

**A Better Kind of Access
A Look at Journal Practices and Possibilities
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Abstract

Listen to any debate about a library budget and you'll likely hear sad tales of journal after journal being cut from the collection. Librarians and readers miss the journals, but the significant costs prohibit subscribing. While it would be convenient to dismiss this issue by saying that journals are an archaic format or that publishers are just seeking profit, the reality is not so simple. Legitimate costs factor into the exorbitant journal prices. Journals offer multiple advantages in the scholarly publication world: they are established forums whose subscribers constitute a built-in, interested audience; a journal issue often focuses on one theme and is edited by an expert in the field. These benefits cannot be attained without the publisher incurring significant costs, and subscription prices have climbed steadily to fund the journals. Rather than continuing the cycle of increasing prices and decreasing subscribers, a publishing framework exists that encourages the sharing of costs and the wide distribution of scholarship. Open access is a broad framework that calls for three criteria—articles that are available at no cost to readers; read or used without permission of the author or copyright holder, and placed in a database or repository that has the goal of long-term preservation. Rather than establishing one path to meeting these goals, publishers should consider combining and modifying models that allow subscribers to remain subscribers, authors to remain authors, and publishers to remain publishers.

The consistent, dramatic price increases of journals are diminishing access to scholarship, information, and research around the world. Readers of scholarly journals obviously suffer because of the increases, but so do authors, publishers, and libraries. Publishers' profits shrink as subscriptions are dropped in response to cost hikes. Authors receive less recognition and citation for their work. Libraries, the primary conduit for readers to access journals, can afford fewer journals each year. Exorbitant pricing harms everyone involved in journal production and use.

Are journal prices justifiable? And if the huge costs are valid, is journal publishing worth continuing? If it is, what alternative economic models are there for sustaining the costs of journals?

Readers, professional and scholarly societies, librarians, authors, and even publishers are beginning to scream "Open Access!" in response to all of these questions. Open access acknowledges that high costs accompany quality scholarship in the convenient format of journals, but also suggests new funding models will help make journals financially feasible for everyone involved.

What Goes Into Journal Publishing and Pricing?

Journals take on one of four formats—exclusively print, exclusively electronic, parallel print and electronic, and value-added electronic. Tenopir (2004) estimated that at the end of 2003, there were approximately 50,000 journals on the market and at least one third of those were electronically available. According to Crow's research (2006), commercial publishers account for more than 60 percent of the peer-reviewed journals in Ulrich's Periodicals Directory. Nonprofit enterprises, such as society or educational publishers, constitute the rest of the market.

Each publisher allots its budget differently, so numbers and percentages about cost are elusive. Tenopir and King (2000) named five categories of cost for journal publishing: article processing (editing, copyediting, indexing, and review processing); non-article processing (preparation of the table of contents, letters, and advertisements); publishing support (accounting, staff costs, equipment and facilities costs); reproduction (printing and binding); and distribution (packaging, mailing, and subscription maintenance) (p. 238, 247). While electronic journals save on reproduction and distribution costs paid by print journals, both formats incur costs on article and non-article processing, as well as publishing support. The staff time and technology needed for value-added features of electronic journals quickly absorbs the savings on reproduction and distribution.

Regardless of publisher or format, journal prices are increasing across the board. Van Orsdel and Born (2006) collected price information for 2002–2006 for the journals in EBSCO Publishing's Academic Search Premier. Over that time, journal prices rose at least 22 percent (in the field of library and information science) and at most 73 percent (in agriculture). Universities including Harvard, Cornell, Massachusetts Institute of Technology, Duke, and Stanford have not only cancelled large numbers of journals, but also released statements protesting the journals' costs. Suber (2006) dedicated one of his Web pages to tracking academic libraries' cancellations, linking to their statements. Several statements name the commercial publisher Elsevier as the worst offender of exorbitant pricing, but many of the statements simply state the need for more affordable alternatives to the current economic model of scholarly journals.

