
Editorial

Boon, bias or bane? The potential influence of reviewer recommendations on editorial decision-making

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Abstract: No formal investigations have been conducted into the efficacy or potential influence of reviewer recommendations on editorial decisions, and the impact of this on the expectations and behaviour of authors, reviewers and journal editors. This article addresses key questions about this critical aspect of the peer review submission process. We suggest several future steps which could be taken towards improving the review process and make it more transparent, better understood, and fairer for all parties.

Introduction

Peer review is the organisational process whereby scholarly works are formally scrutinised by experts. This system of quality control relies on a division of labour between editors and reviewers.¹ However, the roles, responsibilities and boundaries between editors and reviewers on the editorial decision of a submission are often unclear. Traditionally, peer review has been, and is often still, used to assess the soundness of manuscripts and to give expert feedback for improvements.² In many cases, the current journal paradigm may also ask for the perceived future impact and 'fit' for the scope of a journal to be considered.

Problematising the demarcation between editors and reviewers, the latter are often also asked to make an explicit recommendation to the editor about whether or

not the work should be published in that venue.³ Typically, recommendations follow the same system as editorial decisions, such as (but not limited to) reject, major revisions, minor revisions, or accept. There is much variability in this process, with some journals communicating this expectation clearly as part of the manuscript handling process, others requesting any recommendations be accompanied by confidential notes to justify them, while others do not request recommendations from reviewers at all.

There are also disciplinary differences, with some fields such as computer science relying more on conference proceedings as a primary method of communication, and in which reviewer recommendations play a much more prominent role as they numerically assess whether a submission should be rejected or accepted.⁴ Due to the variability in this process between journals, understanding and managing the expectations of different engaged parties is critical for a transparent and improved process of peer review.

Explicit reviewer recommendations can help streamline the process through division of labour. They have the potential to reduce the relative power and responsibility of the editor as the canonical decision maker, or reinforce this power, by giving the editor confirmatory recourse or justification. If the role of the editor is to align an editorial agenda (i.e., the profile, reputation and success of a journal) with a scientific agenda

(communication of rigorous research), then distribution of the decision-making power (and responsibility) among peers is perhaps the more desired ethical process; although ultimately it is the editor, or editorial board, who makes the final decision. Furthermore, conflating these roles and responsibilities could undermine any attempt at determining decision making bias and its sources precisely.⁵

This process of reviewers providing recommendations creates an unclear boundary between reviewers and editors, as there is no clearly demarcated decision-making role. Such blurring risks creating a disparity between author expectations of a manuscript handling process, and the actual process. Despite this clear importance, very little is currently understood about the potential impact of such recommendations on influencing editorial decisions. Questions arise such as what if recommendations are flatly ignored, or if they are misused by editors, who blindly rely on them to make decisions as opposed to using them as an aid to reach their own informed decision?^{6,7,8} On the other hand, reviewer recommendations could be viewed as too harsh, out of scope, or contrary to journal requirements, and therefore editors might have a good reason to 'ignore' them. In other cases, reviewer reports might include a recommendation, despite there being no formal requirement for them. As such, there are many potential factors that can play a role in editorial decisions, and many of them may not relate to strictly scientific criteria, but rather to the vision for the journal and its branding. Such values will differ across editors, editorial boards, and journals, and reviewer recommendations therefore are part of a much more complex decision-making process.⁹ This is important for two main reasons. Firstly, editorial decisions can ultimately make or break the career of academic researchers, especially those earlier in their careers.¹⁰ Secondly, such decisions affect whether or not a manuscript is accepted into the peer-reviewed literature.

Understanding the boundary between editor and reviewer

The key element here is the expected role of the editors and reviewers during peer review. Unfortunately, a general lack of transparency often obfuscates the processes associated with the editorial role, and therefore its impact is difficult to empirically analyse. Given that editors and other members of editorial boards often have great latitude to decide the fate of a manuscript, this lack of transparency is potentially problematic. The same goes for any accountability they may have towards their publishers. As a result of this, we cannot simply assume that editorial judgements are always sound. Of course, this does not mean that an editor is disallowed from using their own personal judgement to make the ultimate decision - that is, after all, an authority granted to them as a decision maker. But that there is often little accountability for the editorial process, with variable requirements for justifying decisions,¹¹ combined with the partial delegation of decision-making to reviewers in a way which blurs boundaries of responsibility, means that the legitimacy and reliability of the review and editorial processes must be called further into question.

