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Persistent myths about open access scientific publishing

Academic publishers do not pay peer reviewers, and lack of funds is no bar to publication in an open access journal



Placing results in the public domain, as happened with the Human Genome Project, can bring major economic benefits. Photograph: Alamy

A spate of recent articles in the Guardian have drawn attention to lots of reasons why open access to research publications is reasonable, beneficial and even inevitable. But two recent letters columns in the Guardian, headlined "Information that we want to be free" and "Better models for open access", have perpetuated some long-running misconceptions about open access that need to be addressed.

It's not surprising that for-profit, barrier-based publishers are fighting to stem the tide, by misinformation if necessary, but researchers and the general public need not be taken in.

Richard Mollet, chief executive of the Publishers Association, claims that "publishers shoulder the administrative burden of filtering three million submissions to 20,000 journals." They do not: researchers, donating their time, do this. Publishers' role in the peer-review process is two steps removed from the coalface: they do not pay peer reviewers, nor in most cases do they pay the editors who handle the reviews, but only the administrative layer above the editors. Publishers and their representatives consistently perpetuate the idea that they provide peer review. We must recognise this claim for what it is.

Dr Robert Parker, chief executive of the Royal Society of Chemistry (which is itself a barrier-based publisher, though a not-for-profit one) points out that, "Open access does not mean free, as many readers may have assumed, with many costs involved including managing systems and content." Of course management and infrastructure can't be done at zero cost – no one has claimed it can – but the important point is that open access is much more cost-efficient. For Elsevier, the biggest of the barrier-based publishers, we can calculate the total cost per article as £1,605m subscription revenue divided by 240,000 articles per year = £6,689 per article. By contrast, the cost of publishing an article with a flagship open access journal such as <u>PLoS ONE</u> is \$1,350 (£850), <u>about one eighth as much</u>. No one expects open access to eliminate costs. But we can expect it to dramatically reduce them, as well as making research universally and freely available.

In <u>a recent article in the New Statesman</u>, Dave Karr and Robert Kiley of the Wellcome Trust explain how the Human Genome Project placed its results in the public domain, and that the result has been that a \$3.8bn project has achieved <u>\$796bn of economic</u> <u>impact</u> with enormous implications for health care. These are the kinds of economic and societal opportunities that become possible when barriers to exploiting the results of research are taken down. We need to look beyond open access's economic effect on existing barrier-based publishers and see the effect it will have on society as a whole.

<u>Rick Bradford complains</u> that under an author-pays open access regime "only people affiliated to an organisation which will pay on their behalf can publish." <u>A. G. Gordon of London</u> amplifies: "Had open-access journals been present in the past ... Einstein, as a patents clerk in 1905, would never have been able to afford to publish his four ground-breaking papers." Both Bradford and Gordon are evidently unaware that many open-access journals are free to authors as well as readers, being funded by government bodies, professional associations or similar: for example, in my own field of dinosaur palaeontology, the journals <u>Acta Palaentologia Polonica</u>, <u>Palaeontologia Electronica</u> and <u>PalArch</u> are all free to authors.

Further, many fee-paying open access publishers offer waivers to authors without institutional funding. For example, <u>PLoS says</u>: "We believe that your ability to pay should not influence your ability to be published and so we offer a waiver to anyone who can't afford the fee." Other open access publishers have <u>similar facilities</u>.

Finally, in his letter to the Guardian Prof Gordon McVie suggested that: "The Wellcome Trust can take a lead by removing impact factor as one of the major determinants of screening grant applications." Happily, it has already done so. Its <u>open access policy</u> states that the trust "affirms the principle that it is the intrinsic merit of the work, and not the title of the journal in which an author's work is published, that should be considered in making funding decisions".

This is a very important development. Probably the greatest impediment to more universal open access at the moment is researchers' fear that unless they place their work in established, prestigious, barrier-based journals, they will be at a disadvantage when competing for grants. This places the researcher's interest directly in opposition to the community's, which needs the work to be as widely available as possible. By promising to evaluate grant applicants on the quality of their work rather than the brand name with which it's associated, funding bodies can work to remove this fear.

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