While it would be easy to blame publishers for increasing prices in pursuit of profits, this cursory examination of costs shows legitimate expenditures in their budgets. Without a journal-by-journal audit, it is impossible to estimate which journals are overpriced. Additionally, Tenopir and King have noted that a commercially-published journal may yield a profit, but it may be supporting the costs of another journal published by the same company (p. 38). Some publishers are joining the protests over increasing costs; Van Orsdel and Born (2006) noted that the editor of *Journal of Economic Studies* "resigned when he realized that his journal's \$9,859 sticker price was wholly out of line both with the market and with his own sensibilities" (p. 41).

Journals: To Save or Not To Save?

Journal publishing is an expensive endeavor. Should the high price tag suggest an alternate mode of publication? Self-publishing on the Internet can be free or very inexpensive; authors could post their works on personal Web sites or their institutions' sites, or simply blog. However, self-publishing lacks most of the benefits that have made—and continue to make—journals an appealing format.

Journals deliver quality, relevant, up-to-date information, theories, practices, and research in a variety of disciplines. Often used as a forum for in-depth study of a topic, a single issue of a journal likely features multiple authors who approach the issue from different perspectives. The lag time between manuscript submission and publication is much shorter with a journal than with a book, making journals a place for discussion on current issues. The publisher's editing, copyediting, and arrangement for peer-reviewing adds polish to the authors' work. Journals also boast the advantage of an already attentive audience—the subscribers. In a time when mediocre information is readily available, delivering quality information through a trustworthy source helps the credibility of the author, as well as increasing his or her chances of being read and referenced.

The journal format is worth saving, but subscriber costs must decrease so subscribers can afford them. Open access offers several alternatives to the traditional model of charging subscribers to cover costs.

What Is Open Access?

The earliest widely shared definition for open access came out of the watershed meeting of the Open Society Institute in December 2001 in Budapest. In discussions about how authors could best make available their research, the Institute penned a policy supporting articles' free availability and use within the bounds of copyright.

This policy became the foundation for the Budapest Open Access Initiative. Other meetings of authors, publishers, researchers, and librarians followed Budapest—most notably in Bethesda, Maryland, and Berlin, Germany—issuing statements with similar implications. Velterop (2005) looked at the statements out of the meetings in Budapest, Bethesda, and Berlin and noted that three criteria must exist for information to be defined as open access:

1. the article must be available at no cost to readers;
2. the article may be read, referenced, and distributed by readers without permission of the author(s) or copyright owner(s); only appropriate notation regarding authorship is required;
3. the article must be placed in a repository that charges no fee, but has the goal of long-term preservation.

The work of Willinsky (2006) focused broadly on the open access movement, avoiding strict definitions of "open access." His theories were grounded in the principles of fostering and improving access—hinting at an ongoing process that calls for constant examination and resulting shifts in practice for what will most improve access to scholarship (p. 27–28).

Another important component of open access is the positive effect that it has on author citations. Authors are usually not paid for their journal submissions and, therefore, do not receive royalties. Traditional journal publishing models have the authors assigning copyright to the publisher. However, according to various studies, open access articles have higher levels of citation than non-open access. Lawrence (2001) found that articles with higher citation numbers within the DBLP bibliography were freely available online. Articles cited less frequently were usually not

open access. Antelman (2004) found similar results of higher numbers of citations for open access articles across the disciplines of mathematics, electrical and electronic engineering, political science, and philosophy.

Long-term feasibility of open access has not yet been proven since it is a relatively recent trend. As statistics emerge, policies will be reshaped or overhauled. Critics such as Stern (2005) have argued that open access models will not generate the same revenue as selling subscriptions. But the reality is that continually increasing journal prices are already losing publishers some revenue.

Creating open access journals allows for quality scholarship through a reputable channel—and for free to the reader. It is built on the democratic principle that access to information is a right, not a paid privilege. One notable discussion in the realm of open access is the rights of citizens to access federally funded research. The American Center for CURES Act of 2005 (S.2104) is a Senate bill requiring that results of research funded by the Department of Health and Human Services be deposited in an online repository that offers access within six months of publication in a journal. This is a much stronger version of a bill directed at the National Health Institute that merely *requested* open access. With citizens' tax dollars helping to fund research, it is only fair that a democratic society would foster access to the research's findings.

