Forum

The Dark Side of Open Access

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Abstract

Many research articles are hidden behind a pay-wall. Research institutions pay subscriptions that allow their members unfettered access but the rest of us independent researchers have to pay a fee. For this reason I welcome the gradual move towards open access journals that will eventually mean that all research is available online with free access to everyone, but there is a darker side to this movement that I am a lot less keen on.

Key Words: open access journal, pay-wall, dark side, arXiv, viXra.

If you are an independent researcher as I am, you will know the feeling of despair when you find a reference to a useful looking paper that is hidden behind a journal's paywall with no free version available on the internet. Research institutions pay subscriptions that allow their members unfettered access but the rest of us have to pay a fee. For this reason I welcome the gradual move towards open access journals that will eventually mean that all research is available online with free access to everyone, but there is a darker side to this movement that I am a lot less keen on.

Let's take one existing Journal as an example of an open access journal that I would certainly consider publishing as a show of support. It accepts submissions in any subject and I particularly like it because its peer-reviews are made public and allow for dynamic changes when subsequent research supports or refutes a published work. Unfortunately there is a catch for independent scientists. You can only register to publish in this Journal if you are a full-time researcher employed by a university, hospital and other research institution. Apparently open access does not mean open to submissions from all authors.

In the traditional publication model it would be very unusual to find a journal that placed explicit limitation on who could publish in its pages. It is not something I had experienced before, but with open access journals this is becoming more common. For now there are still plenty of small open access journals that take submissions from anyone, but will they last? I sense that the thin edge of the wedge is in place and as it is driven in we will see unapproved researchers driven out in an effort to reduce the costs of publication. The result could have unexpected consequences for science and society.

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Green, Gold or Diamond

Open access usually means that anyone can access papers for free. This comes in different forms sometimes termed green or gold open access. With green open access the journal allows authors to place a version of their paper on the internet where anyone can access it for free. Usually they do not allow the typeset version produced by the journal in this way but there is nothing to stop the online version being updated to reflect all changes made as a result of the peer-review. This works for the journals because university libraries cannot rely on authors to provide the open access copy and must therefore continue to pay the journal subscription.

With gold open access the journal itself provides a free copy of every paper online. Some long-standing journals experimented with this option but found very quickly that libraries would cancel subscriptions cutting off the journals revenue stream. In some cases they have agreed to allow open access after a delay of a few years but new research is most relevant as soon as it appears so this is not a very satisfactory solution. Under pressure from funding agencies the new trend is for the journals to move towards payments from authors as an alternative to library subscriptions, but the payments can be several thousand dollars per publication which makes life particularly difficult for areas of theoretical science that can produce many papers with a low-budget. It is of course especially difficult for most independent scientists who may have no funding at all.

For professional scientists the ideal standard for open access is now being called platinum or diamond access meaning that it is free to publish and free to access. However, this does not mean that it is open for anyone to publish. There is no name available for that level of standard because professional researchers do not feel a need for it. Their only real concern is to reduce the cost of publishing which impacts research budgets. In order to make diamond open access possible it is necessary to reduce the cost of running a journal to virtually zero. This is perfectly feasible since the essential work of editors and reviewers is done for free by scientists out of a sense of duty and career promotion. If journals are published online only, the costs are reduced to whatever is required to run a website. This can also be reduced to essentially nil if there is a centrally run infrastructure.

This week Field medalist Sir Timothy Gowers has announced a new initiative funded in France that will provide just such as infrastructure. Scientists will be able to pull together and quickly set up epijournals in whatever area of science they choose at virtually no cost. Although they will be free to charge a publication fee if they wish, this is likely to be very low or zero and reader access will always be freely available because the system will run on the back of the HAL archive which is an arXiv mirror and open access to all readers. This is not the first project that has tried to change the way that science publishing runs but because it will be available to all areas of research and will have solid funding support it is likely to take over as the major platform for peer-review. The catch for independent research is that you will not be able to publish in epijournals unless you can submit to arXiv and that is not possible for everyone.

The scientists and mathematicians who are setting up the system do not seem to regard this as a problem. They believe that any serious researcher can easily find the endorser required to allow them access to arXiv, but as 1700 researchers who use viXra can testify this is not the case. At

present about 15% of papers submitted to viXra are accepted in journals after peer-review, but this figure is likely to diminish to near zero if arXiv based journals take hold. To be fair Gowers has said that epijournals could allow linking to repositories other than arXiv. Whether they allow linking to viXra remains to be seen. My guess is that even if the epijournal infrastructure allows it, most individual journals will limit submissions to arXiv. In fact they may go further and only allow submissions from categories within arXiv that are related to the subject areas of the journal. This will reduce the overhead of having to reject too many papers that are off-topic and with near-zero budgets to work with this is going to be an attractive option. This could mean that even authors who find themselves limited to arXiv's generic categories such as general maths and general physics may find themselves unable to submit to journals. I hope I will be proven too pessimistic but it seems to me that the writing is on the wall.

Why Does It Matter?

You may well ask why this matters. It is clear from the many discussions about open access on the internet that including publication access for all authors is not a concern for professional scientists. Much of the drive towards open access is being piloted by mathematicians and mathematics is rarely a controversial subject. Apart from a few rare cases such as the work of Godel or Cantor, mathematical progress is accepted very quickly. It is hard to argue with a proof.

It is unlikely that any barrier could prevent a good work of mathematics from being recognized even if it came from an independent mathematician without the usual affiliations. But what about subjects more infested with the interference of politics? Take climate science as an example. Would it not be very tempting for the establishment to be able to undermine the work of climate skeptics simply by hindering their ability to publish? I suspect that journal editors will find it all too convenient that they can limit who can submit research by such artificial means. The wedge will be driven in further and it will become harder for scientists on the fringe to get the credibility they need from publication, or even to submit their work to someone who is at least required to read and criticize. Science is sleep walking into a Brave New World where anyone can speak but only the approved few can be heard. I think that those who are leading the fight for open access need to understand this now before it is too late. They must define open access to also mean openness for anyone to have access to the ability to submit for peer-review. At present their only concern is to remove the financial cost of access. Later they will see that such short-sightedness also has a cost.

References

1. http://blog.vixra.org/2013/01/18/the-darker-side-of-open-access/