

tive training in early-stage dementia (Clare et al., 2003), but then proceed to discuss large-scale studies that suggest cognitive stimulation may reduce cognitive decline. These authors are appropriately cautious given limited empirical evidence and recommend clinicians consider normal aging and dementia research, as MCI research is still in its infancy. They conclude by presenting 3 case vignettes as examples of the application of an individualized approach. Finally, Chapter 12 (Peters and Winocur) covers the same general topic areas as the preceding two chapters but has an additional section on combined therapies. Pharmacological trials (exclusively cholinesterase inhibitors in this chapter) and different cognitive training approaches (e.g., cognitive retraining, compensatory approach, holistic approach, Rotman approach) are reviewed, as well as combined approaches used primarily with mild AD patients.

The editors conclude admirably, discussing the common theme of MCI as a heterogeneous construct, the implied notion of decline (*versus* impairment) despite the frequent absence of objective evidence, the sub-categorization of MCI (thereby increasing specificity at the cost of sensitivity), the demonstrated importance of memory measures in predicting conversion, ways to potentially improve prediction of conversion (e.g., by examining executive functioning, neuropsychiatric symptoms, decline on higher level IADLs, biological markers, etc.), and the difficulty inherent in studying therapeutic outcomes in a diagnostic entity that lacks a clear relationship

between underlying pathology and manifest behavioral symptoms. They draw a useful distinction for future research endeavors in which MCI can either be viewed as a behavioral descriptor or as a means to elucidate the natural history of degenerative brain disorders. Overall, this is a useful book with “something for everyone.” The clinician will find some chapters (e.g., Chapters 7 and 8) particularly useful in the second section, as well as the intervention section. These latter chapters provide useful summaries of intervention data that can be relayed to patients during feedback. However, the book will be of particular interest to researchers who may view the MCI concept from a variety of different perspectives and through a variety of different parameters. Because the concept of MCI is a moving target, I am saving a space on my bookshelf for the next edition.

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From the Amygdala to Aikido: Bridging World Views

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The Neuroscience of Human Relationships: Attachment and the Developing Social Brain, by Louis Cozolino. 2006. New York: W.W. Norton & Co., 272 pp., \$35.00 (HB).

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It is not often that one picks up a book where the author illustrates points by using scientific data gathered through the use of the world's most sophisticated technologies, and experiences in a martial art founded on principles of harmonizing with energy fields. The discipline of psychology has developed over the decades into numerous branches (just see the list of divisions for the American Psychological Association), each of which has focused on exploring a topic deeply. The trade-off for this depth of knowledge or understanding, unfortunately, has often been a decided lack of cross-pollination from other branches. Louis Cozolino attempts to bring together two worlds, that of data-driven neuroscience and of subjective, introspective, relationship-oriented psychotherapy. And, whereas there are places where he may not be completely successful, it makes for a very interesting read.

A question that arose for me while reading the book was whether Cozolino could be successful in connecting with the neuroscientists as well as with the counselors and psychotherapists. Almost every chapter provides descriptions of neurological structures, their function and roles in social

behavior and adaptation, summaries of research findings, and then a clinical case example from a relationship-oriented psychotherapy, intended to integrate the neurological concepts. Readers with strong neuroscience backgrounds will probably find the science descriptions basic. The question is whether they will see the implications of the science in the case examples drawn from a clinical psychotherapy practice, especially since those examples never involve any neuropsychological data. The cases are all interesting and compelling, but in the end, the role of neurological substrate and the effects of personal histories on neurological functioning is speculation. It may be reasonable, but it is still only speculation. On the other hand, the descriptions of brain structures, systems, and functioning are very clearly written and easy to follow for readers with less exposure to neurology or neuropsychology.

