volume signal is recorded on five channels of a fast paper recorder and FM tape recorder simultaneously. An example of one such record is shown in fig 2. The phasic activity of the PCA muscle with inspiration can clearly be seen while the interarytenoid remains relatively inactive throughout the respiratory cycle, becoming active during breath holding.

The surface electrode will be of great importance in the future study of pathological states of the laryngeal musculature as well as providing information on the neurological control of the larynx.

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Book reviews

Neuropsychology — A textbook of systems and psychological functions of the human brain by Stuart J Dimond (pp 560; £25.00) London: Butterworths 1980

This is not a textbook of neuropsychology in the sense that most clinicians would use that term. Rather it is an attempt to use neuropsychological evidence to build a set of models about the way the brain controls and makes possible a wide variety of psychological functions. The range from motor behaviour and the analysis of sensory information at one extreme, through more complex functions like memory and language, to even consciousness and the concept of "self". To say the least, the scope of the book is very wide and the goals ambitious. Stuart Dimond brings to this task the fruits of an extensive knowledge of the literature and his own well-known studies of interhemispheric processing and the split-brain. The reviewer has already found the book to be a useful source of reference on some obscure points.

The inevitable problem with a book that attempts to give an overall model of many highly complex processes is that the author is forced to speculate way beyond the immediate implications of the available data. It is impossible to do this without offending many existing theoretical susceptibilities. The overall approach assumes that the higher functions can be fairly strictly localised to a degree that would make some other authorities a little unhappy. There are also enormous philosophical complications inherent in an attempt to create a neuropsychology of consciousness and related concepts. Another problem is that the use of florid descriptive terminology can irritate and confuse rather than illuminate. For example, it is stated that the arcuate fasciculus and associated structures are "a vast organ console on which the stuff of mental life can play to produce the richly orchestrated sounds of the voice as they appear in language".

Despite the criticisms, this book will no doubt be used by many as a useful starting point to examine some topics. However, it is definitely not the book for someone seeking an introduction to clinical neuropsychology. The price is very high which adds insult to certain production errors. Page 460 is missing and this is compensated for by providing two of p 467. Plotting the classical speech areas onto a diagram of the right hemisphere is also not an action best designed to convince the reader that this is a sound way to invest £25.

EDGAR MILLER

Research in the Psychobiology of Human Behaviour, edited by Eugene Meyer III and JV Brady (pp 144, £8.50) London: Johns Hopkins University Press, 1979.

This little book contains seven papers that were delivered (along with other papers not reprinted) at the Adolf Meyer Symposium on Psychobiology held to mark the hundredth anniversary of the founding of Johns Hopkins University. The topics discussed include noradrenergic synaptic transmission, genetics of schizophrenia, neuroendocrine research in psychiatry, psychosomatic effects of learning, the classification of affective disorders. The authors, including Kety, Sachar and Roth, are all experts in their own fields. They mostly write well but, as one would expect of a symposium, do not present new material. Several of the topics have a very tenuous connection with Adolf Meyer, who had no interest in the genetics of schizophrenia or in the classification of affective disorders. Indeed Meyer must bear some of the responsibility for the neglect of these two important issues by American academic psychiatry until quite recently. The book is best regarded as a small collection of interesting accounts of research in various aspects of the biology of psychiatry. A librarian with an unbalanced budget might just buy it.

JL GIBBONS

Systemic Pathology Edited by W St C Symmers (pp 2522; £35) Edinburgh: Churchill Livingstone, 1979.

This is the second, greatly expanded edition of this book. A separate chapter each is devoted to the central nervous system, the peripheral nerves and to the skeletal muscles, amounting to just over 300 pages thus bridging a gap between those popular neuropathology textbooks which always seem to have the word basic, essential or concise in their titles and the heavier, more detailed volumes. The largest contribution is, of course, on the central nervous system; here all the major groups of diseases, including neural neoplasia, are dealt with with remarkable clarity by McMenemey, and revised by the author and Thomas Smith. Cavanagh provides not only accurate descriptions of the diseases of peripheral nerves but also an insight into basic cellular mechan-

isms, reflecting the author's long-standing interest in experimental neuropathies. The original, concise chapter on skeletal muscles by Daniel and Sabina Strich has been revised by Harriman who added recently described afflictions and informative pictures of muscle histochemistry.

