

reflection of Arabic understanding of the brain and spinal cord, at that time, then clearly it was quite advanced. In the Renaissance chapter, he quotes Guy de Chauliac's surgeon's code which expresses many of the same sentiments as the Hippocratic Oath. He carefully outlines and documents the first individual or group of individuals that discovered or related common neurological syndromes and neurosurgical conditions.

The volume is heavily illustrated but the quality of some of the illustrations is poor and in a small format. An attempt has been made to place the illustration close to where that particular concept is illustrated. Pictures of the myriad of individuals associated with the progress of neuroscience are included, many from Dr. Walker's collection. Dr. Walker has also added a number of tables in which he has attempted to collate information in a more understandable format. One frustrating aspect of the volume relates to the reference structure. Although, a very valuable listing of references can be found in the reference section, each listing is not referenced directly in the text. At times, this makes it difficult to locate the appropriate reference especially if a particular author has multiple contributions. The references are, however, alphabetical and one is able, with a little work, to coordinate the name and the year in which a particular event has occurred and find the reference.

To anyone interested in the history of the neurosciences, this book provides an exciting overview with carefully documented historical information on the diseases that a neurosurgeon or neurologist encounters. This is the type of book that one reads and at the end, has an appreciation for the love that Dr. Walker had for the history of the neurosciences. Anyone owning this book would return to it again and again, outlining specific pages and quotations which underline the romance of the study of the brain; the most complex object in the universe.

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NEUROLOGY AND THE LAW. PRIVATE LITIGATION AND PUBLIC POLICY. 1998. By Richard Beresford. Published by Oxford University Press Canada. 188 pages. \$C133.50

As a Professor of Neurology at the University of Rochester and an Adjunct Professor of Neurology and Neuroscience at Cornell, the author is eminently qualified to address the topic of Neurology and the Law in the United States. The book represents an update of an earlier monograph. The field of private litigation is covered under the headings of the problem and definition of malpractice; the malpractice action and a hypothetical case; the standard of care and causation; failure to obtain informed consent; the vicarious liability of medical educators, supervisors and hospitals; the determination of damage; and the categorizing of medical errors into technical, judgmental and conceptual; disputes over credentials as they involve professional bodies, hospital privileges and professional associations; scientific misconduct, its identification, adjudication and the protection of individual rights; and the doctor as a criminal defendant.

Part Two of the book deals with the neurologist as an expert, the Federal Rules of Evidence, coping with the partisan expert and the conduct of the medical expert when testifying, and the special problem of testifying where there is malpractice, disputed causation or pain without adequate objective findings. The legal and ethical issues of withholding life support and physician-assisted dying, of

research in neurologically-impaired subjects, of breach of confidentiality and conflict of interest situations are discussed. Neurology, the law and the changing marketplace as it involves cost-containment, American anti-trust law, the problems of the non-profit hospital and the for-profit corporate medical facility are also dealt with. Healthcare reform, its economic considerations, proposed managed care as a reform, the threats of managed care and the pitfalls of activism are also considered.

The writing is scholarly, thoroughly researched and it contains frequent references to and analyses of U.S. Court decisions, of federal rules which govern evidence and of relevant statutes. The author's expertise as a neurologist as well as a lawyer has led to an extensive and authoritative review of the inter-relationship of neurology and law as it exists in the United States. Understandably, many of the legal and statutory considerations do not apply to neurologic or medical practice in Canada although the issues of health economics and managed care and, to some extent, malpractice, may portend future developments in this country. The sections on the role of the neurologist as expert witness, on preparation for and conduct during testimony and cross-examination and the practical insights derived from the author's neurologic and legal expertise and accomplishments are of considerable value to the Canadian neurologist.

The book is a learned treatise on the practice of neurology and its professional, legal, institutional, ethical and public policy considerations, as they presently pertain in the United States, with much information and useful advice for the Canadian neurologist and for those interested in the comparative developments of such issues.

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ESSENTIAL PSYCHOPHARMACOLOGY: NEUROSCIENTIFIC BASIS AND CLINICAL APPLICATIONS. 1998. By Stephen M. Stahl. Published by Cambridge University Press. \$C76.93. Note: This is a CD-ROM only.

Psychopharmacology is a fast-moving field, with discoveries of new drugs, and new effects of old drugs occurring on an annual basis. Thus it is imperative that the clinician and basic scientist have a relatively up-to-date reference available. To a certain extent, the CD companion to Stahl's textbook meets these needs. It covers the basics of neuropharmacology, receptor pharmacology, psychiatric disorders and their treatments, biological effects of most classes of drugs used in treating psychiatric disease and drugs of abuse. Rather than an in-depth reference volume, this CD is pitched at more of an introductory, undergraduate level; I believe that it would be understandable by students lacking significant neuroscience and pharmacology background. To the best of my knowledge, the facts were correct and reasonably up-to-date. Nonetheless, as would be expected in an active field, recent advances such as the identification of the endogenous cannabinoid ligand were lacking. Even at the undergraduate level, it would appear useful to point the student to additional references where they could obtain more detail, but such information was lacking.

I loaded the CD-ROM on a Pentium II running Windows 95 at 75 Mhz with 32 Meg of RAM. On my 16x CD player it worked well and moved with reasonable speed from one frame to another. Figures were clear and each window had an accompanying text

box, which looked like it might have been lifted directly from the textbook; it often contained additional information to what was depicted in the figure. There was also an audio clip with each window which repeated in an abridged form what was written in the text box. The progression through the CD was identical to that in a textbook, with a table of contents laying out the information in chapters, and ending with an index.

