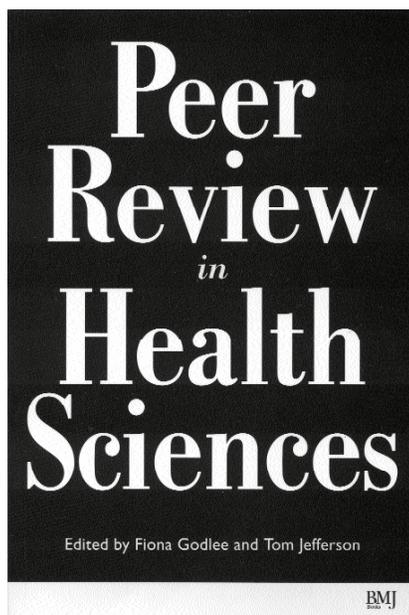


edited by Stephanie Deming and Walter Pagel



PEER REVIEW IN HEALTH SCIENCES. EDITED BY FIONA GODLEE AND TOM JEFFERSON. LONDON: BMJ BOOKS; 1999. 286 PAGES. SOFTCOVER \$54.95. ISBN 0-7279-1181-3.

If sometimes you feel as though the scientific-publishing community is obsessed with issues of peer review, *Peer Review in Health Sciences* will do nothing to dispel that notion. This is an exhaustive examination of the peer-review process—its past, present, and future—in handy primer format. The editors have done an admirable job of pulling together a mostly cogent collection of essays on how peer review affects every aspect of scholarly pursuits, from guiding the funding of biomedical research to influencing how and where the results of that research are made available. The bibliographic references alone are worth the price of the book.

The contents are organized in three parts. Part 1, “How It Is Now and What We Know”, traces the history of peer review from its origins in England nearly 300 years ago to its current, nearly universal popularity. It is fascinating to learn that “peer reviewing developed in response to increasing specialisation, but . . . in the absence of any systematic movement, it developed haphazardly. Those journals that used it at all produced their own versions, often dependent on the editor in charge at the time.” The first chapter sets the stage for what is, in fact, the recurring theme of the book: that today’s peer-review system, despite its many flaws and variants, has no substitute—yet.

Outlining the rationale for peer review, Drummond Rennie cites evidence that peer review helps editors select the best manuscripts for publication and improves manuscript quality and readability. But Fiona Godlee and Kay Dickersin note that the National Library of Medicine does not take into account whether a journal is peer-reviewed in its decision to index a journal in MEDLINE, arguing that “peer review is not a standardised process and its value in terms of improving the quality of science has not yet been proved.”

A favorite chapter, by Christine Wenneras and Agnes Wold, examines bias in peer review of research proposals, a largely ignored but far-reaching arm of peer review, and cites a Swedish study that found clear discrimination against women

in the funding of biomedical research. Male applicants were consistently perceived to be scientifically more competent than female applicants with the same educational background; in fact, “the peer reviewers considered female MDs to be less competent than male nurses.” A Danish study found that female applicants at the Danish Medical Research Council had a 40% lower chance than men of being granted funds, and their grants were on the average 48% smaller than those given to men.

Lest readers think that this phenomenon is peculiar to Scandinavia, the authors report that female researchers at a division of the US National Cancer Institute received less than two-thirds of the budget and a mere 63% of the research staff given to male researchers of equal seniority. Wenneras and Wold cite studies showing that female scientists as a group publish far fewer papers than their male counterparts but that the women’s papers are of higher quality. After a disturbing discussion of other kinds of bias—“funding at the NIH follows a . . . pattern, such that the more grants a particular researcher already has, the larger will be the average size of new grants awarded”—the chapter concludes with two alarming assertions: first, that the European Union requires successful grant applicants to network with scientists from specified countries and to have industrial contacts, despite the fact that a large majority of patents are generated by basic research funded by government or nonprofit organizations, and second, that the grant application and award process in the European Union is opaque.

Part 2, “How To Do It”, deals with specific practices of peer review and their relative effectiveness. Issues explored in depth include reviewer selection, instruction, and evaluation; ethical considerations such as bias, conflict of interest, fairness, and confidentiality of the review; specific problems of small and non-English journals; and the merits of blinding (blocking the identity of authors from reviewers) and masking (blocking the identity of reviewers from authors). (Conclusion: neither blinding nor masking has any effect on the quality of review.)

Reviews

continued

Part 3, “The Future”, suggests how peer review can benefit from the electronic revolution in speed, cost, and quality. A whimsical conversation between Socrates and a journal editor, written by Christopher Martyn, recapitulates in a delightful way the problems with the current system and the challenges that lie ahead. In another chapter Rennie speculates that “if scholarly publication is not to degenerate into some vast and chaotic chat page, formal review by peers will form an indispensable part of whatever systems of electronic publication of science prevail.” A more optimistic Craig Bingham believes that “in the long term, publishers who bring authoritative information, quality control, and judicious selection of information to the Internet will be preferred.” Until then, alternatives to the peer-review system as described in this book are few, if any.

Like all works with multiple con-

tributors, *Peer Review in Health Sciences* is uneven, is often repetitive, and has considerable overlap among chapters. Careful proofreading before publication would have spotted inconsistencies of style and errors in punctuation that render some sentences meaningless. Nevertheless, the book offers practical suggestions that will be helpful to editors, journal staff, authors, reviewers, or anyone else who is or might become involved in some aspect of peer review—and that includes most readers of *Science Editor*.

Grace Darling

GRACE DARLING *edits several non-peer-reviewed publications and is an obsessive proof-reader of anything that falls into her hands.*