Qeios

Peer Review

Review of: "Navigating the Madness of Academic Publishing"

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I have been invited to review this commentary entitled "Navigating the Madness of Academic Publishing," for the journal Qeios. As I have also noted in the potential conflicts of interest section, I currently work for a not-for-profit journal owned and operated by a scientific society as a professional editor. I am a former PhD student and postdoc in the biological sciences. I accepted the invitation to review as I consider it beneficial for the author to hear my thoughts as (i) a trained scientist, (ii) someone with experience of how journals operate (and not-for-profit journals in particular), and (iii) someone who shares the author's interest in ensuring that research is communicated widely at the lowest possible cost and without financially penalising scientists. I respect Qeios's approach to fully transparent peer review and trust both the author and any readers to critically consider my comments and those of the other reviewers.

I would like to commend the author for discussing this very important topic in this commentary. This is certainly a topic of great interest for many researchers, and many attempts have been made to navigate the madness in question. However, there are some common issues that confound attempts to break away.

I think that the article could be improved through consideration of the following:

1. The author starts by citing their own paper on understudied reptile taxa: *doi:10.1111/ecog.06491*

   "*Some time ago, while chatting with a relative at a family gathering, I was congratulated on a recent paper I had published[1].* "

The contents of this paper are not directly applicable to the discussion of scientific publishing, and I strongly recommend its removal. Its inclusion could be construed as an attempt to increase the author's h-index and self-citation without due cause, even in the absence of such a motive.

doi.org/10.32388/BKEoTL

2. "*After all this effort, you finally have the first draft of your manuscript, a 'child' to which you have somehow grown attached*"--I recommend amending to "have grown somewhat attached" (where "somewhat" means "to some extent," which seems to be the intended meaning; "somehow" means "by some method/in some way.")
3. "*typically 1-3 anonymous researchers in your field*"--I recommend mentioning in passing here that some journals operate open peer review, wherein the identity of the reviewers is known to the author, as in this case.
4. "*what they call article processing charges (APCs), supposedly to make research open access (OA)—i.e., freely available to anyone*." I recommend removing the word "supposedly," as this implies that the work could be made OA without any costs incurred; in the case of diamond OA, the costs are covered by institutional funding (or funding from some other body) or potentially through the hard work of volunteers. Whether the APC is appropriately priced is another matter: the profit margins for the major publishers are large, as noted by the author.
5. "*There are also many journals that do not charge researchers and make papers freely available to anyone (no-fee OA journals). As of June 2024, the Directory of Open Access Journals (DOAJ) listed more than 20,000 periodicals, of which 66% (13,521) did not have APCs[2].*" I think the commentary would benefit from a discussion of diamond open access journals, how these are funded, and what problems they face. I recommend referring to this article https://doi.org/10.1002/leap.1611

In particular, I think consideration of the following areas referenced in the above paper would bolster the authority of the article under review:

(i) Sustainability: *"Because OA diamond journals do not charge publication or subscription fees, they must rely on scholarly community support, institutional funding, or volunteer labour to cover their expenses. This can be difficult to sustain over the long term, and many OA diamond journals struggle to secure the resources they need to continue publishing (Bosman, Frantsvåg, Kramer, Langlais, & Proudman, 2021). "*

(ii) Low journal income can compromise peer review and journal quality: *"Additionally, a relatively lower impact factor, which is often and directly related to research assessments and researchers' journal selection criteria, is another weakness in terms of encouraging researchers to publish their research outputs in OA diamond journals (Demeter & Istratii, 2020). This is partly related to journal quality control issues. Without the resources to conduct rigorous peer review or hire professional editors, these journals may struggle to maintain high editorial standards. This can make it difficult for scholars to trust the quality of the*

research published in these journals and may make it difficult for these journals to gain the recognition they need to thrive."

6) "Despite being heavily criticised[4], the IF remains important for career progression in academia, especially for young scientists[5][6]."

