

are associated with odors, while thalamic and neocortical projections may be involved in the conscious perception of the smell.

The distributed nature of the encoding of the odor information in and between different olfactory structures may explain why nu-

merous non-olfactory human pathologies are associated with a diffuse reduction in the sense of smell.

### Language: structure, processing and disorders

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by David Caplan, *The MIT Press*, 1992. \$45.00 (xvi + 515 pages) ISBN 0 262 03189 2

This book provides a very good introduction to studies of aphasia for neurologists, speech-language pathologists and neuropsychologists. It approaches this topic from a psycholinguistic perspective, presenting research on and theoretical explanations for a manifold of aphasic symptoms within the context of the most recent cognitive models of speaking, listening, reading and writing. Five chapters are dedicated to different aspects of word processing and their disorders. These chapters review current ideas about the way in which spoken words are recognized, how the meanings of words are represented, how written language is processed, etc. Word-processing disorders such as anomia, dyslexia and agraphia are described in

terms of psycholinguistic models for unimpaired word processing. The same procedure is followed in the three chapters discussing disorders of sentence and discourse structure, which are more complex levels of linguistic organization. A final chapter discusses some implications for the diagnosis and treatment of language disorders.

The strength of the book is that it is organized on the basis of our knowledge about normal language processing. However, the implication of this psycholinguistic bias is that one will not be able to find detailed information on the relation between observed neurological lesions and resulting language disorders.

My sole complaint about this book is that, in addition to discussing the outcome of relevant modern research on aphasia, it does not critically review the research methods used, despite the fact that the author stresses the importance of 'on-line'

methods in aphasia research. These methods monitor language comprehension and production processes as they unfold in real time, millisecond by millisecond. One such on-line method that has recently been applied to aphasia research is the ERP (event-related potential) method, in which recorded brain potentials are time-locked to the relevant language processing events. Despite its claimed importance for workers in aphasia research, the book does not provide the reader with a clear picture of such 'on-line' methods. In my view, the reader would have profited from an additional chapter that discussed the advantages and disadvantages of the different research methods that are currently used in aphasiology. This, however, is a minor point and does not affect my main conclusion that this book should not be missed by those interested in a scholarly overview of the current state of the art in aphasia research.

## Books Received

Abram Amsel *Frustration Theory: An Analysis of Dispositional Learning and Memory* Cambridge University Press, 1992. (xiii + 278 pages) ISBN 0 521 24784 5

G. Avanzini, J. Engel, Jr, R. Fariello and U. Heinemann (eds) *Neurotransmitters in Epilepsy* Elsevier, 1992. \$177.00/Dfl. 310.00 (xv + 420 pages) ISBN 0 444 88710 0

E. Başar and T. H. Bullock (eds) *Induced Rhythms in the Brain* Birkhäuser, 1992. £117.60/Sfr.278.00 (xix + 483 pages) ISBN 0 8176 3537 8

Arnold Burgen and Eric A. Barnard (eds) *Receptor Subunits and Complexes* Cambridge University Press, 1992. £60.00 (xi + 468 pages) ISBN 0 521 36612 7

J. Engel, Jr, C. Wasterlan, E. A. Cavalheiro, U. Heinemann and G. Avanzini (eds) *Molecular Neurobiology of Epilepsy* Elsevier, 1992. \$177.00/Dfl. 310.00 (xvi + 412 pages) ISBN 0 444 89711 9

A. J. Hunter and M. Clark (eds) *Neurodegeneration* Academic Press, 1992. \$42.50 (xvi + 255 pages) ISBN 0 12 361940 8

Robert L. Isaacson and Karl F. Jensen (eds) *The Vulnerable Brain and Environmental Risks: Volume 1 Malnutrition and Hazard Assessment* Plenum, 1992. \$65.00 (xv + 268 pages) ISBN 0 306 441148 9

Robert L. Isaacson and Karl F. Jensen (eds) *The Vulnerable Brain and Environmental Risks: Volume 2 Toxins in Food* Plenum, 1992. \$69.50 (xxiv + 332 pages) ISBN 0 306 44165 9

Zaven S. Khachaturian and John P. Blass (eds) *Alzheimer's Disease: New Treatment Strategies* Dekker, 1992. \$99.75 (USA and Canada), \$114.50 (elsewhere) (xiv + 235 pages) ISBN 0 8247 8620 3

Patrick Kitabgi and Charles B. Nemeroff (eds) *The Neurology of Neurotensin* New York Academy of Sciences, 1992. \$100.00 (xiv + 374 pages) ISBN 0 89766 717 4

Stephen M. Kosslyn and Richard A. Andersen (eds) *Frontiers in Cognitive Neuroscience* MIT Press, 1992. \$70.00 (xxix + 699 pages) ISBN 0 262 11163 2

Dominic Man-Kit Lam and Garth M. Bray (eds) *Regeneration and Plasticity in the Mammalian Visual System* MIT Press, 1992. \$75.00 (x + 252 pages) ISBN 0 262 12169 7

Jacob M. J. Murre *Learning and Categorization in Modular Neural Networks* Lawrence Erlbaum, 1992. \$24.95 (xi + 244 pages) ISBN 0 8058 1338 1

Risto Näätänen *Attention and Brain Function* Lawrence Erlbaum, 1992. £49.95 (xx + 494 pages) ISBN 0 8058 0984 8

John G. Nicholls, A. Robert Martin and Bruce G. Wallace *From Neuron to Brain 3rd edn* Sinauer, 1992. £20.95 (pbk), £37.95 (hbk) (xx + 807 pages) ISBN 0 87893 580 0 (pbk); 0 87893 586 X (hbk)

S. B. Prusiner, J. Collinge, J. Powell and B. Anderton (eds) *Prion Diseases of Humans and Animals* Ellis Horwood, 1992. £80.00 (xxvi + 583 pages) ISBN 0 13 720327 6

F. Samson and G. Adelman (eds) *The Neurosciences: Paths of Discovery II* Birkhäuser, 1992. Sfr.168.00 (xiv + 338 pages) ISBN 0 8176 3503 3

Howerde E. Sauberlich and Lawrence J. Machlin (eds) *Beyond Deficiency: New Views on the Function and Health Effects of Vitamins* New York Academy of Sciences, 1992. \$125.00 (x + 404 pages) ISBN 0 89766 749 2