



Elisabeth Bik ✓ @elisabethbik.bsky.social · 16d

Good morning from Vancouver!
We start with Plenary Session #1: Misuse of AI by Paper Mills.
The first talk is by Dr. Daniel Moreira with Misuse of AI in Research-
From Data Production to Manuscripts
He works with Machine Learning, a specific form of AI, to find patterns
in complex data.
[#WCRI2026](#)



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DM: Language models then could start to predict words or concepts
based on context and probability, and now also recognize images or
even generate them.
Can we use machine learning to find science misconduct in images?
Paper mills are now using genAI to generate images.
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DM: We now have the perfect storm: Paper mills using genAI. The
technology has become cheap and fast. We also have lazy reviewers
that use AI to do the work.
Gen AI enables not just the fabrication of fraudulent papers; it enables
making up entire research pipelines.

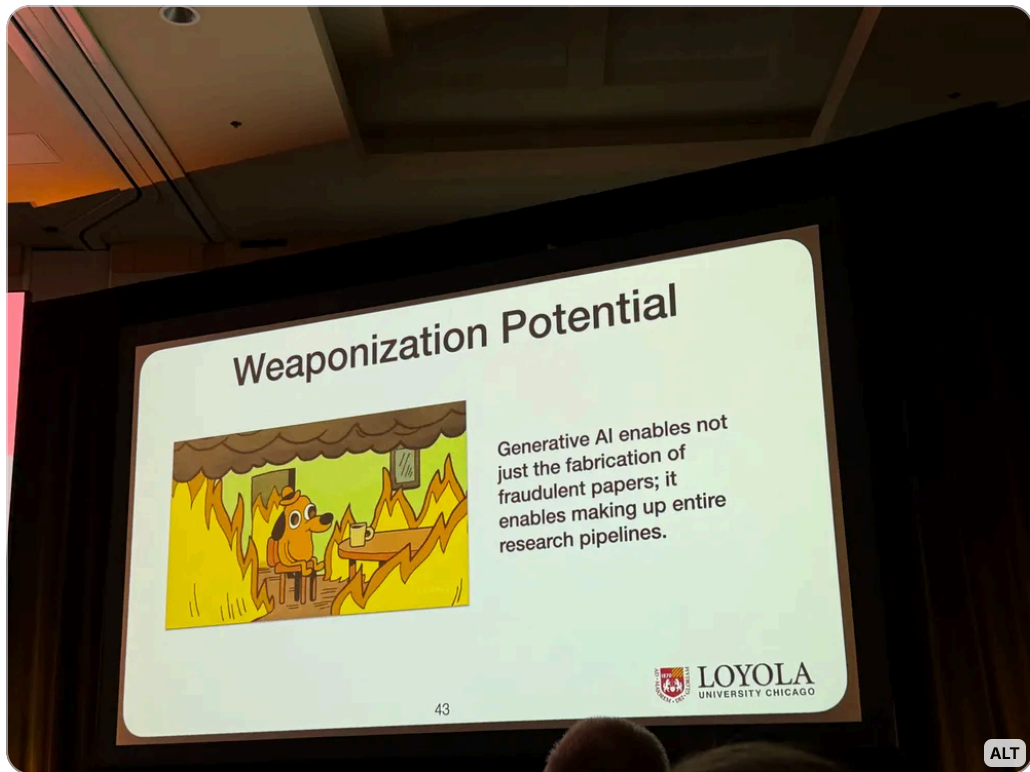


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Feedba

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DM: We work on solutions to detect synthetic Western blots. We ran a Kaggle Competition for copy/move detection of real retracted data.

www.kaggle.com/competitions...

Recod.ai/LUC - Scientific Image Forgery Detection

Develop methods that can accurately detect and segment copy-move forgeries within biomedical research images.

www.kaggle.com

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Next up: Stefan Stender with "AI Misuse to Scale Production of Human Health Research Manuscripts"

Conventional epidemiology was in a crisis in the 1990s: associations appeared robust but were non-causal due of confounders. Mandelian randomizations was better.

wcric2026.org/program/
[#WCRI2026](https://twitter.com/ElisabethBik)



