the same time, the fact that the hippocampus was "known" to have something to do with the memory gave reciprocal support to the notion that long-term potentiation is the physiological mechanism underlying memory). Since I have always been sceptical of both halves of this neat little circular argument, it comes as a relief to discover in Lee's chapter that cortical neurons display the same kind of long-term potentiation as do neurons in the hippocampus. Potentiation (like so many other phenomena) was first discovered in the hippocampus simply because the orderly structure of this organ makes it easier to investigate (neurobiology in the hippocampus). Somehow, however, the significance of Lee's observation of long-term potentiation *outside* the hippocampus appears to have escaped the attention of the other symposiasts, who remained to the end mesmerised by memory.

A new synthesis, then, will have to come from a different source (one, I suspect that will be single- not multi-authored). In the meantime, anyone wanting to keep abreast of neurobiology in the hippocampus should find this volume valuable. Indeed, there is something for everyone, and a reviewer can do little more than list a few of the contents. These range through anatomy (including a characteristically thoughtful contribution from Larry Swanson), transplantation technology (Zimmer), neurophysiology (including an excellent review of potentiation by Bruce McNaughton), the behaviour of hippocampal cells in culture (Seifert), assorted items of neurochemistry and neuropharmacology, slow waves (including Richard Morris's careful work on the relation of theta waves to ballistic movements, and Case Vanderwolf's now somewhat stale sermon on how to be a good behaviourist), single-unit recordings in behaving animals (with some new and interesting observations on the context-dependence of baseline firing rates from Jim Ranch's laboratory), and the expected battle of the gladiators defending each his own view of what kind of memory the hippocampus is supposed to subserve (Olton, O'Keefe, Squire and Gaffan). The two most surprising chapters come near the end: an attempt by Rössler to deduce the functions of the hippocampus from "deductive biology, a predictive branch of adaptation theory which allows one to derive certain necessary properties of adaptive locomotion control apparatuses" (hmm...); and a startling claim from Halgren's group that human psychophysiology has been studying the

hippocampus for years, since the peak in evoked cortical potentials labelled " P_3 " is broadcast from that organ. If this last claim (which I am ill-equipped to evaluate) is correct, we may at last be able to study the psychological correlates of hippocampal function where they are most interesting—in Man.

J A GRAY

Topical Diagnosis in Neurology Anatomy. By Peter Duus, translated by Richard Lindenberg. (Pp 471; DM 38.00.) Stuttgart: Thieme Verlag, 1983

This is the first English edition of a volume first published in Germany in 1976; it is already in its third German edition. It is pocket sized and good value for money. The illustrations are beautifully drawn and make remarkably effective use of a single additional colour to clarify important features. The layout is solidly based on neuro-anatomy in a rigid way, which from the anatomical point of view makes for a remarkably comprehensive coverage of neuro-anatomy but forces the clinical material to be seemingly edited into the text, so that far from a logical progression to clinical application as claimed, the clinical application is sometimes less than clearly described and fails to emphasize the importance of the neuro-anatomy and sometimes too brief to give comprehensive correlation.

The translation is excellent but many of the terms are literal translations from the German and would not readily spring to the lips of English speaking neurologists and some of the clinical features are debatable, as written: the "development" of Friedreich's feet is referred to as if this were a progression of the disease rather than the usual congenital marker of further trouble; cord lesions in cervical spondylosis (called osteocondrosis throughout) is ascribed to exit foramen compression of entering feeder vessels; the reflexes in motor neuron disease are said to be "typically" absent and some surprise is expressed that they can be normal and I think that most neurologists would regard enhancement of reflexes as the marker of this condition.

The use of Queckenstedt's test as a preliminary procedure to see whether myelography is necessary would find little favour in most centres. A glossopharyngeal nerve lesion is said to cause palatal palsy, and an extensive discussion of eye muscle defects is followed by a sketchy list of causes which fails to mention thyroid disease and adds

myasthenia gravis as an afterthought following botulism!

The reviewer can only wholeheartedly recommend the volume for its brilliant exposition of neuro-anatomy but doubts whether the correlation with applied clinical neurology is as well covered and suspects that undergraduates might find it heavy going and perhaps be slightly misled by some of the clinical aspects as presented in translation.

J P PATTEN

Actual Problems in Multiple Sclerosis Research. Edited by Ejner Pedersen, Jorgen Clausen and Lis Oades. (Pp 409; D.kr. 434.42.) Copenhagen: FADL's Forlag, 1983.

In June 1982 the twenty-fifth anniversary of the Danish Multiple Sclerosis Society was celebrated by a symposium whose problems are illustrated by the title of this book. The chairman of one of the sessions was moved by the papers read to enthuse about "the high level of creativity in science today" and the "delight to be a part of a golden era of science". From these remarks we deduce that the symposium was more enjoyable to attend than to read in the abstract. Four hundred pages of abstracts provide recent research information about diagnosis and clinical course, spasticity, sphincter function, epidemiology, humoral and cellular immunology, virology and chemical pathology. The papers vary as much in standard as in length (from two or three pages to only a paragraph). The scientifically acceptable have been or will be published in peer-reviewed journals and the "actual answer" to the problem of multiple sclerosis does not appear among these. Perhaps the answer lies in one of the articles off the mainstream of multiple sclerosis research for which symposia like this provide a means of expression. What is the truth behind the membrane differences detected *on average* in groups of patients with multiple sclerosis by electrophoretic techniques? Should we study closely geographical differences across boundaries where prevalence of multiple sclerosis alters sharply? Was it the reduction of trawling which made the Faroese eat less fish that caused the point source epidemic after World War II, and meat rather than the dogs with their distemper which was to blame? This publication will provide a record of a happy occasion for the participants.

RAC HUGHES