Stroke: Pathophysiology Diagnosis and Management. In 2 volumes. Edited by: Henry JM Bennett, Bennett M Stein, JP Mohr, Frank M Yatsu. (Pp 1274; £135.00.) Edinburgh: Churchill Livingstone, 1986.

This will become a major reference book on stroke. The two volumes cover all aspects of neurological vascular disease including that affecting the spinal cord. Volume 1 covers the pathophysiology, clinical manifestations and investigation of stroke. Volume 2 includes an excellent section on specific medical disorders associated with stroke (11 chapters). There is a most extensive and at times exciting section on stroke therapy (15 chapters) including chapters on progressing stroke, interventional neuro-radiology, surgical considerations, antispasmodics and fibrinolysis.

The editors have themselves made a major contribution to the writing of the book and this helps considerably in giving it a sound framework and uniformity. The quality throughout is of the highest order and the contributors appreciate the major issues of the day and tackle them well. There is an extremely rich source of references. Some of the authors have been rather too enthusiastic in compiling their reference list. The second edition might be improved by starring the key references for the relatively uninitiated. The index will also doubtless be improved in the second edition; for example, there was no entry for anaemia, leukaemia, polycythaemia or thrombocytosis.

This excellent book in two volumes should be obtainable in every medical library.

DJ THOMAS

Food constituents affecting normal and abnormal behaviors. *Nutrition and the Brain* (Vol 7). Edited by Richard J Wurtman and Judith J Wurtman. (Pp 260; \$60.00, £40.) New York: Raven Press, 1985.

Research in the past decade has made the obstacles separating the brain from external influences appear less effective than hitherto. We have become familiar with the idea that extracerebrally synthesised peptides can act on central receptors. Also, numerous publications have been stimulated by the realisation that the rate-limiting enzymes for 5-HT and catecholamine synthesis in the brain are unsaturated with their precursor amino acids, tryptophan and tyrosine. In the case of 5-HT, the enzyme is normally only about half saturated; in the case of the cate-

cholamines it is closer to saturation.

These relationships suggest that central transmitter synthesis and hence functional activity can rapidly respond to food intake. However, while it is common experience that feeding can affect mental state it would be surprising if the wide range of brain functions potentially influenced by transmitter amines were normally completely at the mercy of the last meal. Indeed, major compensatory mechanisms oppose such an eventuality. For example, tryptophan becomes more readily transported to the brain when its intake falls owing to food deprivation or following a high carbohydrate-low protein (and hence low tryptophan) meal. Conversely, meals which contain tryptophan increase brain tryptophan less than one might imagine, as they invariably also contain other amino acids which impair its transport to the brain. A substantial part of the present volume concerns circumstances in which these compensatory mechanisms may no longer be sufficient to maintain normal brain function, for example when foods of unusual composition are ingested, or when there are exceptional demands on transmitter synthesis (as in stress) or in disorders involving defective transmitter function.

In the first of the six chapters, Spring considers the behavioural effects of food on normal individuals and whether these can be related to transmitter changes. This is a useful critical account which should help to put various claims into perspective. The next chapter (Young) reviews a large literature on the behavioural effects of tryptophan when given as the amino acid. Here, there is good evidence of increased brain 5-HT synthesis and also of anti-depressive effect, at least insofar as the therapeutic response to MAO inhibitors is enhanced, but animal work suggests that this response is not necessarily due to 5-HT changes. Other findings described in the chapter indicate that tryptophan can decrease pathological human aggression and this result is consistent with animal data showing that drugs which impair 5-HT synthesis cause aggression.

The chapter by Van Praag and Lemus deals with the effects of monoamine precursors in general on psychiatric disorders, especially depression. This and the chapter by Young contain interesting material and have relevance to the title of the volume. However, the administration of pure precursors in considerable amounts comes within the sphere of pharmacology rather than that of nutrition. Van Praag and Lemus believe that combined treatments with 5-HT and catecholamine precursors merit further study as a possible antidepressant medication; there

is much in favour of this point of view.

