

order and a phenomenal order, the isomorphism of cortex and mind." (p. xi). However, the interest for me was not the potential solution to the duality, but the methods which Fuster proposed as necessary to study the question. While the approach may prove fruitful in understanding "Cortex and Mind", its relevance for many may be the emphasis on the approach itself.

The book is very well-organized in a classic style of presentation. The major concepts are presented early in the book. This has several benefits such as repetitive learning and the ability of the reader to link the different details. At the beginning of each chapter, there is a brief overview of the story to that point in the book, linked with an introduction to the current chapter. Within each chapter there are summaries of sections and of the chapter itself.

The approach is the transition from a modular model of brain mechanisms to the network model of cognition. In the two chapters after the introduction of the concepts, Fuster details how the cortical networks develop (since these are the foundation of cognitive operations) and then describes how the cortical networks (labelled "cognits") function. How the major cognitive functions such as perception, memory, attention, language and intelligence relate to the proposed organization is described in the central chapters of the book. There is of course an obligatory conclusion relating the ideas to consciousness.

Chapter 3, on the "Functional Architecture of the Cognit", deserves mention of its own, since it presents many of the core concepts Fuster proposes. Connectionist models and Hebbian principles are key elements in understanding how brain networks develop and work. The well-crafted chapter begins with the basic structure of knowledge in connectionist models. While a type of modularity is accepted, it is the network that is key: "Each junction or node in those networks will not represent a specific item of personal experience but instead mediate the association between several items that make up the experience" (p. 67). An important aspect of the network is the hierarchical organization. This hierarchy exists within and across cortical domains (e.g., perception in posterior cortex, and action in the frontal cortex). At the end of the chapter, Fuster takes the concept one step further by warning of possible misconceptions of the general theme of "two tiers of stacked cognits of increasing breadth as we ascend in either hierarchy" (p. 80). He introduces the term "heterarchical" to indicate that networks can span levels. Cognits are not discrete and isolated cortical networks. Here is where the dynamic nature of cognition is emphasized: "A more appropriate view is that of a network with relatively firm connections at the core, made of repeatedly enhanced synaptic contacts, as well as weakly enhanced and noncommitted contacts 'around the edges'" (p. 82). There is a durable core, and a more plastic periphery. This is a wonderful way of encapsulating the more fixed nature and dynamic plasticity of cognitive and affective processes. The clinical implications are clear: one must think of the effects of brain damage or change (including aging) in relation to the focal effects, the impact on the "edges", and the undoing of connections.

One could conclude that this is old wine in new skins. But it is not that – it is indeed a better way of thinking about brain functioning. The book is not complete. There is little mention of mathematical models such as path analysis that have transformed the study of cognitive and affective networks. This inclusion would have demonstrated how the approach he is advocating can be, and is, applied. This does not detract from the value of Professor Fuster's

contribution – he did state that his objective was to address the matter not from the cognitive psychology or computer science side, but from the brain side. He has achieved his goal admirably. This is a thought provoking work. It is a book worth reading if you are at all interested in how the brain works.

D.T. Stuss
Toronto, Ontario

PROGNOSIS OF EPILEPSIES. 2003. Published by John Libbey Eurotext. Edited by Pierre Jallon, Anne Berg, Olivier Dulac, Allen Hauser. 344 pages. C\$180 approx.

In an age of neurological and neurosurgical interventions the study of disease prognosis may be viewed with peripheral interest. Yet, conveying accurate information about the expected course of illness is as important as determining the diagnostic or therapeutic interventions that are best suited for an individual patient with epilepsy. Indeed, it can be argued that the prognosis determines the nature of interventions. At the same time, high quality studies about prognosis are not simple. They require the assembly of representative cohorts of patients at an early stage of their illness, following them in a systematic manner for a sufficiently long time, and assessing outcomes of interest in an unbiased manner. Prognosis studies are particularly challenging when dealing with chronic illnesses which, like epilepsy, have a wide variety of etiologies, clinical expression, and clinical course. A book dedicated to the prognosis of epilepsy is welcome.

Edited by Pierre Jallon, this 327-page volume is the result of a symposium devoted to the prognostic aspects of epilepsy, held in 2002. The target readership includes epidemiologists and clinicians interested in the topic. The associate editors and chapter contributors are experts in the clinical and epidemiological aspects of epilepsy and present a wide range of socio-demographic perspectives including those from Europe, North America, Latin America, Africa, Scandinavia, Finland and Iceland.

