

5. ****The review process is slow.****

Reviews often take a considerable amount of time. Review deadlines vary significantly from journal to journal, and with increasingly multidisciplinary research, finding an available reviewer knowledgeable in all aspects of an article is challenging. Although there are journal consortia that share reviews across member journals in case of rejection, **review processes are often reinitiated by a new journal**, adding delays and demands on reviewers.

6. ****Precedence may be compromised.****

Reviews themselves are not considered a timestamp for the intellectual property in the work. Since the review process is typically anonymous and private, information is hidden until the time of publication. While a given journal timestamps an article from initial submission to final acceptance, if the **article has gone through a chain of journals**, such information is typically lost.

7. ****Reviewers are unable to comprehensively evaluate studies.****

The typical review process does not require submission of data and software associated with an article, and the descriptions provided in methods sections are often inadequate for replication. This makes it impossible for a reviewer, if so inclined, to fully evaluate an article's methods, data quality, or software, let alone to replicate the analysis of the study. A related problem to not reporting findings in a replicable manner is not reporting replicated findings. **Articles are biased toward reporting novel findings, but positive-, negative- and non-results are extremely useful to the community.**

8. ****A review has a limited lifespan.****

After an article has been published, the review process simply ends, as if the work and interpretations of the results are sealed in a time capsule. Data, methods, analysis, and interpretations of the results are all a product of their time and context, and at a later time may not stand up to scrutiny or may yield new insights. Simply enabling a continuing dialogue about each article would make it a living document and integrate it in a rich scientific dialogue.

These two topics are inter-related. Better to combine into a single topic.

: A. Klein; B. Avants

These two sentences are talking about the same issue.

: J. Millman; S. Ghosh; A. Klein

This comes out of the blue.

: S. Ghosh

