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A system in crisis

EDITORIAL

ARE BREAN

are.brean@tidsskriftet.no
Are Brean PhD, Editor-in-Chief of the Journal of the Norwegian Medical Association. He is a specialist in neurology.

The international academic publishing system is in crisis. Non-commercial scientific journals, such as the Journal of the Norwegian Medical Association, are part of the solution.

Photo: Sturlason

Trust in academic publishing is a cornerstone of science. That trust is now under pressure. Some have described the situation as a looming knowledge collapse (1), while others warn that developments are damaging the scientific and economic progress of society (2). Among the many challenges, three are often highlighted as particularly pressing.

The first is the enormous and growing volume of published articles, a side effect of the open access publishing model. Historically, most journals generated revenue through subscription sales, meaning researchers and other readers had to pay to access articles. The open access model addressed this by shifting the cost to authors, who now pay to publish, while the articles are freely accessible to all (gold open access). However, this created a new problem: when journals receive funding for each article published, there is little incentive to limit the number of articles. Consequently, the volume has grown exponentially, from around 1.92 million in 2016 to approximately 2.82 million in 2022 (3). Even in the smallest fields, it has become difficult to navigate the flood of high-quality, mediocre and poor-quality articles. And because the growth in the number of researchers has not kept pace with the surge in manuscripts, securing peer reviewers has become a major challenge (3–5).

As the number of articles grows, so too do publishers' revenues. One study estimated that the six largest commercial publishers' revenues increased from NOK 9 billion in 2019 to over NOK 25 billion in 2023 (6). These are funds

originally earmarked by non-profit and public funders for research, but instead they are swelling the publishers' soaring profits.

The second problem is the rise of predatory publishers. The business model is simple: set up a basic website, give it an impressive-sounding name (preferably including 'International Journal' in the title) and persuade researchers to pay for editorial oversight and peer review. Meanwhile, in reality, neither of these are provided; manuscripts are published unchanged, and the money goes straight into the publisher's pocket. In 2021, the number of predatory journals was estimated at roughly 16,000 (7), and this figure is likely increasing. These journals often mimic legitimate publications, making it difficult for authors as well as readers to distinguish between them. Their content frequently comprises a confusing mix of legitimate research, utter nonsense and misleading claims, further exacerbating the problem.

The third issue concerns so-called paper mills that produce large volumes of professionally presented but fraudulent research articles, and offer researchers the opportunity to buy authorship for a relatively modest fee. The number of fabricated articles generated by these paper mills is estimated to double every 18 months (8). In medicine alone, more than 100,000 fraudulent articles are now published every year (1). Some publishers have reported that up to one in seven submitted manuscripts are likely to have originated from a paper mill (8).

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Fraudulent research is not a recent development, including within medicine. What is new is the scale of the problem, driven by the three issues outlined above and further amplified by artificial intelligence, which can generate a fabricated yet seemingly credible research article within seconds. Together, these factors make it increasingly difficult to prevent findings from fraudulent studies from infiltrating systematic reviews and meta-analyses and, in the worst case, influencing clinical guidelines.

In response, international editor and publisher associations are working systematically to draw up guidelines and raise editorial standards. Several publishers have developed digital tools designed to detect various forms of research misconduct. Nevertheless, as long as academic publishing remains highly commercialised and financially rewarding, it will continue to attract those with the incentive and capability to devise increasingly sophisticated methods of deception and exploitation.

This indicates that safeguarding the quality of scientific publishing is too important to be entrusted solely to commercial interests. Consequently, many have argued that the time has come to embrace and strengthen non-commercial, community-led and non-profit publishing models. Diamond open access, where no subscription fee or authors' publication fee is charged, is

hailed by many as the ideal publishing model (9). It also appears that such journals, unlike commercial ones, are less affected by the peer review crisis (5, 7).

The Journal of the Norwegian Medical Association is an example of such a model. We are widely indexed internationally, offer diamond open access, have a dedicated pool of peer reviewers, and are owned by our core authors – doctors in Norway. The Faculty of Medicine at the University of Oslo has recently allowed articles published in our journal to once again be included in doctoral theses (10), potentially reflecting a wider international trend. Addressing the crisis in academic publishing will require a range of measures; supporting journals like this is one of them.

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