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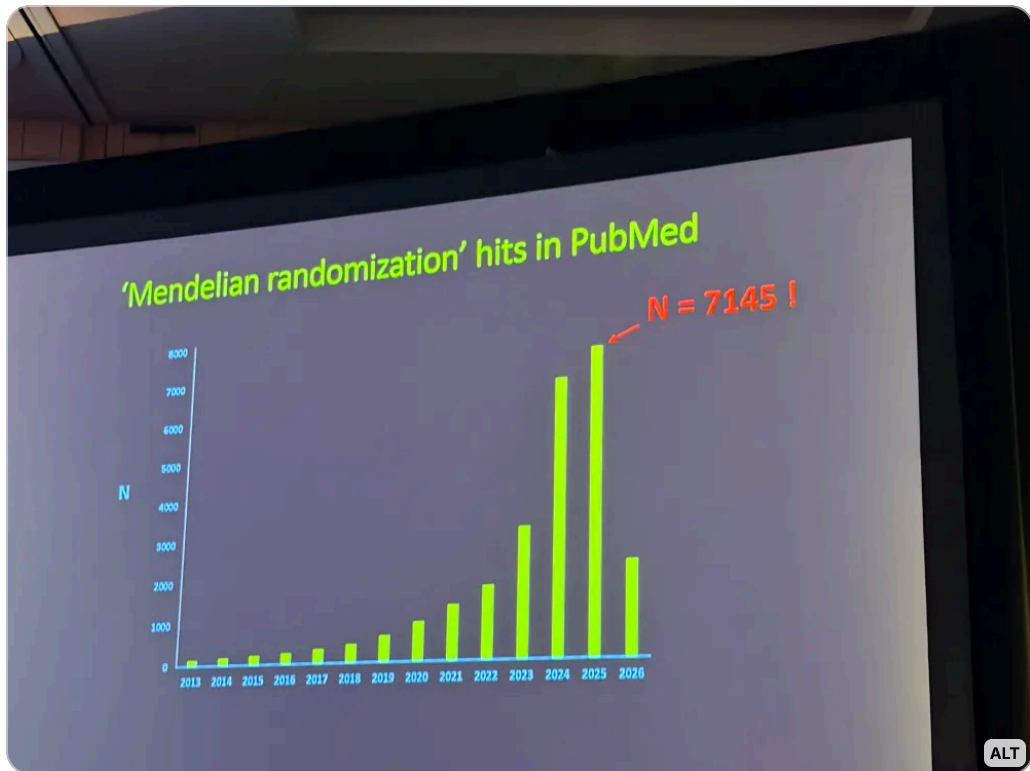
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SS: Now: Genome Wide Association Studies, there are 100,000 GWAS datasets as well as user-friendly R-packages. These packages produce publication-ready figures. This facilitates the mass production of "Mendelian randomization" studies, most from China, flooding the literature.

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1 comment, 2 retweets, 5 likes



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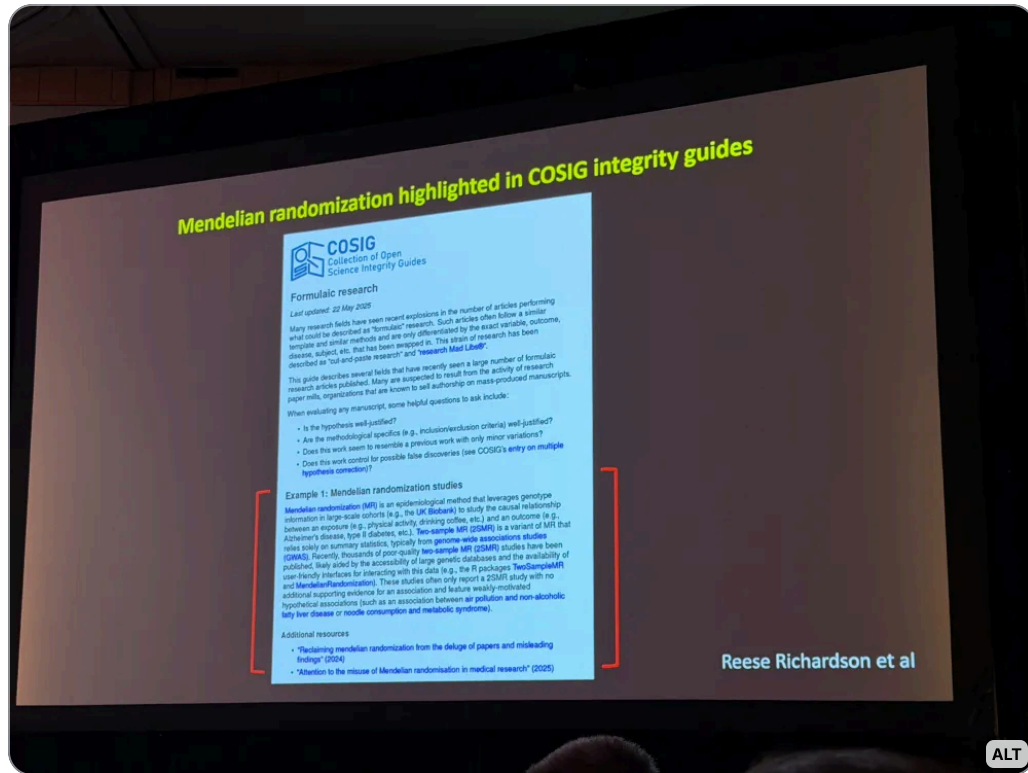
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Feedback



