Peer review golden rules and good practice checklist

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Abstract

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Introduction
In my book, Peer Review and Manuscript Management in Scientific Journals: guidelines for good practice, I included an appendix that listed the basic general principles of peer review and summarized the information presented in the book in a series of key points [1]. That appendix is re-published below. It is nearly nine years since the book was published, but the information is still relevant today, even though scholarly publishing is going through a period of considerable change and innovation, and publication venues now extend beyond conventional 'journals'.

Readers will find additional relevant information in the following guidelines from COPE (the Committee on Publication Ethics) that have appeared since 2007 [2-5]:
- Ethical guidelines for peer reviewers, 2013 http://publicationethics.org/files/Peer%20review%20guidelines_0.pdf
- Sharing of information among editors-in-chief regarding possible misconduct, 2015 http://publicationethics.org/files/Sharing%20of%20Information_Among_EiCs_guidelines_web_version_0.pdf

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Appendix 1. The Golden Rules and the Peer-Review Good Practice Checklist

This appendix is made up of two parts: (i) the Golden Rules and (ii) the Peer-Review Good Practice Checklist, which contains the Key Points. The Golden Rules are the most basic and important general principles of peer review, and have been highlighted in the main text: the Key Points have not, but represent a summary of important information that has appeared throughout the book and they form the basis for achieving good practice in peer review. They are grouped under various headings and, in each grouping, guidance is given on what should and what should not be done. The order of the sections follows, roughly, the sequence of considerations and events in peer review.

Not everyone will agree with everything that is in these two sections; and not everyone will agree with the way the information has been divided. Those who are more experienced may think that some of the information in the Key Points is a bit trivial. It may be, but it will very likely be unfamiliar to newcomers to journal editorial work and peer review. As these individuals form a significant proportion of the intended reader group, this information is there for their benefit. It may also serve as a refresher for ‘old hands’, and perhaps act as a catalyst for evaluation and change.

The Golden Rules are not listed in any particular order of importance: they are all important. For that reason, it proved difficult to try to list them that way. So the final order was dictated by the order of appearance in the book.

The golden rules

1. Editors are responsible for ensuring the quality of their journals and that what is reported is ethical, accurate and relevant to their readership.
2. Peer review must involve assessment by external reviewers.
3. The submission of a manuscript and all the details associated with it must be kept confidential by the editorial office and all the people involved in the peer-review process.
4. The identity of the reviewers must be kept confidential unless open peer review is used.
5. Reviewers advise and make recommendations; editors make the decisions.
6. Reviewers must assess manuscripts objectively and review the work, not the authors.
7. Editors-in-chief must have full editorial independence.
8. Editorial decisions must be based on the merits of the work submitted and its suitability for the journal; they should not be dictated by commercial reasons, be influenced by the origins of a manuscript, or be determined by the policies of outside agencies.
9. Everyone involved in the peer-review process must always act according to the highest ethical standards.
10. Information received during the submission and peer-review process must not be used by anyone involved for their own or others’ advantage or to disadvantage or discredit others.
11. All the parties in the peer-review process must declare any potential conflicts of interest and excuse themselves from involvement with any manuscript they feel they would not be able to handle or review objectively or fairly.
12. No conflict of interest or prejudice must be allowed to influence the submission of a manuscript, its review, or the decision on whether it should be published.
13. Suspected or alleged misconduct must not be ignored.
14. Editors and journals have a duty to keep the scholarly record sound and free from fraudulent or incorrect data.

The peer-review good practice checklist

The key points

Journal obligations

Journals should:
- make clear their scope, editorial policies, and manuscript presentation and submission requirements
- acknowledge manuscript receipt, record the date of submission, and issue a reference number
- ensure the timely handling and publication of manuscripts submitted to them
- check newly submitted manuscripts to make sure that their content falls within the scope of the journal and that they follow its editorial policy guidelines
- obtain reasons for any requests from authors for changes in authorship or for manuscript withdrawal after submission and ensure these are legitimate and justified
- in optional author-side-pays Open Access models (where authors can pay to make their articles available free online from day of publication), ensure that the peer-review process and editorial decisions are not influenced by whether or not an author is intending to take up that option.

Journals should not:
- accept a first submission without external review
- compromise reviewer anonymity if closed peer review is used
- get involved in authorship disputes
- get involved in departmental or institutional politics
- allow authors to play off one editor against another in an attempt to force a favourable decision
- make moral or character judgements about authors; actions and decisions on manuscripts should be based solely on the work reported and ethical issues related to it and its submission.

