THE CONVERSATION

Academic rigor, journalistic flair

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Academic publishing is a multibillion-dollar industry. It's not always good for science

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In December 2024, the editorial board of the Journal of Human Evolution resigned en masse following disagreements with the journal's publisher, Elsevier. The board's grievances included claims of inadequate copyediting, misuse of artificial intelligence (AI), and the high fees charged to make research articles publicly available.

The previous year, more than 40 scientists who made up the entire academic board of a leading journal for brain imaging also walked off the job. The journal in question, Neuroimage, is also published by Elsevier, which the former board members accused of being "too greedy".

Elsevier has previously denied using AI and has disputed that its business practices are untoward.

Mass resignations of journal editors are becoming more frequent. They highlight the tension between running a for-profit publishing business and upholding research integrity.

From a niche to a multibillion-dollar business

The world's first academic journal was called Philosophical Transactions of the Royal Society. It was established in 1665 as a publication that allowed scientists to share their work with other scientists.

For a long time, academic journals were a niche branch of publishing. They were run by and for research communities. But this started to change from the second world war onwards.

The expansion of research, combined with an influx of commercial publishing players and the rise of the internet in the 1990s, have transformed journal publishing into a highly concentrated and competitive media business.

Elsevier is the biggest player in this business. It publishes roughly 3,000 journals and in 2023 its parent company, Relx, recorded a profit of roughly A$3.6 billion. Its profit margin was nearly 40% – rivalling tech giants such as Microsoft and Google.

Along with Elsevier, Springer Nature, Wiley, SAGE, and Taylor & Francis make up what are known as the "big five" in academic publishing. Collectively, these publishers are responsible for roughly 50% of all research output.

Many of the most trusted and prestigious research journals are owned by commercial publishers. For example, The Lancet is owned by Elsevier.

A key factor in their profitability is volunteer labour provided by researchers. Traditional models of peer review are a good example of this. Academics provide publishers with content, in the form of journal articles. They also review their peers' work for free. University libraries then pay for access to the final published journal on behalf of their research community.

Alongside the pressure on academics to publish, the push to "speed up science" through these systems of peer-review only contribute to issues of trust in research.

Person holding mobile phone with logo of academic publishing company Elsevier on screen in front of business web page.
In 2023, academic publisher Elsevier recorded a profit of roughly $3.6 billion. T.Schneider/Shutterstock

Profit at the expense of research integrity

The increasing frequency of editorial board resignations reflects the tension between researchers trying to uphold scientific and research integrity, and publishers trying to run a for-profit business answerable to shareholders.

Research is most often built on spending taxpayers' money.

Yet there is often little alignment between the profit imperatives of large, multinational publishers and the expectations of the communities and funding bodies that pay for the costs of research.

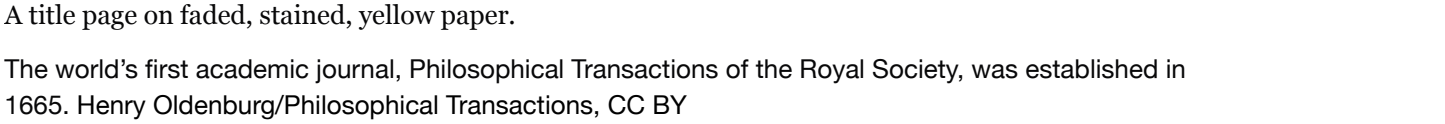
For example, for-profit publishing models mean the results of research often end up locked behind paywalls. This has implications for the dissemination of research findings. It also means the public may not be able to access information they need most, such as medical research.

The business of academic publishing also doesn't always sit comfortably with the values and motives of scholarly inquiry and researchers.

Publishers may focus on maximising shareholder gains by publishing research outputs, rather than on the content of the research or the needs of the research community.

As Arash Abizadeh, a former editor of Philosophy & Public Affairs – a leading political philosophy journal – wrote in The Guardian in July 2024:

> *Commercial publishers are incentivised to try to publish as many articles and journals as possible, because each additional article brings in more profit. This has led to a proliferation of junk journals that publish fake research, and has increased the pressure on rigorous journals to weaken their quality controls.*



A title page on faded, stained, yellow paper.

The world's first academic journal, Philosophical Transactions of the Royal Society, was established in 1665. Henry Oldenburg/Philosophical Transactions, CC BY

Better publishing practices

What could alternative academic publishing practices that safeguard the integrity of research look like?

The "publish-review-curate" model is one example.

This model has been adopted by community research initiative MetaROR. It involves authors publishing their work as "preprints" which are immediately accessible to the community.

The work then goes through an open peer review process. Finally, an assessment report is produced based on the reviews.

This model aims to accelerate the dissemination of knowledge. It also aims to encourage a more transparent, collaborative, and constructive review process.

Another important advantage of preprints is that they are not locked behind paywalls. This makes it faster and easier for research communities to share new findings with other researchers quickly.

There are some drawbacks to this model. For example, preprints can cause confusion if they are publicised by the media too early.

The question of who should pay for and maintain online preprint servers, on which global research communities depend, is also a subject of continuing debate.

As the academic ecosystem continues to evolve, we will need publishing models that can adapt to the changes and needs of the research community and beyond.