

## Psychopathology: The Evolving Science of Mental Disorder

edited by Steven Matthyse, Deborah L. Levy, Jerome Kagan, and Francine M. Benes. New York, N.Y., Cambridge University Press, 1996, 633 pages, \$69.95.

*Psychopathology* is a celebration of the extraordinary progress being achieved in the scientific study of mental disorders. It is also a celebration of the remarkable career of Professor Philip Holzman to this point. Dr. Holzman is in the process of a mid-career change at Harvard, "as he leaves lectern and mortarboard behind to pursue his research full-time" (p. xiii). Dr. Matthyse feels that "Philip Holzman has explored experimental psychopathology with depth and breadth unequalled in our time" (p. xiii). Given their stated dual mission, four Harvard academicians have collaborated in providing editorial oversight and giving birth and shape to *Psychopathology*. They have chosen to achieve this ambitious investigation from a variety of fields to (1) present new findings from their laboratories and (2) share their views and perspectives on areas of rapid growth and change.

In an attempt to maintain focus, the editors have clustered the contributions into four sections—brain mechanisms, development, thinking, and genetics—with a final closing section consisting of the single chapter "Response and Reflections," by Dr. Holzman.

Catherine the Great (1729–1796) once said that "a true sovereign must be able to look beyond the tossing waves to the horizon line." In like manner, a true test of the editors' success in achieving their mission is if they can maintain course and speed and bring the ship to the desired destination on time in topflight shape. A critical issue for this reviewer is to grapple with the degree of success or failure of the editors in achieving their ambitious quest. With 24 contributors, including the one the project is dedicated to, from around the United States, as well as Canada, Denmark, and Norway, can the focus be sustained? The risk is one of diffusion, dispersion, or even frank disconnectedness and incoherence. This task requires an assertive editor who will not lose sight of "the horizon line." For four editors to accomplish this places a high demand upon them collectively for consistency, communication, and coordination between them.

Some of the 26 chapters are multiauthored, but most have single authors. Some authors have submitted more than a single chapter. The editors themselves have written some chapters. Five chapters are followed by a brief "comments" section, usually authored by Dr. Holzman, but in one case jointly by Drs. Holzman and Matthyse. The first 25 chapters fall into one or another of the four sections mentioned. An example is a chapter by one of the editors entitled "The *Drosophila* Eye and the Genetics of Schizophrenia," as the final chapter in the "Genetics" section. It is 22 pages in length, followed by 2½ pages of References, arranged alphabetically by author. The chapter includes (1) hand-drawn diagrams of the cellular architecture of the *Drosophila* eye—axonal tuft cells, small basket cells, chandelier cells, double bouquet cells, spiny stellate cells, and pyramidal cells; (2) a diagram of the morphogenetic furrow that sweeps from right to left, leaving behind photoreceptor clusters in sequential stages of development; (3) a micrograph of a mature photoreceptor cluster; (4) cross-sectional slices of eyes, demonstrating ommatidia differentiation in *Egfr<sup>z</sup>* compared to wild-type near the morphogenetic furrows; and (5) graphs showing the effect of a sinusoidal displacement on torque and

fixation occurring. Many of the chapters have "Notes" listed at the conclusion of the chapter. At the end of the book is an Author index of 12 pages and a Subject index of 15 pages. There is enormous variability in content style and format of the chapters. Some chapters are heavy in emphasis of research and may refer to such technical functions as reflexive saccade tasks, gap tasks, or onset cues. Other chapters are largely animal studies such as the biology of the *Drosophila* eye. Some chapters on humans focus primarily on children and adolescents, whereas others are largely adult in focus. Some chapters have "Conclusions," some "Summaries," some "General Viewpoint" sections, and some conclude with none of these. A consistent closure of each chapter with "Clinical Implications and/or Research Implications" would have been desirable. Some are more theoretical and more conceptual model essays. Some have tried to blend research and essay in the same chapter. One traced historical evolution in child development, e.g., detailing G. Stanley Hall's contributions to developmental psychology. Some chapters conclude with a "Summary" consisting of a single long sentence:

Moreover, since these regions (medial temporal lobe structures, and neocortical STG) are highly interconnected anatomically and functionally (see section II), it is quite possible that damage to this interconnected network affects a number of functions, including: storage and retrieval of verbal information, auditory associative memory, verbal memory, and language-related functions where there is a disruption in the strength of associative links that results in thought disorder and, as described by Bleuler (1911/1950), "incidental" linkages (p. 85).

