Towards better peer review

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'Currently peer review is thought to be slow, expensive, profligate of academic time, highly subjective, prone to bias, easily abused, poor at detecting gross defects, and almost useless for detecting fraud'

Peer review: alive and kicking
Nails in the coffin of peer review?

- There are too few reviewers to do the work.
- It costs too much.
- It’s not rigorous enough.
- It’s a black box.
- It takes too long.
- The web changes everything.
When critiquing peer review we generally focus on it in isolation; we divorce it from the end-to-end process of publication.
This leads us to overlook the vital role of editors and publishers.
Tackling the problem

The act of peer review in the context of the end-to-end peer review publishing process: a simplified view.
Quis custodiet ipsos custodes?

Juvenal, *Satires* VI.347-8

[Image: Juvenal_Nuremberg_Chronicle.jpg](https://commons.wikimedia.org/wiki/File:Juvenal_Nuremberg_Chronicle.jpg)
The problem

Table 10
<table>
<thead>
<tr>
<th>Salient characteristics of potential predatory journals</th>
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<tbody>
<tr>
<td>1. The scope of interest includes non-biomedical subjects alongside biomedical topics</td>
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<tr>
<td>2. The website contains spelling and grammar errors</td>
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<td>3. Images are distorted/fuzzy, intended to look like something they are not, or which are unauthorized</td>
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<td>4. The homepage language targets authors</td>
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<td>5. The Index Copernicus Value is promoted on the website</td>
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<td>6. Description of the manuscript handling process is lacking</td>
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<td>7. Manuscripts are requested to be submitted via email</td>
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<td>8. Rapid publication is promised</td>
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<td>9. There is no retraction policy</td>
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<td>10. Information on whether and how journal content will be digitally preserved is absent</td>
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<tr>
<td>11. The Article processing/publication charge is very low (e.g., &lt; $150 USD)</td>
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<tr>
<td>12. Journals claiming to be open access either retain copyright of published research or fail to mention copyright</td>
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<tr>
<td>13. The contact email address is non-professional and non-journal affiliated (e.g., @gmail.com or @yahoo.com)</td>
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Tackling the problem

‘Is there a ‘gold standard’ for peer review?’
‘What does better peer review look like?’

Definitions, essential areas, and recommendations for better practice

Literature review and case studies

Preprint at https://osf.io/4mfk2/
Creating gold standards for peer review

Heidi Allen, Emma Boxer, Alexandra Cury, Thomas Gaston, Chris Graf, Benjamin Hogan, Stephanie Loh, Hannah Wakley and Michael Willis

John Wiley & Sons

Background

Peer review exists to serve the scientific literature by validating the process that increases our knowledge but it has been shaped by historical constraints and interests and can be improved. Improving peer review will improve the scientific and scholarly literature.

We conducted a literature review for research on peer review and research integrity. This included looking at existing guidelines and standards for peer review and editorial practices.

After reviewing the literature, we defined five essential areas of peer review.

- **Integrity**: peer review establishes that the work is reliable and potentially reproducible
- **Ethics**: peer review establishes that the work was conducted ethically
- **Fairness**: peer review is objective and impartial
- **Usefulness**: peer review is constructive and helpful
- **Timeliness**: peer review provides timely feedback for authors

**Objective**

- Create a definition for the essential areas of peer review
- Define a set of standards for peer review
- Provide editorial offices with guidelines to improve their peer review process

**Methods**

**Case studies**

- We created a Google Form to obtain data on examples of peer review being 'done well'.
- A link to the form was advertised on Wiley’s public-facing Exchanges blog and circulated to Wiley colleagues.
- We received 40 case studies from editorial office colleagues and journal editors.

**Self-assessment checklist**

For each essential area we developed a checklist which journals can use to assess their current peer review practice and to help them improve.

**Recommendations**

Our full recommendations are given in our preprint at https://osf.io/4mfk2/

Here we give an example from each section:

- **Integrity**: Editors should ensure the journal’s standards for article acceptance are transparent to authors and reviewers.
- **Ethics**: Journal teams should use software to check for plagiarism.
- **Fairness**: Articles should include a list of each individual’s contribution to the work.
- **Usefulness**: User-friendly author guidelines should be easily accessible so that manuscripts are in the best possible format to reap the full benefits of the peer review process.
- **Timeliness**: Journal teams should take active steps to improve timeliness through regular audits of their workflow.

**Next steps**

- We will develop and promote our checklist to help journals audit their performance and we will use this work to underpin our peer review philosophy at Wiley.
- We intend to create badges to show authors and readers how a journal is performing and to help journals pursue good practice in each area.
- We will continue to garner feedback from journal staff so our thinking will evolve to meet evolving practices within research communities.

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ORCiDs:


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Tackling the problem

Reviewers
Editors
Authors
Publishers
Readers
Tackling the problem

- Usefulness
- Integrity
- Fairness
- Ethics
- Timeliness
Better peer review

Towards ‘better’ peer review

We want to:

- equip journal teams to assess how well they perform in the five essential areas for better peer review
- encourage journal teams to consider how they can improve in the five essential areas for better peer review

Better Peer Review Self-Assessment, Part 1: Reviewers (version 1.0)

Part 1 asks you 20 questions about your work with peer reviewers.

Each question comes in 2 parts.

First, we’ll ask you answer a yes/no question, and by doing that you will rate your practice (choosing 1 means "no"; 2 means "could do better"; and top marks is 3 for "yes").

Second, we’ll ask you for an all-important narrative description of why you gave yourself that score. Good luck! And thank you!

Hi, Michael, when you submit this form, the owner will be able to see your name and email address.

1. Do you screen possible reviewers to avoid inviting people who work with (or recently worked with) the authors?
   - [ ] 1
   - [ ] 2
   - [ ] 3

2. Why did you give yourself that score?

   Enter your answer
‘We completed the checklist. What next?’

• Resources for editors – e.g. Wiley Editor Academy
• Resources for reviewers – e.g. http://wileypeerreview.com, Publons Academy
• Overhauling author guidelines
• Reviewing journal processes
• Further self-assessment for continuous improvement
Thank you for listening.

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