Normal regulatory mechanisms which protect the brain from acute nutritional variations may well be overwhelmed in disorders of appetite such as bulimia (Rosenthal and Heffernan) and anorexia nervosa (Pirke and Ploog). Although these disorders are more often than not strikingly dependent on social attitudes this does not mean that they are not also dependent on central transmitter defects; whether the latter are exacerbated by neurochemical consequences of the disorders are questions of great importance. Also the evidence of relationships with depressive illness discussed by Rosenthal and Heffernan are worth attention.

The final chapter by Pardridge focuses on potential central effects of the dipeptide sweetener, aspartame. This compound of two amino acids, aspartic acid and phenylalanine could, in principle, cause central depletion of other amino acids such as tryptophan and tyrosine with which phenylalanine competes for transport to the brain. Therefore, it could lead to transmitter deficiencies. Animal experiments apparently give conflicting evidence on whether this occurs but it is obvious that aspartame is contraindicated in phenylketonuria and might also be harmful to subjects who are heterozygous for this disease.

The volume as a whole reveals the large amount of work being done in an area situated where nutrition, neurochemistry, pharmacology and behaviour meet. It also reveals how much remains to be done. For example, even though the rate limiting enzyme for histamine synthesis in the brain is far below saturation with its substrate (histidine) and therefore brain histamine synthesis may be much more sensitive to dietary effects than that of 5-HT or the catecholamines, little work appears to have been done on this topic.

Overall, the book is a useful addition to the series and conforms to the high standards set by the previous volumes.

G CURZON

Deep Dyslexia. Edited by Max Coltheart, Karalyn Patterson and John C Marshall. (Pp 443; £8.95 p/back.) Henley: Routledge and Kegan Paul, 1986.

This book is a scholarly analysis of reading disorders acquired by previously literate adults through brain injury, and deals predominantly, although not exclusively with "deep dyslexia", that purported syndrome

Book reviews

of which a central feature is the presence of semantic errors (for example, the patient reads "crocus" for "tulip"). By intensive examination of individual cases the authors, guided by the information processing framework of cognitive psychology, posit theoretical explanations of acquired dyslexia, with a view to increasing our understanding both of disordered reading, and those processes involved in normal reading.

The multiple contributors to the volume draw on different sources for comparison: early reading in children, speed reading, reading in split-brain patients. Differences in patients studied, together with the varied stance of each contributor lead to some differences in theoretical interpretation: for example, whether the "two-route" model of reading adequately accounts for "deep" and "surface" dyslexia; whether "deep dyslexia" reflects right hemisphere reading or not. Such differences are an asset to the book stimulating the reader to critical thinking. An asset too is the presentation of large amounts of raw data, challenging the reader to draw his own conclusions.

Despite the multiple authorship, the writing is of a uniformly high quality. The chapters dealing with non-English speaking dyslexics are fascinating, particularly the Japanese study, demonstrating dissociations in reading of kana (phonetic symbols representing lexical morphemes).

The book is not intended for the general reader who is likely to find the wealth of information about patients' errors, and subtle differences between cases studied hard to assimilate, and the theoretical issues esoteric. However, although published in 1980, it remains an excellent source book for psychologists, linguists, speech therapists and neuroscientists interested in language and its breakdown following brain damage.

The editors hope that the book will encourage and provide a model for future theoretically orientated investigations of other neuropsychological syndromes. They are not being over-presumptuous in aspiring to this aim. The hardback version, now at paperback price, is a bargain.

D NEARY

Dictionary of Psychiatry. Edited by H Walton. (Pp 170; £12.50.) Oxford: Blackwell Scientific Publications, 1985.

