

neuropathologist. The book is concerned with the mechanism of eye movement and particularly "goal-directed behaviour." The translation reads well, and there are about 300 references of which a fifth are taken from the Russian literature. The chapters deal with structure and function of eye muscles, fixation, tracking, saccadic movements, convergence, and the higher cortical functions.

Despite the conventional arrangement of the book it cannot be regarded as a satisfactory guide to modern knowledge of control of eye movements. Much of the text is concerned with the author's own observations. There are descriptions of disturbed eye movement in patients with aneurysm and other circulatory disorders which are attributed to local alterations in blood flow. Measurements of cerebral blood flow are correlated with "functional loads" such as optokinetic nystagmus and arithmetic. His observations on single motor unit discharge in the rabbit are given in some detail. There are various recordings of rapid eye tremor which do not accord with other publications.

The book is well produced and the index is satisfactory. Its main value is in providing information about work in Russia and the attempts to develop a unifying concept to explain eye movement.

BRYAN ASHWORTH

**Circulation of the Blood** Edited by D. Geraint James. (Pp. 495; illustrated; £25.00.) Pitman Medical: Tunbridge Wells. 1978.

This handsome volume contains a wide ranging series of papers on various facets of the circulation collected together as a memorial to William Harvey on the occasion of the quarto-centenary of his birth. In some instances the contributions are incisive and authoritative—for example, Professor Sherlock's review of the portal circulation and Professor Browse's incisive coverage of the problem of thrombo-embolism—but most workers in the circulatory field will find something of interest in the volume although the very generality of its coverage and its price, may inhibit distribution of a rather handsome memorial.

LINDSAY SYMON

**Atlas of Neonatal Electroencephalography** By Sarah S. Werner, Janet E. Stockard and Reginald G. Bickford. (Pp. xii+211; illustrated; price not stated.) Raven Press: New York, 1977. This is a most welcome Atlas, beautifully illustrated and clearly printed. Much attention is given to the recognition of various types of artefacts. The illustrations are selected very carefully, probably from a fairly large material. The so-called "10-20" electrode placement has been modified very sensibly and in addition to the EEG respiratory excursions, electromyography eye movements are displayed polygraphically. Both normal and abnormal features in the EEGs of premature babies from 24 weeks gestation onwards are presented as well as the normal and abnormal features of babies born at term. In addition to ordinary EEG techniques, the last chapter of the book includes a series of "Spectral Monitoring" as applied to the newborn as an alternative type of EEG display.

This Atlas will be most useful not only to clinical neurophysiologists but also to neonatologists. Its format, though convenient for a large desk, may be rather awkward for most bookcases. Both authors and publishers should be congratulated for such an elegant presentation.

G. PAMPIGLIONE

**The Neurological Examination of the Full-Term Newborn Infant** Second edition. By Heinz F. R. Precht. (Pp. 68; illustrated; price not stated.) Spastics International Medical Publications and William Heinemann Medical: London. 1977.

The revision of this well-known monograph will add to its admirers. As number 63 of *Clinics in Developmental Medicine*, it needs no introduction to paediatricians, but the adult neurologist would find it profitable to read the first 10 pages and to consider how the concepts of optimal performance might apply to older subjects. Dr Precht's book is not a guide to the localisation of brain disease, but an application of system theory to assess the neonatal nervous system as an information processing system. The method is now quantitative but the user must not extrapolate the normal values given to later age groups.

J. A. SIMPSON

## Letters

### Human muscle afferent responses to tendon taps

SIR,—The two recent papers by Murthy *et al.* (1978a, b) are of some interest as they describe a relatively simple method for recording the afferent responses elicited by tendon percussion in intact human subjects. Unfortunately criticisms can be made, both of experimental method and assumed factors such that the results presented and conclusions reached cannot be accepted as valid.

1. Their "indifferent" electrode situated "over the radius," presumably close to the superficial branch of the radial nerve which supplies the skin at the site of percussion. Since they stress the advantages of differential recording, they should ensure that their indifferent electrode is truly indifferent (cf. Figure and its legend on page 228).

2. Percussion of the muscle was standardised, and they made measurements of percussion force. It is difficult to determine the effect of manoeuvre when it is not known whether the stimulus remained constant.

3. With the hand placed as in Figure on page 221, even light percussion would have stimulated receptors in other intrinsic muscles of the hand and in the skin over the ulnar aspect of the hypothenar eminence. Such receptors would contribute to the evoked ulnar nerve potential, and their contribution would not be abolished by anaesthetising the skin over the percussion site. In Figure 4a on page 223, a small deflection of some 25%, occurring at the appropriate latency, is recorded on tapping skin near the muscle tendon rather than the tendon itself. This potential could be of muscle or skin origin (or both).

4. They state that the "phasic tendon tap is known to be a selective and adequate stimulus to the primary sensory endings of the muscle spindle" (page 220). This statement is incorrect. As any of the workers who have recorded from single muscle afferents in man can attest, light percussion with a finger can excite secondary spindle endings, Golgi tendon organs, and pacinian corpuscles in relaxed muscles even if it excites primary endings better