Peer Review: Fearsome Foe or Friendly Facilitator?

Many authors submit their manuscripts for publication in professional journals with trepidation, fearing that they are running a literary gauntlet where they are pummeled by anonymous reviewers and pompous editors who are determined to belittle them and to delay or prevent publication of their work. Some writers are convinced that this academic in-group conspires to publish only works of those in the "establishment." Speakers at the International Congress on Peer Review in Biomedical Publication, sponsored by the American Medical Association in Chicago on May 9-11, 1989, revealed the falsity of this age-old myth, emphasizing that reviewers and editors are in fact the authors' allies and advocates, fighting for the same prize—the communication of truthful, relevant information in medical science. This is our attitude at Refractive and Corneal Surgery.

The Philosophy of Peer Review

Peer review is a costly process. Reviewers are not paid, even though each spends an average of 2.5 hours reviewing a submission and reviews six papers per journal, many reviewing articles for numerous periodicals each year. These reviewers deserve admiration and praise from both authors and editors.

What is the job of these peers who review our work? First, they are the authors' advocates, pointing out the strengths and weaknesses of each article and identifying methods to improve it so that it can be published. Second, they are the editor's advisors, helping to evaluate the validity of the methods, the accuracy of the technical information, the adequacy of the statistical analysis, and the appropriateness of the conclusions. Third, reviewers are professionals, and are therefore expected to comment on an article in a dispassionate, fair, constructive, and courteous manner. Reviewers are prohibited from duplicating or disseminating information in the manuscript; such piracy and plagiarism of an author's work violates fundamental ethical standards. Fourth, reviewers are expected to be punctual, returning their assessment within 2 weeks of receipt.

No reviewer has veto power over publication of an article, that is the Editor's job. Nor are they arbiters of the truth. They do not vouch for the veracity of the data, but only assess the overall strengths and weaknesses of the methods, results, and conclusions as presented in the manuscript.

Peer Review at Refractive and Corneal Surgery

At Refractive and Corneal Surgery, all original contributions, review articles, and brief communications—both solicited and unsolicited—are sent to two or three reviewers selected by the Editor. The Editor or Associate Editor also reads the article and digests the reviewers' comments, making the fundamental decision of whether the contribution is acceptable for publication in Refractive and Corneal Surgery or is more appropriate for publication in another journal. Of those accepted, the vast majority are returned to the author along with the reviewers' comments for revision—sometimes slight, sometimes extensive.

We don't mask the author's identity. Studies reported at the Peer Review Congress demonstrated that eliminating all obvious identifying information from a manuscript conceals the author's identity less than 50% of the time, because reviewers are able to identify the writer by analyzing the references, by previous familiarity with the author's work, or by discovering some clue in the text. Reviewers have the
option of signing their reviews or remaining anonymous. Reports at the Congress demonstrated that signed reviews were often as caustic and critical as anonymous reviews. Nevertheless, since the Editor seeks the unabashed candor and unrestrained evaluation of the reviewers, anonymity is provided to those who prefer it and who might not be as direct were their identity known to the authors.

The purpose of this expensive, time-consuming, and laborious process is to assist the author in bringing his or her work to print. The speed with which this goal can be reached depends on how closely the author's initial attempts approximate the rules and customs of scientific communication, as spelled out in the Instructions for Authors.

Peer Review and the Author

Virtually all authors who receive critical comments and requests for revision see them as a personal attack by hostile competitors whose ignorance is exceeded only by their inability to appreciate the significance and clarity of the paper. However, an evening's diversion and a 24-hour cooling-off period will allow most authors to appreciate the time, effort, and thought that have gone into the peer review process and to acknowledge the attempts of the editorial staff to maintain high standards. We hope that most authors will enter into the painful but productive process of revising the manuscript with the goal of producing the highest possible quality communication for their colleagues.

Authors who think their manuscripts have been treated unfairly may request further explanation. We ask the patience of our contributors as they endure this arduous process.

Structure of Refractive and Corneal Surgery

To allow as many contributors as possible to publish their work in Refractive and Corneal Surgery, we have provided specific sections to present many different types of information, from opinions and new ideas to rigorous clinical and laboratory science.