SS: We see advertisements for increasing your CV by writing Mendelian Randomization papers based on a simple tool, and we tested that LLMs can easily produce MR papers as well. These formulaic types of papers are also highlighted in the @cosig.net guidelines: [osf.io/2kdez/files/...](https://osf.io/2kdez/files/) #WCRI2026



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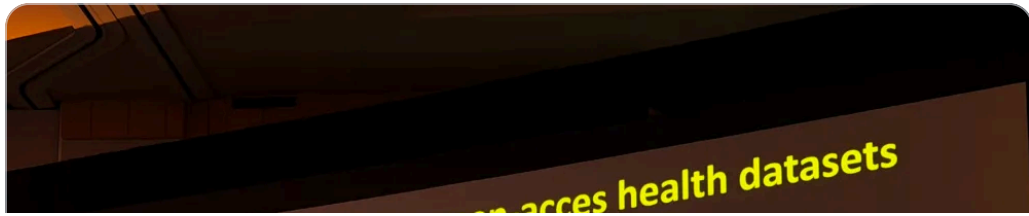


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SS: This is not limited to MR papers - it is starting to become a widespread problem with open-access datasets. We need to shift from article count to research quality. Papers can be produced in 20 min - they lose their meaning. We need to shift away from counting paper metrics.



Feedback

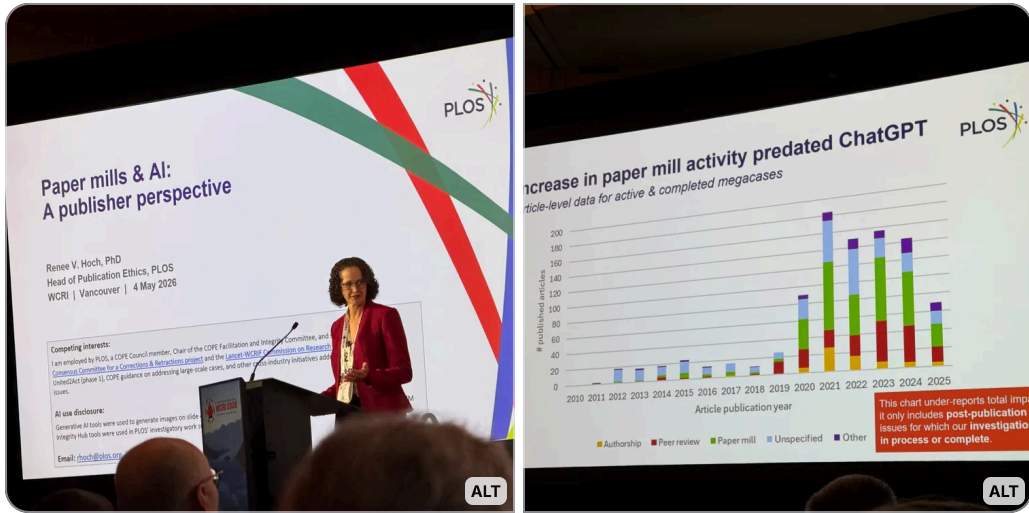


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Next: Renee Hoch @plos.org with "Paper Mills and AI - A Publisher Perspective"

At PLOS we have put increasing resources into prevention and detection. Paper mill problems predated ChatGPT, in 2020. We see this from various countries, but also multi-country author groups.

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RH: AI can amplify production for paper mills, but also individual researchers.

In addition, we have found rising numbers of peer review integrity cases - Open Peer Review might be able to help fight this.

[Wifi not strong enough this minute; cannot upload image]

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RH: AI makes paper mill content easier to produce and more difficult to detect. Big win on both sides for the paper mills!

It's an arms race between generation and detection.

"Fast churn" science - large amounts of low-quality database studies from paper mills.