The specialist dictionary is a curious animal, all the more so when the speciality is one

which draws upon such diverse sources as does psychiatry. In this small volume, then, we may find terms rooted variously in the neurosciences, general medicine, psychology, philosophy, sociology, psychoanalysis and, indeed, the vernacular. This is the mixture which gives psychiatry its unique richness, but poses problems for the lexicographer. To produce a useful dictionary out of this miscellany he must set his boundaries clearly and then exhaustively plough the terrain within.

Concise and lucid definitions of terms are provided by a dozen or more contributors from both sides of the Atlantic, all with impeccable credentials. Also included are brief biographies of key figures in the history of psychiatry. The typeface and layout are attractive. Where the book fails is in its most difficult task: the coherent selection of entries within the obvious constraints of size. The result here is an anthology which feels unbalanced and sometimes anachronistic. Many of the older psychosomatic and psychoanalytic terms could usefully have been dropped to allow inclusion of those more important in contemporary clinical practice and research. *Primal scene* and *psychogenic hiccup* are all very well, but not at the expense of crucial terms like *first rank symptoms* and *dysphoria*. And where are *illness behaviour*, *liaison psychiatry*, *expressed emotion*? Choice of inclusions runs to the frankly idiosyncratic. Why *Cotard's* but not *Capgras' syndrome*? Why *noradrenaline* but not *acetylcholine*? Why *chloridiazepoxide* but not *chlorpromazine*? Why *flight of ideas* but not *pressure of speech*?

These shortcomings will annoy dictionary addicts and can only limit the usefulness of the book. It is modestly priced, but surely most readers would be better served by a short textbook with a good index.

SW LEWIS

Behavioural Neurology—A Practical Approach. (*Clinical Neurology and Neurosurgery Monographs Vol 7.*) By Howard S Kirshner. (Pp 230; £24.50.) Edinburgh: Churchill Livingstone, 1986.

Introductions to books are important, and are usually turned to by reviewers to stimulate comment. It is unfortunate that the introduction to this book irritated the reviewer such that it nearly coloured his reading of the rest of it. However, this would have been unfortunate because after the in-

troduction it turns out to be an excellent monograph on behavioural neurology. It is, as stated, a practical approach, and an attempt has been made not only to present a number of clinical syndromes succinctly but also in a way which provides practical advice for the assessment of patients mainly at a bedside setting.

The contents, familiar now to behavioural neurology, include aphasias, alexias, agraphias, apraxias, agnosias and amnesias. Chapters cover selected topics such as right hemisphere dysfunction and frontal lobe abnormalities, and then three syndromes are covered in separate chapters, namely dementia, delirium and epilepsy.

The book needs to be compared with *Behavioural Neurology* by Pincus and Tucker, now in its 3rd edition, and the more recent *Principles of Behavioural Neurology* by Marsel Mesulam. The scope of the conditions discussed in this book is more limiting than those other two, although this monograph is more comprehensive in what it tackles than the former, and less so than the latter. It would be easy to point out important topics for behavioural neurology that are missing from this book, but it is a monograph, and as such presumably reflects the limited space available and the personal interests of the author.

It would certainly be recommended to those who wish to increase their confidence with regards to the clinical dissection and understanding of the conditions outlined, and will be good for students wishing to familiarise themselves with the subject.

And so, back to the introduction. The statement "Biological psychiatry is the study of physical and organic abnormalities... in which no primary brain abnormality is proved. Behavioural neurology, on the other hand, deals with behavioural effects of known brain disease..." is irritating. It implies that as soon as any somatic alteration is identified in association with a behavioural syndrome, it ceases to be psychiatry. This line of thinking has led the author to a second error. Of the names quoted, Wernicke, Liepmann and Alzheimer were not neurologists, the latter being a neuropathologist, and the former two being psychiatrists in the traditional sense, neuropsychiatrists. Indeed, the author frowns on theories which suggest "personality and behaviour emanate from the brain as a whole, rather than from the activity of localised brain centres", thus emphasising perhaps a fundamental distinction between behavioural neurology and neuropsychiatry.

M TRIMBLE