In reviewing a CD-ROM, one must ask what advantages are gained over those of time-tested books. One feature of this CD was an abundance of figures, most likely more than would be found in a comparable text. Nonetheless, there were few animations in which the power of the computer could be harnessed. It was also disappointing to find absolutely no illustrations of original or experimental data. An additional feature of the computer that would have been nice to see is the liberation from the sequential format of a textbook; there were no links where one could, for example, switch with a mouse click back to the figure on catecholamine biosynthesis and degradation when one is in the section on antidepressant medication. Finally, with so many people now with Web access, it is disappointing not to find any Web links, either to original abstracts of articles or to informative Web pages.

In summary, for individuals who find learning easier at a computer terminal than from a print document, or who prefer to listen to figure descriptions rather than read them, this CD-ROM will be useful.

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MEMORY IN NEURODEGENERATIVE DISEASE: BIOLOGICAL, COGNITIVE, AND CLINICAL PERSPECTIVES. 1998. Edited by Alexander I. Tröster. Published by Cambridge University Press. 413 pages. \$C128.25

This edited volume includes 24 chapters covering biological, cognitive, and clinical perspectives on memory function and dysfunction in various forms of neurodegenerative disease (ND). In the preface, Tröster wrote that this book was assembled "so that neuropsychologists, neurologists, psychiatrists, and neuroscientists can familiarize themselves with allied research outside their immediate area of expertise", a goal that also acknowledges that the most promising approach to the study and treatment of memory disorders in ND is a multidisciplinary one. Indeed, most chapters in this book describe empirical methodologies and theoretical perspectives that span multiple levels of analysis.

Space limitations do not permit discussion of every chapter; only those chapters that left stronger impressions will be mentioned, although it should be noted that each had its merits. In the section on biological perspectives, one finds Testa et al.'s impressive tome of the neuropathology of memory dysfunction in Alzheimer's disease, Parkinson's disease, Huntington's disease, progressive supranuclear palsy, Lewy body disease, corticobasal degeneration, Pick's disease, and prion disease; this chapter will be an essential reference for scientists and clinicians, even though it is bound to test the fortitude of readers who lack a strong background in neurology. In their chapter on the neurochemistry of ND, Miyawaki and Koller pay curiously little attention to the implications of neurochemical alterations for memory functioning, even though this issue has been well-studied. Berent and Giordani's chapter on functional neuroimaging in ND focuses more on resting metabolism

studies (imaging while the patient is resting) than on activation studies (imaging while the patient is performing a cognitive task), although a number of activation studies in the literature would have been worth discussing. Furthermore, one could argue that resting metabolism data are more appropriate for studying the disease (or condition) per se, while activation data are more appropriate for understanding how cognitive function is affected by the disease or condition, because the cognitive sequelae of ND may be more strongly linked to decreased blood flow in brain regions that are actively processing information than to basal blood flow or metabolic level in those same brain regions. The biological perspectives section is summarized by Markowitsch, who provides a cogent and comprehensive theoretical framework within which to organize the biological contributions to memory dysfunction in ND.

In the section on cognitive perspectives, Owen et al. describe their program of research on executive/working memory deficits in ND. The advantage of this approach is that it allows the reader to appreciate the logical steps taken in superbly well planned and executed cognitive neuroscience research, but the disadvantage is that it does not provide a general review of the area as do the other chapters. Knight reviews studies on prospective memory (remembering to do something in the future) in ND; this chapter is brief, because in the past, many investigators shied away from prospective memory research, owing to its limited and often unreliable measures (e.g., the red pen task, in which the patient has to remember to ask for a red pen when filling out a form). More recently, however, new methods with greater empirical rigour have been developed; it is hoped that in the future these tasks will be incorporated in more studies of ND, because to a large extent, the integrity of prospective remembering, such as remembering to make phone calls, remembering to go to appointments on time, and remembering to deliver messages (to name a few examples) determines how well one can function independently in daily life. Fink and Randolph, and Salmon et al. discuss semantic memory and nondeclarative memory, respectively; both chapters provide excellent examples of the interaction between empirical data and cognitive theory, as at every step the authors describe what data would be predicted from memory theory, and how the data modify our theories of memory. In his summary for the cognitive section, Mayes asks a number of very critical questions of the theories and data presented that must be answered for a complete and accurate understanding of memory function and dysfunction in ND; however, the way Mayes structures his questions and arguments will call for a rather advanced and flexible knowledge of cognitive neuroscience on the part of the reader.

In the section on clinical perspectives, Jacobs and Schofield discuss the appealing notion of 'brain reserve capacity' (also considered by other authors in the book), that developed following findings that younger, and, in some studies, better educated patients suffer relatively milder cognitive consequences of dementia. Paulo provides references to normative data for older aged individuals that (along with the Lezak, and Spreen and Strauss's compendiums) will prove indispensable to clinicians and researchers. Ethical and legal issues regarding research and treatment of ND are discussed by Zehr; this chapter should be mandatory reading for all professionals dealing with ND patients and their families. In his review of this section, Benke raises one topic – cognitive intervention – that is essentially neglected throughout the remainder of the book. This omission is particularly surprising given that many authors discuss spared mnemonic function, and clinicians