[journals.plos.org/plosbiology/...](https://journals.plos.org/plosbiology/)



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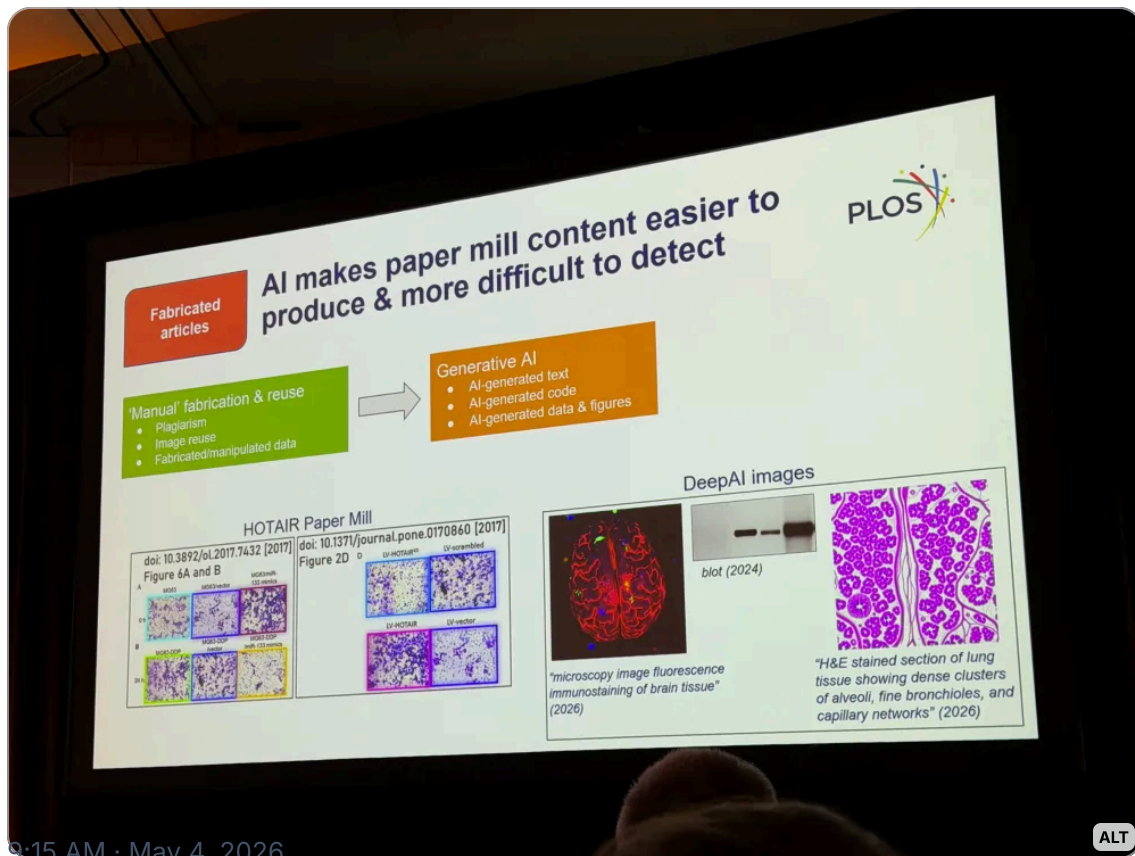
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Write your reply



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RH: AI tools aren't all bad. They are here to stay and can have positive impacts on the research community. Language quality, equity in access, But we need to use it responsibly.

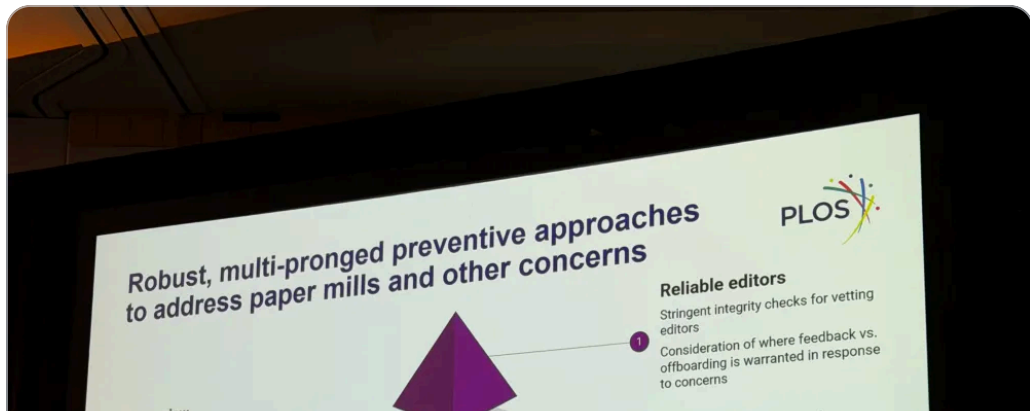
We need to have robust peer review, reliable editors, author checks, require primary data, ethics documents.

