

sound, journals, conferences, mailings, luncheons, APA conferences, advertising, etc. At this time, do we need a whole volume on this subject, I wondered?

This multi-authored monograph comprises five chapters covering relevant basic science followed by seven chapters mostly exploring the use of these medications in treating different disorders. Csernansky and Filippino begin with a chapter providing historical background and a review of the popular theories of what makes the newer drugs “atypical” that is informative, clear, and interesting. The chapter on rodent behavioral models usefully reminds us that the extant paradigms lack face validity for relevance to psychotic symptoms. My eyes glazed over, however, while slogging through the chapter on metabolic regulation: 35 pages of details of study results and references. The recited findings of these studies, almost exclusively poorly controlled retrospective analyses and numerous case reports, mostly about diabetes and glycemic control, do not add new conclusions to the current level of understanding of most clinicians. One chapter addressing the nosology of psychotic disorders might seem misplaced, but it provides a clear and engaging review of where our diagnostic categories have come from and their inherent limitations.

Further topics are neuroimaging studies, the acute and long-term efficacy of the newer antipsychotic medications (both covered in well-crafted chapters), their use in childhood disorders and “affective disorders” (mood disorders for most of us), and new targets for antipsychotic drugs (rather a more interesting piece, in which future directions are succinctly described). At best these provide current useful and intelligent reviews, but reading the book cover-to-cover exposes one to a moderate amount of repetition. On the other hand, the chapters are well referenced and most are well written, with only a modest number of small errors and typos. So perhaps this should be endorsed as a worthwhile addition to the literature.

Who, however, will be the audience for this book? It is more than most practicing clinicians will want to read on a familiar topic. Some motivated individuals might prefer to perform PubMed searches for the latest reviews when a question arises for them. As an alternative to a book, the authors might have published the chapters separately as review articles. This volume will principally be of value to researchers in the field, to those whose practices are focused on treating psychotic disorders, to trainees who wish a more thorough introduction to this class of medications with some historical background, and perhaps to those reviewing practice guidelines and administrative controls on prescribing. The latter group may be disappointed, though, to find only a single passing mention of one administrative scourge of current institutional psychiatry: the frequent and expensive practice of nonrational polypharmacy.

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*Electroconvulsive Therapy, 4th ed.*, by Richard Abrams. New York, Oxford University Press, 2002, 328 pp., \$66.50.

A veteran reader of the first three editions of this book receives the fourth with the expectation of pain and pleasure. The pain relates to the need to drag once more through the basic science, although refreshment is ever necessary because this knowledge only fleetingly sticks. The pleasure relates to the anticipation of a masterful analysis and synthesis

of a vast and important topic by a legend in the field, who will deliver an unambiguous and personal statement in a clear and often entertaining style: “Like Man, ECT is at the end of an evolutionary line, but, also like Man, rather than facing imminent extinction it is flourishing.”

An interesting addition in this fourth edition is a chapter on transcranial magnetic stimulation, which Abrams sees as having potential in the treatment of depression. This was a brave prediction, for at the time of writing he had access only to reports up to and including 2000. Over the subsequent years there have been more positive reports (1). Abrams correctly points out, however, that the current method of delivering transcranial magnetic stimulation “bears as close a relationship to the methods that will be employed in 25 years hence as unmonitored sine wave bitemporal ECT bears to modern ECT.”

The predicted thorough review of the basic science is present and updated. Of particular interest in the new edition is the progress in the debate over the method of determining dose: stimulus titration versus fixed dose or age-based dose. After reviewing the literature, Abrams is quite clear in his own preference: “I prefer simply setting the ECT device to deliver the maximum dose.” He describes the fears of undue cognitive consequences of high-dose right unilateral ECT as “unwarranted.”

An advantage of the publication is that in addition to the scholarly assessment of the literature, in chapter 9, Abrams gives a practical account of how he performs ECT. There are also reassuring practical statements, including that the higher the dose, the shorter the seizure—“confuting the frequently offered advice to increase the stimulus dose if seizures are too short, and reduce it if they are too long.”

This is the most authoritative ECT monograph and has been so for almost two decades. It is essential reading for all trainee psychiatrists and essential source material for departments providing this treatment. It is based on evidence, interesting, and easy to read. Although Abrams cannot see how the treatment can be further improved, he observes that our knowledge of the mechanism of action is rudimentary, having not surpassed “in conceptual elegance the 18th-century claim that things burned because they contained phlogiston.”

#### Reference

1. Fitzgerald PB, Brown TL, Marston NA, Daskalakis ZJ, De Castella A, Kulkarni J: Transcranial magnetic stimulation in the treatment of depression: a double-blind, placebo-controlled trial. *Arch Gen Psychiatry* 2003; 60:1002–1008

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## BIostatistics

*Beyond Significance Testing: Reforming Data Analysis Methods in Behavioral Research*, by Rex B. Kline. Washington, D.C., American Psychological Association, 2004, 336 pp., \$49.95.

This book is aimed at the statistics consumer who has only a rather partial quantitative education—that is, most of us.

## BOOK FORUM

The basic thrust is to counter the overwhelming emphasis on p-value-centered, null-hypothesis significance testing. The pros and cons of this debate are carefully reviewed. The major point is that drawing inferences from analyses solely in terms of p values is grossly inadequate and easily leads to misunderstandings. To remedy this, confidence limits, effect sizes, and meta-analyses are emphasized.

The extended, lucid treatment of the variety of effect sizes is unique. Also, a helpful page is titled “How to Fool Yourself With Effect Size Estimation.” Particularly trenchant are the statements that “generic definitions of effect size magnitude” are problematic, referring to the convention that considers a  $d$  index of 0.2 as small, whereas 0.8 is large. It is generally forgotten that the late remarkable innovator, Jack Cohen, proffered these tentative standards as representative of the range of effect sizes common in the psychological literature. He did not address whether this is due to feeble assessments.

A further strength is the welcome emphasis on replication:

No matter how intriguing the result for a single study, it must be replicated before it can be taken seriously. Replication also is the ultimate way to deal with the problem of sampling error. Indeed, statistical tests are unnecessary with sufficient replication.

Unfortunately, these axioms are quite inconsistent with the practices of most novelty-focused scientific journals as well as the U.S. Food and Drug Administration, where two mammoth trials that achieved statistical significance—despite miniscule effect sizes and no clearly useful clinical impact—were deemed sufficient for marketing.

The author’s firm stand for replication becomes somewhat problematic within the context of “meta-analytic thinking.” The admirable criticism applied to the interpretation and misinterpretation of p values is missing here. He cautiously states, “If the results of a meta-analysis helps researchers conduct better primary studies, then little more could be expected.” However, there is no explication of the many flawed meta-analyses that distort the psychiatric and psychological literature.

The unpublished critical paper “Meta-Analysis at 25” by the pioneer Gene V. Glass is linked as a Web resource in the book’s amplifying Web supplement ([www.apa.org/books/resources/kline](http://www.apa.org/books/resources/kline)). Glass forthrightly denounces many statistical approaches to meta-analysis and pleads for massive, public, complete raw data archives to be posted on the Web concurrently with journal publication—to replace meta-analysis. That would really reform behavioral research.

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