Answering these questions likely hinges on clearly defining expectations of reviewers and editors and making editorial strategies of reviewer selection more transparent. The latter encompasses editors who invite a number of reviewers skilled in differing parts of the manuscript under consideration. Editors and reviewers may, through strategic reviewer choices or careful recommendations, attempt to anticipate elements of the synthesis, evaluation, normalisation and weighting. Ultimately, we can ask which elements of the editorial judgements are facilitated by inviting reviewer recommendations. Providing more transparency here should help to make the process more fair, verifiable, and trustworthy

Key questions and discussion

Key questions arising from this, which are highly contingent on (inter)disciplinary community norms, are:

1. Should journals invite reviewer recommendations, either built into manuscript handling systems or within the reviewer reports?
2. Should such recommendations be mandatory or optional?
3. Do recommendations form part of reviewer best practices?
4. Should authors see these recommendations?
5. Should the factors upon which the recommendations are based be clearly stated across different venues (eg novelty, perceived impact, quality)?
6. What is the expected distribution of responsibilities and tasks between reviewers and editors, and how does this vary across communities?
7. What is the impact of these recommendations on editorial decisions?

What reviewer recommendations (to editors) do

We can articulate a series of informed expectations both in favour and against such inclusions and will, here, develop them further.

We hypothesise the five most salient expectations of reviewer recommendations as follows:

1. We may expect that inviting recommendations would more evenly distribute responsibility for the ultimate editorial decision on publication, often across reviewers with a diverse range of opinions, review styles, and experiences. This should enable a more complete expertise palette to contribute to judgements, as well as a more variable value palette to counteract undesirable normative evaluations.
2. It signals to reviewers that editors and journals trust their expertise and are willing to take their considerations seriously.
3. It has the potential to help editors make a more clear and legitimate decision, especially if they are under pressure to handle high volumes of papers or oversee a broad expertise area they cannot possibly cover by themselves. However, contradictory recommendations are likely to hinder this advantage, making the weighing or synthesis of evaluations difficult.
4. More critically, it runs the risk of becoming a proxy

for a more thorough evaluation, a numerical input in a decision algorithm.

5. It allows editors to tease out for themselves how reviewers think without having to either filter-out or factor-in relevant cultural differences in potential decisions; for example, regarding language preferences, seniority or status, institutional affiliation, gender, or region-specific significance.

Before we can discuss the proportional contribution of all these expectations to a final position, the status of the recommendation offered by reviewers needs to be considered. Making the recommendation mandatory signals that editors might be unable to reach conclusions themselves. Reviewers may have good reasons to withhold judgement. For instance, a reviewer may be capable of reviewing all the epistemic claims of a paper with a keen eye for detail, but unable to fully assess the statistical methods used; which some manuscript handling systems ask reviewers to be explicit about. That reviewer would usually indicate the limits of their review (or would receive a question classifying their competence in the matter) and given such limitations, no sensible judgement can be made.

Making the recommendation voluntary could mean that some reviewers choose to withhold judgment for other reasons than fair assessment of the paper - although they could also opt for a judgement that mismatches the content of the paper - if they have an interest in the paper being published/rejected. Either way, non-mandatory recommendations within a journal could potentially introduce further inconsistencies into the decision-making process.

While the status of the recommendations could be written down in editorial policies, a lot of leeway is expected to remain in the daily operations of any publishing practice. Recommendations could be just that: a piece of advice, to be treated as the editor pleases. However, the recommendation could also carry more power in the sense that the editor would have to follow it, except when they could argue how and why they chose not to; in cases where this happens, transparency is clearly required to justify conflicting decisions to both reviewers and authors.

The status of the recommendation tends to be very unclear, meaning that when reviewers issue a recommendation, they cannot know how it will be treated. Reviewers can disagree on their recommendation. They do so, in fact, regularly. While reviewers are, in the current system, not pressured to reach consensus (ie they have no synthetic duty), the editor will have to reach a single decision - the synthetic duty lies with them.

Reviewer recommendations in practice: transparency, variability and responsibility

Scientific publishing is rapidly becoming more transparent in a multiplicity of dimensions, ranging from open review¹² and open data¹³ to open access publishing¹⁴. However, this does not mean that all decision processes are being made public, and indeed this aspect is strikingly absent from most recent discussions of open review, with some exceptions,¹⁵ including the Peer Review Evaluation initiative¹⁶ or the TRANsparency in Scholarly Publishing for Open

Scholarship Evolution (TRANSPPOSE) project.¹⁷

Open review, or open science in general, is currently not typically accompanied by open editorial conversation or open legitimations of editorial decisions; although there are some exceptions, such as the journals PeerJ and BMJ with optionally public editorial processes that include reviewer recommendations. To this seeming lack of editorial accountability; how do recommendations by reviewers contribute to holding editors accountable? Providing recommendations as part of an (open) peer review allows either public and authors or, in the case of closed review the authors themselves, to use them as arguments to appeal, or question editorial decisions.

