the opening and reading of a new book. Such is the case with *Emotions*. While I am certain that the precise content of any text on emotion will vary with and reflect the editor's view of the subject, I am equally certain that chapters on "Integrative rostralodiencephalic neurons and integrative peptides in hydromineral regulation" and "Electrophysiological bases for rhythmic activity in the suprachiasmatic nucleus of the rat: an *in vitro* study", among many others, would not generally come high on the list for inclusion of most editors.

Having come to terms with the frankly misleading title of the book (for example there is no discussion of fear or anxiety, little of aggression, and sexual behaviour is discussed only in terms of the control of the lordosis reflex in female rats), what of its contents? The first two sections of the book deal with the regulation of ingestion and something called "sensation—energy balance"—essentially discussions of taste, smell and temperature regulation, mostly in an ingestive context. Several of the chapters in section one deal with reappraisals of the role of hypothalamic mechanisms in the control of feeding behaviour. The papers by Novin, Oomura, Nijijima, Inoue and their collaborators are all well written and authoritative accounts. Lenard, Oomura *et al* have written a particularly interesting and challenging article on the activity of the lateral hypothalamus during feeding and the effects upon units there of catecholamines and opiates during various phases of an operant task (responding, cueing ingestion etc).

Section two opens with an excellent chapter by Scott and Mark on hedonics and taste. In particular, they describe the neural systems involved in discriminating the toxicity versus the nutritional value of foods and their modification in the short term by individual experience and hunger/satiety mechanisms. Also good is the chapter by Ritter *et al* on hindbrain mechanisms controlling food intake, including some interesting observations on the area postrema and the control of orosensory responsiveness. There is a typically challenging and concise contribution by Shimazu *et al* on the neural control of brown adipose tissue thermogenesis and a good chapter by Yamashita *et al* on the status of the paraventricular nucleus as a centre for the integration of autonomic and endocrine responses (presumably central to some issues in the study of emotion).

Taken together, the chapters in the first two sections of the book provide a valuable review of the various avenues of contemporary research on the neurobiology of

ingestion and intermediate metabolism. The majority of articles are well written and authoritative, but there is little cross reference between them.

The third section of the book deals with "neuroendocrine affected behaviour" and is very quirky in the topics it covers. Three chapters discuss elements of the neural basis of the lordosis reflex in female rats and the effects of manipulations of opioid peptides upon it. It is a matter of debate as to whether the display of this spinal reflex provides any insight at all into the neural mechanisms of sexual motivation, a subject central to the title of the book. Through chapters on amygdaloid seizures and aggression and behavioural capabilities during sleep we come at last to a consideration of the Kluver-Bucy syndrome, at least the psychic blindness associated with it. This interesting contribution by Iwai *et al* concerns the nature and importance of inferotemporal visual information relayed to the amygdala. The surprise is that in a book on emotion, this is essentially the only chapter dealing with the amygdala in an experimental way.

The final section of the book purportedly deals with psychological correlates of emotion. It opens with a typically well written and concise paper by Rolls on a theory of emotion and its neural basis. He deals with some authority on the subject of the prefrontal cortex, amygdala and the hypothalamus, providing an interesting analysis of the Kluver-Bucy syndrome and of manipulations of the prefrontal cortex. It is a pity that other authors did not refer to this theoretical chapter when discussing their experimental work. The chapters by Ono *et al* on decision-related responses in the prefrontal cortex of monkeys and by Luiten *et al* on the pathways involved in the regulation of hormone release during feeding and agonistic behaviour are both excellent. Tanaka *et al* provide interesting data on the effects of benzodiazepines in antagonising some of the neurochemical effects of stress (although it is a disappointment that the "stress" in question is immobilisation) and Bandler *et al* summarise their work on the periaqueductal grey in the behavioural and cardiovascular components of the defence reaction.

Dr Oomura states in his preface that the papers in the book are "presented with a minimum of referee interference to encourage expression of the most advanced insight of these experts". Well, the individual contributions are frequently well-written, authoritative and interesting but in no way do they constitute an integrated treatise on emotion. Instead, the absence of "referee

interference" and a firm editorial hand has resulted in a publication which presents a pot pourri of vaguely interrelated papers, at least in the context of neurobiology of emotion. The scientist interested in the neural mechanisms of ingestion will find much to explore in the first two sections of the book, and these are undoubtedly the most integrated papers. But the scientist searching for new insights into the complex neurobiological issues underlying emotion will be disappointed. At £105, few individual research workers will be able to afford *Emotions* and, I suspect, only the more specialised libraries will have budgets flexible enough to accommodate a book of such specialised diversity.

BARRY J EVERITT

Clinical and Experimental Neuropsychophysiology. Edited by Demetrios Papakostopoulos, Stuart Butler and Irene Martin. (Pp 728; £45.00.) Beckenham: Croom Helm Ltd, 1985.

The editors of this book have recognised that the standard biological disciplines are too compartmentalised to provide a scientific basis for the understanding of the neural mechanisms underlying, for example, perception or the fields of mental illness. If a medical student is unlikely to have sufficient grounding in Pavlovian conditioning theory to be able to understand Irene Martin *et al*'s theory of stress-related diseases. No pharmacologist coming to work in the field of neurophysiology could be expected to know the mathematical basis underlying the collection and analysis of EEG evoked potential waveforms. It is with this in mind that the editors have instructed their authors to introduce each chapter from basic principles so that any student with a grounding in one of the biological sciences can, without too much difficulty, achieve an understanding of the field which is being discussed. This policy has produced a book of unusual value, as it is quite possible for even the most unsophisticated reader to turn to a chapter in an unfamiliar field and find the theoretical underpinning necessary for an understanding of that area.