Responsibilities of editors

Editors should:
- ensure their behaviour is transparent and beyond reproach
- develop a written editorial policy and amend and update this regularly to take account of changes in their field and in publishing in general
- ensure manuscripts comply with recognized ethical guidelines and that all procedures at their journals are ethical and in accordance with recommended best practice
- keep manuscript submissions confidential
- ensure that everyone involved in the handling and review of manuscripts understands that they are dealing with privileged information that must not be used for private benefit or gain
- disqualify themselves from handling manuscripts for which a conflict of any kind exists
- ensure the efficient, fair and thorough review of all manuscripts submitted to them and have the appropriate systems in place to achieve this
- request more data or clarification from authors if they come across anything that is unclear or suspicious
- ensure decision making is fair and consistent in their journals
- ensure compliance by authors with their journals’ policies, both on submission and after publication; pursue non-compliance and implement appropriate sanctions if it persists
- ensure that peer-reviewed and non-peer-reviewed material is clearly distinguished in their journals
- ensure that any sponsorship of articles is made clear
- keep abreast of developments concerning the publication of research with potentially harmful applications (dual-use research) and introduce appropriate measures and procedures into their journals
- identify manuscripts that report potentially harmful research and ensure that their review is especially rigorous and takes into account the special circumstances
- put in place procedures for dealing with suspected misconduct
- investigate all cases of suspected misconduct at journal level and decide whether there is any substance to the suspicion or claim of misconduct, and then either deal with it themselves or alert the appropriate agency for further investigation and action.

Editors should not:
- abuse the trust of the parties involved in the peer-review process
- personally handle manuscripts from their own institutions or their own research groups
- deliberately choose reviewers who will provide either a favourable or an unfavourable review, or who will hold up the review of a manuscript because they are known to be slow
- use privileged information for personal gain or to disadvantage or discredit others
- attempt to increase the Impact Factors of their journals by unethical means during the peer-review process, for example by inappropriately requesting additional citations to their own journals or deleting citations to competing journals.

**Author submission**

Authors should:
- choose the most appropriate journal to which to submit their work
- decide which individual will act as corresponding author and give that person responsibility for co-ordinating all issues related to submission and review, including ensuring that all authorship disagreements are resolved appropriately
- submit original work that has been honestly carried out according to rigorous experimental standards
- always give credit to the work and ideas of others that led to their work or influenced it in some way
- declare all sources of research funding and support
- submit manuscripts that are within the scope of journals, ensure that they abide by all those journals’ policies and follow all their presentation and submission requirements
- explain in a cover letter if there are any special circumstances, if their manuscript deviates in any way from a journal’s requirements or if anything is missing
- ensure that their manuscripts do not contain plagiarized material or anything that is libellous, defamatory, indecent, obscene or otherwise unlawful, and that nothing infringes the rights of others
- ensure they have permission from others to cite personal communications from them and that the extent, content and context have been approved by those individuals
- provide details of related manuscripts they have submitted or have in press elsewhere
- check the references they cite carefully to ensure the details are correct
- notify a journal if work done subsequent to the submission of their manuscript casts doubt on the work submitted or alters its interpretation
- if they decide to submit to another journal after an unsuccessful submission, reformat the manuscript to meet the requirements of the new journal and redraft the cover letter before resubmitting the manuscript.

Authors should not:
- be influenced by the sponsors of their research regarding the analysis and interpretation of their data or in their decision on what to, or not to, publish and when to publish
- divide up their papers inappropriately into smaller ones (minimum publishable units or MPUs) in an attempt to increase their list of publications
- be involved in ‘ghost’ or ‘gift’ authorship
- submit the same or a very similar manuscript to more than
one journal at the same time
- present their work, or use language, in a way that detracts from the work or ideas of others
- use information obtained privately without direct permission from the individuals from whom it has been obtained
- make exaggerated claims about the novelty or significance of their findings
- misrepresent or inappropriately enhance their results by any means
- make significant changes to their manuscript after acceptance without the approval of the editor or journal editorial office
- submit a manuscript that has been rejected by one journal to another journal without the reviewers’ comments being considered and appropriate revisions being made and presentation errors corrected.