The journal impact factor is a critical point when it comes to the cost of publishing, but it is only mentioned in passing twice in the commentary. I recommend greater consideration of this point. As noted above, diamond open access journals frequently have a low journal impact factor, whereas so-called "vanity journals" (which have high subscription and/or APC fees) have very high JIFs. Scopus currently indexes content from over 7,000 publishers, and so in a market economy, these publishers would be competing amongst themselves to provide the most cost-effective service in order to attract authors. In any other industry, researchers would pick and choose based on a number of factors, including cost. However, this is not the case because researchers wish to publish in journals with a high JIF at all costs, as their careers and future grants depend on it. Addressing issues in publishing requires that researchers stop focusing on the JIF. Initiatives like the San Francisco Declaration on Research Assessment (DORA) show the way in this regard, but until researchers as a body agree to stop ranking researchers based on where they publish their work (when serving on hiring and grant committees), nothing will change, and journals with high journal impact factors but costly subscriptions/APCs will still draw submissions away from society journals and diamond open access journals. It could also be remarked that researchers often use the journal impact factor as a proxy for the quality of the individual article because they do not have time to read several articles by several candidates for a single position or grant. This is a problem that needs to be solved by researchers.

7) *Consequently, a more fundamental problem arises: the financial burden that exorbitant APCs places on researchers from the Global South, where prohibitive prices can hinder publications e.g.,[12] and affect career progression given that most no-fee OA journals lack impact factors[3], while APC-OA journals have on average higher citation counts and impact[13].*

There are some initiatives to address the important issue raised by the author above, such as Research4Life, which supports discounts and waivers on the APC for authors in developing countries: https://www.research4life.org/ While this does not go far enough to solve the problem, I think it would improve the commentary if this were mentioned.

8) *One potential solution for this dilemma may lie in encouraging researchers to publish primarily in venues controlled by scientists themselves, such as platforms and journals backed by robust scientific societies[15].*

Many of these have no APCs or much more affordable prices compared to corporate publishers[3].

As an employee of a journal owned by a scientific society, I am a strong proponent of this suggestion. However, researchers continue to seek to publish in journals with a very high journal impact factor, and there needs to be greater incentive for them to support society journals (not only by submitting their work to these journals but also by seeking to get involved in the society and its activities, including its journals).

9) "*Preprints, or preliminary versions of research papers shared publicly before formal peer review, also offer a promising alternative to these issues, as they can potentially reduce researchers' dependency on traditional publication venues*".

I think it is worth noting that preprint servers also have costs; for example, bioRxiv is financially supported by Cold Spring Harbor Laboratory (CSHL) and the Chan Zuckerberg Initiative. The platform is dependent on CSHL and the CZI continuing to invest money.

10) Preprints: while I agree that posting an article on a preprint server may reduce the dependency of researchers on large publishers, more consideration could be given to the two major issues:

(i) The lack of coordinated peer review. While researchers do indeed review for free, they do require a platform in which to do so (the electronic submission and review systems are not free; sending emails to the editor is a potential way around this, but very cumbersome and generates more labour, which means more costs), and there needs to be oversight of the process lest authors review their own papers by posing as other researchers, or researchers seek to block publication of their competitors' work by providing unfair reviews (or failing to return their report within a reasonable timeframe, thus blocking publication). The most important function of journals is to act as an independent body to coordinate the peer review process, and it is questionable whether relying on the community to regularly review manuscripts that interest them without any oversight is sustainable.

(ii) The impact factor; as noted above, posting an article on a preprint server does not hold the same currency as publishing in a respected journal with an impact factor when it comes to hiring and grant decisions. This is ultimately an issue that researchers need to solve.

11) Another cost of publishing relates to the expense of ethics investigations. Unfortunately, we now face fraud on an industrialized scale, and the costs of trying to prevent the publication of fraudulent articles (or retracting them following publication) is a cost that is passed onto the research community. This point also underscores the need for some kind of independent body that monitors

peer review (whether this be a publisher or some other body). I would recommend that the author consider the following article:

Byrne JA and Christopher J (2020) Digital magic, or the dark arts of the 21st century—how can journals and peer reviewers detect manuscripts and publications from paper mills? *FEBS Lett* 594, 583–589.

I would also note that peer review has a poor track record of detecting fraud (Waltman L, Kaltenbrunner W, Pinfield S and Woods HB (2023) How to improve scientific peer review: four schools of thought. *Learn Publ* 36, 334–347), which also emphasises the need for professionals to oversee the publication process.

12) I think the article could be improved by considering how researchers may better operate a journal on a reduced budget. Could technology be the answer? This journal, Qeios, uses AI to select appropriate reviewers for a manuscript. It clearly selected me as I authored an article on scientific publishing. Am I an appropriate choice? Could AI be used to streamline other tasks?

In summary, I hope that my review has provided some insights into why publishing continues to cost money in the digital age, and some ideas as to how researchers may take a greater role in the process while reducing costs.

Declarations

Potential competing interests: No potential competing interests to declare.