A main theme that Cozolino weaves throughout *The Neuroscience of Human Relationships* is that the experiences people have throughout their lives, and particularly experiences involving relationships with other people, have

tangible, physical, and lasting effects on neurological functioning. For anyone involved in providing psychotherapy or counseling, this is a welcome theme because it implies that people can change their lives through experiencing positive relationships with others. This is a welcome change from the ubiquitous television commercials encouraging people to seek particular medications from their doctors to relieve unwanted symptoms and restore health.

The book is organized into six parts with a total of 23 chapters. In Part I, "The Emergence of Social Neuroscience," Cozolino introduces the idea of neuroplasticity, and a second theme to which he returns frequently, the role of evolution in neurological development and in the specific functions of various brain structures. These chapters present theories and models of evolution, such as that of MacLean (MacLean, 1990), and begin to illustrate the role of evolution and survival of the species in behavioral functioning and related neurological functioning. Part II is devoted to a review of neurological structures because they relate to social behavior, or the "social brain" as Cozolino terms it. One chapter traces brain development, another structures and systems, and the third addresses laterality, specifically as it relates to emotional and social functioning. Case examples in each chapter aim to illustrate the role of neurological development and the effects of relationship experiences on various neurological structures and systems.

Part III, "Bridging the Social Synapse" is devoted to parent-child attachment from a variety of perspectives. Cozolino starts this section by focusing on "experience dependent plasticity," moving on to the role of reflexes and instincts, the effects of love on human behavior and the underlying neurological functioning, memory, and ultimately to the various ways of attaching. To attachment researchers, this part proves particularly interesting. Cozolino outlines in each of the chapters in this section, neurological structures or systems, and the role they may play in human relationships, such as the dopaminergic reward system and motivation in social behavior. Part IV moves on to focus in-depth on vision and its role in social behavior, with chapters covering topics such as gaze and eye-contact, reading faces and facial expressions, moving into imitation and being able to imitate what is seen, and ending with the topic of empathy. He provides realistic arguments from neurological development for the reality of con-

cepts such as "transference," which is often set aside in the emphasis on empirically supported treatments.

In Parts V and VI, Cozolino moves even more into a clinical discussion, with Part V detailing across six chapters various forms of psychopathology and the roles of various neurological systems as described in earlier chapters. The disorders, as expected, are relationship oriented such as social phobias, borderline personality, antisocial personality disorders, and autism. Part VI discusses issues of psychotherapy more specifically, with the importance of life narratives for health and well-being, and how psychotherapy can benefit from neuroscience and the knowledge we are gaining about how the brain systems function.

Throughout this book, Cozolino strives to weave together the mutual influences of brain structure and function with the complexities and subtleties of human relationships. He uses examples from his martial arts experiences with Aikido, stories of a Buddhist master and teacher, as well as data drawn from analyses of the brains of individuals with various social problems and impairments. It makes for an interesting read even when he is not always completely convincing. The suggestion at the end of the book, to teach clients about their own brain chemistry and functioning to facilitate psychotherapy, does not appear compelling to me. He also tends to write throughout the book as if certain findings are reliable and clear, such as when he describes the styles of attachment in children and adults and the implications for behavior and brain functioning. The reliability of avoidant/dismissive and anxious/ambivalent attachment styles is equivocal, and the adjustment and adaptation of individuals with "insecure" attachment styles can quite often appear healthy, contrary to expectations (see Crittenden & Claussen, 2003). But, these difficulties notwithstanding, *The Neuroscience of Human Relationships* lights the path that neuroscientific researchers and clinicians alike should be traveling, hand-in-hand.

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A Broad-Based and In-Depth Overview of the Neuropsychiatry of Stroke

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The Clinical Neuropsychiatry of Stroke: Cognitive, Behavioral, and Emotional Disorders following Vascular Brain Injury. Second Edition, by Robert G. Robinson. 2006. Cambridge, UK: Cambridge University Press, 470 pp., \$150.00 (HB)

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Many researchers have explored the development of emotional and psychiatric disorders following stroke. Few indi-

viduals, however, have dedicated years of clinical research to the topic or have the depth of knowledge required to