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Regression towards the mean—a plea for civility in peer review

How can we ensure that peer review is more courteous and constructive? **Rahul Rao** and **Beth Bareham** discuss

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Peer review is integral to the ongoing publication of high quality research. In pursuit of this aim, reviewers are expected to provide constructive feedback that helps authors improve their manuscripts.¹ All too often, however, peer reviewers fall into the trap of harsh criticism rather than critical evaluation. Common pitfalls include reviews that are overly negative or incredibly brief, give little acknowledgment of the strengths of the manuscript, and use an unfriendly or insulting tone.²

An unconstructive rejection or disrespectful review can lead to authors abandoning potentially useful research, instead of revising an article or resubmitting it to alternative journals. In the worst case scenario it could even prompt researchers to give up on research activity and academia altogether.^{3,4} Social media are full of examples of the cutting criticism people have received in peer review feedback. Twitter's @YourPaperSucks collects examples of some of these barbs, including, "I am afraid this manuscript may contribute not so much towards the field's advancement as much as toward its eventual demise."⁵ Such comments are clearly unhelpful, discourteous, and considerably disheartening.

Ideally, reviewers should consider both the content and the delivery of their feedback—maintaining an appropriate tone, backing up their comments with evidence from the manuscript and the wider subject area,⁶ and highlighting any of the article's strengths.⁷ It is perfectly possible for reviews to highlight an article's limitations without framing these as insults or tearing down its authors. Useful peer review can help authors improve their future academic output even if their paper is rejected.

Nurturing early career researchers in the peer review process, and giving them encouraging and supportive feedback, is particularly important for capacity building in academia. Early career researchers may lack confidence and experience in scholarly publishing, particularly if it is their first submission, and dealing with the first rejected manuscript can often be a "grieving process."⁸ This is particularly relevant for certain groups who face existing biases or structural disadvantages when submitting manuscripts. Women, for example, have been found to experience greater delays than men in publication and career advancement after receiving unprofessional reviews.¹⁹

Finding solutions

So, how can we make the peer review experience better for authors? Some responsibility lies with journals. It is up to editors to tie together the responses from peer review and communicate them

in a way that gives authors the confidence to carry out a major revision or, in the case of a decision to reject, provides them with enough information to act on before considering submission to another journal.

Open peer review, which reveals the identity of the author and the reviewer to one another, is one approach that may lead to improved outcomes in a process that traditionally permits reviewers to hide behind anonymity, in terms of both their tone and the robustness of their review.¹⁰ In practice, however, this approach has been found to favour the publication of more prominent researchers over less well known early career researchers.¹¹ This bias may have a greater negative effect on women, people from ethnic minority groups, and those who are based in lower income countries or less eminent institutions—all of whom already face barriers to research and writing, career progression, and recognition within their field.

Other types of open peer review, such as open interaction reviews, encourage direct, reciprocal discussion among reviewers and/or between reviewers and authors. This may serve to humanise the author to reviewers and promote supportive responses, while holding reviewers to account for their comments as authors are able to respond. The publisher Frontiers, for example, uses this form of review, arguing that this "unites authors, reviewers and the associate editor . . . in a direct online dialogue."¹²

Best practice guides for reviewers could also improve the quality of peer review.¹³ Guidance can direct reviewers to provide feedback about the content of a manuscript rather than about the author; to point out errors without disproportionate negativity; to support all comments given to authors with evidence such as citations; to provide direct references to the data where reviewers believe that the author's interpretation is incorrect; and to show an openness to an author's counterarguments. Editors may decide against using reviewers for a second time if they employ hurtful language.¹⁴ Formal guidance is already provided, however, by a number of publishers,^{15,16} with one study finding that almost two in three journals promote a positive and constructive tone in their guidance.¹⁷ Greater consistency among these guidelines could help, and quality checklists can also provide some objectivity in the review process.¹⁸

Finally, better recognition of reviewers' contributions of time and expertise might also help to promote kinder, more constructive discourse. Peer review is an unpaid endeavour that is simultaneously expected of active researchers and academics, while competing

with their wider workloads. The estimated monetary value of the time spent on reviews by US based reviewers was over \$1.5bn (£1.25bn; €1.45bn) in 2020. Among UK based reviewers the estimate is close to \$400m.¹⁹

Time spent on unremunerated work requires better incentives. Measures that could offer this include awards for peer reviews; credits for continuing professional development; discounts for journal membership, conferences, or membership of professional organisations; inclusion in academic appraisal; and recognition in grant applications. If peer review were more widely rewarded in these ways it could encourage reviewers to uphold higher standards in their feedback.

Systemwide efforts to improve peer review should continue to be researched and invested in, but every reviewer individually can already start to make a difference to their own corner of academia. Peer reviewers should remember this variant of the “golden rule”: “Review unto others as you would have them review unto you.”²⁰ With a constructive, balanced, and above all courteous approach, we can better engage the researchers of tomorrow.

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