

# Freedom and Responsibility in Medical Publication

## Setting the Balance Right

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*Liberty and duty, freedom and responsibility: that's the deal.*

John Gardner  
(quoted by Donald Kennedy in *Academic Duty*, Harvard University Press, Cambridge, England, 1997)

I WISH to discuss changes that we might make that would improve the ethical climate of the publication of research by making it both more open and more responsible. While none of the systems I briefly discuss have yet become common practice, they are all being tried in various ways, and they indicate the direction in which we ought to move.

In the future, the following 4 systems will, I hope, be routine. First, authorship will be abolished in favor of contribution, and the work done by the contributors will be listed for the readers. Second, peer review will become open, and we will come to talk about anonymous review as a quaint anachronism. Third, scientists will take full responsibility for the aftercare of their papers, and, fourth, as a result, editors will enable and encourage readers to assume the responsibilities of reviewers. Changing our practice would in each case rectify the balance between rights and duties.

### AUTHORSHIP

Nowhere does one see the imbalance between personal credit and accountability typified more starkly than in the case of authorship, where responsibility has declined as numbers of authors have risen.<sup>1</sup> To deal with this pressing issue,

we suggested calling authors “contributors,” listing their contributions for the reader, and listing those who could guarantee the integrity of the article.<sup>2,3</sup> It is encouraging to see change occurring. *The Lancet*, *BMJ*, and *American Journal of Public Health* have adopted variants of the plan,<sup>4,5,6</sup> and *Radiology* and the *Annals of Internal Medicine* now require the editor to be informed of contributions.<sup>7,8</sup> In addition, following a workshop sponsored by the Council of Biology Editors (CBE) in February of this year, a CBE Task Force on Authorship, under the chairmanship of Frank Davidoff, editor of the *Annals of Internal Medicine*, began work on this issue.

### OPEN PEER REVIEW

The predominant system of editorial review, where the names of the reviewers are unknown to the authors, is a perfect example of privilege and power (that of the reviewer over the fate of the author's manuscript) being dislocated from accountability—accountability, that is, to the fellow scientist who wrote the manuscript. For that reason alone, we must change our practices. In 1994, David Hearse, editor of the British journal *Cardiovascular Research*,<sup>9</sup> published an issue devoted to the anonymity of peer reviewers. Hearse described the results of an experimental survey of their readers and reviewers. He also published an article by Alexandre Fabiato commenting on the survey. Eight interested observers were asked to comment on Fabiato's commentary.<sup>10,11</sup>

The arguments for open peer review are both ethical and practical, and they are overwhelming. What are they? There are only 2 justifiable systems for peer review: fully closed or fully open.<sup>11</sup>

*Fully closed* means that a system is set up such that neither the reviewers nor, ideally but rarely, the editors know the names or institutions of the authors, and the authors do not know the names of the reviewers. Experience across several journals<sup>12-15</sup> shows that masking the reviewers successfully is very hard to achieve, so not only is it tedious, but also 10% to 50% of the time it does not work. The variable success of masking, introducing as it does another bias, is a serious flaw and it means that “fully closed” cannot work. *Fully open* means all parties know each others' identities. It is cheap and can be achieved in every case. Open review easily wins the practical argument, which is just as well, considering that electronic publication will be a great stimulus to open review.<sup>16</sup>

Writing after the Prague meeting, Davidoff has also noted the ethical paradoxes in our present system—the remarkable “disconnect between principle and practice” when, as he puts it, journals behave simultaneously as if anonymity did not matter (authors' names are disclosed to reviewers) and as if it mattered very much (reviewers' names are kept hidden from authors).<sup>17</sup> While we swallow this inconsistency, I suggest we pause to reflect on a further illogical circumstance, namely, that it is the present ethically unequal and inconsistent system that is the norm and that proponents of an ethically consistent, open, and equal system should have to prove that openness is superior before it is adopted.

If peer review as now practiced were perfect, alternatives would not be considered. But Osmond<sup>18</sup> has called peer review “Malice's Wonderland,” and the potential for trouble has been justified in

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Presented as the opening address of the Third International Congress on Peer Review in Biomedical Publication, Prague, Czech Republic, September 18, 1997.

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fact. In the early 1980s, there were the celebrated Soman and the Bridges cases, hijacking of ideas and words by a masked peer reviewer, his identity known only to the editor, and, at the 2 previous peer review congresses, we heard of numerous cases where people have been robbed or otherwise abused by the peer review process.<sup>19-23</sup> The recent Cistrone case is another example of plagiarism, this time of a molecular sequence, during closed review.<sup>24</sup>

Peer reviewers sit as judges, and we have a long history to tell us that justice is ill-served by secrecy.<sup>23</sup> It would be harder for reviewers to abuse their position when disclosure of their names made them accountable. Hiding the names of reviewers from authors does not, of course, make them anonymous or unaccountable to the editor.<sup>17</sup> The trouble about this as a justification is that their accountability is at a significant remove, which is why, for example, editors do not publish anonymous letters. Readers, distrusting people who cannot stand behind their own opinions, afford them little credibility and are not reassured when told that the editor knows their names.<sup>11</sup>

Although McNutt et al<sup>25</sup> have shown that signed reviews (the reviewers' names being disclosed to the authors) tend to be more polite and constructive, this awaits confirmation, as does my impression that I have yet to see a slapdash signed review. This suggests that openness strengthens the link between power and accountability, because when reviewers know their names will appear at the end of their reviews, one may be sure that they will be constructive and will attempt to back up their statements.

