

Coalition S: Towards (ir)responsible publishing?



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There is a new bold proposal to change scientific publishing toward low-cost publishing and open refereeing. Reducing costs is attractive, but this approach could create more problems than it solves.

It has been nearly 6 years since a group of funding agencies, known as 'Coalition S', launched a plan to end the ever-increasing costs of scientific publishing. With 'Plan S', they aimed to remove paywalls, let scientists retain the copyright on their work, and change the business model of commercial publishers to reduce library subscription costs. Now that publishers are slowly transitioning to open-access models, the net effect appears to be that publication costs simply shift from the university libraries to authors and their institutes through article-processing costs. Last October, Coalition S proposed a course correction to finally break the dominance of commercial publishers. The proposal is, however, not without serious issues.

The main goal of Coalition S is a noble one. Over the centuries, the publishing ecosystem has evolved toward a group of very large publishers who own a substantial fraction of high-impact journals that form the backbone of science. It led to a culture that, as a scientist, you better publish your result in a high-impact journal to be taken seriously. This put these publishers in a monopoly position, almost allowing them to ask whatever fee they want. In recent years, the fees have risen much more than the average inflation and boosted their profits. Fixing this leak of public money flowing to publisher shareholders could increase the fraction of research money spent on research.

Following the laws of economy, one way to lower publisher prices is to create low-cost alternatives. Having an attractive alternative provides a better negotiation position with publishing deals. There are already a number of these low-cost journals, also called 'diamond open access journals', meaning that they are free to read and in principle free to publish in. Authors may choose to spend money on a language editing and typesetting service, but that is optional.

The [latest proposal of Coalition S](#) aims going towards a fully diamond open access publishing system, but this is not the only aim. In parallel, Coalition S also proposes to move toward an almost fully open refereeing system. Papers should be first published as a preprint and be subject to open refereeing before a final version can be saved. Although stimulating diamond open access has its advantages, there are quite a lot of serious issues with the proposal. The proposers appear to assume that people in science and society are all reasonable people capable of making constructive comments, receive feedback, and are very careful about what they report. Well, they are not... This discrepancy is at the basis why I think this proposal will be a disaster for science if adopted.

These plans have serious drawbacks for both individual scientists and the position of science in society. Although the proposers claim this will be beneficial for equity in science, it can be harmful to early career scientists, and in some fields even increase individual safety concerns for scientists at all levels. The proposed refereeing system will lead to lower quality science and damage the public trust in science even more than it already is.

Before we look at the position of science in society, let us first look at the effects of open refereeing on scientists. In the ideal world, when a preprint is published, other scientists have the time to read many papers, publicly give constructive comments to the authors and work toward a better version of the original paper. Well, the first issue is that scientists do not have time to read all these preprints, let alone comment on them. It is already difficult to find one referee for a paper. Engaging

a community of referees is even more difficult. Not to mention the effort needed to make sure that discussions remain civilized and misbehaving users are banned.

But what if there is something fundamentally wrong with the published preprint? Depending on the career position of the authors, two things may happen. If the author is an early career scientist, the error may be pointed out publicly and the authors will be known for making this mistake for the rest of their careers. If the author is very senior, then criticizing this person openly may harm your career as the senior scientist may take 'revenge' when reviewing your papers or proposals. This system can easily lead to academic feuds, while at the same time favoring senior scientists and potentially allowing errors to pass. The option to stay anonymous as a referee and to opt out of publishing the communication between author and referee is therefore very important.

This also has consequences for the relation between science and society. In the last decades, we have seen the rise of the 'post-truth' age. The internet has been swamped with misinformation and conspiracy theories, many times casting doubts on scientific results. Followers of these theories often bully or threaten scientists with death when they try to disprove this disinformation. As a scientist, you need to have a choice whether you want to be publicly on the front line or not.

Having trustworthy sources of scientific information in this society is paramount. Journalists should be able to easily check which scientific journals publish trustworthy results. The current high-profile journals provide such trust. A move to lesser-known diamond open access journals could undermine that trust and increase the confusion about which science results are real and which are not. It is essential to have a robust and publicly accessible system to determine whether a journal is trustworthy and has a well-functioning peer review system.

Publishing preprints increases the danger of spreading misinformation. Preprints that contain a huge error will be online immediately and journalists may just publish these wrong results without waiting for the referee process to finish. Once a wrong story is out, it is very difficult to get rid of the error again. We have seen this with the erroneous result that vaccines cause autism. This result has been proven wrong many times, but a substantial fraction of people still believes in it.

It is the responsibility of science to be very careful about the information that it releases to the public domain. The independent review of a referee is key to filter out as many mistakes as possible before the paper is published. Of course, this is work done by humans, and some mistakes may be overlooked. However, every mistake that is corrected before publication is vital to avoid erroneous conclusions being released to the public.

The global pandemic is often used to argue the importance of immediate sharing of scientific results. In such an emergency situation, this is understandable, but this should be an exception rather than the rule. In most scientific cases, the quality of the work is much more important than its publication date. Taking time for the review process is essential for that quality. Therefore, the standard should be to publish after peer review, unless there are urgent reasons to release the results earlier.

To break the dependency on commercial publishers, it is good to promote diamond open access. However, we need to take care that the general public can still recognize which scientific results can be trusted. This requires clear communication about which scientific journals are good and taking time to review papers carefully before they are published. In most scientific fields, there is really no need to rush publications and it is better to focus on quality. For the safety and career of scientists it is an option to move to anonymous 'double-blind' refereeing to get the most honest review of the paper. This is not ideal either but poses much less problems than the Coalition S proposal. Above all, let the scientists decide which refereeing process works the best in their field.