nature neuroscience

Crafting a revision

Responding to referee comments constructively improves the quality of published papers.

The scenario is familiar to many of us at some point or another in our careers; after spending years working on a project and building what we think is a complete story, the long-awaited reviews finally arrive with a long list of criticisms. Disappointment, however, turns to outrage as you start scrolling through the referee reports, which seem to go on and on. You stare at the comments in disbelief, noting that one of the referees has made critical mistakes, whereas another expects you to spend several years following up the story, which would involve both gobs of money and the careers of several postdocs. Even when editors allow the option of a resubmission, the process of revising a paper can sometimes be a frustrating journey for the authors, editors and referees. Some authors may even begin to suspect that referees are out to deliberately thwart the publication of individual papers and that one must fight with editors and referees to get the paper published.

Although some may argue that low funding rates and an ever increasing number of competitors have contributed to a cut-throat atmosphere in publishing, we continue to view the review process as an opportunity. This is not to say that endless rounds of peer-review are productive; on the contrary, we have always tried to prevent multiple rounds of peer-review on the grounds that this just tends to frustrate authors, referees and editors. Undoubtedly, there are also cases in which both referees and editors make mistakes, and we routinely overrule referees on requests for additional extensions. Nonetheless, we strongly feel that thoughtful revisions based on editorial and referee feedback do improve papers. It has always been extremely rare for a paper to be published in *Nature Neuroscience* without any revision; for example, of the original research papers that we published during 2005, only 2.3% were accepted after a single round of peer-review, and this number was 3.2% in 2010. Practically, this means that authors must be open to referee criticisms and that they must remain committed to revising their paper and working with both referees and editors. We outline the basics of such a constructive revision below.

When responding to referee reports, although it may be natural for frustrated authors to lash out at referees, this is rarely productive. We ask that authors go through the referee comments point by point and respond constructively and diplomatically to each point in turn, keeping in mind that referees are busy, and with the assumption that they are not out to stall publication. Try not to accuse the referee of bias, and keep the tone of the response polite and professional. Make it easy for the referees and the editors to evaluate the revision by including the new data in your response to the referees and by sending us a revised version of the paper with the changes highlighted. Even if you find that the referee has overlooked some data stashed away in the Supplementary Information or made some factual errors, this does not negate the rest of his/her points. Disregarding a concern made by the referee is not helpful; it simply makes both editors and referees feel that the concern was just dismissed out of hand and raises a red flag in revision. Similarly, try not to play one referee against another; pointing out, for instance, that the experiment that they found questionable was suggested earlier by one of the other referees.

It also helps to keep in mind that, although referees do have an obligation to fairly evaluate the paper, the onus is not on the referees to suggest the exact experiments that the authors need to do to make a better case for high-profile publication. Referees may feel, for instance, that further mechanism and/or better evidence for *in vivo* relevance are essential for publication, but are not required to suggest specific experiments for the authors to do next. In cases such as this, it is up to the authors to take the initiative and design and conduct suitable experiments that they think will address the main issue. Similarly, when such extensions are included in the revision, it is up to the authors to make a well-reasoned case for why the new data they included substantially increases the conceptual advance of the paper.

Critically, during the revision, make an earnest effort to improve the paper, paying attention to both requests to improve the clarity of the presentation as well as its scientific foundations. Keep in mind that your referees and editors are fellow scientists and are likely to respond better to well-reasoned, logical arguments as to why you feel certain experiments are unnecessary. For example, if you feel that some of the referee requests are unreasonable, spell out your arguments why you feel a certain experiment is unlikely to yield the desired answer. Simply listing a slew of prior publications with the same level of analysis with the argument that "they got away with this, so we should too" is less likely to help your cause.

Finally, keep in mind that editors are active members of the process. When revising a paper, authors should feel free to discuss their plans for a revision with the editors, particularly if they feel that the requested experiments are unreasonable or are not likely to be productive. Editors can help counsel authors on what they view as essential revisions and can help explain both the referees' and journal's points of view. We recognize that peer-review is not always perfect and are sensitive to our authors' needs for timely publication. We are also aware that referees (consciously or unconsciously) sometimes request extensions that are unnecessary. Nonetheless, authors, referees and editors all benefit from a collaborative and collegial peer-review process. Although communication among these parties can sometimes be difficult, working with editors and referees will help authors showcase their best science. ■