The book contains five major sections. The first deals with evoked responses, and gives a comprehensive series of chapters covering visual evoked responses, and language processing, together with some work on auditory evoked potentials related to extraversion and intraversion. There is also

a good chapter on the present status of evoked potentials in aging and dementia. This section is weak on somatosensory evoked potentials, and spinal evoked potentials. If these had been included instead of some of the more repetitious chapters relating to visual evoked responses, this would have made a formidable section.

Section 2 deals with slow wave phenomena and gives a rather poor and idiosyncratic view of present day slow wave research. Although one chapter summarises the present position as regards the CNV and psychiatric states, with a further chapter on brain DC potentials, the section does not deal with the very large literature and theory underlying P300 or other CNV work. This is a serious omission, which weakens the section.

Section 3 takes a broad overview of some aspects of the cutting edge of EEG analysis. As this is such a wide field, it is a question of editorial choice, and the selection that the editors have made is relevant to the rest of the book. For example, there is a good chapter on the validity of EEG and alpha symmetry by Butler and Glass, and a good review chapter of quantitative EEG methods in human neuropsychopharmacology.

Section 4 deals with autonomic and skeleto-motor activity. This is an area which is usually sadly neglected in textbooks of psychophysiology. The section is opened by Levy, Martin and co-workers, in an excellent chapter on their theory of differential conditioning as a basis for psychophysiological disorders. The section proceeds through a description of the use of the polygraph as a lie detector, and a section by Randy Katz on understanding how the predictability of a stimulus affects the stress that is produced. There is then a comprehensive coverage of GSR, EMG, and the electrocardiogram in psychophysiological research.

The final section, on interdisciplinary study, is a lucky dip by the editors into the current tub of the more exciting aspects of psychophysiological research. All choice must be idiosyncratic, and their choices certainly reflect this. There is a good article by Wastell on the basic assumptions underlying the event related potential, which takes us to task for the naive view that most of us have shared to date. There is also a good description of contemporary models of human information processing, using the techniques of psychophysiology. I was pleased to see that magnetoencephalography is at long last given some mention, although this article is only an introductory one and already outdated. The mandatory article by

Gruzelier and co-workers on hemisphere asymmetries in schizophrenia is of course also included.

Who should buy this book? Clearly, it should be on every library shelf, as a current statement of the present state of neuropsychophysiology. Those who have access to departmental grants would be well advised to buy a copy for their own departmental bookshelves. Certainly it should be available to those of us who are involved in teaching, and I would even agree with the editors when they suggest that it might be given to final year undergraduate students (though I feel only the brightest ones are likely to get much out of it). As an enthusiastic brain researcher, should you put your hand into your own pocket and come out with 45 shiny one pound coins? I suspect not, provided a copy is available in your departmental library, so that you can read (or copy) the chapters most of interest to you.

I must confess to a personal prejudice against books which look as though they have been run off on a rather old and inefficient typewriter. Surely a book of this quality (and at this price) deserves to be properly printed?

P FENWICK

Practical Psychiatry of Old Age. By John Wattis and Michael Church. (Pp 195; £19.95 h/bk; £8.95 p/bk.) London: Croom Helm Ltd, 1986.

The authors declare their objectives in their introduction. The book is to be a "practical approach", "in non technical language", "accessible to a wide range of health and social care workers ... and their trainees", "using a problem solving approach" and dealing with different patients as "whole people interacting to their environment".

Few would dispute their objectives, but have they achieved their aim? Their book falls into various sections; basic background information and skills, dealing with symptoms and discussing the problems of care and management.

The background information consists of a useful review of the demographic and epidemiological aspects of the problems faced in caring for an ageing population, an enumeration of the types of service that have developed, but this is followed by an unhelpful flow chart concerning patterns of service delivery and an accompanying description which gives an impression that

what occurs in the service in which the authors work is a sort of "Categorical Imperative". A simple clearly written account of the most commonly agreed diagnostic categories would have been most helpful; the flow chart adds little and makes simplistic assumptions some of which are open to argument. It also seems somewhat unusual to give a schema for assessment before clarifying the issues of diagnosis. Confusion is added to the confusional states which seem to be on a continuum with the dementias on one hand and yet we are exhorted to distinguish them carefully but not given a great deal of help in this task. The spurious impression of clarity, given by the flow charts is shown again by that referring to the persecutory states, in which it is suggested if the patient is undergoing "real" persecution then they cannot have paraphrenia; would that it were as easy as that.

The question of how easily people untrained in psychology and psychiatry will understand the text is problematical when in case studies we are expected to understand the meaning of "hostile dependent behaviour" and the technical language in other sections is also complex. Perhaps the problem orientated analyses of clinical cases give the best flavour of what the authors intended to achieve, conveying aspects of practical and commonsense interventions.

Has the book achieved its aims? Only in part: it is aimed like a blunderbus at a wide field for many disciplines, but the explanations of disease processes and the use of flow charts are simplistic rather than simple, though the glimpses it gives of clinical practice are more encouraging and helpful.

K BERGMANN

Working Memory. (Oxford Psychology Series No. 11.) By Alan Baddeley. (Pp 289; £30.00.) Oxford: Clarendon Press, 1986.

Psychologists have commonly distinguished between short lasting memory representations and more durable, longer term forms of storage. The short term temporary memory representations are held to be strictly limited in terms of the amount of information which can be stored at any one time, as well as being transient. In many contemporary information processing models of skills such as language comprehension and problem solving, temporary forms of storage, termed Working Memory, play a central role. Despite the popularity of this