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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 each 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investigation would show brain activation with a temporal resolution approximating to real-time; PET is likely to be superseded by functional MRI and magnetoencephalography in this regard.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, 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 researched 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 complaints 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
JOHN HODGES

Adult Dementias. Edited by DAVID M A MANN, DAVID NEARY and HUMBERTO TESTA. (Pp 184.) Published by Mosby, London 1994. ISBN 0-7234-1784-9.

Within behavioural neurology, the dementias are the principal area of research. Manchester has been prominent in this field, and this text, written by a neuropathologist, neurologist and radiologist, illustrates their approach.

The introductory chapter on clinical features is succinct, although the section on functional topography of the cortex is very brief. The bulk of the text is devoted to individual diseases, classified into cortical, subcortical, cortical-subcortical and multifocal encephalopathies. The authors have not attempted to present a comprehensive account of all dementias, but have deliberately targeted the common conditions. For each disease, there is a wealth of pathological illustrations, accompanied by an excellent explanatory text. Molecular biology and genetics are also given good coverage. Clinical features and imaging are given less space, although there are useful sections on clinico-pathological correlations.

A further section on diagnosis gives an insight into the pathologist's art of weighing up the pathological findings to come to a diagnosis. There is also practical advice regarding staining, of use to those general pathologists who perform neuropathology infrequently. The final section addresses setting up a dementia clinic.

For the dementias, the colour atlas format provides the opportunity to demon-

strate pathology and imaging. The pathological illustrations are excellent, but have eclipsed the imaging, which is sparse by contrast. The lack of a reference section is also unfortunate.

This fine book will appeal to neurologists and psychiatrists with an interest in the dementias. Its principal strength will be in improving the clinician's understanding of the underlying pathology, and hence the clinical manifestations of the disease.

JOHN GREENE

Dural Arteriovenous Malformation. By ISSAM A AWAD and DANIEL L BARROW. (Pp 353 \$90.) Publishers: American Association of Neurological Surgeons, USA 1993. ISBN 1-879284-06-5.

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 very 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 neuroscience library should be without a copy.

DAVID HARDY

Functional Neuroimaging—Technical Foundations. Edited by ROBERT W THATCHER, M HALLETT, T ZEFFIRO, E ROY JOHN and MICHAEL HUERTA. (Pp 303 \$150.) Published by Academic Press Inc, California 1994. ISBN 0-12-685845-4.

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,

NOTICE

Announcement from the British Neuropsychiatry Association

The 1995 Summer meeting—to include joint sessions with the British Association for Psychopharmacology—will be held on 15–17 July in Cambridge

On 16 July BNPA will hold a scientific meeting with the theme of "movement disorders" and its AGM. On 17 July BNPA/BAP will have a joint session on neuroimaging, psychiatry, and psychopharmacology. Short scientific papers and single case videos by members of both associations will also be presented. For further details please contact Ms Sue Garratt, 17 Clocktower Mews, London N1 7BB, UK.

For details of membership of the BNPA, which is open to medical practitioners in psychiatry, neurology, and related clinical neurosciences, please contact Sue Garratt at the address above, or Dr Jonathan Bird, Burden Neurological Hospital, Stoke Lane, Stapleton, Bristol BS16 1QT, UK.

BOOK REVIEWS

All titles reviewed here are available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the United Kingdom and for members of the British Forces Overseas, but overseas customers should add £2 per item for postage and packing. Payments can be made by cheque in sterling drawn on a United Kingdom bank, or by credit card (Mastercard, Visa or American Express) stating card number, expiry date, and your full name.

Localization and Neuroimaging in Neuropsychology. Edited by ANDREW KERTESZ. Published by Academic Press, California 1994. Pp 662 \$89.95 ISBN 0-12-405045-X.

The use of neuropsychology and neuroimaging to elucidate brain-behaviour relationships is arguably the most fascinating area of neurological research today, and this book, written by world authorities in their field, is the perfect introduction.

developed in subsequent chapters, is that analysis of the imaging data must take into account the ambition of explaining why and how the functional architecture of the brain results in the phenomena of thought, perception and action. Much of the first part of the book, which incidentally is beautifully produced and illustrated, develops this idea with a technical perspective based on experience developed with positron emission tomography (PET). However, the book is organised so that the reader is soon led beyond this specific base to newer methods and more generalisable techniques of image analysis.

