

A retired researcher's musings on issues in contemporary research publications

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The explosion of literature on the processes, costs and rankings of academic publication is often focused on the perspectives of employed researchers. In this editorial I consider these matters from the viewpoint of an active researcher who has retired from a salaried role but still contributes to writing, reviewing and editing as well as supervising and mentoring of students.

The challenges of funding publication and obtaining literature

As a Senior Fellow at the Australian Museum I depend on being an adjunct at a university to access much of the newer scientific literature as the Museum has a limited budget for purchasing periodicals, although it can order interlibrary loans within its limited budget. While technically retired I am still an active researcher and have graduate students, I have no research budget, so I am totally dependent on asking colleagues for a PDF, checking Research Gate or using my university access to obtain a PDF. To date I have not yet had to resort to actually pay for a reprint and I am totally opposed to this given I still review many papers for many journals and rarely, if ever, do they then give you access to the final published paper.

As I am still publishing actively although technically retired, I have no funds to pay for page charges to publish in open access journals. I accept that publishing does cost, yet we do have a small group of companies controlling the very profitable business of academic publishing.

So researchers have two options: publish in journals which are open access providing you pay page charges, or submit to journals which do not charge for publishing but your colleagues and fellow researchers can only gain access if their institution pays for access to those journals. This is not an option for many smaller institutions and also for many developing countries. Yet these journals are published by international publishing houses which are commercial enterprises. An alternative for those without institutional access to those journals is for the researcher to pay \$/€20–30 or more per article which of course is not feasible for many researchers.

Another factor which should be considered is that much of the research being carried out used government funding, obtained from the general public in the way of taxes. So the results of the research should be widely and freely available but, as explained above, this is not always true. We certainly do not

want research findings to be published in the grey literature without being peer-reviewed and again not easily accessible and certainly not archived in any standard way.

Researchers want their data published and available for posterity and while initiatives such as the World Biodiversity Heritage collection are very welcome this only applies to the older literature where copyright has expired. Certainly some journals published by scientific societies are making their back issues freely available such as Royal Zoological Society of NSW for their journal *Australian Zoologist*, and others if you are a member can access back issues, such as Marine Biological Association of the United Kingdom, for *Journal of the Marine Biological Association UK* and Biological Society of Washington for their Proceedings (although they will not be publishing after 2021).

Problems with peer review

Despite taking money from authors or subscribers to pay for publication, all journal publishers are dependent on peer-review, which involves researchers reviewing manuscripts and increasingly being asked again to re-review the revised manuscript; we do this for free, and while some journals publish lists of reviewers used, others do not, and some give you a small discount if you submit a paper to those open access journals. Sometimes a reviewer requests an acknowledgement that they have reviewed a paper which is then attached to a CV, but again at no real cost to the publishers, just more work for the editors. Some journals (*Pacific Conservation Biology* is one of them) do collaborate with Publons so that reviewers can receive recognition (Smith 2016), but reviewing is still a significant impost.

Yet journals are totally reliant upon researchers to maintain their standards and help to increase or maintain their rankings. As an editor of a couple of journals I know how hard it is becoming to find reviewers. In some cases you may have to invite 10 or more people to review and increasingly reviewers are declining to review for some journals. Yet, I know these people who are declining to review are often publishing many papers which also need to be reviewed, so they consider it alright to submit papers but not to review papers of their colleagues, which is certainly not a level playing field. The system is breaking down as many do not consider they have a moral responsibility to at least review one

paper for each of the ones they publish. Of course, there are some very responsible colleagues out there who are willing to review papers constructively and in a timely fashion, and as an editor I thank you.

Thoughts on ranking and status of journals and papers

Over the past few decades we have seen an increasing pressure by administrators to publish in high profile journals for departmental rankings or obtaining grants, which pressures researchers to 'publish or perish', a term widely used. Evaluating the quality and future significance of scientific work is difficult. This has led to the rise of citation metrics, such as the h-index, as a proxy for the quality of articles, researchers and journals. The main reason these metrics have become so prevalent is that they are easy to calculate, and calculation can be automated. As a proxy for quality they are inherently unreliable, especially once they become influential in job prospects and funding allocations. The problem is best expressed by [Strathern \(1997\)](#): 'When a measure becomes a target, it ceases to be a good measure'. This is exactly what has happened in science, to the extent that your viability as a scientist depends on hitting the target. In fact, somebody else will hit the target, so you had better exceed it. This obligation is probably the reason why relatively few early and mid-career scientists are active on discussion boards; they simply do not have the time. Some scientists do better on the treadmill than others, but I believe almost all would

produce more meaningful work if they had more time to explore and reflect. Citation metrics are perhaps even more insidious and entrenched than paywalls, and I do not have any good solutions here either. Just be aware that they, like the paywalls, are impeding science (in my opinion).

Solutions?

I certainly have no answers to the questions and dilemmas raised, and we certainly need to maintain high quality peer-review to limit the amount of second class science being published. In today's world good science continues to be critically important and needs to be widely available. Is it wishful thinking that publishing houses should realise how much they owe the scientific community to make their publications more accessible? Without us they would not have anything to publish!

Acknowledgements

I would like to thank Dr Mike Calver for encouraging me to write this editorial and for his helpful edits.

References

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