Book reviews

AN ILLUSTRATED HISTORY OF BRAIN FUNCTION By Edwin Clarke and Kenneth Dewhurst. (Pp. 154; illustrated; £5.50.) Sandford Publications: Oxford. 1972.

This beautiful book is a work of scholarship on a subject of dominant interest to all readers of this *Journal*. The annotations are brief but adequate to guide the reader through a pictorial survey of the evolution of concepts about the localization of brain function, from the earliest known illustrations of the brain to modern photographic methods of representation. One may doubt the necessity for an artist to provide a faithful replica of the brain when this served no obviously useful purpose. A modern textbook would not be illustrated with Renzo Vespignani lithographs.

The reproductions are extraordinarily clear (there is no acknowledgement of retouching) with the surprising exception of one modern photograph of the brain (Fig. 147). Radiographs are not ignored and the closing plates (radioactive isotope brain scans) are described in the last sentence as 'the most recent method of outlining the tissue of the brain'. After 23 centuries of slow development of the accurate delineation of the brain, it is rough on the authors that computerized transverse axial tomography should have appeared while their book was being published. But it is for the historical aspects that the book will be valued. It was, therefore, probably not a good idea to change the format completely for the final chapter on modern aspects of cortical localization. Though an accurate and interesting account of the impact of modern psychology on cortical localization, the chapter is so out of keeping with its predecessors as to suggest a return to the labelled boxes of the early localizers. However, the lesson of the whole book is that knowledge of function tends to precede detailed knowledge of anatomy (a hard won knowledge the modern student is in danger of losing). Could the same be true of acupuncture despite an 'anatomy' not dissimilar to that of mediaeval China?

J. A. SIMPSON

RECENT ADVANCES IN PARKINSON'S DISEASE Edited by Fletcher H. McDowell and Charles H. Markham. (Pp. 245; illustrated; price not stated.) Blackwell: Oxford. 1973.

The editors have gathered a distinguished team to

record the recent spectacular advances in Parkinson's disease. Medawar has aptly described successful research as 'the art of the soluble' and it is because of advances in some basic sciences that new insight into the pathology and treatment of this disease complex is possible. Little new information is available from the clinical field. For instance, the nosological position of arteriosclerotic Parkinsonism is still uncertain. Many workers feel impelled to deny its existence while others see no reason to reject a syndrome containing all or most of the elements of Parkinsonism resulting from ischaemic lesions of the basal ganglia merely because these lesions are not confined to a territory involved by other types of pathology.

Carlsson gives a brief but sufficient account of central monoamine neurotransmission and the pharmacological observations leading up to the introduction of levodopa, and Hornykiewicz then expands the subject with particular reference to dopamine and acetylcholine and the concept of a balance between these transmitters. The possibility that other chemical mediators are involved is stressed and this subject is dealt with in detail by McLennan. Poirer then gives an excellent account of the development of animal models for studies in Parkinson's disease which undoubtedly illuminate the tremor, and tone disturbances. But the recent experience of stereotaxic surgery has made it clear that akinesia is the most crippling part of the Parkinsonism syndrome and it is in this aspect that animal models are least satisfactory. It is, therefore, surprising that the book does not include human electrophysiological studies of voluntary movement. Forno and Alvard review the pathology of the disease, stressing Lewy body degeneration and Alzheimer neurofibrillary degeneration and their correlation with severity of neurone loss in the substantia nigra. They conclude that there are probably two types of idiopathic (? genetic and metabolic) Parkinsonism as well as the postencephalitic type. They also accept a number of unclassified cases in which the lesions appear to be 'extranigral'. Denny-Brown's views on the 'état criblé' are mentioned but the reviewers favour those authors who consider that the globus pallidus is normal. There is an interesting review of degenerative changes in the normal ageing brain.

The editors, with associates, discuss the diagnosis