Reviewer’s report

Title: Open access versus subscription journals - A comparison of scientific impact

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Reviewer: Alma Swan

Reviewer’s report:

The study’s main aim is to show how the quality of Open Access (OA) journals (OAJs) compares to the quality of subscription journals, measured by citations, and whether paying for ‘Gold’ OA undermines standards of peer review, as has been claimed by various critics of Gold OA publishing. The authors have controlled for OA journals that became OA some time after launching as print-only subscription journals, and OA journals published from ‘other countries’ outside the research publishing hotspots of US, UK, Netherlands and Germany. The main finding is that OAJs that were born OA (the methodological assumption is that OAJs launched since 2002 are in this category) approach subscription journals in terms of quality measured by citations. Thus, a system involving author payments does not seem to diminish standards of peer review. This is a new empirical contribution to the debate about whether OA has encouraged a general lapse in peer review standards and adds to the body of evidence on this topic. It is recommended that this paper is published after attention is paid to the points below.

A. Major Compulsory Revisions

1. OA by any route is known to enhance citations: since the level of Green OA is around 12-20%, this could have a significant effect on the citation rate of the subscription journals studied, enhancing their citation rates enough, perhaps, to account for the observed citation advantage of these journals as a group. The authors should explain if and how they have controlled for the provision of OA through the ‘Green’ route for articles in subscription journals. Some discussion of this issue is warranted here so that the effects of Green OA in this experimental situation can be fully understood.

B. Minor Essential Revisions

1. In setting the context for the study the authors summarise the evidence so far as suggesting that ‘when eliminating for factors such as author’s [sic] selecting their better work for OA dissemination, the [citation] advantage ... is low or even non-existent’. The main study on this is not, however, cited, and this is not the conclusion of that study, which indicated that the OA citation advantage for both self-selected (presumed to be an author’s better work) and mandated (no selectivity permitted) is the same (Gargouri Y, Hajjem C, Larivière V, Gingras Y, Carr L, et al. (2010) Self-Selected or Mandated, Open Access Increases Citation
Impact for Higher Quality Research. PLoS ONE 5(10): e13636. doi:10.1371/journal.pone.0013636). This work should be acknowledged and set into the context of the work, too.

2. The authors acknowledge that the increased readership that comes from OA may account for some of the citations for articles in OAJs, but say that they cannot isolate the effect of that factor. It would certainly be difficult to do this since the citation advantage does differ from discipline to discipline and the extent of the effect is by no means agreed by researchers in this field. However, the effect here could be significant: the authors are encouraged to address this issue with at least further discussion and referral to published studies that might provide some estimates of the extent of the effect.

C. Discretionary Revisions

There is a considerable number of typos and other small errors – such as missing words or ends of words – in the text. Although these do not in general affect the meaning of the prose, in one case (third sentence under the heading ‘Does OA threaten to undermine scientific peer review?’ the sentence is incomplete. Proof-correction would improve the manuscript.

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare I have no competing interests.