references to current work and also contains pointers to past milestones in the development of ideas on the motor cortex. It would provide a research student with an extensive base for studying the literature and for developing experimental hypotheses.

In his closing remarks the chairman warns of too simplistic assumptions of cortical organisation and function and emphasises the need for further detailed studies using developing new technology. One looks forward to the next motor cortex symposium with interest!

JSG MILLER

Introduction to Clinical Neuroscience 2nd ed.
By Sir John Walton. (Pp 282; £12.95.)

In this second edition Sir John Walton has taken the opportunity to update much of the material which was first published some six years ago. As an introduction to clinical neuroscience it provides a comprehensive survey of the basic concepts and essential facts. There is no presumption of any previous knowledge of neurobiology, and the text moves rapidly to explications on the pathophysiology of various neurological conditions which serve to illustrate a particular basic concept.

The text is well illustrated, but references to the literature are rather sparse and appear in a somewhat haphazard manner. The book ends with a useful discussion of various investigative techniques, and although it appears strange to read about the indications and precautions for air encephalography, the book is obviously intended for a wider audience than medical students in affluent western countries. For those who do not have ready access to CT and MRI scanners a fine selection of scans is provided.

In these days when the teaching of the basic medical sciences is supposed to be increasingly integrated with clinical medicine, such a book serves as a model exemplar of the genre. However, in schools where this approach has not been introduced, the preclinical teachers and clinicians in neuroscience might consider that the "basic science" and "clinical practice" respectively have not been sufficiently well covered for their liking. They will suggest to medical students more comprehensive texts in their fields, and the role for such an "Introduction" is difficult to envisage with the many competing pressures on students' reading times. All this illustrates the urgent need for integrated preclinical and clinical teaching, where such a book is ideal.

CHRISTOPHER KENNARD


The speed with which magnetic resonance imaging is advancing is astonishing even by the standards of modern medicine. It is therefore quite hard enough for those involved with it to keep pace with the technology; it is almost impossible for those with limited exposure to be able to keep abreast. The books covering the basic principles stop at the conventional imaging, making only brief reference to "future" possibilities such as MR angiography, fast sequences and volume imaging etc. That these are rapidly reaching the stage of clinical evaluation must necessitate an understanding of the principles underlying these techniques. A book which covers both the basics as well as explaining the principles of these more advanced imaging techniques is therefore to be welcomed. Dr Young writes in a very readable manner and without going into detailed physics covers the subject very comprehensively.

The first four chapters are concerned with the basic principles and discuss in some detail the main imaging techniques of filtered back projection and two and three dimensional fourier transformation.

Chapter 6, which accounts for over one third of the book, is concerned with non neurological as well as the neurological applications and includes a useful section on some of the commoner artefacts encountered. The relatively short text is extensively illustrated with examples demonstrating less straightforward pathology which is adequately explained in the captions. Interestingly, however, the numbering of some of the captions is missing, presumably an oversight due to the desire to have such an up to date book in print as quickly as possible.

A chapter on the role of imaging and in particular MRI in the changing economic climate follows. This is more applicable to American readers but will also be of interest on this side of the Atlantic. Further chapters deal briefly with the planning of a new scanner and the possible role of spectroscopy and the book concludes with a useful glossary of terminology and a rather limited review of normal anatomy, many of the scans being rather too small to be useful.

This book, however, has a rather different slant from the usual book on basic principles and so will be a useful addition to the texts currently available. It is highly recommended.

DPE KINGSLY


Those who use immunological techniques to try to understand order and disorder in the nervous system may be sceptical about the need for 531 more pages on neuroimmunology. Clinical investigators are now, in a position to benefit from the application of increasingly clever and versatile laboratory techniques, to the extent that strict immunological biochemical or physiological approaches to understanding disease are giving way to multidisciplinary oriented research. Several monographs on neuroimmunology already exist covering familiar topics of animal models, multiple sclerosis, myasthenia gravis, diagnostic tests and treatment; in these previous accounts and the present book, there is plenty of information, no shortage of hypothesis, no rather less established fact. However, the addition to the neuroimmunological canon (containing European, American, Japanese and Australian contributions) is the best account available outside the primary literature; inevitably, it will be out of date more or less before the ink has dried.

The tone is set by the imaginative and times provocative, overview. The remaining four chapters on general neuroimmunology rehearse the now familiar gamma interferon, induced class 2 antigen expression theory of autoimmunity, followed by a purely descriptive account of HLA and disease, a catalogue of monoclonal antibodies that can be used to explore structure and function in the nervous system, and finally a comprehensive account of the function and distribution of complement receptors. Subsequent accounts of immune response to infection could usefully have appeared here.

