Respond to peer review in the spirit of helpfulness

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Highlights: Pre-publication peer review aims at improving the overall quality of scientific articles. All publishing scientists serve as reviewers and many as journal editors. Peer review works best when each partaker is able to view each article (they write, review or handle) through all of these roles. For an author revising a manuscript, this means responding to editors and reviewers' comments respectfully, thoroughly and with evidence.

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Peer-review "quality stamp"

The majority of scientific journals, including forestry journals, continue to rely on peer review to ensure articles meet the general standards for scientific publications. The pre-publication peer review process starts when the editor finds the submitted work suitable for the journal and ready for external evaluation. Based on the reviews, and his/her own reading of the manuscript, the editor may reject, accept, or conditionally accept the article for publication. If the author accepts the invitation to submit a revision, the author-editor-reviewer correspondence continues until the reviewers and editor are satisfied with the improvements made by the authors (or they are not, resulting in rejection of the paper). The vetted product is then published and its value and impact may be openly discussed (most often in writing) among scientists in the field. This is how, we believe, science may be advanced.

Fundamental to the functioning of pre-publication peer review is the trust between editors and authors, as well as editors and reviewers. All parties are expected to keep the level of confidentiality agreed upon (single- or double-blinded review; Smit, 2006). Perhaps more implicit, but just as important, is the expectation that everybody is doing their very best towards the *common* goal of publication of scientifically sound articles. The process relies not only on the insight and ethics of each player, but also on their skill and willingness to communicate their findings. The principle that, in addition to writing their own articles, scientists also review and/or handle papers by others should ensure that peer review works as intended. Don't we all wish to receive constructive criticism towards our work *and* read thoughtful responses to concerns we have raised on a fellow scientist's paper?

Learning all aspects of scientific communication is at the core of our profession. Early-career authors learn article writing through reading papers, from their advisors and mentors, and in the classroom. General advice on how to review articles or to respond to reviewer comments has been harder to find (Williams, 2004). In the past few years, major publishers and other parties have begun providing online resources targeted to help scientists become better authors and reviewers (Awati, 2013; Halmes, 2013; van Harten, 2014; van Hilten L, 2015). These articles, blog posts, and webinars discussing the (previously) mostly unwritten etiquette for responding to peer review form the basis of what follows.

Why is it that we sometimes find ourselves disappointed at the process?

The hard-t0-uncover breaches of trust aside, and despite our good intentions, peer review may fail at improving the overall quality of scientific publications (Hochberg 2010, Kangas and Hujala, 2015). While these 'failures' are difficult to quantify, it seems safe to assume that most scientists agree that there is room for improvement in the process. One of the underlying reasons for the apparent disappointments is that we are overwhelmed, in all our roles. Jinha (2010) estimated that, by 2010, the scientific community had accumulated ~50 million peer-reviewed journal articles since 1665 and the beginning of scientific publication and peer review. The number of scientists also increased and continues to do so, but not proportionally to the number of papers being submitted. Consequently, as today's scientist progresses in his/her career, he/she has less and less time to allocate to each paper they prepare, review, and handle.

It appears that we are in a situation where, on average, the 'scientist-author' may be more likely (today than, say, two decades ago) to fail to prepare a ready-for-fair-review manuscript or revision, and more likely

to suggest 'scientist-reviewers' he/she expects to write "easy" reviews. Similarly, the 'scientist-editor' or 'scientist-reviewer' is more likely to decline to handle or review each additional manuscript, or less likely to deliver after accepting the invitation. As a result, relative to the increase in overall submissions, immediate rejection rates increase; a larger number of submissions circulate from journal to journal, from one editor to another. More reviewer invitations, rushed reviews, revisions, and responses are sent, both overall and per manuscript. Everybody is frustrated and nobody is quite sure that the quality of the articles is improved. What can we do? At least until we have a reasonable replacement for it (if need be), we must try harder to make the best out of peer review—as editors, reviewers and authors.

A thorough and long(ish) review is good review

A prerequisite for receiving a helpful review is submitting a good manuscript. This is because, as any interested reader with loads of papers to choose from, the editor or reviewer likely grasp at the first reason to stop reading. By remaining self-critical throughout and taking the time polish the manuscript, the author increases his/her chances to keep the reader engaged. The author should step back often to take a look at his/her piece through the eyes of the reviewer/editor. Moreover, it is most helpful for all involved if the author suggests arm's-length reviewers (which may be defined as no co-authorships in the recent three years) who are experts in the specific topic. Not only is an overly forgiving review by an acquaintance not likely to improve the quality of the article, but it is also likely to draw the attention of the editor if another fair review is far more critical.

