?) voluntary movement can only be investigated in the human, where the measured response is a summation of excitatory and inhibitory functions within the nervous system. The dilemma is a real one, but ingenious experiments on man may legitimately be interpreted in the light of experimental work on animals, especially on primates which probably approach the human in development of the corticospinal system and in which the authors have made important contributions. Regarding the pyramidal tract neurones as a "middle level" in a hierarchy of motor neurones, the authors have nothing new to say about the nature of the highest level of "voluntary" movement control. Until this is solved, they are wise to adopt a historical format for their narrative.

The book is well written and authoritative, as one would expect from such distinguished authors and from a Monograph of the Physiological Society. The book is number 34 in the series but the first to be published by Academic Press—they have produced an elegant volume which will be the standard reference on the topic for years to come.

J. A. SIMPSON

**Disorders of the Lumbar Spine** By Arthur J. Helfet and David M. Gruebel-Lee. (Pp. 262; illustrated; £17.60.) J. B. Lippincott Company: Philadelphia, Toronto. 1978.

This small book, largely by authors from South Africa and Saskatchewan, is aimed at all clinicians involved in the treatment of the total patient with back

pain. There is a succinct review of pathological anatomy and an interesting personal history of a prolapsed intervertebral disc. The claimed problem-solving approach does not materialise. Although there is constant emphasis on psychosocial aspects, little practical help is given for their assessment. The chapter on radiology provides an excellent review on water-soluble myelography though little of other techniques. Conservative management is well reviewed but could have been more critical. The chapter on failures of surgery has excellent illustrations of micro-anatomy but is unhelpful in prevention or management.

This book gives some very personal emphases and only patchily reviews current concepts. There is little in the book which is not better dealt with elsewhere, and it is difficult to see to whom it could be recommended.

GORDON WADDELL

**Acetylcholine Synthesis in Neurons** By S. Tuček. (Pp. 259; illustrated; £15.00.) Chapman and Hall: London. 1978.

This monograph, which reflects the long-standing involvement of the author in choline acetyl transferase, treats the topic widely to include control of availability of precursors of acetylcholine in addition to sites and mechanisms of its synthesis.

After a detailed description of the properties of choline acetyl transferase and a thorough critique of current methods of assay, the author goes on to discuss our present state of knowledge of transport of the enzyme from neuronal cell bodies to the nerve endings. This is followed by a chapter on the supply of acetyl groups for acetylcholine synthesis. While there is appropriate emphasis on the precursor role of pyruvate, the clinically interesting pyruvate dehydrogenase deficiencies and the effects of hypoxia and hypoglycaemia here are virtually ignored.

Our increasing awareness of the vital role of choline transport forms the theme of the next chapter, and this is followed by a discussion of the regulation of synthesis in the nerve ending. The final chapter describes changes in choline acetyl transferase activity in development and in old age. The

English is clear and concise, the few illustrations are attractively set out, and the work is thoroughly referenced throughout. The book seems to have been written with the committed experimental research scientist in mind rather than the clinician. This seems a pity since the topic has recently progressed to the stage where there is much to fascinate the clinician. However, those working on neuromuscular disorders could find it a useful reference text.

H. S. BACHELARD

**Asymmetrical Function of the Brain** Edited by Marcel Kinsbourne (Pp. 581; illustrated; £18.00.) Cambridge University Press: Cambridge. 1978.

Marcel Kinsbourne is one of the guiding lights of neuropsychology today. The reader knows that a volume which bears his name will make an important contribution to the subject. For example, in his chapter with Hicks he elaborates the idea of the functional distance between cerebral control centres which he sees as decreasing with the extent to which they collaborate on concordant tasks. This substantial volume contains contributions from distinguished workers in the area. Each chapter is thoughtful and reflective in turn, and each contains a valuable store of information as well as critical argument and creative stimulus. This book has been a long time in gestation and some of the material is dated. Nevertheless the volume contains many worthwhile contributions which will be read with a great deal of pleasure and as a continuing source of reference.

STUART J. DIMOND

## Notice

The Vth International Symposium on Impedance Methods for Brain Circulation Investigation and IVth Conference on Bio-Impedance will be held in Zadar, Yugoslavia from 8 to 9 June 1979. Further information may be obtained from P. Baturić, MD, Department of Neurology, Psychiatry, and Neurophysiology, Medicinski Centar, 57000 Zadar, Yugoslavia.