

Cognition in Schizophrenia: Impairments, Importance, and Treatment Strategies, *edi ted by Tonmoy*

Sharma and Philip Harvey. New York, Oxford University Press, 2000, 363 pp., \$39.95.

Not so long ago, perhaps only a decade or so, we were taught that schizophrenia (as opposed to delirium or dementia) is characterized by psychotic symptoms occurring in the presence of a clear sensorium and normal cognitive findings. Only a few years ago, a psychiatrist testified against me in court, stating that schizophrenia is a “functional” as opposed to an “organic” disorder. (Okay, okay, I know it’s akin to testifying that the earth is flat, but that’s another story.) Today, researchers, investigators, and forensic specialists alike are aware that schizophrenia is a neurocognitive disorder. Many have also become aware that the cognitive deficits in schizophrenia are more enduring than the psychotic symptoms and are responsible for the failure of patients to improve in psychosocial functioning even when their psychotic symptoms are in remission.

The message about the importance of cognition in schizophrenia has filtered to front-line clinicians largely through the efforts of pharmaceutical companies, who, in their efforts to market the atypical antipsychotic agents, have emphasized studies that show the (possibly) unique salutary effects of these agents on cognitive dysfunction. A number of practitioners, as well as investigators who do not specialize in this area, are now interested in learning more about cognition in schizophrenia so that they can critically evaluate the emerging data and better treat their patients. This reasonably concise book, edited by two key researchers in the field—Tonmoy Sharma and Philip Harvey—provides a good general reference for readers who wish to begin the process of learning more about this topic.

The book is divided into three sections. In the first section, *The Impairment of Cognitive Functioning in Schizophrenia*, there are seven chapters covering topics as diverse as learning and memory, formal thought disorder, the longitudinal course of cognitive impairment, and the role of glutamatergic systems in cognitive dysfunction. These chapters—and indeed all of the chapters in the book—are written by established experts in the subject. A rather unique and interesting feature is the Anglo-American nature of the endeavor, with well-known contributors from both sides of the Atlantic. Perhaps this is a stylistic stereotype on my part, but the chapters written by Americans struck me with their clarity and bluntness, and the chapters written by British colleagues struck me with their elegance and thoughtfulness. (Surely science and medicine benefit from both approaches.)

To return to the structure of the book, the second section, *The Importance of Cognitive Impairment and Its Correlates in Schizophrenia*, presents five chapters on the relationship of cognitive deficits to social adjustment, functional and longterm outcome, symptoms, and the presence of substance abuse. The third section, *Treatment for Cognitive Impairments*, has five chapters that cover the effects of different pharmacological interventions as well as cognitive remediation approaches to the treatment of deficits.

The strengths of the book are its timeliness and the ability of many chapters to distill a large and specialized body of work into several key take-home messages. As an example, "Relevance of Neurocognitive Deficits for Functional Outcome in Schizophrenia" by Green et al. is by design "relatively non-technical and reader friendly." It begins by defining what is meant by "neurocognition," goes on to summarize and derive easily understandable conclusions from a huge body of work on functional outcomes, and concludes by presenting an interesting model on how social cognition might be a possible mediator between basic neurocognitive abilities and social outcome in schizophrenia.

As another example, Keefe's chapter, "Working Memory Dysfunction and Its Relevance to Schizophrenia," begins by presenting the reader with an entertaining example of working memory in action: "It is 20,000 years ago and you are running for your life. You have not eaten for days and your dinner—the woolly mammoth you and your fellow tribesmen are chasing—is getting away." The chapter goes on to delineate in an elegant and extremely thorough manner the definitions of working memory, the working memory deficits observed in schizophrenia and in first-degree relatives, and the relevance of these deficits to other aspects of the disorder.

The main weakness of the book appears to be its organization. Chapter 1, "The Course of Cognitive Impairment in Patients With Schizophrenia," is a very clear and well-written overview by Weickert and Goldberg of the variation in general cognitive abilities and their progression over time in cognitively defined subgroups of patients. This is a great overview of a fascinating and somewhat complex aspect of cognition in schizophrenia, but wouldn't it be better to place this topic later in the book, after the general reader has become familiar with more basic concepts? Likewise, in this first section of the book, which introduces the reader to key areas of impairment, I wondered why the otherwise excellent chapter on glutamatergic contributions was included. Again, it seemed that this important but challenging subject area would fit better later in the book where certain neurobiological and neuropsychopharmacological aspects of cognitive dysfunction are explored. As another example, the early section 1 chapter on cognitive underpinnings of formal thought disorder seemed to belong farther on in the middle section, where the relationship of cognition to specific symptom clusters is covered. This confusing organization of chapters might induce some transient cognitive dysfunction in the naive reader, who will wonder why she or he is not always able to understand the link among topics in each section (a sort of dysexecutive state perhaps?). It will not prove to be a problem for readers who are familiar with the field, for they will simply engage in some adaptive "attentional impairment" and jump around to various chapters of the book as their interests and curiosity prompt them.

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