Outside of health research, open access is not such a clear picture. Nicholas and Rowlands (2005) found that of 100,000 authors who had recently published in a journal in the ISI database, only one in ten had published with an open access journal; more than half had not heard of open access. Universities, prompted by their cost-outraged library staff, are encouraging faculty members to investigate publication in open access journals (such as the ones in the *Directory of Open Access Journals*). Several individual advocates and advocacy groups have created Web pages and Web sites that are dedicated to promoting open access as the best response to overpriced journals. Content includes newsletters, links, brochures, and fliers to educate about the movement. The Scholarly Publishing and Academic Resources Coalition pages (www.arl.org/sparc) even offer an addendum for authors to add to their publishing contracts, informing publishers that they have retained the right to make the article freely available.

If I'm Not Paying, Who Is?

The wish to make information free does not make the significant journal publishing costs disappear. So what models exist for paying those costs? Suggestions abound for who should pay how much to promote open access. Most literature about open access refers to two main models—the green road or the gold road—terms popularized by Harnad et al. (2004) and Guédon (2004). The green road involves publishing with a journal that allows authors to self-archive their work for free public access. On the gold road, publishers require that authors pay a share of the publication costs, but make the entire journal freely available. Willinsky noted no fewer than ten “flavors” of open access, which are not mutually exclusive, that fall into the green or gold categories.

Three models of open access (again, not mutually exclusive) seem to have the most feasible underpinnings—subsidized, e-print archive, and/or delayed. In the subsidy model, professional

or scholarly societies, governments, or institutions provide sponsorships to allow for full access to a journal. *First Monday*, a peer-reviewed, strictly online journal has become a reputable source for scholarship about the Internet, funded by subsidies of various groups.

The e-print archive model has authors self-archiving materials (that will be published in subscription journals) in repositories underwritten by institutions or scholarly societies. Willinsky notes that the e-print archive arXiv.org is the hallmark of publishing and research in physics.

Under the delayed model, an embargo period of 6–12 months allows for eventual access, while maintaining the appeal of having the information immediately available by subscription. *Proceedings of the National Academy of Sciences (PNAS)* is one journal operating under this model; editor-in-chief of *PNAS* Nicholas Cozzarelli said of delayed open access, ““Not only has it not adversely affected us, it has benefited us by engendering loyalty among authors and reviewers”” (quoted in Rovner, 2005).

What Are the Challenges of Open Access?

Other models have been suggested and are in use, but do not completely answer the pricing problem or full access criterion. For example, an author fee framework asks authors to pay the publisher, usually between \$1500 and \$3000 per article, to cover the publisher’s costs. While many authors consider this fee an investment in making their names and research more widely recognized, the cost is high for one person. Some academic institutions cover this fee, some publishers agree to waive it, but many authors pay this fee themselves. This model seems to discourage frequent publishing, especially of new authors, and may also have the unintended result of longer articles, increasing the publishers’ processing and printing costs.

Some models grant only limited access, allowing full text of only some of the articles, or to only abstracts of all the articles. Neither of these models strictly meets the criteria for open access. In addition, controversy would doubtlessly arise over how to choose which articles should be full-text. Many databases offer abstract information and with more self-publishing on the Internet, highlights of article may be attained from blogs or Web sites.

Even the subsidized, e-print archive, and delayed models pose challenges. How many journals can be subsidized in a given discipline, given a limited number of societies within each discipline and each society’s limited budget? As more e-print archives emerge, what difficulties will arise in navigating them? What index and search features will help readers find what they’re looking for? And under the delay model, what time frame maintains relevancy while simultaneously encouraging subscriptions?

Answers to these questions (and many others) will require trial and error, some successes, and even a few failures. Fear of failure aside, the benefits of open access far outweigh the downfalls of it and of the current journal model. Open access is not just a plot to make information free for the benefit of the reader. It is also a model that will allow journal publishing to keep its audience and participate in the creation of quality products.

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