

Dealing with 'open access' demons

The possibility of open-access scholarly publications started almost 24 years ago, in response to a growing demand to make research findings free and available to anyone with a computer and an Internet connection, and building on the digital developments of the 1990s. The initiators of the movement came from a wide range of prestigious research-intensive institutions and major research funders including Harvard, the Max Planck Institute, University College London, the University of Montreal and – amongst funders – the Open Society Foundations and the Wellcome Trust. They worked on open-access issues for 10 years before releasing the Budapest Declaration and Guidelines for Open Access Publishing in 2001. Sadly, the Mellon, Carnegie and Ford Foundations seem not to have been supporters at that stage.

In the ensuing 13 years, open access has, for good reason, become an increasingly desirable route to scholarly and scientific publishing. It has also become a complex field in the publishing arena – beset by a number of serious challenges. In particular, open-access journals have come under scrutiny over the past months because of the dubious charging practices and poor, or non-existent, reviewing processes of some. Open access seems to be known as much for inadequate and exploitative publishing practices as for any increase in access.

Readers of *Science* may know that an article published by that journal in October 2013 revealed some startling statistics. Earlier in 2013 a *Science* journalist and molecular biologist, John Bohannon, submitted a seriously flawed manuscript under a range of fictitious names to 304 open-access journals.¹ A number of journals failed to respond, 20% rejected the article and 61%, including some published by Elsevier and SAGE, published the article. Bohannon concluded that a large proportion of open-access journals have lax or no real peer-review systems in place.

Reactions to the *Science* article were swift and clear. *The Guardian's Higher Education Network*² carried a response the very next day from Curt Rice, a professor at the University of Tromsø. Rice argued that the *Science* article demonstrated (almost) the reverse of what it had set out to do: it's not that there are too many open-access journals that ignore proper reviewing processes, but that there are too many that set out to profit from researchers, and too few that are serious research publishing ventures.

Within a week, the *Economist* had also offered its views on 'bad science'.³ Arguing that while it is assumed that the peer-review system ensures that science is 'self-correcting', they presented examples of many experiments reported in respectable journals that could not, subsequently, be replicated. Apologists point to many benign reasons: scientists make statistical errors, peer review does take place but reviewers are harried and do not always pick up mistakes or inappropriate conclusions, and universities place more emphasis on publishing than on getting research reporting right. Benign though they may be, these reasons still serve to undermine trust in research and in the current publication system. What is worse, more subtle and clearly obvious limitations and problems with open access are not dealt with because these practices are such an obvious challenge to the industry. Publishers, big and small, have been caught up in pilot trials that have shown that their peer-review practices are inadequate.

But more was to come: in this case, for the respectable publishers Springer and the Institute of Electrical and Electronics Engineers

(IEEE) – and for open-access journals in general. In February this year, a French computer scientist, Cyril Labbé, privately informed Springer and the IEEE that he had identified 16 publications by Springer and over a 100 by the IEEE that were computer-generated 'gobbledygook'.⁴ Strangely enough, Labbé's research had been published online in a Springer journal (*Scientometrics*) in June 2012 but no attention appears to have been paid by Springer to his findings (at the time). The two publishers had subsequently no option but to withdraw over 120 papers from their subscription services after the papers were discovered to be fraudulent. Again, however, the problem was not open access itself, but a fairly cavalier approach to profit-making and a disregard for proper double-blind reviewing – or reviewing of any kind.

Currently, sites on the Internet list the names of 477 'predatory' publishers and 303 'predatory' stand-alone journals.⁵ Predatory journals are defined extensively⁶ – although the criteria may be summarised as including journals which have dubious practices that are widely considered to be the antithesis of reliable scholarly publishing. The Academy of Science of South Africa does not appear on the list of predatory publishers, nor does the SAJS appear on the list of stand-alone predatory journals.

So what does all this imply for the SAJS, which is already an open-access (and free-to-publish journal)?

Taking account of the problems and dangers exposed by Bohannon and by Labbé, but also the useful insights shared by Rice, it is clear that the SAJS has the potential to contribute substantially to the obvious need for more open-access journals that follow rigorous reviewing processes, offering content that is as reliable as these conditions can assure. This is a critical element in the process of rebuilding trust in open access.

It is true, of course, that nothing is ever free. So if the SAJS does not charge at either end of the publishing process, who does, in fact, pay? The answer is – South African taxpayers. Their annual contribution, however, is a very small portion of the cost of securing just one national key point: science set against royal sports stadiums.

References

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