Managing the review process
Journals should:
- always treat reviewers with courtesy and respect
- send manuscripts to reviewers, or give instructions on how to access them, as soon as possible after they have agreed to review them
- send reviewers manuscripts that are correctly formatted, well presented and complete, with all ancillary materials included
- provide reviewers with clear instructions and guidance on the journal’s aims and scope and what is expected of them in the review process
- instruct reviewers that their narrative reports for authors must correspond to what they have indicated in their confidential reviewing forms and checklists
- give reviewers access to any closely related manuscripts by the authors that are in press or submitted elsewhere for publication
- also have supplementary material that is to be published with a paper peer reviewed as it is an integral part of the publication
- alert reviewers to the possibility that they may be identified if they access material directly on an author’s website; they should make alternative arrangements for reviewers to access or receive that material if it is important for the review of a manuscript
- provide reviewers with contact details they can use if they have problems or need assistance during the review of a manuscript
- answer reviewers’ queries promptly and sort out any problems as quickly as possible
- ensure that reminder messages sent to reviewers are always courteous and never aggressive or threatening
- thank reviewers for their efforts and give them feedback on the outcome of the review process
- halt the review process if misconduct by the authors is suspected
- remove from the review of manuscripts any reviewers or editors who have acted inappropriately.

Journals should not:
- send to external reviewers manuscripts that are out of scope or do not follow essential journal editorial policy
- send out for review manuscripts in which the standard of language is very poor
- compromise reviewer anonymity in closed peer-review systems
- bombard reviewers with inappropriate review reminders
- automatically send manuscripts that receive opposing opinions or recommendations out for further review.

Reviewer selection
Journals should:
- have a database of reviewers and ensure this is kept up to date
- recognize that reviewer selection is the most critical aspect of peer review
- advise authors on who it is not permissible for them to suggest as potential reviewers for their manuscripts
- ask authors to provide reasons for any requests for exclusion of particular reviewers for their manuscripts
- monitor reviewers’ workloads to ensure they are not overloaded or taken advantage of
- have reviewer-selection procedures that involve active decision making
- keep a record, or audit trail, of where various reviewer suggestions have come from
- contact potential reviewers and obtain their agreement to review before they are sent a manuscript
- ensure reviewers are sent manuscripts that are appropriate to their areas of interest and expertise.

Journals should not:
- send manuscripts to more reviewers than are needed with the intention of using only the first reviews returned
- put pressure on any reviewer who feels uncomfortable about reviewing a manuscript to do so
- send manuscripts to reviewers who regularly fail to return reviews, or who do so only after unacceptably long times, or who provide superficial or inadequate reviews.

Reviewer behaviour
Reviewers should:
- provide timely reviews that are both relevant and constructive
- declare any conflicts of interest, either real or potential
- disqualify themselves from review if they feel unable, for any reason, to provide an honest and unbiased assessment
- notify journals of any limitations to their ability to review a
manuscript
- declare if they have reviewed a manuscript previously for another journal; if both the editor and reviewer agree that the reviewer can be involved in a second review, he or she should review the manuscript afresh and submit a review based on that assessment
- declare a conflict if asked to review a manuscript that is very similar to one they have submitted elsewhere or have in preparation
- keep confidential the submission and contents of manuscripts sent to them for review
- alert the editor or journal if any circumstances arise that will delay their review
- provide comments that can be forwarded to the author separately from any confidential comments for the editor
- make sure that their comments for authors correspond to their assessment on the confidential review forms and checklists
- report to journals any suspicions of misconduct and ask for advice on how to proceed.

Reviewers should not:
- agree to review a manuscript just to gain sight of it for personal benefit with no intention of providing a genuine review
- contact anyone else about reviewing a manuscript without the knowledge and permission of the journal from which it was received
- use information in manuscripts they review for their own or others' benefit or gain, or plagiarize any of the material within those manuscripts
- intentionally delay return of their reports
- make personal or derogatory comments about authors in their reviews
- request that authors include citations to their own work in order to receive additional citations for themselves
- contact the authors directly about any manuscript they review.

Handling reviews
Journals should:
- check reviews as they are submitted rather than when all the reviews are in, so that errors can be corrected, clarification obtained, and additional action taken if necessary
- ensure that reviewers' reports for authors do not contain anything that is defamatory, libellous or likely to confuse the authors
- check before editorial decisions are made that the correct reviews have been assessed and that all the reviews submitted have been considered
- recognize that the most important part of a review is that which contains the detailed comments, not the recommendation.

Journals should not:
- selectively edit reviewers' reports so that they better reflect an editorial decision.

Editorial decision-making
Editorial decisions should:
- be made or approved by an editor, and should not default to someone who does not have appropriate specialist training or knowledge
- be based on the merits of the work submitted and its suitability for the journal
- give more weight to reports of flaws or technical criticisms than to subjective opinions on suitability for a journal
- be consistent across all manuscripts submitted to a journal
- be as transparent as possible; editors should be able to substantiate their decisions if challenged
- provide reasons for any comments and opinions in reviewers' reports that have been overridden by the editor.

