

Will Open Access & Open Science Disrupt the Future of Academic Publishing?

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Post Url

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There has been an explosion of scientific progress in the last few decades. Thanks to the development of new technologies, we are now closer than ever in overcoming hurdles such as curing cancer and slowing down climate change. Academic publication practices have had to cope with the rapid change in the pace of scientific achievement.

Changing Landscape of Academic Publishing

The commercial interests of academic publishers and the need for research scientists to publish align accordingly with each other. Journals charge subscription and publication fees to meet [article processing, management, and other costs](#). In the past, universities received generous [government funding](#) and the relationship between research and publishing was mutually beneficial. However, reductions in research funding have left academic institutions unable to afford [increasing publications costs](#).

Online publishing has kept [academic publishing](#) profitable by eliminating the costs associated with producing and distributing a printed journal. Online publications are more accessible than traditionally published articles. This has paved the way for open science and the [open access movement](#).

Advantages of the Open Access Movement

The open access movement confronts a widely criticized aspect of traditional publication practices—that research cannot become freely accessible for everyone. For example, scientists in poorer countries now have better access to the latest developments in their field and are at less of a disadvantage. The general public (who, many argue, has every right to read public-funded research) can also learn more about science. Making science open may help tackle public mistrust in valuable scientific developments, such as genetic manipulation and the development of vaccines.

Technological developments such as blogs, search engines, and social media have revolutionized online publications. These tools are rapidly increasing the exposure of information published online. Scientists benefit from this wider exposure of their work.

Open access publishing promotes the sharing of information. Materials published online do not limit what can be printed. Online articles can present a greater wealth of information, such as videos of state-of-the-art imaging techniques. Furthermore, large raw datasets can be uploaded and shared. This [data sharing promotes](#) open science and encourages reliability and reproducibility. In addition, publishing in open access journals is cheaper.

Is Traditional Publishing a Better Service?

Despite the advantages of open access publishing, many still believe that traditional publication practices still have a part to play. Publishers of subscription journals have argued that their publishing approach offers [better editorial quality](#), which may include [copy editing](#), or writing additional content. This is because they tend to employ a full-time editorial team, whereas editors of open access journals are usually working scientists.

Traditional journals are also more selective and reject more papers, on average, than open access journals. This partially explains the higher cost to publish in these journals; the more rejected papers, the higher each paper will cost to publish. The advantage to this approach is prestige. A publication in *Nature*, which accepted only 8% of submitted articles in 2011, will grab more attention than one published in a less prestigious journal. Some believe that this filtering and selection by the publisher adds significant value that should not be eliminated entirely.

Open Science and Looking to the Future

Academic publishing is changing rapidly. The rising popularity of open access journals and [free access initiatives](#) demonstrates that the scientific community supports open science and free access for all.

However, scientists still believe in the prestige of more selective, traditional publishing practices. Many are still ruled by the mantra “Publish or perish” and impact factors are still used as a means to measure academic achievement by grant committees. Therefore, it does not seem likely that traditional publishing approaches will completely give way to open access publishing in the near future.

However, the open access movement may change some aspects of academic publishing, including the approach to peer review and conceptualization of quality.

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