Firstly, current techniques used in localising brain function are considered. Cortical stimulation, the use of subdural electrodes and event-related potentials, PET and functional MRI are all described, as are their limitations. To study the localisation of cognitive processes, a means of observing activation of brain regions during performance of cognitive tasks is needed. The ideal investigation would show brain activation with a temporal resolution approximating to real-time; PET is likely to be superseded by functional MRI and magnetoencephalography in this regard.

The second section deals with the localisation of various cognitive functions. The editor’s interests are reflected in the preponderance of studies relating to language, including aphasia, alexia and agraphia. However, apraxia, agnosia, face processing, neglect, constructional ability and frontal function and lateralisation are also addressed. There are useful chapters on the effects of subcortical lesions on cognition, and on the role of neuroimaging in dementia. A minor criticism is that memory, perhaps the most extensively studied area of neuropsychology, is only afforded one chapter.

This is an excellent account of modern investigative techniques and of current thoughts regarding the localisation of cognitive functions. The only complaint might be that memory and imaging in dementia are not given more space. Also, there is a relative scarcity of images, with only a few colour plates. That said, the book is essential for the neurologist with an interest in higher cortical function.

JOHN GREENE


Another book in a line of AANS publications, intended to “provide neurosurgeons, especially those not located in an academic institution, with periodic publications related to neurosurgery”. The original titles covered everyday subjects but these books are becoming increasingly esoteric. One wonders if complex dural AVMs should be managed by a neurosurgeon not located in an academic institution and with no particular interest in difficult vascular cases.

Not surprisingly, the authors are from the other side of the Atlantic, except for two French neuroradiologists. This is a thorough subject review by physicians with much experience in managing this uncommon condition. There are numerous radiographic investigations, clearly labelled. Being multi-authored, the style does vary but the book is clearly laid out and easy to read.

Although the subject matter is perhaps a little abstruse for the trainee, no good neurosurgery library should be without a copy.

DAVID HARDY


Over the past few years there has been an explosion in the number and variety of methods available to investigate in vivo human brain function non-invasively. This technical development has generated a considerable number of sub-disciplines, each with its own unique terminology and contribution to make to the description and understanding of the functional architecture of the brain. The editors of “Functional Neuroimaging” have brought together presentations from the established leaders in these sub-disciplines to give a remarkably coherent overview of the present status and the probable future direction of each.

The science of functional imaging, on account of the intrinsic spatial resolution of the majority of the methods, takes a system perspective of the functional organisation of the brain. The book starts promisingly with a theoretical model of cortical integration, emphasising that without such models to test, the science of functional mapping remains purely descriptive. The corollary,

The book claims to take a "neuro-medical" approach to the problems of sexual dysfunction which is an important distinction from other texts available which have mostly been written by urologists with titles like "Impotence" or "Male Impotency". This book is one of the first texts with an account of the sexual response cycle in the two genders and there are nine pages about this in women and seven pages in men. This sets the tone for the rest of the book which gives due attention to the female perspective throughout. It is a multi-author book written by 31 North American authors and there is a strong neurological component.

Several chapters are particularly illuminating. For example the introduction of intracorporal injections for the treatment of erectile difficulties has lessened the need for nocturnal penile tumescence studies but the type of continuing referrals to the laboratory are "complex cases, legal, physicians, foreign dignitaries and celebrities". It is interesting to read how this means of research became routine—it has certainly contributed greatly to research.

Throughout the book an utterly professional tone is adopted but a glimmer of humour breaks through when discussing the possibly less impressive matter of premature ejaculation. The authors postulate it is due to "a tendency to ejaculate at lower levels of sexual arousal. One possible mechanism is a lower rate of sexual intercourse as compared to control subjects, a notion with obvious therapeutic implications".

There is very sensible advice on the problem of impotence in men urging clinicians to recognise the various underlying possible organic causes rather than diagnose psychogenic disorders. Inevitably the equivalent chapter about women veers towards examining female sexuality and the feminist scholar's view of the body image issue, but this is not the fault of the author, rather the dearth of knowledge about medical disorders that affect the female sexual response. There is a balanced view of when neuro-physiological basis are cobwebby—e.g. a subjective sexual response. There is nothing which has been given extensive coverage by scribblings in urological journals.

In general this is a very complete account of the problem written from a neurological point of view and therefore of considerable interest to readers of this journal who wish to know more about the subject.

CLARE FOWLER


In a series of books designed to help "physicians who grapple with the problem of neurological disease on a daily basis," it is probably appropriate that movement disorders should have so far taken up three of the fourteenth of Butterworth Heinemann's International Medical Review series. The treatment of Parkinson's disease forms a substantial part of the average working neurologist's clinic time, whilst rarer movement disorders like parkinsonian kinesigenic choreoathetosis and dentato-rubro-olivary atrophy await lurking to teese our diagnostic skills. Hyperkplexias startle us with their rarity in the ordinary clinical scene but anthropologically erudite neurologists will recognise Latala, Myariachi, Yau, bah-tshei, mali-mali, imu, and ragin' Cajuns not to mention the jumping fishermen of Moosehead Lake in Maine. Similarly though hemifacial spasm is commonplace in neurological practice, we no longer recognise such entities as 'Belly Dancer's Dyskinesia', which despite its name, is not a disease of the lower abdomen.

Movement Disorders III contains all these wonders and more.

The spine of my copy of Movement Disorders I is bleached green from the sun, worn out, and of its companions that of its still blue younger sibling demonstrates how movement disorders have advanced in the last 12 years. Transplantation of neural tissue for the treatment of human Parkinson's disease was just a dream in 1982 whilst this occupies two chapters in the 1994 volume. Similarly PET imaging of dopamine uptake was yet to be described and Movement Disorders I put ideas on paper for the first time. Although they are now commonplace in clinical practice, little more than a decade ago it was still not possible to tell before surgery that a patient's brain has a non Lewy body disease unresponsive to L-dopa. Alien hands are now recognised as a manifestation of cortico-basal degeneration, which gets a whole chapter in this book, being both difficult to diagnose and a child of the eighties (albeit nearly stillborn in the late sixties). All these problems are well covered in this book, the largest share of which is devoted to Parkinson's own disease (although, as Niall Quinn points out, even some of James' cases were probably non-Parkinsonian). The detailed anatomy of the basal ganglia is here for those that like to revise their hippocampus with circuit diagrams, as well as concise reviews of experimental models of Parkinson's disease and a good chapter on eye movements in basal ganglia disease. The second half of the book is a cornucopia of stereotaxic stuff, people, syndrome stereotypes and many other dyskinesias with a helpful introduction by the editors to these tricky disorders.

This latest Movement Disorders volume is to be recommended to clinicians who want to keep ahead with the management of and the latest science about one of the commonest treatable diseases seen in neurologists' practices as well as of some of the most extraordinary.

CHRIS ALLEN

RICHARD FRAKOWIAK

TOM HEATHER

THEO SINGER