These sections are spelled out in the Instructions for Authors.

Contrary to general impression, the acceptance of a manuscript for publication is not the most important event in the life of the paper, but rather the beginning of the process. Indeed, it is what happens after an article is published that is most important, because acceptance and publication place the information before the profession, and it is their reactions and their assimilation and use of the information that is most important—debating, validating, replicating, and assessing its role. Refractive and Corneal Surgery provides numerous avenues for such evaluation, including invited Editorials that put major articles in perspective, Letters to the Editor, and in selected articles, Open Commentary, where an article accepted for publication is sent out for comment by other individuals with response by the authors, the comments and response published at the same time as the article.

Ethical Issues

Three major ethical issues were discussed at the AMA Peer Review Congress: duplicate publication, conflict of interest, and fraud and deceit. Each of these is of concern to the Editorial Board of Refractive and Corneal Surgery.

Even though there are approximately 15,000 biomedical journals published worldwide, the number of contributions far exceeds the space available for publication, some journals rejecting up to 60% of manuscripts received. One study of the otolaryngology literature found that over a 7-year period, 20% of authors had engaged in duplicate publication. Although the academicians' pressure to "publish or perish" and the practitioners' striving for increased recognition both tend to reward high volume publication, duplicate publication other than in review articles or book chapters is counterproductive. It is the editorial policy of Refractive and Corneal Surgery to ask authors to state that they have not submitted a manuscript or one similar to it for publication in any other source and to enforce the Ingelfinger Rule that substantive disclosure of major results and conclusions in the popular or medical press (but not in scientific abstracts) will disqualify an article from publication.

The problem of conflict of interest has attracted attention in both the public and political sectors, the government now proposing legislation that would greatly restrict physician investment in self-referral circumstances. With the proliferation of commercially sponsored research, of researcher investment in industry, and of university and small business involvement in commercial ventures, it becomes increasingly important for authors to disclose potential economic conflicts of interest, as spelled out in our Instructions for Authors.

This helps the reader—and the public—be aware of the author's potential bias or conflict of interest. Such is the very concern of the Secretary of Health and Human Services Louis Sullivan, "That which was once performed in the remote ivory tower of academia is now submitted to the glare of the television camera, the business investor, and the venture capitalist. The hopes and anticipation of the public soar to the heights or are dashed to the ground with the evening news" (Science, June 2, 1989, p 1038).

The current fascination with fraud and deceit in science has also reached the level of a United States congressional inquiry through the Oversight and Investigations Subcommittee of the House Energy and Commerce Committee, Representative John Dingell, Subcommittee Chairman. The names of
those scientists who have engaged in fraudulent publica-
tion have become a modern litany: Sutherland, Darcey, Slusky, and others. While Refractive and Corneal Surgery makes every effort to ensure the veracity of the material it publishes, the Editorial Board cannot be responsible for intentional deceit. Fabricated data are difficult to detect if they are at all plausible, and it is patently impractical to ask reviewers of scientific manuscripts to also review original data. Peer review is a lousy way to detect fraud, a theme reiterated at the AMA Congress.

Conclusion and Appreciation

The Editorial Board and reviewers for Refractive and Corneal Surgery consider themselves allies of the contributing authors. The journal encourages relevant contributions from all quarters. We also encourage the active participation of individuals like H. Kaz Soong, MD, Editorial Board Member from the University of Michigan, who edited this issue of Refractive and Corneal Surgery devoted to corneal transplantation. Thank you, Dr Busin; thank you, Dr Soong.

We welcome to the editorial board the new Associate Editor for Europe, Massimo Busin, MD, from the Freie Universitat in Bonn, West Germany, who has assumed the responsibility of Associate Editor of the Journal for Europe and will work closely with Lucio Burrato, MD in facilitating publication of manuscripts submitted by European authors. We are also seeking an Associate Editor for Latin America. We also welcome two new European coordinators, Chad Rostron, London, England and Dan Epstein, Stockholm, Sweden. These individuals will facilitate the publication of work from our European colleagues.

GEORGE O. WARING, III, MD, FACS
Editor-in-Chief

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