

How open practices help prevention and detection of fraud

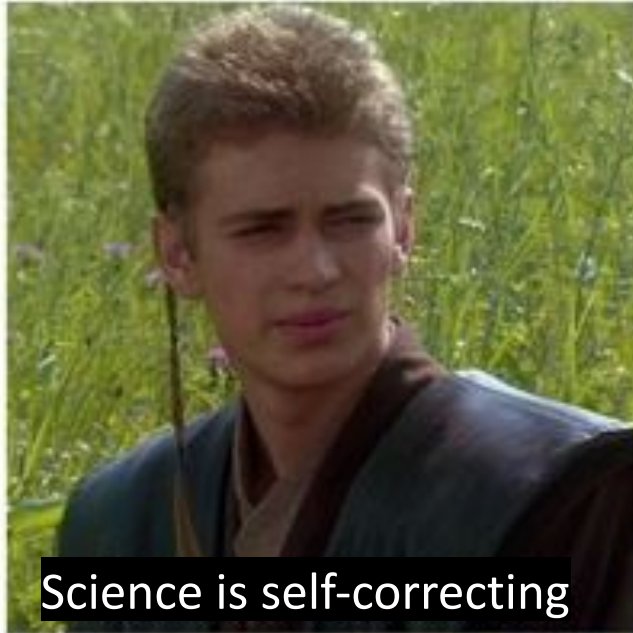
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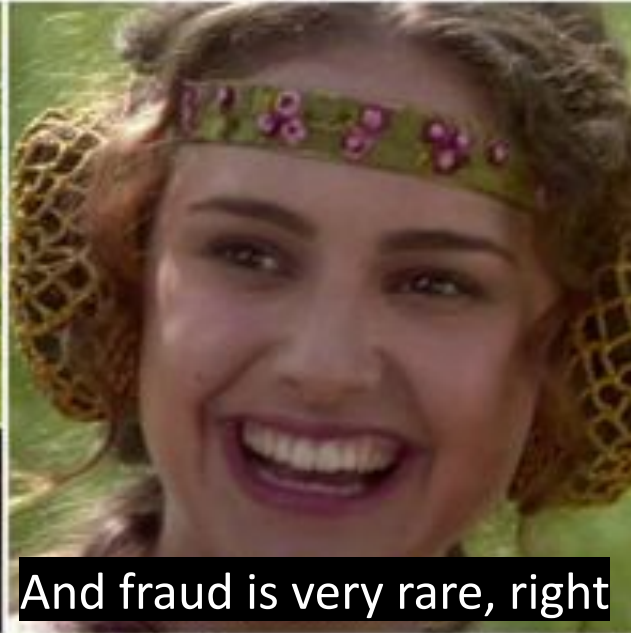
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Science is self-correcting



And fraud is very rare, right



And fraud is very rare, right

A moment for recalibration

NEWS FEATURE | 23 March 2021

The fight against fake-paper factories that churn out sham science

Some publishers say they are battling industrialized cheating. A *Nature* analysis examines the 'paper mill' problem – and how editors are trying to cope.

[Holly Else](#) & [Richard Van Noorden](#)

Physics publisher retracting nearly 500 likely paper mill papers

<https://retractionwatch.com/2022/09/09/physics-publisher-retracting-nearly-500-likely-paper-mill-papers/>

July 2022: Hearing at US House Committee on Science, Space and Technology. Paper mills and research misconduct

Exclusive: Hindawi and Wiley to retract over 500 papers linked to peer review rings

After months of investigation that identified networks of reviewers and editors manipulating the peer review process, Hindawi plans to retract 511 papers across 16 journals, Retraction Watch has learned.



<https://retractionwatch.com/2022/09/28/exclusive-hindawi-and-wiley-to-retract-over-500-papers-linked-to-peer-review-rings/>

How papermills work – Authorship and citations for sale

<https://retractionwatch.com/2022/10/25/meet-a-sleuth-whose-work-has-resulted-in-more-than-850-retractions/>

“There’s this entire economy, ecosystem of Facebook groups, Whatsapp groups, Telegram channels selling authorship for papers, selling citations, selling book chapters, selling authorship of patents.”

