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Open Access and the Future of Academic Scholarship

by Barbara Fister

In January 2012, a highly respected British mathematician, Timothy Gowers, wrote a blog post explaining why he no longer writes, edits, or reviews articles for journals published by Elsevier, a major academic publisher. In his post, he speculated that it might advance the impact of those commitments if there was an online site where those who were of the same mind could state their intentions collectively. A graduate student quickly threw together a website (http://thecostofknowledge.com/) and the names began to roll in – dozens, hundreds, then thousands of scholars declaring that they were boycotting Elsevier. As of this writing, the number of signatures is close to 10,000.

Why are so many academics speaking out against one publisher? Elsevier uses the same model as other large scholarly presses – charging high subscription prices, bundling subscriptions to induce libraries to subsidize journals they don't particularly want, and lobbying fiercely against efforts to change the system. Three factors made this publisher particularly vulnerable to attack.

First, the multinational corporation was a **strong supporter of the Research Works Act**, which would have prohibited open access mandates attached to federal research funding and would roll back a signature program of the National Institutes of Health. (In fact, Elsevier was so thoroughly identified with this bill, that when they ultimately withdrew their support in the face of criticism, its congressional sponsors followed suit immediately and within hours the bill collapsed.)

Second, though Elsevier had acquired prestigious journals over the years such as *Cell*, it also was notorious for publishing **work of dubious value**.

Finally, its size and profitability made it an obvi-

ous target. Through acquisitions and the launching of new titles, Elsevier now publishes over 2,000 journals, making a profit in 2010 of \$1.1 billion, with an astonishing profit margin of 36%.

When higher education is retrenching, the high profitability of journals that rely on freely donated academic labor is open to criticism, particularly as academic authors lose access to the work they and their peers create when their libraries can no longer afford access. Simply giving libraries more money has proven an unsustainable solution, and the value added by publishers is increasingly challenged. As a satirist who calls himself "Fake Elsevier" on Twitter put it, journal publishers have one job – "disseminating the results of our work to the widest possible audience" – a task at which he believes Elsevier fails. (https://fakeelsevier.wordpress.com/).

The most compelling response to the problem gaining traction today – and the one that Timothy Gowers calls for – is open access (OA).

What Exactly is Open Access?

A simple definition of open access scholarship is "scholarship that anyone, anywhere can read at no cost." There different opinions about how to achieve open access, and these approaches come in different flavors:

• **Green OA** publications are not freely available, but they don't prohibit their authors from posting versions of their work online.

Coming Soon —

Libraries and Distance Education

- Gold OA publications are freely available in their entirety, obtaining support for their operations by means other than subscriptions and sales.
- Gratis OA publications are free of charge, but don't come with unlimited use other than access.
- **Libre OA** publications invite reuse without permission and the creation of derivative works by reserving only some rights, such as acknowledging the original author.

The principle underlying OA is not controversial. When academics write articles or review articles by their peers, that service to their discipline is provided without pay because the purpose of scholarly publishing is to advance knowledge. Though making research findings freely available might be the best way to accomplish that goal, it seems impossibly idealistic. After all, Elsevier and other journal publishers publish prestigious journals that hold the key to professional advancement.

But holding onto that key is growing increasingly difficult. Twenty years ago, there was no realistic alternative to traditional journal publishing. Managing journal submissions, page layout, printing, and distribution required significant money, time, and specialized knowledge. Today free open source journal publishing platforms such as Open Journal Systems, free software such as LaTeX for formatting complex articles, and low barriers to sharing material online have made many academic authors question the high price of value added by traditional publishers.

Common Misperceptions Among Faculty

In February of 2008, the Harvard Faculty of Arts and Sciences made headlines by unanimously adopting an open access mandate. Since then faculty at over 150 institutions, including MIT, Duke, and Princeton, have followed suit, agreeing that they would refrain from submitting their research to publishers that restrict access to their work and pledging to make copies publicly available. Nevertheless, many

misperceptions persist among faculty, including these:

Idon't see the problem. The library is able to get me whatever I ask for. Many libraries have adjusted to unsustainable subscription prices by purchasing access by the article. While that may work for some scholars, using library funds to pay between \$30 and \$50 per article redirects institutional resources to temporary access for individuals, rather than investing in shared and shareable resources.

Open access journals are useless on a CV because they are poor quality. While it's true that most journals considered core to the disciplines they serve are currently supported through subscriptions, some journals with high impact factors are Gold OA, including PLoS One and the British Medical Journal.

Authors can't afford to pay the thousands of dollars OA journals charge. In fact, the majority of open access journals do not charge authors anything. Generally, it's only in fields where authors are already accustomed to paying page charges that some OA journals have adopted the practice of charging authors whose papers have been accepted for publication. Those fees are rarely paid by authors, but (like page charges) are funded institutionally or built into grants as an expense.

Traditional publishers ensure quality through peer review; without peer review, we're opening the floodgates to dubious research. Publishers don't provide peer review, scholars do. OA journals are just as likely to be peer reviewed as traditional journals.

