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**Book Review Editor**

## Neuropsychiatry and Behavioral Neuroscience

**By Jeffrey L. Cummings and Michael S. Mega**  
 Oxford, U.K., Oxford University Press, 2003, 414 pages, ISBN 0-19-513858-9, \$99.95

*Reviewed by Tiffany W. Chow, M.D.*

Jeffrey Cummings wrote the first edition of *Clinical Neuropsychiatry* 18 years ago. Along with co-author and colleague Michael Mega, the goals are unchanged from the 1985 edition, as the book continues to enhance clinical assessment and management through clarification of brain-behavior relationships. Writing a comprehensive book on all of neuropsychiatry presents an immense organizational challenge. Possible approaches to this information include the phylogenetic (evolutionary order of appearance of higher brain systems and their functions followed by dysfunctions), syndromic (address disturbance of each cognitive domain in succession), topographic (lobe-by-lobe or system-by-system, e.g., start with frontal-subcortical systems then work posteriorly) or historical (phenomenology in chronological order of appearance in the literature). The authors have chosen the first two in reviewing the phylogeny of behavior and cognition against a limbic framework, an appropriate keystone for neuropsychiatric syndromes, before

addressing each syndrome in subsequent chapters.

New to the second edition are sections on frontal-subcortical circuits, treatment of neuropsychiatric disorders, and a list of unifying principles. Orbitofrontal, dorsolateral prefrontal and anterior cingulate frontal-subcortical circuits have served as the basis for many aspects of neuropsychiatry, and prior work by the co-authors in this area culminates in this chapter. Treatment of Neuropsychiatric Disorders may be familiar territory for clinical psychiatrists but provides a helpful synopsis for the behavioural neurologist seeking a reference for psychotropic medication dosages. Table 4.11 lists possible indications for psychosurgery, a frequent cause for neuropsychiatric consultation. The Principles of Neuropsychiatry chapter celebrates solutions to brain-behavior puzzles borne out by collaboration among psychiatrists, neurologists, neuropsychologists, neurosurgeons, and neuroimaging specialists. Each of the new sections contributes to the reader's appreciation for those models of brain-behavior relationships that have endured the tests of time and new technologies.

At a glance, the new edition is strikingly different from its predecessor, which sported fewer than a handful of neuroimaging figures, all of which were CT scans of the head. In this second edition, structural and functional neuroimaging evidence has been assembled to bolster each of the original chapters. The second edition of this textbook updates the original with neuroimaging findings that amply underscore the validity and importance of brain-behavior relationships. Comparison of the two editions will give clinicians an ap-

preciation of how much the neuroimaging field has changed in 18 years, to the extent that many of us now take MRI and functional imaging for granted. A burst of color figures graces every chapter. This edition pulls together those functional neuroimaging studies that validate the brain-behavior relationships hypothesized or modeled in the original, but readers should not expect just an illustrated version of the original.

This book is an informative milestone in the history of neuropsychiatry. The authors take pains to bring down the barriers between the domains of neurology and psychiatry. The effort to consolidate understanding of the brain's mediation of emotion and behavior includes leaving references to DSM-IV to a minimum and combining diagnoses classically claimed by one or the other specialty within chapters discussing clinical syndromes. For example, the former chapter on epilepsy is now titled "Epilepsy and Temporal-Limbic Syndromes," to further emphasize the brain-behavior relationships of that region. Highlights of this edition include banishment of the terms "organic" and "functional," very clear definitions of terms at the start of each chapter, homage to the clinical challenges of working with these patients, and citing the importance of family counseling as a nonpharmacological intervention, to alert the clinician to the stress of these disorders on caregivers and communities.

The target readership for this book includes psychiatrists, neurologists, and neuropsychologists who seek one text to explore brain-behavior relationships in a clinical context. The structure of the table of contents might seem more approachable or

familiar to a clinician from a psychiatry background for use as a trustworthy reference to understand the brain basis behind a given syndrome, as well as being able to consider neurological diseases in the complete assessment plan. Those from a neurological background will appreciate the grouping of psychiatric diagnoses into recognizable neurocognitive systems but may need additional sources to guide psychotropic management. *Neuropsychiatry and Behavioral Neuroscience* is for the serious student of neuropsychiatry or behavioral neurology who will make the time to read through the entire text to appreciate how the authors' principles of neuropsychiatry apply to each syndrome. The authors are wise to acknowledge that the field is moving so quickly as to render each book "obsolete" upon publication. Because clinical management guidelines are still moving targets in neuropsychiatry, the text is not definitive in this aspect, but it has brought

nonpharmacologic interventions to the fore. Devotees of the 1985 edition will be glad to see that bedside testing has not been displaced by neuroimaging. Examples of abnormal neuropsychometry have been retained throughout the second edition.

Clinicians will be grateful for the summarization of neuroimaging research, diagnostic and treatment guidelines into digestible packets sorted by syndrome. Some chapters are more clinically applicable than others. More arrows, labels, and outlines of pertinent structures or a neuroanatomical template key to figures in the text (e.g., Brodmann's area map) would enable readers less familiar with neuroimages to more readily connect the text and the figures. While diagnostic criteria and differential diagnosis lists appear frequently, algorithms could operationalize this information more concisely for the clinician. Those chapters that discuss treatment are easier

to reference in the second edition than in the original, because the authors have formatted the information into tables where appropriate.

Readers might have welcomed a final chapter on implications for the future of neuropsychiatry, including potential clinical uses for functional neuroimaging, trends in neuropharmacological investigations, or the role of genetic counseling as signposts to continuing education on the subject. I would highly recommend this book as a text for those in fellowship programs, to be supplemented by up-to-date readings on the roles of genetics in neuropsychiatry, neurotransmitter pharmacology, evidence-based decision making in diagnosis and treatment, and the role of neuropsychology in a complete neuropsychiatric assessment.

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## CME CALENDAR

### CME Calendar

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**33rd Annual Meeting of the International Neuropsychological Society.** February 2-5, 2005 at the Adam's Mark Hotel in downtown St. Louis, Missouri, USA. Extensive Continuing Education program available with special topic focus on Medical Neuropsychology. CME credits offered for AMA Physician's Recognition Award Category I, sponsored by The Ohio State University Center for Continuing Medical Education. CE credits available for psychologists, approved by The

American Psychological Association (APA). CEU credits available in speech-language-pathology and audiology, approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA). Online abstract submission available May 17–September 1, 2004 at <http://ins.abstractcentral.com>. Meeting details and online meeting registration will be available on the INS website: [www.the-ins.org](http://www.the-ins.org). For more information, please contact the INS office: (tel) 1-614-263-4200, (fax) 1-614-263-4366, (E-mail) [ins@osu.edu](mailto:ins@osu.edu).

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