The book is organized into two sections. Section one will appeal to epidemiologically inclined readers. It discusses methodological issues of studies about prognosis (three chapters), and describes specific cohort studies with different designs looking at the prognosis of epilepsy in various parts of the world (11 chapters), as well as studies of prognosis after surgery for temporal and frontal lobe epilepsy (two chapters). I enjoyed reading section one. It illustrates the strengths and weaknesses of different study designs, and it helps interested readers understand why different studies yield different answers to the same question. Because of its focus, those looking for answers to specific clinical questions may find this an arduous section.

The smaller section two focuses on clinical aspects. Its 13 chapters address the prognosis of individual epilepsy syndromes, and non-convulsive and convulsive status epilepticus. The chapters vary in their readability and organization, but all present prognostic data in light of two main aspects. One pertains to the difficulties imposed by the existing classification and description of epilepsy syndromes. The other pertains to the available evidence, which is sometimes limited, and often of variable quality and methodology. Overall, this section provides readers with most of the necessary information about prognosis for epileptic syndromes.

There is some room for improvement. Some clinical chapters

contain a section detailing the authors' own studies. When such studies are the optimum available evidence for that particular topic, readers can benefit from the emphasis provided. When that is not the case, a systematic, well-presented analysis of all the evidence is preferable. Chapters also vary in their ability to focus prognostic questions, and to summarize and present the evidence about those questions. Some references are incorrectly linked in the citations in the text, and there are some syntactic and typographic errors. Finally, the omission of an index is somewhat unfortunate, even in a volume of this size.

Overall, this volume accomplishes several things. First, it highlights the importance of prognostic studies and prognostic data in clinical practice. Second, it discusses important methodological data of prognostic studies. Third, it achieves the important task of putting together an up-to-date, accessible compendium on prognostic data about various aspects of epilepsy.

Samuel Wiebe
London, Ontario

THE CLINICAL MANAGEMENT OF EARLY ALZHEIMER'S DISEASE. 2003. Edited by Reinheld Mulligan, Martial Van der Linden, Anne-Claude Juillerat. Published by Lawrence Erlbaum Associates. 348 pages. C\$90 approx.

With the advent of approved therapy for mild to moderate severity Alzheimer's disease (AD), there has been a huge developing interest in pursuing diagnostic and therapeutic approaches in the incipient to early AD stages. At present, the number of papers being presented for journal consideration on the topic of mild cognitive impairment (MCI), a precursor state to AD is substantially outnumbering the number of papers submitted on AD. The public health impact of this new focus is enormous, given the personal and economic costs of care of AD and the hope that there can be a delay in the onset of early AD from MCI. In turn, a book exploring the issues around early AD is indeed very timely, holding the promise of translating the research findings of the past decade into clinical care and guidance for neurologists, geriatricians and geriatric psychiatrists. Unfortunately, though the timing is ripe for a book exploring early AD, *The Clinical Management of Early Alzheimer's Disease* falls well short of its potential, in meeting this promise.

The editors of this multi-authored text set out ambitiously to address the social, economic, clinical, neuropharmacological and

caregiving aspects of early AD. Unfortunately, in the approach that they have taken, they have overlooked the importance of defining what they consider early AD to be. They do not take on the nosological issues of the interface between MCI and AD, nor do they indicate where along the continuum they feel early AD ends. They do not propose timelines, stages or other key parameters to shape the readers' understanding of where early AD starts and ends. The result is a rather long compendium of chapters that discuss AD broadly without effectively focusing down on the issues that are unique to the area of early AD. This lack of definition detracts from the intention of the book title. The specific challenges of early AD, such as diagnostic disclosure, is not brought into the sharp focus that one might expect for a monograph on early AD. While there is extensive discussion of cognitive and psychosocial intervention, there is no significant focus on the cutting edge research on AD that has focused on the utility of biological markers to assist in the particularly demanding problem of early AD diagnosis. There is limited discussion of MRI volumetric measures, PET studies and new ligands that might be useful for early AD, or CSF markers. In the pharmacology there is no presaging of the forthcoming completion of very large MCI acetylcholinesterase clinical trials and no specific discussion on how the borderland of MCI and early AD can be handled *vis-a-vis* pharmacological treatment. Though published in 2003, there is a lack of cutting edge information provided in this text.

There are some positives for this monograph. A number of chapters are very comprehensive and particularly well-referenced. The cognitive neuropsychological aspects of AD covered in chapter 3, and the cognitive intervention approaches covered in chapter 9, will be valued by readers seeking to review these topics. There is a strength of authorship with chapters having been contributed by a diverse multidisciplinary group offering complementary perspectives to those of neurologists.

Overall though there are some positives within this text, the reader may be disappointed or misled by the title and the lack of specific defined focus on early AD. It is unlikely that clinical neurologists will find the answer to their clinical problems surrounding early AD in this text nor will research scientists find new provocative insights to further spur their research forward.

Howard Feldman
Vancouver, British Columbia