**Ten Simple Rules for Open Peer Review**

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* Many thanks to our reviewers!

Today’s peer review is a mix of open and blind

Most scientists regarded the new streamlined peer-review process as ‘quite an improvement.’
Reactions to peer review also depend on familiarity

Dear Sir,

We (Mr. Rosen and I) had sent you our manuscript for publication and had not authorized you to show it to specialists before it is printed. I see no reason to address the in any case erroneous comments of your anonymous expert. On the basis of this incident I prefer to publish the paper elsewhere.

Respectfully,

P.S. Mr. Rosen, who has left for the Soviet Union, has authorized me to represent him in this matter.

(Albert Einstein to the editor of Physical Review in 1936)
“Open Peer Review” encompasses diverse constellations of many distinct aspects

** 122 definitions collected and analysed **
** 22 distinct configurations of 7 traits identified **

Primary aspects
- Open identities
- Open reports
- Open participation

Secondary aspects
- Open interaction
- Open pre-review manuscripts
- Open final-version commenting
- Open platforms

Why ten rules?

• **Open peer review (OPR) is on the rise.**
  Both as an **established practice** at some journals and via several **experiments and studies** over the last years.

• **Greater transparency and participation.**
  Not an end in itself but to **deliver greater value** of a peer review process which is not meeting expectations (e.g. undiscovered errors, conflicts of interest and misconduct, too little follow-up).
Ten rules for whom & what

• **Authors, reviewers, editors, readers, & service providers** (e.g. submission platforms)

• **Some differences by discipline** (long vs. short form publication, pre/post reviewing, review criteria, etc.)

• Primarily for **journal papers but also conference proceedings**

• May also be applied to books or book chapters

• Not so much for conference abstracts (somewhat lighter review)
Ten simple rules for OPR (1)

1. Understand **what kind of open peer review you’re dealing with**
2. Open peer relies on **mutual trust and respect**
3. Open peer review enables **constructive and efficient quality assurance**
4. Open peer review increases **transparency and accountability**
5. Open peer review facilitates **wider discussion**
Ten simple rules for OPR (2)

6. Open peer review gives reviewers recognition
7. Open peer review offers learning opportunities and facilitates training
8. Open peer review is already moving mainstream
9. There is room to practice open peer review even if it hasn’t been formally introduced
10. We need more research into open peer review
Survey on attitudes to OPR

- Online survey for OpenAIRE project
- Sept-Oct 2016
- 3,062 complete responses from authors, reviewers and editors

Statements on how peer review may be modified

- Open Interaction: Direct reciprocal discussion between author(s) and reviewers, as well as between reviewers.  
  - 16% Much worse  
  - 16% Worse  
  - 55% Neutral  
  - 59% Better  
  - 68% Much better

- Open Reports: Review reports are published alongside the article.  
  - 21% Much worse  
  - 20% Worse  
  - 55% Neutral  
  - 59% Better  
  - 59% Much better

- Open final-version commenting: Review or commenting on final version of record.  
  - 16% Much worse  
  - 29% Worse  
  - 51% Neutral  
  - 59% Better  
  - 51% Much better

- Open Participation: The wider community may contribute to the review process.  
  - 28% Much worse  
  - 21% Worse  
  - 51% Neutral  
  - 44% Better  
  - 44% Much better

- Open platforms: De-coupled from publishing in that it is facilitated by a different organisational entity.  
  - 23% Much worse  
  - 33% Worse  
  - 44% Neutral  
  - 41% Better  
  - 41% Much better

- Open pre-review manuscripts: Manuscripts are made immediately available.  
  - 36% Much worse  
  - 23% Worse  
  - 41% Neutral  
  - 41% Better  
  - 41% Much better

- Open Identity: Authors and reviewers are aware of each other's identity.  
  - 51% Much worse  
  - 18% Worse  
  - 31% Neutral  
  - 31% Better  
  - 31% Much better

Response: Much worse  Worse  Neutral  Better  Much better
Fig 14. Views on OPR by scientific discipline.
Attitudes to Open Peer Review

• **OPR is already mainstream** (in the given sample)
  – Over 3/4 have practical experience
  – 60% believe OPR should be common practice

• **Positive reactions to most OPR traits** (esp. open interaction, reports, participation)

• However, **strong rejection of open identities** (every second against)

• Generational differences: younger researchers more supportive
Interim conclusion

