

LIN 405 - Writing in Linguistics

Summer 2021 - Scott Nelson

Scientific Literature

Communication

- In the early days of scientific research, researchers would share their observations with others through open letters that were passed from person to person
- Today there are many ways to share research
 - Personal communication
 - Conferences/presentations
 - Journal articles
 - ...
- Journal articles are typically thought of as the highest form of scientific communication

Types of sources

- Academic articles
 - Research article
 - Review article
- Non-academic writing
 - News article
 - Blog post
 - Wikis
 - Personal websites
- Non-academic articles are not necessarily bad or incorrect, but they have not been vetted through peer-review and therefore should not be used as sources in academic writing.

Different Definitions of Peer Review

- Peer review is the process that allows scientists to trust the reliability of published journal articles (the Undergraduate Science Librarian).
- Peer review really just means that other scientists have been involved in helping the editors of these journals decide which papers to publish, and what changes need to be made to those papers before publication (Maggie Koerth/Meet Science).
- Peer review is designed to assess the validity, quality and often the originality of articles for publication. Its ultimate purpose is to maintain the integrity of science by filtering out invalid or poor quality articles (Wiley).
- Peer review is defined as “a process of subjecting an author’s scholarly work, research or ideas to the scrutiny of others who are experts in the same field” (Kelly et al. 2014).

What does the process look like?

1. A scientist submits an article to a journal saying “please publish this article.”
2. The journal finds 2 or 3 people who know a lot about the research topic, called REVIEWERS or REFEREES, and asks them to look at the article.
3. The reviewers look at the article carefully. They check to see if the experiment is designed and conducted well, they look at the analysis of the data, they see whether the conclusions are justified by the data, and they make sure the article can be understood by other scientists. They also make a judgment about how “important” the article is. Some journals only accept really innovative and important research, other journals accept research that advances the field just a little bit.
4. The reviewers say “yes, we should publish this article”, “no, we shouldn’t publish this article” or “if the author makes some changes, maybe we should publish this article”
5. If the article is published, we can say that it has been PEER REVIEWED.



Types of Peer Review

Single blind review

- Most common type of review
- Authors **are not** anonymous to reviewers
- Reviewers are anonymous to authors

Double blind review

- Authors are anonymous to reviewers
- Reviewers are anonymous to authors

Triple blind review

- Authors are anonymous to reviewers
- Reviewers are anonymous to authors
- Additionally, authors are anonymous to editors
 - Not the case in single/double blind review

Open Review

- Different types:
 - Both author and reviewer names are known during the process
 - Reviewer names appear on the article
 - Publication of peer reviews
 - Publication of the paper after an open discussion where anyone in the community can comment on the paper
- **Radical** is an open review journal for phonology: <https://radical.cnrs.fr>
- **Behavioral and Brain Sciences** is a psychology/neuroscience/cognitive science journal that has "open peer commentary"

Disadvantages of Peer Review

- It can delay publication
- It can be exploited by reviewers for personal gain
 - E.g. - disagree with theory so they reject; tell author to cite them; delay review so they can do similar research and publish first
- Reviewers may not be as knowledgeable in the specific topic of the paper as the author
- Some critics say it is not effective at detecting errors (see discussion in Kelly et al. (2014))
- Limits creativity since most research outside the accepted norm is not published in major journals

Student Questions

- How many "peers" are involved in peer-reviewing an article? How does one get chosen to review an article?
- If a peer-reviewed article turns out to have false information in it, does it get taken down from the journal it's in or just edited to fix the wrong information?
- Wouldn't it be more efficient to have a wider pool of effective peer reviewers than a large pool of ineffective reviewers that get ignored and a much smaller one of the reviewers who learned well enough through osmosis?

- If you're getting information from a textbook assigned by a professor, wouldn't that be considered reliable and researched information even though it might not be technically peer-reviewed?
- How does a journal select the reviewers/referees? Or let's say how can a journal know whether the 2 or 3 people they found really know a lot about the research topic?
- Why do some journals not allow submissions that only advance the field a little bit? Isn't any advancement noteworthy?

- How long does a good peer review take? (No matter who it is)
- Since there is no strict guideline on how to peer-review or how to train to become a decent reviewer, do journals at least have biases? The article mentioned that reviewers who are older tend to produce reviews that are not as useful and are not as good quality. Do they at least try to go around very old reviewers or do they like the expertise and knowledge that comes with working with someone who has been doing work in their field for a long time?
- For what we have done in the workshop, does that mean our paper is peer reviewed?

- Is there a way to make sure the article is good other than peer review?
- Do you like that peer review is anonymous? Or do you believe it should be public?
- Can you decline an offer to peer review a journal?
- What should an author or researcher take away from their article being refused by a journal to be peer reviewed? Is it more indicative of flawed methodology or flawed analysis?
- Is it best to stick to getting our sources from original research articles vs review articles?

References

- <https://undergraduatesciencelibrarian.org/a-very-brief-introduction-to-the-scientific-literature/>
- <https://boingboing.net/2011/04/22/meet-science-what-is.html>
- <https://www.elsevier.com/reviewers/what-is-peer-review>
- <https://authorservices.wiley.com/Reviewers/journal-reviewers/what-is-peer-review/index.html>
- Kelly, J., Sadeghieh, T., & Adeli, K. (2014). Peer Review in Scientific Publications: Benefits, Critiques, & A Survival Guide. *EJIFCC*, 25(3), 227–243.
- <https://dlc.hypotheses.org/545>