Would the reviewers accept it? We do not know because the survey by Hearse was biased in favor of results that would favor the status quo, which is what was found. Thus, 70% of authors and 83% of reviewers were "in favor of maintaining the reviewers' right to anonymity." Naturally, when one poses a question in terms of stripping the rights of reviewers, they will tell one they wish to keep their "rights": in this case the right to anonymity. We all like power without accountability, so it is no surprise to find that reviewers favored not disclosing their names.<sup>11</sup>

What objections are there? It is alleged that open review would cause animosity. I would counter that the animosity is already there.<sup>18,21</sup> It is far more probable that the consequence of openness will be a decrease in the level of paranoia and suspicion.<sup>11</sup> The only cogent argument against open review is that reviewers feel they might find them-

selves the object of vengeful behavior if they were identified. This is pathetic on 2 counts: first, under our present system, there is plenty of evidence that authors make mistakes and wrongly identify, and presumably sometimes take revenge against, reviewers. Second, and more persuasively, if this is the state of our profession, surely this denotes a dreadful state of affairs and shows that we must be more open in order to improve things. However, Fabiato wrote, "For a number of years I have reviewed for *Cell Calcium*, which has a system of open reviewing . . . and experienced none of the problems mentioned by the respondents to the questionnaire of *Cardiovascular Research*."<sup>10</sup> If that proves to be the case, the issue becomes moot.

Finally, scientific papers were often anonymous 200 years ago. It was dropped as a system because readers liked authors to be accountable. We should do the right thing and get our reviewers to sign, and the experience of journals that are open tells us that the sky will not collapse on us if all journals were to become open.<sup>11</sup>

It is encouraging and should provoke re-examination of the issue that not 1 of the 8 commentaries in *Cardiovascular Research* supported our present system. Horrobin wrote that reviewers who will not allow their names to be known are "so pusillanimous or so used to expressing strong subjective opinions without a solid basis of evidence that their views are unlikely to be of great value to an editor."<sup>26</sup> Lock, an experienced editor, wrote, "In journals we shall obtain . . . maturity when we let the authors know the name of the referees. It will not be long."<sup>27</sup> For it to happen, all that has to be done is for editors to agree to make it their journal's practice.

I would add a refinement that would simplify things even further. Instead of the present system whereby reviewers send to the editor comments to be shared with the author and confidential comments for the editor (these comments are sometimes widely disparate), I would prefer a system in which the reviewer made only 1 series of signed comments. It is the editor's job to decide on revision, acceptance, or rejection, and the editor should be able to do this perfectly well from comments that can go to the authors.

#### THE AFTERCARE OF REVIEW ARTICLES

Journals should consider making the aftercare (the updating) of published reviews a precondition of acceptance. The practical limitations of the print medium mean that this can happen only in conjunction with electronic databases or da-

tabanks.<sup>28</sup> But if we ever conduct business in an entirely electronic medium, this will be relatively easy. To take an example, individuals undertake systematic reviews for the Cochrane database on condition that they keep them regularly updated,<sup>29,30</sup> first, by the addition of new material and, second, by the removal of information shown by readers (users) to be out-of-date or wrong. For the Cochrane reviews, this requires the development of software to enable users to structure their comments for easy collation with the comments of others and for the comments to be sent automatically to the Cochrane editors and to the authors of the Cochrane reviews. In addition, it requires that the authors' responses be organized, that changes to the original published reviews be made, and that the readers accessing the reviews be alerted to these changes. The published review, therefore, is steadily modified as new information comes in, using, where appropriate, cumulative meta-analysis.

If this can be done for reviews appearing in the Cochrane database, why not for all systematic reviews in journals, especially as electronic publication becomes the norm? Contributors must take responsibility for the continuing update of their original review, and it is easy to envisage a time when editors will require a commitment to make regular updates from those who submit systematic reviews.

#### POSTPUBLICATION PEER REVIEW: THE READER AS REVIEWER

At present, editors annoy a few reviewers and that choice alone makes the process biased and sometimes haphazard. It seems clear that postpublication peer review (a system that makes every reader a potential reviewer) should be another ideal. This would differ from the present inefficient system of letters to the editor in linking criticisms closely with the criticized article and in causing changes in that article (changes that would be flagged). A responsive system that allows published articles to be altered in response to criticism from readers will require even more accountability on the part of the writers. It could not work unless those who had written the article were then responsible for revising the article after its electronic publication, thus making their colleagues their cocollaborators and throwing responsibility onto the readers to become reviewers.

The editors of the *Medical Journal of Australia* are putting some articles on the Web for criticism from the entire readership, and subsequent revision, before they are accepted and published.<sup>16</sup> It will be interesting to watch this bold

and healthy experiment. This type of adult, evolved, and inevitable version of peer review must be the sort we should encourage to take over as we question the present expensive, biased, and primitive system. It seems unavoidable that it will also require the presence of an editor to orchestrate and act as um-

pire. If that editor performs the task openly, that is the best guarantee that he or she is accountable.

The future that will work best is one where responsibilities are openly shared, where authors become contributors and state what they have done, where reviewers are prepared to be identified, where

contributors and editors are responsible for the update of their published reviews, and where readers are enabled to become postpublication reviewers and authors have to respond. In other words, when contributors, editors, reviewers, and readers are all prepared to be held accountable.

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