A good reviewer represents the group of expert readers. He/she scores the novelty of the work and evaluates the ways it may advance the field. Are the research questions/hypotheses important and well defined? Are the findings as expected or mostly unexpected? Do they confirm, strengthen or question current understanding? Is a negative finding sufficiently important to merit publication? To answer these questions requires that the reviewer critically assess the appropriateness, strengths and weaknesses of each part of the paper, as well as the consistency among the parts. Are the methods appropriate to answering the research questions or testing the hypotheses? Do the conclusions address the questions posed as motivation for the study? The reviewer also comments on the writing style, accessibility, and overall presentation. A good review provides constructive criticism and specific comments on how to improve the work. However, neither the reviewer nor the editor is expected to function as a language editor nor are they expected to check for plagiarism. Those remain the responsibility of the author.

Address review response to potential readers

Receiving reviewer comments may be exciting yet cause anxiety; "…get it right and you could see your paper published, get it wrong and it could mean rejection." (van Hilten, 2015). The author has the best chance to "get it right" if he/she is able to see the manuscript as the reviewer and respond to him/her as the representative of all potential readers. The authors should therefore distance themselves from the work and, as difficult as it is sometimes, avoid taking the comments personally. It is thus a good idea to read through the review comments, take a break, and read through the manuscript and the comments again, perhaps a day or two later. Responding to a critical review immediately after receiving the decision letter, or even the next day, is not prudent. Angry rebuttal letters are rarely helpful, whereas a solid, factual response may at times, even though rarely, reverse a negative decision.

Once the author reaches a calm state of mind allowing them to be reasonably objective, he/she should identify the main concerns of the referees, decide how to best follow their advice, and begin framing the response. Are substantial textual changes suggested? Are most comments on the methods or the interpretation of the results? Are additional data or analyses asked for? Can the concerns be alleviated within the time allotted for response, or at all? While the editor and reviewers are experts in the field, they are not always right. The author can respectfully disagree on any point as long he/she explains and provides evidence to make the case. However, if the author wishes to keep the editor/reviewer positive about the response, it is unwise to argue every single point.

In a response letter, the editor and reviewers' concerns are best alleviated by providing details on how each issue was dealt with or, if the authors disagree, what factual support they have for promoting a different view. The editor will look for helpful, point-to-point responses to numbered reviewer comments. In other words, the surest method is for the author to copy the reviewer and editor's comments into his/her response letter, answer each and every question, and reference the changed sections in the text with line numbers and/or by copying the revised sections into the letter. Finally, a thorough reviewer consumes large

amount of time to help improve the quality of another researcher's work and advance science. The least we should all do is treat reviews with respect, and thank reviewers for their effort.

References

Awati M. (2013). How to respond to comments by peer reviewers. http://www.editage.com/insights/.[Cited 9 September 2015]

Jinha A.E. (2010). Article 50 million: an estimate of the number of scholarly articles in existence. Learned Publishing 23: 258–263. http://dx.doi.org/10.1087/20100308.

Halmes I. (2013). COPE Ethical guidelines for peer reviewers. http://publicationethics.org/[Cited 15 September 2015]

Hochberg M.E. (2000). Youth and the tragedy of the reviewer commons. Ideas in ecology and evolution 3: 8–10. http://dx.doi.org/10.4033/iee.2010.3.2.c.

Kangas A., Hujala T. (2015). Challenges in publishing: producing, assuring and communicating quality. Silva Fennica 49, article id 1304. http://dx.doi.org/10.14214/sf.1304

Smit C. (2006). Peer Review: Time for a Change? BioScience 56: 712-713. http://dx.doi.org/10.1641/0006-3568(2006)56[712:PRTFAC]2.0.CO;2

van Harten J. (2013). How reviewers look at your paper. https://www.publishingcampus.elsevier.com. [Cited 9 September 2015]

van Hilten L. (2015). 3 top tips for responding to reviewer comments on your manuscript. http://www.elsevier.com/authors-update/story/publishing-tips/. [Cited 10 September 2015]

Williams H.C. (2004). How to reply to referees' comments when submitting manuscripts for publication. Journal of the American Academy of Dermatology, Journal of the American Academy of Dermatology 51: 79–83. http://dx.doi.org/10.1016/j.jaad.2004.01.049