OUTLINE

Publishing
- Who
- Where
- Double-Dipping

Data Falsification and Replicability

Predatory Journals

Peer Review Process

Future Suggestions
THE PUBLISHING INDUSTRY IS AN ETHICAL TRAVESTY


Photo by Viktor Taloshuk from Pexels
WHOSE VOICES ARE HEARD?

One guess – It’s old, white men.

Photo by Andrea Piacquadio from Pexels
COMPARISON OF PUBLISHED VOICES

Composition of Authors for Manuscripts Submitted to AJPS (*2,672 manuscript with a final decision (accept or decline) issued from January 2017 – October 2019)


Fig 5. Gender-specificity of citations & scholarly productivity.

(A) The descendingly ordered citation rates shows that articles with male key authorships are more frequently cited than articles with female key authorships. The mean citation rate of 37.5 citations/article is depicted by a dotted line (Kruskal-Wallis test, (*): p < .05 (**): p < .01). (B) Average citation rates of both, ungrouped articles (bars) and articles that were grouped by the gender of their key authorships (lines), plotted as a function of the number of authors. Statistically, the citation rate of an article is higher the more authors are involved. The differences in citation rates between the two genders increase with the number of authors per article. (C) Gender-specific distribution of the number of articles per author. Women dominate the sub-groups ‘author has 1 or 2 article(s)’. All other sub-groups are characterized by a relatively over-representation of male authors. This finding correlates with the higher productivity of male authors, as 61.0% male authors are responsible for 70.2% of all authorships.

https://doi.org/10.1371/journal.pone.0189136.g005
& DURING THE CORONAVIRUS PANDEMIC?

https://www.nature.com/articles/d41586-020-01294-9


**PREPRINT DROP-OFF**
Two separate analyses show that women's posting rate on preprint servers has slowed during the coronavirus pandemic.

**All-author analysis**
When compared with March and April 2019, the number of male authors on preprints posted to bioRxiv and arXiv has grown faster than the number of female authors in that period this year.

**First-author analysis**
At many preprint servers, women were submitting at a lower rate in March and April, as compared with the preceding two months and the same months of the previous year.

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Female first author (%)
PROMOTION & TENURE

Has a lot to answer for.

Photo by Gratisography from Pexels
Meta-Research: How significant are the public dimensions of faculty work in review, promotion and tenure documents?

Figure 7:
Percentage of institutions mentioning terms and concepts related to research and metrics by institution sub-type.

Bars represent whether each term or concept (several terms and phrases) was identified within documents of doctoral/research-focused universities, from the most research intensive (R1; blue), to those that are less so (R2; orange, and R3; green), as well as the Canadian research universities (RCan; red). The term "impact" appears less in R3 institutions, and the concept of "metrics" appears to decrease with research intensity (with RCan institutions at similar levels to the R2 institutions from the US) However, the conditions for a chi-square test were not met to measure the significance of these differences.

https://doi.org/10.7554/eLife.42254.009
WHOSE VOICES ARE HEARD?

The Global North
vs
The Global South
THE GLOBAL SOUTH

Under-representation of developing countries in the research literature: ethical issues arising from a survey of five leading medical journals


Also read: http://doi.org/10.1177/0011392116680020

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The average contribution of the RoW to the research literature in the five journals was 6.5%.
HIGHLIGHTING THE INEQUALITY

Subscription databases from big publishers cost big bucks

Global South can’t afford to read

Article Processing Charges – fees to publish articles in journals

Global South can’t afford to publish

Read-and-Publish Open Access deals – fees paid by consortia or institutions to allow for reading and publishing OA articles in top publishers’ journals

Global South can’t afford to read or publish

Suggested reading: https://blogs.lse.ac.uk/impactofsocialsciences/2020/02/21/read-and-publish-open-access-deals-are-heightening-global-inequalities-in-access-to-publication/
APC AND SUBSCRIPTION DATABASE COSTS

Known colloquially as publisher double-dipping
PRINT → SUBSCRIPTION DATABASES

Photo by Kaboompics.com from Pexels
APC/HYBRIDS OPEN ACCESS

Photo by Artem Beliaikin from Pexels
ARTICLE PROCESSING CHARGES IN SUBSCRIPTION JOURNALS

Varies widely:
- from $0 - $5,000

Who is paying?
- Author
- Funder
- Institution

CITATION BENEFITS

• 2005 study on open access articles 2.1% more likely to be cited 4-10 months after publication; 2.9% more likely after 10-16 months*

