BOOK REVIEW

Schizophrenia: Evolution and Synthesis

edited by Steven M. Silverstein, Bita Moghaddam, and Til Wykes. The MIT Press, Cambridge, MA, 2013, 390 pages, \$50.00 (hardcover).

Schizophrenia is a serious mental disorder that is lifelong, with evidence of impairment from birth. To date, the understanding of the molecular and neurobiological bases of the disorder has been fragmented at best, and this book provides a comprehensive overview of the current understanding of the molecular and neurobiological bases of the disease.

The outward clinical presentation of patients with schizophrenia can be extremely variable, with differing levels of thought organization, diverse contents of delusions and subjective experiences, and varying extents of negative and cognitive symptoms. This book suggests that schizophrenia should be considered a category of brain syndromes that bear some outward resemblance to one another, similar to epilepsy, dementia, and cancer. The authors skillfully describe efforts to break down the "schizophrenia syndrome" into subgroups and also suggest grouping schizophrenia with other psychotic disorders, perhaps leading to a "psychotic spectrum" of disorders.

While the debate on the appropriate definition of schizophrenia as a syndrome or a distinct disease is ongoing, the book also presents potential new avenues for treatment of schizophrenia. It is clear that the available pharmacologic treatments, predominantly focused on the dopamine system, have thus far had limited success in treating the negative and cognitive symptoms of schizophrenia, as well as in controlling symptoms in severely chronically ill patients. In addition to citing possible targets for drug development, such as the *N*-methyl-D-aspartate system, the authors correctly point out that future therapies for treatment of negative and cognitive symptoms will need to be considered. A major strength of this book is that chapters on early psychosis and on risk in relation to etiology of schizophrenia—pregnancy, urban upbringing, genetics, etc correctly paint a picture of the multifactorial nature of symptom onset. It smartly suggests possible avenues for early intervention, including fish oil and cognitive interventions. The authors also emphasize that by the time of the first onset of psychosis, the disease is most likely hard-wired into the patient's brain circuitry, which supports the claim that earlier interventions are needed if one wants to change the course of the disease.

At times, the book reads like a series of research proposals on the molecular and neurobiological bases of schizophrenia. However, it is ideal for those who are interested in reading about modern experimental techniques that may in time provide insight into the molecular and developmental bases of schizophrenia.

Overall, *Schizophrenia: Evolution and Synthesis* does a wonderful job of providing a broad survey of current research techniques and the current thinking regarding the biological basis of a disorder that has so far eluded molecular characterization. There is wide agreement that schizophrenia remains poorly understood, and this book marvelously summarizes not only the clinical problem, but also the beginnings of a plan for solving it.

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