Editorial Decision Making
And Open Access Journals

Emma Veitch, PhD
Senior Editor, PLOS ONE
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Is the communication trail fit for purpose?

• When should ‘scrutiny’ happen?
• What does ‘scrutiny’ involve?
The PLOS ONE model

Research

Funding

Submission

Peer review

Open access
Publication

Impact evaluated post-publication

PLOS ONE’s Key Innovation: the editorial process

- Editorial criteria
  - Scientifically rigorous
  - Ethical
  - Properly reported
  - Conclusions supported by the data
- Editors and reviewers do not ask
  - How important is the work?
  - Which is the relevant audience?
- Everything that deserves to be published, will be published
  - Therefore the journal is not artificially limited in size
- Use online tools to sort and filter scholarly content after publication, not before

How does it work?

http://www.plosone.org/static/information

- >23,000 articles published in 2012
- >3000 Academic Editors
- Accepted papers reviewed by 2.9 external experts on average
- In-house team of 9 editorial staff support external board, ensure consistency of standards
Average number of reviewers per manuscript

Higher standards

- We aim for the highest standards in everything we do. Not selecting for impact does not mean we operate a substandard or ‘lite’ publishing process.
- Publication ethics
  - Financial disclosures are enforced
  - Competing interests disclosures are enforced
  - Open data sharing is enforced
  - Academic Editors are named on every paper
  - Ability to pay does NOT influence ability to publish
  - Editorial staff are blinded from any financial information
- Research ethics
  - Ethics statements published on all papers
  - Clinical trials must be prospectively registered
  - Clinical reporting guidelines enforced (PRISMA, CONSORT etc)
  - We do not accept papers funded by the tobacco industry

PLOS ONE model has led to the rise of the “MegaJournal”!
But what about Post Publication Impact?*

*(caveat): PLOS journals do not “chase” (advertise, promote, attempt to increase etc) impact factors.…

Solution?

- Measure “impact” on an article-specific basis, not a journal-specific basis…
- Panel of “markers” of post-publication use/impact, article by article
Other Editorial Models at PLOS
PLOS Medicine

• Highly selective (3% acceptance)
• Outstanding research and commentary on the major challenges to human health worldwide
• Decision making carried out by in-house professional editors in conjunction with high-profile board of academic editors
• Incisive Magazine section with critical commentary, debate
• Strong editorial voice promoting importance of biological, environmental, social, and political determinants of health, particularly in global health

PLOS Medicine

• Series, collections, commissioned content highlight under-appreciated topics, campaign for greater attention to role of industry interests in health

• Ghostwriting Collection
  • www.ploscollections.org/ghostwriting
  • Focus on the problem of individuals who have made substantial contributions to manuscript writing but their role is unacknowledged.

• Big Food Collection
  • www.ploscollections.org/bigfood
  • Examines and stimulates debate about the activities and influence of the food industry in global health.
PLOS journals aim to improve the communication trail – but what about other challenges for scientific journals?

- Bias (common)
- Misreporting (common)
- Spin (common)
- Misconduct (thought rare)
  - Falsification
  - Fabrication
  - Plagiarism
  - Violation of ethical standards
  - Other types of misconduct

How can these threats to integrity be addressed?

Why Most Published Research Findings Are False

Abstract

There is increasing concern that most current published research findings are false. The probability that a research finding is false decreases as the number of independent laboratories conducting studies increases; hence, the number of laboratories conducting a study is a critical determinant of the probability that the finding is true. Here we review published reports of laboratory studies that examined whether specific findings are true, and find that a strikingly large fraction are false. Examples include findings from studies of basic biological and clinical research importance, studies that examined whether the findings were true, the number of laboratories conducting studies, the number of laboratories conducting studies, and the number of laboratories conducting studies. Here we review published reports of laboratory studies that examined whether specific findings are true, and find that a strikingly large fraction are false. Examples include findings from studies of basic biological and clinical research importance, studies that examined whether the findings were true, the number of laboratories conducting studies, the number of laboratories conducting studies, and the number of laboratories conducting studies.

Redefine misconduct as distorted reporting

To make misconduct more difficult, the scientific community should ensure that it is impossible to lie by omission, argues Dennis Fanelli.

13 February 2013

As an epidemic of false, biased and falsified findings, the scientific community’s defenses are weak. Only the most egregious cases of misconduct are discovered and published. Butler forms slip through the net, and there is no protection from publication bias.

Delegates from around the world will discuss solutions to these problems at the 3rd World Conference on Research Integrity (wcr2013.org) in Montreal, Canada, on 5–8 May. Common proposals, detailed in Nature and elsewhere, include improving mentorship and training, publishing negative
Misconduct and bias - challenges for all scientific journals?

“...There seems to be no study too fragmented, no hypothesis too trivial, no literature too biased or too egotistical, no design too warped, no methodology too bungled, no presentation of results too inaccurate, too obscure, and too contradictory, no analysis too self-serving, no argument too circular, no conclusions too trifling or too unjustified, and no grammar and syntax too offensive for a paper to end up in print."


What do journals need to do to address these challenges?

- Raise reporting standards
- Incentivise reproducibility of original studies
- Ensure access to historical documents eg protocols – ensure what has been reported can be compared against what was planned
- Improve access to original datasets
- PLOS collaborates in all of these areas

Thank you for listening!

Emma Veitch
eveitch@plos.org
@veitchemma