• Open Reports supported by a strong majority
• More interaction, more visibility for peer review processes wanted
• Open Identities is met with reservations (even among those with OPR experiences)
• Disciplinary differences need to be better researched and understood
Ten simple rules for OPR (1)

1. Understand what kind of open peer review you’re dealing with
2. Open peer relies on mutual trust and respect
   >> civil dialogue essential, some monitoring needed
   >> acknowledge the effort, even if you disagree
   >> respond in kind, i.e. PR is a dialogue, not a monologue
3. Open peer review enables constructive and efficient quality assurance
   >> in particular when the paper is made available as a preprint
   >> some improvement of quality of review reports has been observed (in particular by editors)
4. Open peer review increases transparency and accountability
   >> you can follow the discussion, how points of comment/criticism have been addressed
   >> reviewers are accountable for their comments
   >> editors for their choice of reviewers and the final decision
5. Open peer review facilitates wider discussion
   >> in particular in case of Open Comments
   >> editors can encourage discussion & moderate comments
Ten simple rules for OPR (2)

6. **Open peer review gives reviewers recognition**
   >> enables direct acknowledgement (however, ORCID and Publons allow to collect reviewer evidence even if not OPR)

7. **Open peer review offers learning opportunities and facilitates training**
   >> e.g. journal clubs can use preprints or post-pub review, review quality of review reports

8. **Open peer review is already moving mainstream**
   >> established resp. studies and experiments for journals, books & conferences

9. **There is room to practice open peer review even if it hasn’t been formally introduced**
   >> Open Science Peer Review Oath
   >> A radical approach: only review if the paper is available as a preprint, sign & publish review reports

10. **We need more research into open peer review**

    PEERE, 6-8 March 2018, Rome
Post, Read and Engage with Preprint Reviews

We are scientists and ASAPbio Ambassadors who want to encourage other scientists to post their scientific outputs as Preprints. We hope to do that by making it easier to start and run a Preprint Journal Club, or integrate preprint review into conventional journal clubs.

PREreview Contributor Code of Conduct

Our Pledge

In the interest of fostering an open and welcoming environment, we, as contributors and maintainers, pledge to making participation in our project and our community a harassment-free experience for everyone, regardless of age, body size, disability, ethnicity, gender identity and expression, level of experience, nationality, personal appearance, race, religion, or sexual identity and orientation.

Our Responsibilities:

Project maintainers are responsible for clarifying the standards of acceptable behavior and are expected to take appropriate and fair corrective action in response to any instances of unacceptable behavior.
Open Science Peer Review Oath

#1 I will sign my name to my review

#2 I will review with integrity

#3 I will treat the review as a discourse with you; in particular, I will provide constructive criticism

#4 I will be an ambassador for the practice of open science

Are there any rules missing?

#? Opt out if there is a sound reason to do so

In experiments, about 1/10 opted out for conflict of interest and 1/4 for personal reasons. However, time was the most important factor (over 2/3).
Open questions

• **Who benefits most** from OPR?  
e.g. more positive reviews for those already in power, in-crowd, & trendy topics

• **Which biases play out** in OPR? Which get stronger, which weaker?  
e.g. English language skills, underprivileged authors/reviewers shy away, only strong papers are submitted for OPR, gender bias, etc.

• **How can such effects be controlled/mitigated?**  
e.g. role of policies, editors, education

• Is Open Reports the best we can have given the strong competition in academia?
However, biases can be better monitored via OPR

A recent study revealed that all-female economics papers remain 6 months longer in peer review than all-male papers (Hengel, 2017)

>> in OPR settings such behavior can be monitored & inform interventions

Wellcome Open Research Year One Data: 142 papers (gender of first author) (Schmidt, 2018)

>> time from submission to publication to first review etc.

>> about the same time from submission to first review (see figure)

>> reviewers took about 5.5 more days to review papers of female first authors (19.5 vs. 14 days for female vs. male first authors)
Thank you for your attention

• Your comments?
• Any rules missing?
• Which are most essential vs. not so much?

Go to www.menti.com and use the code 35 35 67

Your views on 10 rules for OPR

#1 Understand what kind of OPR you're dealing with
#2 Relies on mutual trust & respect
#3 Enables constructive & efficient quality assurance
#4 Increases transparency & accountability
#5 Facilitates wider & more inclusive discussion
References