• 2012 study found that "48% of trials with publicly available microarray data received 85% of the aggregate citations. Publicly available data was significantly (p = 0.006) associated with a 69% increase in citations…”**

• 2018 study: “OA articles receive 18% more citations than average”***

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**Piwowar, H. et al. (2007) “Sharing Detailed Research Data Is Associated with Increased Citation Rate”. PLOS One 2(3): e308. https://doi.org/10.1371/journal.pone.0000308

CONSORTIAL DEALS: WHEELING AND DEALING

• Bibsam Consortium (Sweden) & Cambridge University Press (January 1, 2019)
  • Access and waives Article Processing Charges (APCs) for fully OA and hybrid OA journals

• Germany & Wiley (January 15, 2019)
  • Approximately $26 million USD for access and cost of APCs

• University of California system & Cambridge University Press (April 10, 2019)
  • Access and waives APCs for fully OA and hybrid OA journals

• Norway & Elsevier (April 23, 2019)
  • $10 million USD for access and publication up to 2,000 OA articles/year

https://sparcopen.org/our-work/big-deal-cancellation-tracking/
DATA FALSIFICATION AND REPLICABILITY

Basically, academics can be huge liars just like anybody else.

Photo by Connor Danylenko from Pexels
“Simulations show that for most study designs and settings, it is more likely for a research claim to be false than true. Moreover, for many current scientific fields, claimed research findings may often be simply accurate measures of the prevailing bias.”
In 1972, in a landmark article, Dr. Alfred Steinschneider, took the data of five infant deaths in a family to be a sign that SIDS was genetic. Approaching SIDS as a genetic problem “offered hope that children at risk could be identified and saved,” (L., 1995). It later came to light that the children’s mother murdered all five children.

Or we can examine the example of Dr. Don Poldermans, an infamous researcher in perioperative medicine with over 500 peer-reviewed, published articles. It came to light that Poldermans performed scientific misconduct, lying about his research in perioperative beta-blockers and statins in noncardiac surgery. His acts of fraud caused a domino effect amongst researchers, patients, and grant agencies that had funded him.
PRECLINICAL REPRODUCIBILITY AND ROBUSTNESS

https://f1000research.com/gateways/prr

Photo by Chokniti Khongchum from Pexels
PREDATORY JOURNALS

“I know this dispossessed royal who just needs a wire transfer.”
WHAT TO WATCH OUT FOR IN A PREDATORY JOURNAL

- E-mailed invitations to submit an article
- Journal's name suspiciously similar to another prominent in the field
- Misleading geographic information in the title
- Unprofessional website appearance
- Insufficient contact information
- Lack of editors or editorial board
- Editors with no or fake academic credentials
- Unclear author fee structures
- Bogus impact factors
- Invented metrics
- False index claims
- Peer review process
- Lack of ISSN
- "Instructions for authors" page
- Information is unavailable

Evaluate published articles
Publisher has a negative reputation
Author fees
Use common sense
Check the publisher address in Google Maps

Are you submitting your research to a trusted journal?

Publishing your research results is key to advancing your discipline – and your career – but with so many journals in your field, how can you be sure that you’re choosing a reputable, trustworthy journal?

Tips to confirm a journal’s credentials and decide if it will help you reach the right audience with your research, and make an impact on your career.

Take control of your career at thinkchecksubmit.org
THE PEER REVIEW PROCESS

And how it can be conned.
A scientist from Harvard University named John Bohannon, submitted a fake article to 304 publishers, of these it was “accepted by 157 of the journals and rejected by 98. Of the 255 versions that went through the entire editing process to either acceptance or rejection, 60% did not undergo peer review. Of the 106 journals that did conduct peer review, 70% accepted the paper.”
The authors submitted 20 papers that mimicked articles in top journals but with bogus claims. They wrote the articles to sound good, but not to be accurate or scientific in any way. They had 7 papers accepted and 7 were under revise and resubmit at the time they pulled the plug on the endeavour. In both of these examples, what is readily apparent is a failure of the peer-review process.
MAY 2019: PLOS JOURNALS — OPEN PEER REVIEW

https://blogs.plos.org/plos/2019/05/plos-journals-now-open-for-published-peer-review/
FUTURE SUGGESTIONS

Break the Publishing Industry

Open Access journals
Pre-print servers
Changes to Promotion & Tenure
Improve Peer Review process

Photo by Min An from Pexels
THE FUTURE IS FEMALE

Photos by
Ali Pazani from Pexels
mentatdgt from Pexels
August de Richelieu from Pexels
THANKS FOR WATCHING!

Michele Gibney, Head of Publishing and Scholarship Support
mgibney@pacific.edu