See also: talk by Bernhard Sabel at <https://osf.io/47utb/>

<https://forbetterscience.com/2022/10/19/the-incredible-collaborations-of-renaissance-men-and-women/>



Nick Wise

What to do?

The 'virus' model of papermill management



Test and trace



Inoculate against virus

Quarantine those affected



Test and Trace

Tracking down papermills – chasing a mutating virus

Some papermill products are easy to spot just on cursory inspection

Others look more plausible, and we are probably missing many of these.

Discovery of one papermill article can lead to discovery of a network, but the work of tracing this is time-consuming.

OPEN ACCESS makes it
easier to check articles and
cited articles especially
when exploring a network

Test and Trace

Tracking down papermills – importance of open data/code sharing

“Science should be ‘show me’, not ‘trust me’;

If I publish an advertisement for my work (that is, a paper long on results but short on methods) and it’s wrong, that makes me untrustworthy.

If I say: “here’s my work” and it’s wrong, I might have erred, but at least I am honest.”

If open data/scripts routinely required, then would make a great deal of work for paper mills



Philip Stark

Test and Trace

Tracking down papermills – importance of open peer review

Authors need not be identifiable, but peer review should be public.

Can check if peer review occurred and if it was properly done.

An example.....

The tanu.pro papermill

Discovered by Anna Abalkina, an expert on 'hijacked journals'

- Articles use fake email addresses for authors and peer reviewers
- May appear in 'special issues' and hijacked journals



<https://retractionwatch.com/author/anna-abalkina/>

RESEARCH ARTICLE |  Full Access

Structural measures

Orynassar M. Mukhitov✉, Zaren
Ainur Ch. Yeshniyazova, Nurlan O.

Abstract

Extremism has an antilegal r
social problems, giving prefe
achieving various goals, in p
intolerant leadership among

people in extremist activities are especially dangerous. The novelty of the

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[For evaluation see:](#)

<https://pubpeer.com/publications/2D5E8274AE359ECF82239CC4A5A14F>

Open peer review

Reviewer 1. Georgina Smith, University of the Sunshine Coast
Google revealed no web presence for an academic with this affiliation.

Review 1: I rate this article quite positively and I think that it is worthy for publication, but there are some inaccuracies:

[1] The purpose and the objectives of the research are not stated in the introduction part.

[2] The large paragraphs should be divided into smaller ones.

[3] Correct numerous inaccuracies in the typing.

