



The Evolution of the Psychiatry Research Journal

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The psychiatry research journal is evolving as part of a larger transformation in the way that we communicate. In this commentary, I will share a personal perspective on ways to increase the functionality of psychiatry journals that emerges from my experience as editor of *Biological Psychiatry*.

The traditional glossy-covered published "hard copy" journal is in decline. Even book lovers are likely to switch to content presented via digital formats. Digital/mobile readers, such as the Amazon Kindle or the Barnes and Noble eReader, provide electronic access to book content and they are likely to offer journal content as well. For *Biological Psychiatry*, far more people access the journal in its electronic format, particularly through institutional subscriptions, than receive a copy of the journal through a personal subscription. The change from paper to electronic copies has important implications for

the way that most readers access papers in the journal. Rather than identifying papers by leafing through a printed issue, readers typically locate our papers through electronic means, such as Web-based literature searches performed by Google (www.google.com), PubMed (www.pubmed.gov), and other literature search engines. Further, journals are judged by the number of times their articles are cited rather than by the number of printed subscriptions. Thus, journals are shifting their emphasis away from printed journal articles and toward the emerging opportunities associated with electronic publication.

This shift is critical to the survival of established journals, because they will need to be increasingly structured to capture the attention of readers who access information via the World Wide Web. Subscription journals have new types of competition. For example, open access publishing, such as the journals

associated with BioMed Central and the Public Library of Science (PLOS), make journal content available to readers without charge. Free access is particularly important for academics and clinicians who are not affiliated with teaching hospitals or universities or who are working in isolated or impoverished settings. There are also a growing number of alternatives to journals as sources of medical and scientific advances, including Web-based encyclopedias; the Web pages of professional organizations, advocacy groups, and individual investigators; and blogs.

With so many sources of information, what are the emerging roles of psychiatry journals? Rather than simply providing access to information, journals collaborate with scientists and readers in the communication of scientific information through the peer-review process. First, journals serve as a filter of scientific content. Competitive journals publish a small fraction of submitted papers. For example, *Biological Psychiatry* generally publishes 10% to 15% of submissions. Readers come to rely on this filtering process when selecting papers to read from among papers published on a given topic. Similarly, this selection process adds credibility to findings reported by the lay press as scientific breakthroughs. An unintended consequence of this filtering function is that academic institutions use the capacity of investigators to publish papers in highly competitive journals as a surrogate marker for academic achievement when considering faculty candidates for promotion. Second, journals shape the content that they publish. During the review process, additional experiments, data analyses, and disclosures regarding data collected are requested routinely. Similarly, the style and formatting of articles evolve. Thus, the published papers may be improved substantially from the initial submissions. As a result, the principal value of the journal is the editorial process that has identified important well-conducted research studies and improved the way that these studies are presented.

Journals are struggling to provide content in forms that have greater utility for more types of readers. For lay audiences,

Biological Psychiatry creates press releases of high profile papers and releases summaries of each paper using language appropriate for lay audiences ("In this Issue"). To make papers most accessible to readers with a general topical interest, we limit the printed versions of papers to the key methods, results, and commentary. However, for readers with a more specialized interest in a paper, we publish secondary methods, results, and commentary as online supplements to published papers. We, like other journals, are seeking ways to enrich the content of published materials presented online and to create opportunities for new types of interaction with published content. Some types of materials that might be published in this fashion are podcasts, videos, slide presentations in the PowerPoint or related format, and raw data sets.

Journals are evolving in response to the emergence of new technologies that create novel and more effective ways for authors to present scientific information and for readers to make use of this information. This process is likely to accelerate as generations of clinicians and scientists emerge who are adept at Twitter, Facebook, and other new Web-based forms of communications. It will be interesting to see what unexpected new opportunities develop from this evolution in scientific communication.

Author affiliations: Department of Psychiatry, Yale University School of Medicine, Yale-New Haven Hospital, New Haven, and VA Connecticut Healthcare System, West Haven, Connecticut. **Financial disclosure:** Dr Krystal is a consultant or Scientific Advisory Board member for Abbott, AstraZeneca, Bristol-Myers Squibb, Eli Lilly, Forest, GlaxoSmithKline, Janssen, Lohocla Research, Merz, Pázer, SK Holdings, Takeda, and Transcept; reports Janssen Research Foundation support to the Department of Veterans Affairs; and holds exercisable warrant options with Tetragenex and 3 patents or inventions. **Funding/support:** Dr Krystal receives financial support for his role as Editor of *Biological Psychiatry*. **Acknowledgments:** I would like to thank my colleagues at *Biological Psychiatry* and Elsevier for comments on this paper including Rhiannon Bugno, Cameron Carter, Daniel Geschwind, Paul Harrison, John March, Eric Nestler, Joshua Spieler, and JonKar Zubieta. **Corresponding author:** John H. Krystal, MD, Department of Psychiatry, Yale University School of Medicine, Yale-New Haven Hospital, 300 George Street, Suite 901, New Haven, CT 06511 (john.krystal@yale.edu). doi:10.4088/JCP.09com05629whi

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