Scammers run open access journals. It's true that some fly-by-night operations calling themselves publishers are cashing in on people's gullibility and misperceptions about how open access works. Academics also get e-mails purporting to be from African potentates with generous impulses, but that isn't a reason to abandon all use of email.

I'm all for open access, but how am I supposed to get tenure? About 80 percent of traditionally published journals now allow authors to post their work online (Green OA). In fact, there's

evidence that an emerging scholar's research will get more exposure if it's not hidden behind a paywall.

Claims Made by Publishers

Apart from concerns many academics have, publishers who are hostile to open access mandates have frequently made the following claims:

There is no problem that open access will solve. Anyone who needs access already has it. This is clearly untrue. Not only are students and faculty at most colleges and universities unable to get access to many journal articles they seek, those who are not affiliated with an academic institution are more interested in research findings than the publishing industry would have us believe. Recently ISTOR (a non-profit organization that digitizes academic journals) made articles old enough to be in the public domain free to all. Within four months the openly-available articles were accessed 2.35 million times. Half of those uses came from people unaffiliated with subscribing universities. Saying there is no problem assumes that scholarship is of no value to most of the population, a claim that is untrue - fortunately.

When federal agencies force grantees to make articles reporting results of funded research publicly available, it hands valuable American research over to foreigners who will use it to compete against us. This appeal to xenophobia ignores the fact that most of the publishers lobbying against open access are, in fact, foreign-owned corporations that currently make their publications available to non-Americans - as they should, since the pursuit of knowledge is without borders. Further, publishers are not compelled to comply with requirements that they feel are unacceptable. Complying with grant requirements is up to authors, not publishers.

Scientists are free to post their research to the web if they're feeling generous, but the articles published in our journals are private-sector research and not the authors' intellectual property. Technically, once an author has signed away copyright, they have legally transferred their intellectual property rights to the publisher. How-

ever, scientists and scholars have never considered publishers to be co-authors or creators of the articles they publish. This claim that publishers actually produce the research they publish, asserted by publishers in support of the failed Research Works Act, was particularly aggravating to academics.

What's Holding Us Back?

According to John Willinksy, 2003 was a watershed year for open access. *Nature* and *Science*, among other influential publications, listed the open access movement as one of the top science stories of the year. Why hasn't it changed the system?

There are two main reasons. First, higher education has a culture that is deliberate and cautious about change. Authors want to publish their results in outlets that have high prestige and impact, and over the long term, the best traditional publishers have acquired that status. Prestige gained over decades is hard to trump, as are habits and beliefs about prestige inculcated in graduate education. It doesn't help that these beliefs are hardwired into the tenure and promotion system.

Second, switching publishing systems from paid access to free access is complicated. Many societies, large and small, depend on limiting access to the research they publish to preserve membership and provide subscription income. Ironically, treating disciplinary scholarship as a member benefit limits the impact of the ideas the societies were founded to promote. Some non-profit organizations, such as the American Chemical Society and the American Psychological Association, take the same side as Elsevier when lobbying in Washington against open access efforts because they don't want to lose the hundreds of millions of dollars they make annually from their publications. Though smaller societies don't generate that kind of revenue, they often outsource their publications to for-profit publishers in order to support their programs.

Apart from technology that makes it less costly to publish open access journals, scholars are increasingly questioning the flawed concept of **Fixed Cost or Fixed Price?** An executive at the American Anthropological Association (AAA) told the association's members that making their journals open access was out of the question because anthropologists couldn't afford to pay the \$5,000 in expenses that the association incurred for each article they published, with Wiley as their corporate partner. His argument depended on two false assumptions: that open access costs are always charged to authors and costs are fixed. Jason Baird Jackson, an anthropologist who founded the Gold OA *Museum Anthropology Review*, reported that he was able to publish a journal equal in quality to a similar journal published by the AAA at a cost amounting to roughly 42 cents per article. Both publications rely on volunteer labor when it comes to authorship, peer review, and editorial work. The *Museum Anthropology Review* also benefited from open source software, in-kind contributions of office space and administrative assistance, and the expertise of their partner, Indiana University Libraries.

"impact factor," used to determine the value of a scholar's work. Today, it's possible to measure downloads, appearance in online citation tools such as Mendeley and Zotero, as well as links shared through blogs and other social media. As higher education is pressed to justify itself, mapping the flow of information through what some call "altmetrics" might prove a more informative measure of influence than relying on citations alone.

Though it's unlikely that scholarly publishing will ever be entirely open access, the Elsevier boycott and the collapse of the Research Works Act suggests that scholars are increasingly impatient with a publishing system that relies on limiting access when there are affordable alternatives.

What Does OA Mean for Libraries?