This does not mean that there is any duty for editors to uncritically adopt reviewer recommendations. Editors have to consider a lot of competing valuation systems.^{18,19,20,21} Journals range from very small to very large, both in terms of the number manuscripts they handle and publish, as well as in terms of their epistemic scope. Some are commercial entities while others are run by volunteers. Some are ideologically committed towards open science while others are more hesitant. These variable profiles translate into different relationships to their reviewers and authors, and diverse expectations of those who interact with the journal. They will most likely shape expectations of editors overseeing such interactions and as a consequence, confront each editorial office with a unique balance of diverse value systems. This also raises the question of whether the recommendation by the reviewer to the editor ought to have a conditional status, since the editor can draw from other valuation systems to overrule it.²²

Ultimately this paper invites the question over to what extent the wider research community can, and should, trust editors with this responsibility and power. Transparency does not, in itself, enhance trust or even trustworthiness. While trust is a characteristic in a relationship, trustworthiness is a characteristic of an individual or institution. Importantly, it can be enhanced and maintained via optimisation of its key ingredients: competence, reliability and honesty.²³ Trustworthy editors and reviewers are competent, reliable and honest and through repeated displays of all three, can build credibility; the goal of the consensus statement on core competencies for editors includes ensuring these traits are present.²⁴

Recommendations

We recognise that peer review can never be a 'perfect' process. However, there are certain steps that can be taken towards improving the process, making it more transparent, better understood, and fairer for editors, reviewers, and authors. With respect to reviewer recommendations, these include:

- For journals to share data on the peer review workflows and decisions made by editors, and the respective recommendations from reviewers and...
- ...gain insight into the user experiences of manuscript handling systems. We could analyse the effects and use the information to improve review and editorial systems.
- For journal policies to be clear to all parties about the current expectations and roles of reviewers and editors, especially if

these policies change. Here, greater transparency about the division of labour and responsibility is key to managing the process and could help to alleviate some of the confusion around the roles of different parties involved.

- Greater transparency for readers regarding editorial decisions, for example, by widening the practice of naming the editor responsible for accepting a manuscript, along with disclosing reviewer recommendations (even where review reports or reviewer names are not made public).

These suggestions do not represent all possible future ways forward, nor do we expect them to be agreed upon by all communities and stakeholder groups. However, we hope that this article catalyses scholarly communities into further discussion on this important aspect of the peer review process, and we can begin to gain some empirical insight into the potential impacts of reviewer recommendations.

Conflicts of interest

All authors report acting as reviewers and have provided recommendations to editors in that capacity. JPT is the Executive Editor of Geoscience Communication, and Editor at Publications and the Journal of Evidence-Based Healthcare; TRH is Editor-in-Chief of Publications; DMS is Senior Consulting Editor for the Journal of Bioethical Inquiry; CRM has an editorial role at Collabra: Psychology, Frontiers research topic, Journal of Open Source Software, Palgrave Communications, and Research Ideas and Outcomes (RIO); SA was Editorial Director of F1000 Platforms during the time this article was submitted. She is currently Associate Editorial Director of Medicine and Health journals at Taylor and Francis; DG is associate editor at the Journal of Open Research Software and editor at Research Ideas and Outcomes (RIO). BM is reviewer experience lead at Elsevier. BM is also a council member of EASE. DN is a freelance consultant and Vice-President of European Association of Science Editors. FS is editor-in-chief of JASSS-The Journal of Artificial Societies and Social Simulation. AWM is co-Editor-in-Chief of Geo: Geography and Environment and is a member of the editorial boards of The Anthropocene Review, and Open Quaternary.