The section on animal models deals in three chapters with autoimmune and viral models of demyelination; in both, clear distinctions are made between events which damage the blood brain barrier, those which cause inflammation and those which underlie mechanisms of myelin injury. The position reached in the study of some immunological disorders of the nervous system...
Book reviews

Lucid account of the success and failure in
the eye's attempts to maintain its immunological
privilege.

The next part lists a heterogenous col-
lection of conditions which the editors pre-
sumably thought fit to separate from the
more established neuroimmunological dis-
cases. There is a thorough account of bor-
eliosis, and new thoughts on cerebral
lupus—again emphasising the dissociation
between clinical and serological evidence for
disease activity and stressing the role of anti-
phospholipid antibodies in causing tissue
damage. The chapter on glialia fails to men-
tion mononclonal antibody therapy, and the
account of paraneoplastic disorders, whilst
listing all the conditions recognised to have
an immunological basis, is poorly referenced
and omits most of the original publications.
The interaction between genes, epilepsy,
phentoxin and IgA deficiency is discussed by
one of the editors who concludes this section
with a brief account of neurological compi-
cations of immunodeficiency, a topic which
would of course now just ify an entire mono-
gaph of its own. The inevitable rate at
which a book of this kind gets out of date is
also demonstrated by the relative lack of
molecular biology—a deficiency remedied in
the chapter on narcolepsy, surely one of the
most unlikely disorders to have taken pole
position in the HLA and disease states.
Seemingly, the notion of lymphocytes lulling
the reticular formation to sleep has given
way to a less immunological concept of
MHC molecules acting as receptor for trans-
mitters involved in wakefulness.

The catalogue of laboratory tests avail-
able for investigating neuroimmunological
disease, which follows, is useful but anyone
actually wanting to apply one or other tech-
nique will need a more detailed recipe book;
the value of investigating the cerebrospinal
fluid as a peeshow on what is going on in
the brain itself is authoritative described
but, although it is undoubtedly one of the
major achievements of modern neu-
roscience, imaging of the nervous system fits
a little uncomfortably into this book. Tre-
ment is dealt with as and when it arises in
discussion of the individual diseases, but the
book ends with accounts of the com-
plementary roles of immune suppression and
stimulation, emphasising the in vitro actions
of each drug, a little immunophysics, and
futuristic strategies for treatment.

It is inevitable that a multi-authored book
which sets out to be encyclopaedic in its cov-
erage of the subject, will be something of a
curate's egg but, for the moment, this is the
definitive text on neuromunology.

DAS COMPSTON

Temporal Lobe Epilepsy 1948 to 1986; a Bio-
ographical Study. By Christopher Ounsted,
Janet Lindsay and Peronelle Richards.
(Pp 129; £12.00.) Oxford: Blackwell

The essence of this book is a description
of the lives of children with temporal lobe
epilepsy. It may be divided into three parts:
a prospective study of 100 children with
epilepsy; an assessment of surgical treat-
ment; and a discussion in the pathogenesis
of partial epilepsies.

The book is remarkable in that it provides
excellent follow up data over nearly 40 years
with no subjects lost. The development of
each case is viewed not in terms of the seizure
disorder but in terms of the patient as an
individual. For example, schooling, psycho-
sexual, domestic and employment progress
were monitored. The results of the studies are
clearly presented and well illustrated by case
reports.

In spite of these very good points the pro-
spective study of children with epilepsy is of
limited applicability. The authors repeatedly
state that the patients were “unselected”,
even though I think that the entry requirements
would introduce a bias towards more severe
cases. Indeed, 67% had a clearly identifiable
aetiology and only 32% became seizure free
and independent.

The chapters on neurosurgical treatment
are well written and provide a useful assess-
ment of hemispherectomy in 18 patients and
temporal lobectomy in 65 patients. Again it is
important to view outcome in relation to
patient selection. For example, 30 of the
temporal lobectomy patients had mesial
sclerosis, which, as Jean Aicardi states in the
foreword, is unlikely to occur in com-
temporary series. The chapter on pathogenesis
is a reprint from an earlier “Clinic in Devel-
opmental Medicine”. It remains interesting
and is appropriate to the scope of the book.

In conclusion, this book is easily read and
provides an interesting perspective on the
effect of temporal lobe epilepsy on the lives
of a group of children. However, much of the
prognostic information may be of limited
applicability.

D FISCH

Electroencephalography. Edited by Ernst
Niedermeyer, Fernando Lopes da Silva. (Pp
940; £81.00.) Baltimore: Urban & Schwar-

This edition is larger than the first and covers
a wider range of newer techniques. The gen-