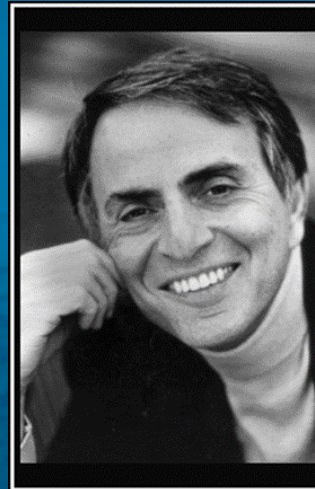


Applying organized skepticism to preprints



It is the tension between creativity and skepticism that has produced the stunning and unexpected findings of science.

(Carl Sagan)

izquotes.com

Howard I. Browman
Member, COPE Council
Institute of Marine Research
Bergen, Norway
(<https://fishlarvae.org>)



Benefits (?) of preprints

For authors

- Immediate publication (when authors think it is ready!!!) - bypasses peer review
- Low cost (free – sustainable?)
- Establishes precedence (?)
- Improves quality of papers pre-submission (?)
- Eliminates journal and other hierarchies (?)
- Identifies hypotheses not to test further (by making negative results available) (?)



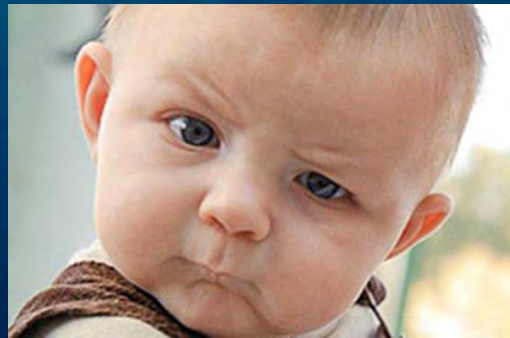
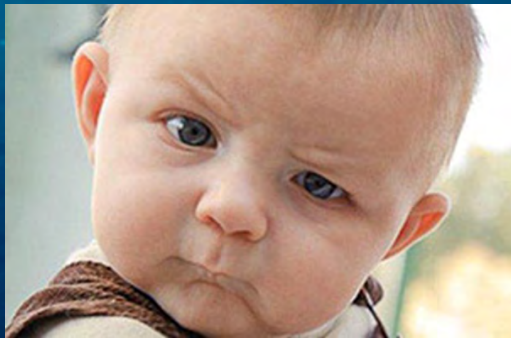
For journals

- Source of submissions (?)
- Improves the quality of what is submitted (?)



Key concerns-challenges about preprints

- Safety: Peer review removes more errors and unvetted claims than no review (incorrect and over-stated inferences are more and more common).
- Safety: Multiple competing versions (all of which are citable) of what – without careful and informed examination - appears to be the same content (the preprint version of which is much more likely to contain errors and unvetted claims) persist in perpetuity.
- Safety: Presently, no one is responsible for updating the preprint server version, nor to link it to the final published version.



Clin Orthop Relat Res (2019) 477:1-4
DOI 10.1097/CORR.0000000000000565

Clinical Orthopaedics
and Related Research[®]
A Publication of The Association of Bone and Joint Surgeons[®]

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Editorial

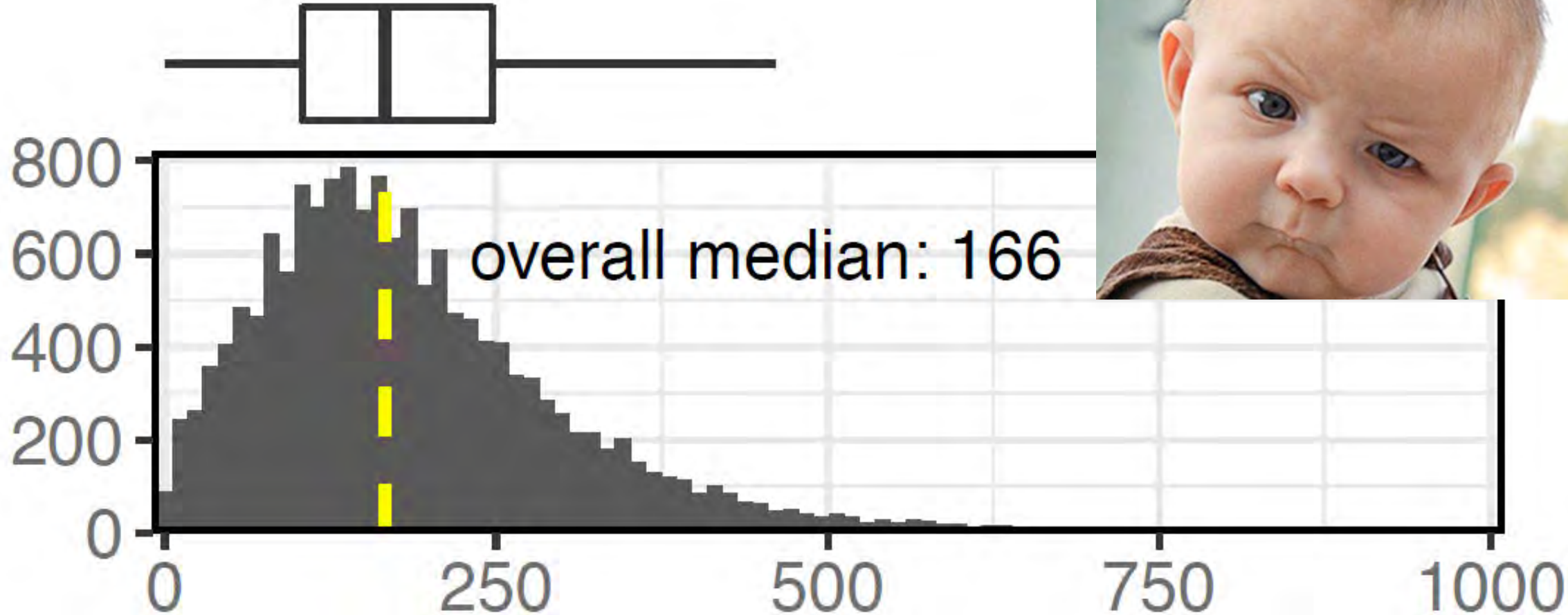
Editorial: *Clinical Orthopaedics and Related Research, The Bone & Joint Journal, The Journal of Orthopaedic Research, and The Journal of Bone and Joint Surgery* Will Not Accept Clinical Research Manuscripts Previously Posted to Preprint Servers