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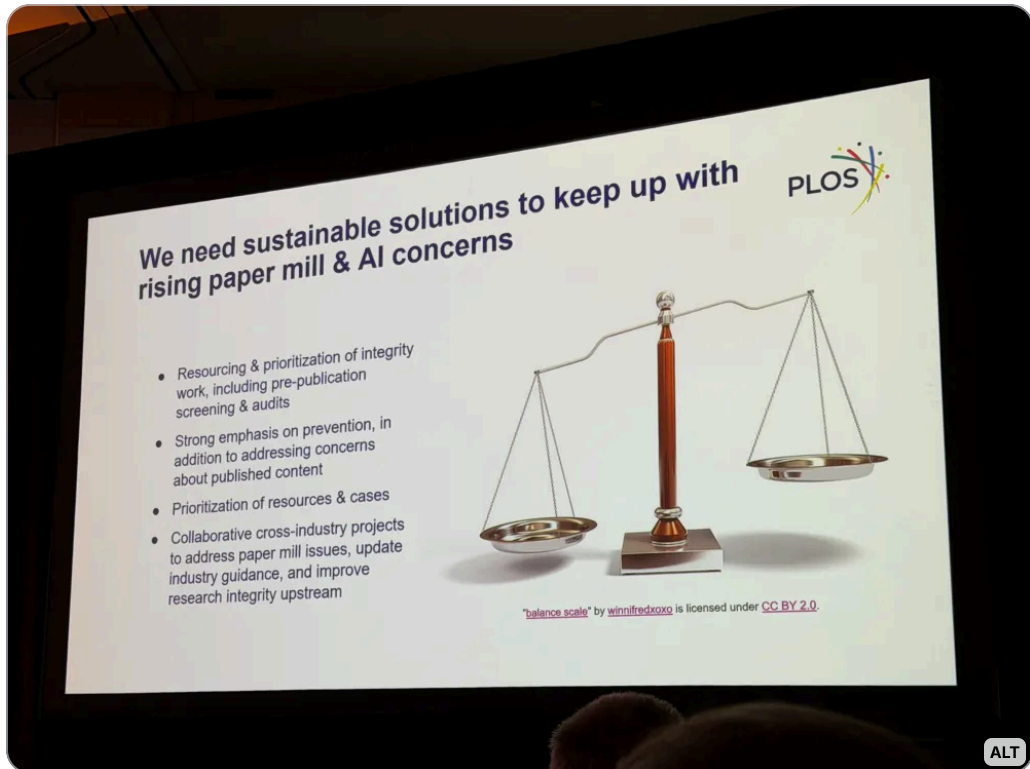
Feedback



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RH: We need sustainable solutions to keep up with rising paper mill and AI concerns. Pre-publication screening, strong emphasis on prevention, but also addressing published content. How to prioritize resources and cases? Cross-industry collaboration, improve research integrity upstream.

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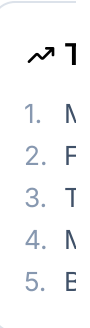
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Panel discussion: six audience members are lining up at the microphone. All men. First question is so long (a whole introduction "given this and given that...") that none of the panels understand what the question is, and the question needs to be repeated. Sigh.

Please be concise!

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Q: We see that our PhD thesis are being downloaded by the 1000s, perhaps by AI bots. Is this the end of Open Science? We tried it but it does not work!

How to make it Open but not Too Open?

@jabyrnesci.bsky.social doing a great job in moderating questions with humor and clarity.

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Q: Is there really any value in these churned-out database analysis papers?

A: They report on cherry picked data, might find a p-value, but there is not correction for thousands of other hypotheses that were rejected.

[First 6 questions all by older men - where are the others?]

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Discussion:

* how much money do publishers actually earn from paper-mill publications? [nice provocative question, no good answer]

* C2PA standard - poster 99 - content credentials for figures and images - might bring credibility.

* Role of libraries



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* Reliability of AI detection tools

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[putting on my mask, and moving to a different seat, because the person sitting next to me suddenly is starting to sniffle and drip and I don't want to catch that virus].

We are ending this session, now on to coffee and the parallel sessions!

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