Editorial decisions should not:
- be influenced by the origins of manuscripts or determined by the policies of outside agencies
- except in exceptional circumstances (for example, misconduct or if a serious flaw comes to light), override all the reviewers' recommendations and opinions
- allow papers to be published with overstated claims or interpretations.

Feedback to authors
Journals should:
- notify authors if the review process is unduly extended or additional review is required
- if a manuscript is withdrawn from review by the journal, give the authors clear reasons why this is being done and provide them with the opportunity to respond if appropriate
- check decision letters before these are communicated to authors to ensure that editorial notes, instructions, and inappropriate words or phrases have been removed
- make clear to authors exactly what the decision is on their manuscript, the reasons for it and, if appropriate, what conditions need to be met for the journal to consider the manuscript again
- let authors know what the procedures will be for handling a resubmission of their manuscript
- answer authors' queries promptly and informatively
- keep a full record of all manuscript status enquiries to ensure accuracy and consistency in responses.

Journals should not:
- misinform authors about the review status of their manuscript
- allow editorial staff to tell authors informally the decisions on
their manuscripts based on editors' initial recommendations; this should not be done until decisions have been finalized.

Revised manuscripts
Journals should:
- remind authors of revision deadlines
- accept a manuscript if an author has fulfilled all the revision and journal policy requirements within the stipulated time
- send authors official, dated acceptance letters.

Journals should not:
- issue a blanket instruction that all revised manuscripts are to be sent to the original reviewers for assessment; decisions on review procedure should be made on a case-by-case basis.

Accepted manuscripts
Journals should:
- check manuscripts before moving them on for preparation for publication to ensure they are complete and all the required information and enclosures have been received
- refer for editorial approval requests from authors both for non-trivial changes to a manuscript after it has been accepted and for notes to be added in proof
- publish papers in a timely and efficient manner, with dates of receipt and acceptance.

Journals should not:
- reverse the decision to accept a paper for publication unless a serious problem is subsequently found, for example fraud or an ethical issue; such decisions should not be reversed because a journal has misjudged the availability of space.

Authors should:
- supply any missing items or information promptly when requested
- abide by all the post-publication policy requirements of journals
- notify a journal immediately if errors are found in a paper after publication so that an appropriate correction note can be published if necessary.

Authors should not:
- include in notes added in proof information they were aware of and should have either included or referenced in their manuscript because it was already published at the time of submission.

Dealing with misconduct
Journals should:
- have procedures in place for investigating allegations of misconduct at journal level
- look into all cases of suspected misconduct
- take extra care to keep complete and accurate records when suspicions or allegations of misconduct arise
- give the person(s) against whom allegations have been made the opportunity to respond to the allegations and to provide an explanation
- obtain written evidence from all the parties involved
- refer to individuals' institutions or funding bodies cases that warrant further investigation
- ensure that referral to an individual's institution or funding body is warranted as this is a serious step with potentially very serious implications for the individual and his or her reputation
- reprimand individuals found guilty of misconduct or inappropriate behaviour and implement appropriate sanctions
- publish appropriate correction notes for papers they have published in which errors, fraudulent data or misconduct have been found
- ensure that when correcting the literature any conclusion that a paper is problematical or fraudulent and the attribution of blame are based on rigorous and thorough investigation and expressed appropriately and within legal restrictions.

Journals should not:
- mistake genuine errors for misconduct
- launch full-scale external investigations into allegations of research misconduct to determine if they are substantiated and that misconduct has occurred; this is the responsibility of employers and funding agencies
- release information about allegations or suspicions of suspected misconduct until they have been substantiated
- pressure reviewers into revealing their identities to investigating bodies in misconduct cases
- alter papers or remove them from the scholarly literature once they have been published except in very exceptional and restricted circumstances.

Conclusion
The role of journal editor is a very important one. Editors play a central role in bringing research to publication and curating the scholarly record. Because editors determine what is published and where, they have great influence on the careers, grant prospects and reputations of researchers. Many, however, come to the role without much, if any, training in peer review or the associated responsibilities. My book [1] was written as a manual to provide editors and editorial office staff with practical guidance on all aspects of peer review. The above republished Appendix 1 is a summary of the informa-
tion in the book, and represents the crystallisation of 30 years’ experience in scholarly journal publishing, particularly the 16 years spent (at the time of writing the book) as the managing editor of an international scientific journal.

Conflict of Interest

Irene Hames was a Council Member of the Committee on Publication Ethics (COPE) 2010-2013, and produced the COPE Ethical guidelines for peer reviewers.

References