
Reviews

After Peat: Scientific Writing

Peer review

- The cornerstone of good science but, that said, it is a peculiar process.
 - The peer-review process is inherently fraught with difficulty because you are essentially asking for criticism, although you would, no doubt, prefer praise.
 - Only the criticism can help to improve your paper.
 - Although you need peer review, criticism is hard to take no matter how it is packaged,
 - Take a deep breath, put your feelings aside, and
 - If your coauthors misinterpret what you have written or find your paper difficult to read, then others will too.
 - Once your paper is underway, it is time to ask for peer review from either your coauthors or coworkers.
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How to prepare a paper thinking to reviewers

- With good writing practice, peer review should not be too painful or too depressing.
 - If you start with a plan in mind, design the paper with a purpose, and write in short, clear sentences, you will create a product that the reviewers will find easy to read and therefore can respond to more easily in an intellectual way.
 - Intellectual contributions are far more valuable to the advancement of papers than comments on grammar and organization.
 - When papers are badly constructed and poorly written, reviewers tend to concentrate on trying to fix the immediate problems of presentation rather than thinking about the content and the big picture.
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Checklist questions for reviewers and writers

■ General

- Is the work original?
- Is the information important?
- Was the study ethical?
- Does the work add enough to what is already in the literature?
- Is the title accurate and informative?
- Does the abstract include the most important results?
- Does the paper read well and make sense?
- Are the results of interest to the readers of this journal?

■ Introduction

- Is the length of the introduction reasonable?
 - Does the introduction adequately review the background and state
the aims?
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Checklist questions for reviewers and writers

■ Methods

- ❑ Are the methods well documented and detailed enough?
- ❑ Are the participants adequately described and their conditions defined?
- ❑ Was a satisfactory response rate achieved?
- ❑ Is the equipment used adequately described?
- ❑ Are the techniques used adequately described and validated?
- ❑ Were the methods suitable for the study?
- ❑ Is a calculation of the required sample size given?
- ❑ Are all statistical methods adequately described and referenced?

■ Results

- ❑ Is the description of the results clear and detailed?
 - ❑ Are the results credible, valid, and well presented?
 - ❑ Are the statistical methods appropriate?
 - ❑ Are confidence intervals given where necessary?
 - ❑ Are the numbers in the text independent of the numbers in the figures and tables?
 - ❑ Are the stated results supported by the statistical analyses?
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Checklist questions for reviewers and writers

- Discussion
 - Is the length of the discussion appropriate?
 - Does the discussion adequately consider the limitations of the study?
 - Does the discussion fairly review previous work?
 - Do the conclusions answer the aims set out in the introduction?
 - Are the conclusions justified and logical?
 - Tables and figures
 - Are the figures of adequate quality?
 - Are all of the tables and figures necessary?
 - Do the legends and titles of the tables and figures provide adequate information?
 - References
 - Are all of the references relevant?
 - Do the references fairly represent current knowledge in this field of research?
 - Is any major literature omitted?
 - Are there any misquotations or incorrect citations?
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Reviewers requests

- External reviewers are usually asked by editors to rank the quality of your paper.
 - They are often asked whether it is suitable for publication in terms of yes, no, or uncertain, whether publication should be routine or fast track, and whether the quality is excellent, good, fair, or poor.
 - Reviewers are also sometimes asked to score attributes such as creativity and originality, scientific importance, study design, interpretation, clarity, and brevity.
 - If you are unsure about the quality of your paper, it may be prudent to devise your own checklist and give it to your internal peer reviewers or coauthors to elicit this type of feedback.
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Peer-reviewed journals

- A peer-reviewed journal is one that is controlled by editorial staff who send papers out to external reviewers.
 - The external reviewers are selected because they have a reputations as experts in their fields of research.
 - The work that is published in peer-reviewed journals is considered far superior to that published in non-peer-reviewed journals simply because it has undergone expert external review.
 - The editorial team has the responsibility of communicating with the author, and the external reviewers have the responsibility of ensuring that the external review process is rigorous and expeditious.
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Levels of selection

- When you send your paper to a journal, there are usually two levels of review.
 - The first is the internal peer review by the editorial team to decide whether your paper is the type of article that they want to see in their journal and, if so, whether it is of an adequate standard to be sent out for external review.
 - Editors have the ultimate responsibility of selecting papers that will appeal to the journal's readership.
 - Rejection is common and, perhaps for this reason, approximately half of the papers that are presented at conferences never make the grade to becoming a published journal article.
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Requests

Reviewers are asked to comment on the following areas:

- Scientific rigour
 - Experimental or study design
 - Adequacy of data
 - Importance and originality of the results
 - Validity of conclusions reached
 - Completeness of the literature cited
 - Clarity of writing
 - Interest to the journal readership
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Comment treatment

- When you receive the reviewers' comments, the extent of them may leave you feeling devastated.
 - This is a normal response when unknown peers widely criticise many aspects of your work.
 - The best approach is to be calm and objective. All you need to do is deconstruct each of the messages into individual items that you can respond to.
 - It is probably best to try and make the majority of the changes requested, and to try carefully to negotiate the more radical suggestions as needed.
 - Editors take the review process very seriously so no comments from the reviewers should be lightly dismissed.
 - Sending back a paper with minimal changes implies either disdain or arrogance for the review process and will not impress the journal editor.
 - Your replies to the reviewers' comments should make your responses very clear.
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From author to reviewer

- Once you have started publishing, it is fun to start reviewing.
 - Although this honorary position rarely brings financial rewards, it is exciting to be invited to be an external reviewer by a journal.
 - In fact, if you write, then you should also be willing to review.
 - However, reviewing is a serious undertaking and can be time-consuming when done properly.
 - In being a good reviewer, you need time to read the paper carefully from beginning to end, think about it, read it a second time, write a review, revise your review, and then check back with the paper again.
 - The rewards for this are that you are sent the most current research work to read and that your reviewing skills have a currency that help to foster good science in the journals as well as your career.
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