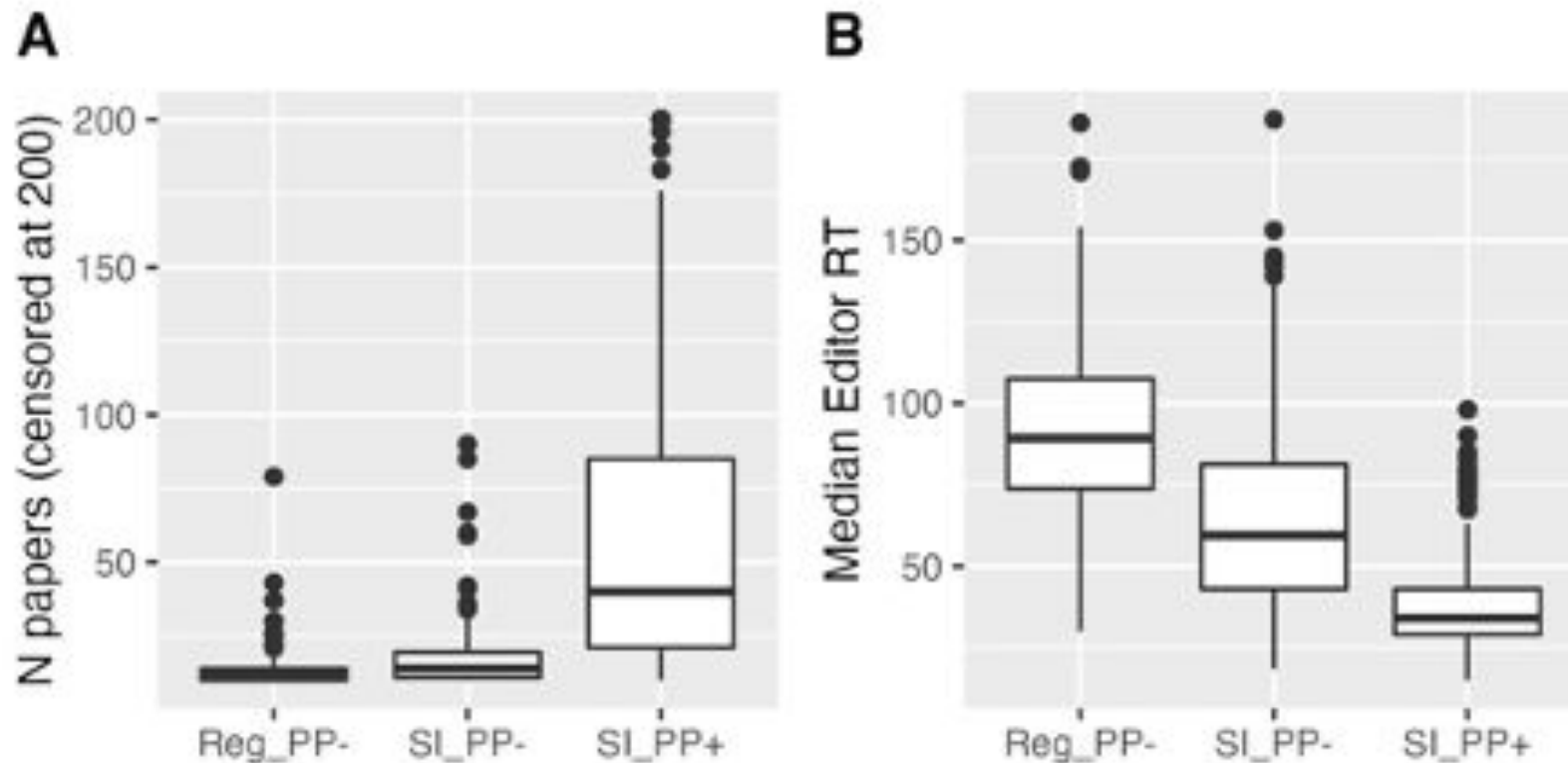
[4] Literature should be refreshed since some of the citations are considered rather dating.

Review 2: “The paper was perfectly fine-tuned in accordance with all the comments that were indicated by the reviewers. I'm glad to recommend this manuscript for publication.”

Test and Trace

Tracking down papermills – importance of open post-publication peer review

PubPeer website for POST-PUBLICATION PEER REVIEW, with opportunity



Editors of Hindawi special issues who have PubPeer comments handle far more papers than other editors, and do so remarkably quickly

Prevention

Fabricated gene research manuscripts could be deterred by introducing new rate-limiting steps that specifically target paper mills. One method to selectively delay manuscript submissions by paper mills could be the registration of human gene research prior to submission.

....

The key feature of gene research registration would be to require minimum time periods between registration and manuscript submission, which would be chosen to align with and support the requirements of genuine experimental research. The requirement to specify both study topic and authors in advance of manuscript submission would be highly unfavorable to paper mills, where manuscript construction and author identification are likely to be separate activities



Jennifer Byrne

Tackling papermills – importance of open science

PREREGISTRATION of studies, so we can check what was done against the plan – and see if the timescale was realistic

OPEN ACCESS makes it easier to check articles and cited articles especially when exploring a network

Easier to check that findings are sensible and reproducible if there is OPEN DATA and OPEN CODE

Much easier to identify dodgy peer review with OPEN PEER REVIEW

Hugely important role played by PubPeer website for OPEN POST-PUBLICATION PEER REVIEW, with opportunity for authors to respond.

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