Junior scientists are skeptical of skeptics of open-access

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Anurag Agrawal [1] recently published a Letter in which he suggests four points that researchers should consider when choosing to publish open access (OA). While a critical evaluation of the pros and cons of publishing OA are warranted and important, three other points should also be considered when discussing OA.

First, it is important not to confuse OA with OA publishing. To the best of our knowledge, funding agencies do not require that supported work be published OA, but that it be made freely available to read. This could be achieved via 'green OA', where the final version of a manuscript before copy-editing is archived in a publically available repository, or 'gold OA', where the author(s) pay(s) a fee to the publisher to make the final copy-edited version freely available. Publishing articles as either green or gold OA reflects the motivation of researchers to make their work freely accessible to ALL who could benefit from and build upon it, not just those who can afford to pay for subscription-based journals (including institutions). This motivation for publishing OA is particularly important when considering Agrawal's [1] third point that OA papers are not more frequently cited. Not all studies of citation rates of OA articles reflect this finding [2], but in any case, increased citations are not the goal. Rather, the intention of OA is to promote greater dissemination of information and reusability of published material to audiences both within and outside academia. Its success is reflected by higher download figures for OA versus non-OA publications [3]. New initiatives such as www.conservationevidence.com/ highlight the broad interest in scientific results contained in published articles, and in that regard, publishing OA is working [3].

Second, subscription journals require many of the same warnings Agrawal gives for OA journals [1]. Researchers should remember that (i) the business model of most subscription-based publishers is for-profit and (ii) OA journals should not be conflated with particular (for-profit) business

models. Editorial policies of subscription journals may often reflect the same conflict of interest denounced by Agrawal [1] for OA journals. Such journals can attempt to be highly selective to generate higher impact factors through higher citations, but they can also generate higher citations by publishing work that is controversial, or focuses on a topic that is 'sexy' (www.theguardian.com/commentisfree/2013/dec/09/how-journals-nature-science-cell-damage-science). Most importantly, we should not associate OA journals with simply aiming to be "not scientifically flawed". There are several OA journals, e.g., eLife and PLOS Biology, which are succeeding in being as selective as the 'luxury' journals of Schekman's boycott (www.theguardian.com/commentisfree/2013/dec/09/how-journals-nature-science-cell-damage-science), and are, notably, non-profit. Despite this, we do not believe that the approach of aiming to publish work that is scientifically sound and allowing the wider community to assess its novelty and impact should necessarily be seen as negative.

Third, as junior scientists facing the prospect of 'ambiguous' publication records if we favour OA journals over subscription journals, Agrawal's [1] fourth criticism is particularly vexing. An evaluator of a researcher's work *should* read the work to make a fair and valid assessment of it. Failing a direct assessment of a researcher's work, a hiring committee could use other tools that can track the impact of research, for example, ImpactStory (impactstory.org). It is thus no longer necessary to rely on a journal's impact factor to judge the potential impact of particular individual articles, which, as mentioned above, primarily reflects the overall reach of a journal within the pay-walled ivory towers of academia. Further, there is more on an academic CV than publications alone, and we should not forget this when discussing junior researchers' CVs. A researcher should be judged on their contribution to the academic community through many means, such as reviewing and editing for journals, and conference participation, among others (see ImpactStory for other examples of academic contributions).

While we may not have arrived at an alternative publishing model that suits the primary goal of scientists, it is becoming increasingly accepted that a publication model which restricts access to scientific findings and drains research funds towards for-profit publishers is deeply flawed. We should move away from this model as soon as possible (see e.g. Open Access policy of UK funding bodies http://www.hefce.ac.uk/whatwedo/rsrch/rinfrastruct/oa/policy). We junior scientists can change the publishing landscape through our decisions of where to publish and by increasing the outreach of our work. Senior scientists can support these decisions by taking the necessary time to consider our work fairly. Most importantly, when judging junior scientists' publication records, they should avoid considering it as 'ambiguous' if they see an article in any OA journal, regardless of the selectivity of that journal. Junior and senior scientists alike should be raising awareness about the motivations for OA when discussing alternative publishing models, so that we do not lose sight of why we need the change. We should certainly not punish those junior scientists who decide to effect change by publishing in OA journals.

References:

1 Agrawal, A.A. (2014) Four more reasons to be skeptical of open-access publishing. *Trends Plant Sci.* 19, 133

2 Swan, A. (2010) The Open Access citation advantage: Studies and results to date. http://eprints.soton.ac.uk/268516/

3 Davis, P.M. (2011) Open access, readership, citations: a randomized controlled trial of scientific journal publishing. *The FASEB Journal* 25, 2129-2134