An important part of the book is the section outlining concisely the technical bases for measurements of blood flow and cerebral metabolism that are most frequently used to study the living brain. It describes the theoretical and mathematical foundations of the generation of functional images from external measurements. Of topical interest is an introduction to the potential of generating functional images with magnetic resonance (fMRI) that is an expert critique of the advantages and limitations of this method, especially in relation to the nature of the signals recorded.

Following descriptions of functional mapping using unimodal images in individuals, a major portion of the book proceeds to explore and describe the statistical and methodological aspects of combining and correlating imaging data between subjects. The different approaches being taken to resolve these technical issues are all extensively described in a clear and highly relevant way. Novel methods for the statistical analysis of inter- and intra-subject mapping data and new ways of communicating, visualising and integrating such information are another principal focus of the book.

The techniques developed to solve problems of intersubject comparisons lend themselves to integration of complementary measurements. A continuing theme of the book is the need to correlate function with anatomical structure which poses problems of registration of images from different modalities. The various techniques and problems of modelling and registering electrical and magnetic measurements, with their rapid time courses, are discussed in detail. A major new effort is being directed at the integration of spatial and temporal information about the distribution of brain activity. This area, that represents the forefront of imaging research at present, is well discussed in the final section of 10 chapters.

In his introduction, one of the book's editors, Robert Thatcher, explains the need to produce a work of this nature, believing there is enough common ground between all the sub-disciplines of functional imaging to warrant "publishing in one place some of the most recent advancements in the field". The depth and breadth of the book show that he has, indeed, been successful. The intended readership of (methodologically motivated) neuroscientists, graduate students, psychologists, neuropsychologists, neurologists, neurosurgeons, radiologists, psychiatrists and those interested in the use of MEG, EEG, MRI and PET to study brain function will find it a valuable source volume and an excellent, if technical, overview of the current status of the field.

JON HEATHER
RICHARD FRACKOWIAK

Sexual Dysfunction: A Neuro-Medical Approach. Edited by CARLOS SINGER and WILLIAM WEINER (Pp 375 \$50.) Published by Future Publishing Company Inc, Armonk 1994. ISBN 0-87993-582-0.

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". Impressively, this book starts 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 contributing team.

Several chapters are particularly illuminating. For example the introduction of intracorporeal 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 established—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 serious 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 effect the female sexual response. There is a balanced view of when neurophysiological investigations are contributory—a subject which has been given extensive coverage by scribbles 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

Movement Disorders III. Edited by C DAVID MARSDEN and STANLEY FAHN. (Pp 529; Price: £50.00). 1994. Butterworth Heinemann, Oxford. ISBN 0 7506 1412 9.

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 fourteen volumes in 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 paroxysmal kinesigenic choreoathetosis and dentatorubropallidolysian atrophy await lurking to tease our diagnostic skills. Hyperekplexias startle us with their rarity in the ordinary clinic but anthropologically erudite neurologists will recognise Latah, Myriachit, Yaun, bah-tsche, mali-mali, imu, and ragin' Cajuns not to mention the jumping Frenchmen of Moosehead Lake in Maine. Similarly though hemifacial spasm is commonplace in neurological practice, we do not often recognise such entities as 'Belly Dancer's Dyskinesia', which despite its name, is not Salome's occupational dystonia. Movement Disorders 3 contains all these wonders and more.

The spine of my copy of Movement Disorders 1 is bleached green from the sun and comparison of its contents with those 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 little more than a dream in 1982 whilst this occupies two chapters in the 1994 volume. Similarly PET imaging of dopamine uptake was yet to be described when Movement Disorders 1 was put to press, whilst in volume 3 mention of this technique is scattered all over, not just in the chapter devoted to functional imaging of movement disorders. Trinucleotide repeats were just genetic echolalia in the early 1980's but now even Anita Harding's excellent chapter on the genetics of movement disorders is out of date in mentioning only three diseases other than Huntington's in which expansion of such a repeat appears to be the genetic pathology. Similarly over the last decade much discussion has occurred about the nosology of non-Parkinson's disease. Although clinicians watched out for rigid patients with postural hypotension or eye movement paralysis, these were considered to be pretty rare stamps whilst now we know that many more than we suspected of our 'Parkinson's patients' have a non Lewy body disease unresponsive to L-dopa. Alien hands are now recognised as a manifestation of corticobasal degeneration, which gets a whole chapter in this book, being a nosological 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 exercise 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 stereotypes, stiff people, startle syndromes 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 neurological clinics as well as of some of the most extraordinary.

CHRIS ALLEN