



## *ARL Bimonthly Report 220* **February 2002**

### **Where Does the Free Online Scholarship Movement Stand Today?**

by Peter Suber, Professor of Philosophy, Earlham College, and Editor, Free Online Scholarship Newsletter

There's a lot happening these days to create free online access to peer-reviewed scientific and scholarly journal articles. Here are some of the more significant trends:

- More disciplines are setting up preprint archives.
- More open-access peer-reviewed journals are popping up in every field. Most of these are online-only. But journals like *BMJ* [*British Medical Journal*] and *Cortex* show that even the costs of a print edition do not foreclose the possibility of free online access to full text.
- More universities are supporting institutional self-archiving for their research faculty.
- More priced journals are experimenting with ways to offer some online content free of charge, and experimenting with ways to cover the costs of providing this kind of free access.
- Editorial "declarations of independence" against publishers who limit access by charging exorbitant subscription prices are becoming more common. See my list at <http://www.earlham.edu/~peters/fos/lists.htm#declarations>. The most recent was last October, when 40 editors of *Machine Learning* issued a public letter explaining their resignation from the journal. One of the editors, Leslie Pack Kaelbling, then launched the *Journal of Machine Learning Research*, which MIT Press agreed to provide to readers free of charge.
- More scholars are demanding that journals offer free online access to their contents. The Public Library of Science, <http://www.publiclibraryofscience.org/>, has collected more than 29,000 signatures from researchers in 175 countries in the six months since its launch.
- More white papers, task forces, projects, and initiatives are endorsing the Open Archives

Initiative. The two most recent are the International Scholarly Communications Alliance, <<http://makeashorterlink.com/?A15D6226>>, and the Budapest Open Access Initiative, <<http://www.soros.org/openaccess/>>.

- More initiatives are acknowledging that progress requires the launch of new open-access journals. Both the Public Library of Science (PLOS) and the Budapest Open Access Initiative (BOAI) have come to this conclusion.

One of the most interesting trends is for priced journals to experiment with free online scholarship (FOS). In the February issue of *Information Today*, Derk Haank, the CEO of Elsevier, said that his company has the same goal as the PLoS, <<http://www.infotoday.com/it/feb02/kaser.htm>>. Even though this is a very misleading overstatement, Elsevier is making some notable experiments in FOS. For example, it owns ChemWeb and the Chemistry Preprint Server, which both provide free access to all their contents. It allows authors to self-archive preprints, even if not postprints. Its science search engine, Scirus, not only searches Elsevier journals, but a growing number of FOS sources such as Medline, BioMed Central, and arXiv. Finally, Elsevier has started distributing science books through ebrary, which allows free online reading of full texts, and charges users only for copying and printing.

In general, *Nature* offers free online access only to tables of contents, abstracts, the first paragraphs of selected articles, and other special features. Nevertheless, *Nature* hosted an important online debate about FOS, <<http://www.nature.com/nature/debates/e-access/>>, and of course it provides free online access to the contributions themselves. *Nature* has also agreed to be a partner in the Alliance for Cellular Signaling [AfCS], <<http://www.cellularsignaling.org/>>, which will put all the research discoveries that directly result from its funding or reagents into the public domain. Papers that survive AfCS peer review, will be considered-and be retrievable-as papers published in *Nature*. (AfCS will launch in the spring or summer of this year.)

Even though a growing number of journals like *BMJ* and *Cortex* offer FOS without half-measures or experiments, these experiments by Elsevier and *Nature* are nevertheless promising. They show a recognition that scientists and scholars are demanding open access and that this demand is legitimate and increasingly realistic. Moreover, of course, every journal or archive that moves to free online access for even part of its content is enlarging the absolute quantity of FOS, enlarging the proportion of FOS relative to the entire body of scholarly publications, changing the expectations of future authors and readers of research literature, and adding to the competitive pressure on journals that limit access to paying customers.

One of the most important FOS initiatives to date is the Budapest Open Access Initiative, which was launched on February 14. (Full disclosure: I am one of the drafters.) BOAI is important for several reasons. It endorses "parallel processing" or multiple strategies. It supports self-archiving and the launch of new open-access journals, two compatible and complementary approaches that have too often been pursued in isolation from one another. Second, it applies to all academic fields, not just to the sciences. Third, it is accompanied by a

detailed FAQ, <<http://www.earlham.edu/~peters/fos/boaifaq.htm>>, no small thing for an initiative whose primary obstacle is misunderstanding (more on this below).

Finally and above all, BOAI brings serious financial resources to the cause. The long-term economic sustainability of FOS is not a problem. We know this because creating open access to scholarly journals costs much less than traditional forms of dissemination and much less than the money currently spent on journal subscriptions. The only problem is the transition from here to there. The BOAI is especially promising because it understands this and mobilizes the financial resources to help make the transition possible for existing journals that would like to change their business model, new journals that need to establish themselves, and universities that would like to participate in self-archiving. George Soros' Open Society Institute has pledged \$3 million for this cause and is working to recruit other foundations that can add their resources to the effort.

There are three recurring objections to FOS initiatives, and all are based on misunderstandings. Because I've already heard all of them raised against the BOAI, let me run through them quickly. One is based on copyright, one on peer review, and one on funding.