The new edition is more comprehensive in content (an extra 100 pages) and more up-to-date in concept than its predecessor: results obtained by electron microscopy, tissue culture, histochemistry, immunology and virology occasionally complement the more traditional morphology. One only wished that these modern investigations had been incorporated more frequently and discussed at greater length. Economy with space, however, resulted in the omission of repetitive reviews of case reports, thus bringing many disorders into sharper focus. The illustrations are of good quality; they may not always be outstanding but are seldom disappointing. The reference lists bear witness to long gestation: only a few works quoted were published later than 1970.

These three chapters on neuropathology are recommended not only for pathologists but for everyone who is interested in the diseased nervous system. This book makes rewarding reading.

PL LANTOS

Tredgold's "Mental Retardation", 12th Edition Edited by Michael Craft (pp 384; £16) London: Baillière Tindall, 1979.

Tredgold's Mental Deficiency first appeared in 1908 and for many years had the distinction of being the definitive British text on the subject. In spite of its scholarly nature and combination of wisdom and good sense, its reputation suffered and, with changes in attitudes and despair over the services provided in some hospitals for the mentally handicapped, it had come, somewhat unjustly, to epitomise an outdated "medical" model of care identified with institutionalisation.

The publishers and the new editor have retained the marque but taken the courageous step of almost completely remodelling this multi-author work.

Encouraging outward signs are the use of the term "Mental Retardation"

in the title, suggesting that clinicians in this country may be falling in with the internationally accepted nomenclature. The presentation of the volume and distinguished multidisciplinary panel of contributors, all of whom are new (with the notable exception of the author of the chapter on epilepsy) increases the confidence of the reader.

Does the text meet up to these expectations? The answer must be a qualified assurance that this volume will retain its place as one of the two standard text books on the topic in this country.

The clinical section is of particular value in providing an up to date source of reference on the biological courses of mental retardation. It is to be hoped that further editions will demonstrate a response to the editor's request for improved illustrations and that some of the undoubted profits will be used to introduce colour into those illustrating the commoner and more important clinical signs.

The sections on psychiatry and medication are disappointing in neglecting recent research on this topic, as it relates particularly to mental handicap and, generally speaking, the reader would do as well to consult a standard text on psychiatry. The sections on psychology and social work are welcome additions, although those on social work and residential care are of limited and rather parochial value. Throughout the volume the very limited and selected list of references means that the book will be of little value to the research worker except as an introduction to the multidisciplinary nature of the field.

The contribution on the law is of particular interest and, while justifiably critical of the present state of legislation, and the author seems to miss the point that the relatively small number of applications under Sections 29 or 26 to mental hospitals are not because of mental retardation alone but super-added psychiatric illness. The author of this section hints at changes in legislation to protect the rights of the mentally retarded, and hopefully the next edition will include constructive suggestions. Like many multi-author works the rag bag section of chapters covering specialised areas are of varied usefulness. The chapter on "Autism" takes a somewhat idiosyncratic view of the

topic, neglecting much contemporary research, and would have been better included under the section on psychiatry, where the other important links between child psychiatry and mental handicap tend to be neglected. The distinguished contribution on epilepsy clearly points to the need for further research into the neurophysiological aspects of this common secondary handicap in the mentally retarded and would have been better included in an extended section on the neurological aspects of the problem.

These criticisms apart, this new text book is to be welcomed as a major and much needed contribution to the professional care of the mentally handicapped, and of value to students and practitioners alike.

JA CORBETT

Photosensitivity and Epilepsy by ME Newmark and J Kiffin Penry (pp 220; \$24.48) New York: Raven Press, 1979.

This book from the Epilepsy Branch, Neurological Disorders Programme, National Institute of Neurological and Communicative Disorders and Stroke, National Institute of Health, Bethesda, Maryland is an extensive review of the current knowledge on photosensitivity. This is defined as "an abnormal electroencephalographic or clinical response to light" and does not include other forms of photosensitivity such as the dermatological ones. Although the authors claim to have avoided "the use of EEG terms in describing clinical phenomena and vice versa" they have not completely succeeded, for example in the use of the term "photo-convulsive response." The large bibliography quoted is very helpful but little is said about discrepancies in the techniques employed by various authors with considerable diversity of results. A minor portion of Grey-Walter's work has been quoted and, in addition, there is no mention of the large amplitude discharges in the EEG in response to single flashes of light in patients with Bielschowsky-Janski's disease. In many EEG laboratories anticonvulsant treatment is suspended for 1-2 days prior to the EEG: this is one of the most common causes of abnormal responses to photic stimulation in many centres, and this aspect is not discussed. The chapter on animal models of photosen-