Librarians have played a significant role in the open access movement since its inception, calling attention to the harmful effects of escalating journal prices, working hard to educate their communities about emerging issues in scholarly publishing, and in the following ways:

Faculty Mandates – Faculty at many institutions have voted to make their work open to all. Librarians have frequently involved in promoting these initiatives. Mandates do not automatically result in compliance. Librarians need to develop ways to make it easy for faculty to follow through.

Is a faculty mandate unrealistic at your institution? Consider adopting one a departmental mandate within the library to demonstrate leadership and practice what librarians preach.

Funder Mandates – Many funders, including the National Institutes of Health and the Wellcome Trust, require grantees to deposit data and resulting research publications in an open access repository within a set period of time in order to increase the reach of their funded activities. Librarians need to be aware of emerging trends and positioned to help grant recipients comply with requirements.

Institutional Repositories - Hundreds of libraries have established repositories where faculty, staff, and students can make their research public and discoverable - if they haven't relinquished the legal right to do so. Setting up a repository is only the first step. Librarians need to encourage its use and work on making deposit habitual. Determining the copyright status of works is a major task, since academic authors are rarely aware of the rights they have signed away. It's important for libraries with an institutional repository to reallocate sufficient staff resources and build high-level support for it to have an impact.

Publishing Services – Many libraries provide technical and administrative support for publishing open access journals and monographs. In some cases, universities have moved their univer-

sity presses under the umbrella of the library. Examples include Indiana University's support for the open access publishing activities of the American Folklore Society (http://openfolklore.org/) and the University of Michigan Library's innovative MPublishing (http://www.lib.umich.edu/mpublishing).

Financial Support for Author-Side Fees – As academic authors opt to publish in open access journals that finance their operations with author fees, particularly in the sciences, some libraries have set aside funding for these purposes. Making authors aware of the funding opportunity can be surprisingly challenging.

Providing Discovery for Open Publications - Librarians should take care to integrate open access publications into their discovery systems and avoid characterizing traditionally published research as intrinsically superior to freely available information in their instruction efforts. Journals listed in the Directory of Open Access Journals (http:// www.doaj.org/) should be included in library link resolvers. OAPEN (a European open access book project) is launching a similar directory of open access books (http://www.doab. org). Librarians can support these efforts by selectively adding relevant titles to their catalogs.

Providing Open Access Avenues to Authors – In addition to helping faculty discover Gold OA publishing venues, librarians can point authors toward alternative contract language that will help them reserve some of their rights; see http://www.arl.org/sparc/author/. Publications with restrictive policies will often relax them on request. Librarians can also publicize dis-

ciplinary repositories appropriate for faculty publications such as SSRN (http://www.ssrn.com/) and arXiv (http://arxiv.org/). These are non-competitive with institutional repositories, but simply provide additional access avenues.

Not Just a Library Issue

Timothy Gowers did not frame his call to boycott Elsevier as a solution to a library problem, just as he was reluctant to name Elsevier as its cause. Rather, he characterized it as an academic issue that could be solved if scholars did things differently, writing:

I don't think it is helpful to accuse Elsevier of immoral behaviour: they are a big business and they want to maximize their profits, as businesses do. I see the argument as a straightforward practical one. Yes, they are like that, as one would expect, but we have much greater bargaining power than we are wielding at the moment, for the very simple reason that we don't actually need their services. That is not to say that morality doesn't come into it, but the moral issues are between mathematicians and other mathematicians rather than between mathematicians and Elsevier. In brief, if you publish in Elsevier journals you are making it easier for Elsevier to take action that harms academic institutions, so you shouldn't.

An even simpler way to look at it is provided by John Willinsky, who wrote "a commitment to the value and quality of research carries with it a responsibility to extend the circulation of such work as far as possible and ideally to all who are interested

in it and all who might profit by it." Working on making this ideal a reality is a good match for the mission of academic libraries.--fister@gac.edu

Resources

Open Access Overviews

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John Willinsky. *The Access Principle*. (Cambridge: MIT, 2006). http://mitpress.mit.edu/books/willinsky/theaccessprinciple_theMITpress_0262232421.pdf

Keeping Up With Open Access News

Charles W. Bailey Jr. *Digital Koans*. http://digital-scholarship.org/ digitalkoans/

Open Access Tracking Project http://oad.simmons.edu/oadwiki/ OA_tracking_project

SPARC Open Access Newsletter (SOAN) http://www.earlham.edu/~peters/fos/newsletter/archive.htm

Economics of Open Access Journals

Jason Baird Jackson, "42 Cents, Really?" *Shreds and Patches*, Sept. 3, 2010. http://jasonbairdjackson.com/2010/09/03/42-cents-really/

Stuart Shieber, "An Efficient Journal," The Occasional Pamphlet, March 6, 2012. http://blogs.law.harvard.edu/ pamphlet/2012/03/06/an-efficientjournal/

Other Useful Sites

Compact for Open-Access Publishing Equity. http://www.oacompact.org/ Public Knowledge Project http://pkp.sfu. ca/

Sherpa (directories of publisher policies, funder mandates, and open access repositories). http://www.sherpa.ac.uk/



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