1. The first objection is that we are advocating the reform, abolition, or even the violation of copyright. Not true. We want to use copyright to support open access. The copyright holder has the right to make access open or restricted. We want to put copyright in the hands of authors or journals that will use it to authorize open access. Copyright reform may be desirable for other reasons, but it is not at all necessary for the complete realization of FOS—and we are too busy to fight unnecessary battles.
2. The second objection is that we want scientists and scholars to post their research articles to their home pages and bypass peer review. Not true. The primary body of literature for which we want open access consists of peer-reviewed research articles. Peer review is essential for science and scholarship, and entirely compatible with open access to the papers it vets and validates. Again, peer review reform may be desirable for other reasons, but it is not at all necessary for the complete realization of FOS.
3. The third objection is that we think open-access publications costs nothing to produce, or that we have no way to cover these costs. Not true. We know that peer review costs money. Open-access journals will have expenses beyond peer review as well, though not many. Taken together, however, these expenses are far lower than for print journals and far lower than for online journals that want to block access to non-subscribers. But they are non-zero, and more costly than simply posting articles to one's home page.

Here the misunderstanding is corrected once we acknowledge that open-access journals will not be free to produce, and therefore will need some revenue or subsidy in order to be free for readers. However, once correcting the misunderstanding, we still face the objection that we have no way to cover these costs. Our full reply to this objection has several parts. Here's a sketch. First, the scope of the FOS movement is limited to scholarly journal articles. We pick this focus not because these articles are useful (as if everything useful should be free), but because they have the relevant peculiarity that their authors do not demand payment.

Moreover, in most journals and most fields, editors and peer reviewers do not demand payment for their work either. Second, the costs of open-access publication are significantly lower than the costs of print publication or limited-access online publication. So the required subsidy is significantly smaller than the budget of the average contemporary journal.

Third, we have a general revenue model for open-access journals. The basic idea is to charge for disseminating articles rather than for accessing them. There are many variations on the theme, depending on who pays the cost of dissemination (which includes the cost of peer review). A model that will work well in the natural sciences, where most research is funded, is to regard the cost of dissemination as part of the cost of research, to be paid by the grant that funds the research. BioMed Central is a for-profit provider of FOS whose variation on this theme is to charge authors, and let authors make whatever arrangement they can to obtain the funds from their grants or employers.

The economic feasibility of FOS is no more mysterious than the economic feasibility of television or radio. In both cases, funders pay the costs of dissemination so that access will be free for everyone. In the case of public television and radio, the funders are volunteers of means and good will. In the case of commercial television and radio, they are primarily advertisers moved by self-interest. The variations on the theme matter less than the general approach to pay for dissemination so that access is free. There are many successful and sustainable examples in our economy in which some pay for all, and those who pay are moved by generosity, self-interest, or some combination. Either way, they willingly pay to make a product or service free for everyone rather than pay only for their own private access or consumption. This funding model, which works so well in industries with much higher expenses, will work even better in an economic sector with the nearly unique property that producers donate their labor and intellectual property, and are moved by the desire to make a contribution to knowledge rather than a desire for personal profit.

Here are two trends that will guide the future of the FOS movement. On the one hand, the scholarly communication crisis (also known as the serials pricing crisis), which has long troubled and mobilized librarians, is starting to trouble and mobilize scientists and scholars themselves. On the other hand, this is happening much too slowly and incompletely. Most scientists and scholars are still oblivious to the magnitude of the crisis and even its existence. (A good introduction to the data and issues can be found here [on the Create Change Web site], <<http://www.createchange.org/faculty/issues/quick.html>>.) This matters because the most important means to this very important end are within the reach of scientists and scholars themselves, and do not depend on legislatures or markets. One of the most effective ways that you can help the cause today is to educate colleagues about the seriousness of the problem and the beauty of the solution.

*ARL thanks the author and the editor of Cortex <<http://www.cortex-online.org/>> for permission to reprint this article, which originally appeared in Cortex 38, no. 2 (April 2002).*

**The Free Online Scholarship Newsletter: How the Internet is Transforming**

## Scholarly Research and Publication

The *Free Online Scholarship Newsletter* – edited by Peter Suber, Professor of Philosophy at Earlham College – shares news and discussion on the migration of print scholarship to the Internet and on efforts to make this scholarship available to readers free of charge. Features include:

- **Newsletter archive** – Read past issues.
- **Discussion forum** – Read postings and (if you subscribe) post your own.
- **Sources for the FOS Newsletter** – Where the editor finds FOS news and where you can find news on related topics.
- **Guide to the FOS Movement** – Brief, interlinked definitions of the terminology, acronyms, initiatives, standards, technologies, and players in the FOS movement.
- **Timeline of the FOS Movement** – Chronology of major events in the movement.
- **FOS Lists** – Clusters of FOS-related sites and information.
- **User-submitted links** – See what others have submitted and submit your own.
- **Feedback form** – Send your thoughts and comments.

*Free Online Scholarship Newsletter*

[<http://www.earlham.edu/~peters/fos/>](http://www.earlham.edu/~peters/fos/)

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