

Editorial

Limitations of the peer review system and possible alternatives

Marios Kyriazis

British Longevity Society, Dunstable, United Kingdom

Email: drmarios@live.it

Everyone who has tried to publish a scientific paper is familiar with the drawbacks of the current peer-review system (Smith 2006). Anecdotal stories refer to papers being summarily rejected by one journal, yet accepted without the need for revision by another, sometimes even more prestigious. Reviewers that are in direct competition with the paper they are asked to review may decide to delay submitting their review or even reject the paper altogether, in an attempt to thwart competition. Referees can request time-consuming, unnecessary and trivial extra details, sometimes making the author question if the reviewer has indeed read their paper. These are only some of the problems inherently associated with the current peer-review system (Henderson 2010).

This does not mean that the notion of peer-review should be abandoned altogether. There is no point in allowing the publication of a scientific paper of low standards and value. In a survey, an overwhelming 93% of academics supported the process of peer review and agreed upon its necessity. A large majority (85%) agreed that peer review greatly helps scientific communication and believed that without this process there would be no control (Ware 2008). In this particular survey many participants preferred double-blind review (56%), followed by single-blind (25%), open (13%) and post-publication (5%) review. However, 49% of reviewers were discouraged by open peer review.

The issue here is one question: who decides that the standards or value of a research paper are poor? I have seen papers published on formal online journals which were full of simple typing errors, as well as substantial and prominent errors in the formulation of the hypothesis and/or approach of the paper. Yet these papers received positive and enthusiastic post-publication reviews, suggesting that the reviewers were personal friends with the author.

Another issue to be considered is this: in today's modern environment of instant global communication, is there still value in traditional printed publications? Wouldn't science and academia be served better by abandoning the traditional printed methods and em-

brace an online, electronic publishing model which can reach a much wider audience? The ultimate purpose of publishing one's research is to make it available to a wide audience and thus help improve humanity as a whole. If this research remains unpublished because two reviewers did not agree with it, or if it is published in a limited-circulation scientific printed journal, then it defies the point of its very publication. Clearly, a freely accessible paper has much more potential value compared to one that only a limited number of 'insiders' have access to.

Be that as it may, a model that can address some (although not all) shortcomings associated with the current system is based upon the mandatory publication of any submitted scientific paper together with a combination of pre-publication online reviews by at least three members of the editorial board of the particular journal, plus a series of post-publication online reviews. This can be augmented by the possibility of short comments by any colleague, member of the public and/or the author in the form of a comment-and-answer protocol. Perhaps this can be associated with an automatic system whereby a star can be awarded when the paper reaches a certain amount of positive reviews. This can make it immediately clear that the paper in question has been extensively assessed by others and is considered to be of some value. In addition, the author should be given the possibility of correcting or amending some parts of the paper which have been severely criticised by others; correcting any errors, re-writing certain sentences and overall maintaining a dynamic, evolving and open approach to the subject of the paper would be crucial. This, of course, can only be achieved with an online publication, making the need for printed, closed-access journals even more questionable.

References

Smith R 2006 Peer review: a flawed process at the heart of science and journals. *J R Soc Med* **99** 178-182.
Henderson M 2010 Problems with peer review. *Br Med J* **340** c1409.

Ware M 2008 Peer review: benefits, perceptions and alternatives. PRC Summary Papers 4. London: Publishing Research Consortium.