Seth S. Leopold MD, Fares S. Haddad FRCS(Orth), Linda J. Sandell PhD, Marc Swiontkowski MD

[OPEN](#)

By how much do preprints speed up dissemination?

Preprints (count)



overall median: 166

Age of preprint at publication in a journal (days)



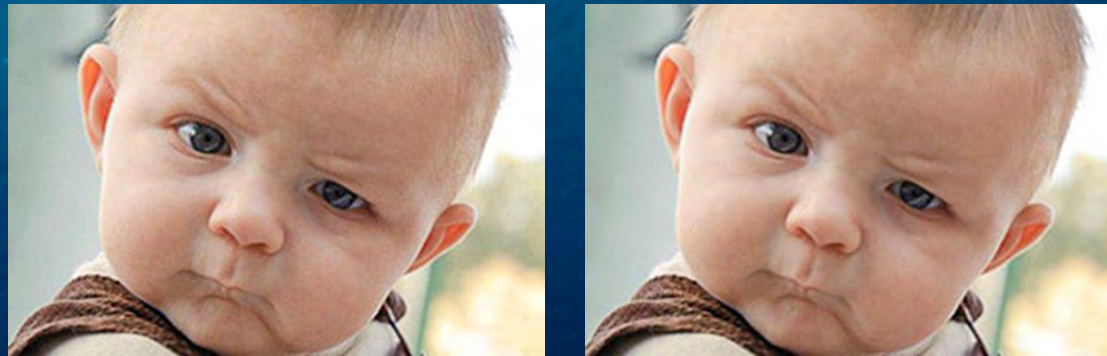
Immediate dissemination of unvetted science – particularly if it feeds into public policy or health - feeds the instant-everything culture and is risky

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Do preprints really accomplish their mission?

- Critical comments in advance of publication? Only 8 - 25% get commented on and the majority of those comments are not substantive (Sources: John Inglis; Sarabipour et al. 2019; Wakeling 2019).
 - Why would a higher % of authors adopt critical comments on their preprint when they often do not during formal peer review?
- Pace of discovery? Generally considered adequate in many disciplines (medicine, biology). Cost of error is much greater than a small loss in pace.
- Mitigating positive outcome bias? Possibly, but are preprints the only-best solution?
- Transparency? How does allowing potentially error-ridden manuscripts presenting overstated inferences and conclusions improve transparency to the typical reader?



The risk

Freely available unvetted documents

Given the limited time saved, and the limited improvement to most preprints, is it worth it?



Other concerns-challenges about preprints

Authors



- Loss of novelty (on submission to a journal)
- Not all journals will accept mss that are already available as preprints
- Citation confusion (which is the VoR and when?)
- Impact on credibility and public perception of science
- Adds to information overload
- Adds to author workload



Other concerns-challenges about preprints

Journal editors



- If a piece of work is already out there in the public domain, and has been “community” peer reviewed on a preprint server, and has a DOI and is searchable and citable forever, then why should the volunteer editors-reviewers of a journal use their time to do that all over again?
- Why would a publisher (whose existence is based on ORIGINAL content) republish it?



Other concerns-challenges about preprints

Journals-publishers



- Possible publishing and access right conflicts
- Duplicate-redundant publication - definitions will have to be revisited
- Plagiarism – definitions will have to be revisited
- Loss of originality – what “originality” means will have to be revisited
- Loss of newsworthiness
- Multiple versions/version confusion and citation confusion
- Who is responsible for corrections-expressions of concern-retractions?



Is post-publication review the future?

Preprints are becoming more-and-more like peer-reviewed publications?

Are preprint servers the mega-journals of the future?

Will pre-publication peer review become rare?



PREreview Powered by Authorea

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.

[Join](#)

Our Mission

PREreview seeks to *diversify peer review in the academic community* by crowdsourcing pre-publication feedback to improve the quality of published scientific output, and to train early-career researchers (ECRs) in how to review others' scientific work.



Peer Community in ...

A free recommendation process of scientific preprints (and published articles) based on peer-reviews (photo credit: Martin Grandjean: A force-based network visualization)