Why do people write like that, and why do editors allow it? In general, the publisher has done a fine job with very few typographical errors. The dust jacket cover did have "these" when it should have read "fields," and on p. 83, the graph axes are labeled, but are upside down and the book must be moved accordingly to read them.

Nonetheless, Dr. Holzman (as well as some of the other contributing researchers) makes some eloquent points:

Basic studies, while less dramatic than targeted disease-oriented studies, can yield a bigger and more lasting return on the investment of time, work, and money. Peter Medawar wrote that one should invest in applied science for quick returns, but in pure (basic) science for capital appreciation (p. 594).

In most psychopathological research we have no psychological periodic table to guide us toward what is missing in our experimental efforts. Accumulation of sheer numbers of facts does not make a science, any more than does the old Sears, Roebuck catalogue, crammed as it was with very interesting facts. Nor does the physicist hunger after bare numbers. It is the ordering of those facts and numbers and their relation to each other that give them meaning. Such is the guidance provided by grand theory, which now, I say sadly, has lost its mandate. Most of us do not even mourn its loss, perhaps because we had never developed a lasting attachment to it (p. 595).

My own assessment of *Psychopathology* concurs with that of Dr. Holzman:

Basic research must occasionally touch base with clinical problems and clinical issues must be informed basic research. There are times, however, when researchers do lose touch with the clinical phenomenon that began their study (p. 600).

This appears to be an insightful indictment of this book, whether intended or not.

In our excitement with our shining present and promising future, and with the sea change of our field into something rich, and strange, and miraculous, we may forget our links with the past. At times we may then claim too much and appear a bit too puffed up by pride in our new and undeniably spectacular discoveries. Together with our soaring aspirations and highmindedness there are unmistakable elements of self-deception and a tendency to overreach in the way we present our work. It has always been so. To recognize that, along with our genuine and inspiring advances to loftier levels of knowledge, requires self-reflection, wisdom, and a sense of humor. It enables us to savor the truly astonishing accomplishments of the science of psychopathology, which we have been privileged to witness and to take part in, and to say with Miranda, "O, wonder" (pp. 601–602).

Do I feel the editors achieved their goals? Other than an expression of fondness for Dr. Holzman, no, and I think it was

doomed from conception. The methodology and findings of basic science are best published as focused articles in peer-reviewed journal articles largely for a researcher readership. This subject area would hold little interest for most members of our profession. Philosophical essays on the historical evolution of and future of psychopathologic research might be an article or series of articles in a different type of journal. The writing style should be simple, straightforward, focused, and with meaningful conclusions. If there are no conclusions, then what is the point of publishing or reading the paper at all?

The warmth felt for Dr. Holzman is palpable throughout the book. The belief in and commitment to psychological research is also powerful and pervasive. However, when the editors said, "This book will appeal to graduate students, clinicians, and researchers in the fields of psychiatry, cognitive science, and neuroscience" (dust jacket leaf), I beg to disagree. I feel this book will appeal to those people who wish a milestone souvenir in the career of their cherished mentor—consisting largely of basic scientists in psychological research into psychopathology and who trained at Harvard and few others.

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**Editor's Note**—I do not necessarily endorse every point made by Dr. Gold. But I do share his general concern about sloppy editing undertaken by famous scientists and equally famous publishers—or rather, should I say, editing not undertaken by some of the giants in our field. I am permitting this review as a generic notice to publishers.—H.S.A.