References

- Zuckerman H, Merton RK. Patterns of evaluation in science: Institutionalisation, structure and functions of the referee system. *Minerva*, 1971. 9(1), 66-100.
- Baldwin M. Scientific autonomy, public accountability, and the rise of "peer review" in the Cold War United States. *Isis* 2018 109(3), 538-558. doi: 10.1086/700070
- Campos-Arceiz A, Primack RB, Pin Koh L. Reviewer recommendations and editors' decisions for a conservation journal: Is it just a crapshoot? And do Chinese authors get a fair shot? *Biological Conservation* 2015. 186: 22-27.
- Cabanac G, Preuss T. Capitalizing on order effects in the bids of peer-reviewed conferences to secure reviews by expert referees. *Journal of the Association for Information Science and Technology* 2013. 64, 405-415. doi:10.1002/asi.22747
- Jukola SA. Social Epistemological Inquiry into Biases in Journal Peer Review. *Perspectives on Science* 201. 25(1), 124-148. doi: 10.1162/POSC_a_00237
- da Silva JAT, Al-Khatib A. How are editors selected, recruited and approved? *Science and Engineering Ethics* 2016 1-4.
- Gottlieb JD, Bressler NM. How should journals handle the conflict of interest of their editors?: Who watches the watchers? *JAMA* 2017. 317(17), 1757-1758. doi:10.1001/jama.2017.2207
- Teixeira AA, Da Costa MF. Who rules the ruler? On the misconduct of journal editors. *Journal of Academic Ethics* 2010. 8(2), 111-128. doi: 10.1007/s10805-010-9107-y
- Bravo G, Farjam M, Grimaldo Moreno F, et al. Hidden connections: Network effects on editorial decisions in four computer science journals. *Journal of Informetrics* 2018. 12(1): 101-112. doi: 10.1016/j.joi.2017.12.002
- de Rijcke S, Wouters PF, Rushforth AD, et al. Evaluation practices and effects of indicator use—a literature review. *Research Evaluation* 2016 25, no. 2. 161-169. doi: 10.1093/reseval/rvv038
- Shaw DM, Penders B. Gatekeepers of Reward: a Pilot Study on the Ethics of Editing and Competing Evaluations of Value. *Journal of Academic Ethics* 2018. 1-13. doi: 10.1007/s10805-018-9305-6
- Ross-Hellauer T. What is open peer review? A systematic review [version 2; referees: 4 approved]. *F1000Research* 2017. 6:588. doi: 10.12688/f1000research.11369.2
- Wilkinson MD, Dumontier M, Jan Aalbersberg I, et al. The FAIR Guiding Principles for scientific data management and stewardship. *Scientific data* 2016. 3. doi: 10.1038/sdata.2016.18
- Tennant JP, Waldner F, Jacques DC, et al. The academic, economic and societal impacts of Open Access: an evidence-based review [version 3; referees: 4 approved, 1 approved with reservations]. *F1000Research* 2016. 5:632 doi: 10.12688/f1000research.8460.3
- Schmidt B, Ross-Hellauer T, van Edig X, et al. Ten considerations for open peer review [version 1; referees: awaiting peer review]. *F1000Research* 2018. 7:969. doi: 10.12688/f1000research.15334.1
- AAAS launches PRE (Peer Review Evaluation) Across the Science Family of Journals. American Association for the Advancement of Science [Updated March 9, 2016, accessed November 26, 2018]. Available from <https://www.aaas.org/news/aaas-launches-pre-peer-review-evaluation-across-science-family-journals>
- Ross-Hellauer T, Hindle S, McDowell G, et al. Guest Post: Help TRANSPOSE Bring Journal Policies into the Open. Scholarly Kitchen [updated 2018 November 1, accessed 2018 December 2] Available from: <https://scholarlykitchen.sspnet.org/2018/11/01/guest-post-help-transpose-bring-journal-policies-into-the-open/>
- Taubert N. Online Editorial Management"-Systeme und die Produktion wissenschaftlicher Fachzeitschriften. *Leviathan* 2013. 40, 297-319.
- Franzen M. Torwächter der Wissenschaft oder Einfallstor für die Massenmedien? Zur Rolle von Science und Nature an der Schnittstelle von Wissenschaft und Öffentlichkeit. 2009, In S. Stöckel (Ed.), *Verwissenschaftlichung der Gesellschaft - Vergesellschaftung der Wissenschaft. Wissenschaftszeitschriften im 19. und 20. Jahrhundert* (pp. 229-252). Stuttgart: Steiner.
- Franzen M, Rödder S, Weingart P. Wissenschaft und Massenmedien: Von Popularisierung zu Medialisierung 2012. In *Handbuch Wissenschaftssoziologie* (pp. 355-364): Springer.
- Weingart P. The lure of the mass media and its repercussions on science 2012. In *The Sciences' Media Connection—Public Communication and its Repercussions* (pp. 17-32): Springer.
- Corlett JA. Moral integrity and academic research. *Journal of Academic Ethics* 2009. 7(1-2), 45-49. doi: 10.1007/s10805-009-9087-y
- O'Neill O. *A question of trust: The BBC Reith Lectures 2002*. 2002. Cambridge University Press.
- Moher D, et al. Core competencies for scientific editors of biomedical journals: consensus statement. *BMC Medicine* 2017, 15.1, (1) doi: 10.1186/s12916-017-0927-0