The Free Online Scholarship Movement: An Interview with Peter Suber

The Technology Source Archives
at the University of North Carolina

SEPTEMBER/OCTOBER 2002 // COMMENTARY

The Free Online Scholarship Movement: An Interview with Peter Suber

by James L. Morrison and Peter Suber

Note: This article was originally published in *The Technology Source* (http://ts.mivu.org/) as: James L. Morrison and Peter Suber "The Free Online Scholarship Movement:
An Interview with Peter Suber" *The Technology Source*, September/October 2002. Available online at http://ts.mivu.org/default.asp?show=article&id=1034. The article is reprinted here with permission of the publisher.

Peter Suber has an unusual background. He has a PhD in philosophy (Northwestern), a law degree (Northwestern), and has worked as a research associate in an artificial intelligence lab (Indiana). He is currently a professor of philosophy at Earlham College, where he also teaches computer science and legal studies. One of his research interests centers on the migration of scientific and scholarly literature from print to the Internet. He is a leader in the free online scholarship movement; he founded The Free Online Scholarship Newsletter, which focuses on making scientific and scholarly literature available online to readers free of charge.

James Morrison [JM]: Peter, what stimulated your interest in free online scholarship?

Peter Suber [PS]: I've been putting my own scholarship on the Internet, and organizing other people's scholarship, since 1995. It was obvious early on that the Internet had many very attractive advantages over print. Works could be searched, copied, saved, forwarded, printed, interlinked, and perhaps above all, disseminated to a huge audience at virtually no cost. It wasn't difficult to imagine that scholars would take advantage of these exciting new opportunities. The only

questions were how soon, how extensively, and whether the new forms of communication would supplement the old ones or supplant them.

You could say that my interest came in two stages: first, when I realized what an obvious boon the Internet was to scholarly communication, and second, when I realized that most scholars and most scholarly publishers were slow to recognize this fact.

JM: What are the various forms of free online scholarship?

PS: There are many ways to divide the genus into species. Some free online works are peer-reviewed and some are not. Some are books and some are journal articles (the kind that matters most to me are peer-reviewed journal articles and their preprints). There are even many new genres for scholarship that didn't exist in print, such as multimedia presentations, interactive charts, and weblogs. Some works areinteractive and some are not. Some are static (unchanging after publication) and some are dynamic (periodically updated or modified). Some are in the public domain, some are copyrighted, and some have more exotic licenses like copyleft,trans-copyright, open content, and author-designed licenses. Some reside at journal or publisher sites, some at university or library sites, some in independent archives, and some at personal home pages. Some are contained in interoperable collections (to make life easier for readers and search engines) and some are not. Some reside in the deep Internet (invisible to ordinary search engines) and some in the surface Internet. Some are published by unpaid volunteers, some by non-profit organizations, and some by for-profit companies. Some are also published in a print edition and some are not.

I'm not even listing the half-measures by which, for example, a journal only makes tables of contents or abstracts freely available, only selected articles, only the current issue, or only sufficiently old issues.

For most purposes, the two major categories are open-access journals and open-access archives. Open-access journals are like traditional journals except that they provide free online access to their contents. For example, they employ editors and subject submissions to peer review. Because they do not charge readers or their sponsors for access, they need to cover their costs by charging authors or their sponsors for dissemination, or by some kind of institutional subsidy.

Open-access archives don't provide peer review and simply make deposited papers available to Internet users. They may belong to institutions (like universities) or disciplines (like economics). They tend to accept both unrefereed preprints and refereed postprints. Almost always nowadays they conform to the standards of the Open Archives Initiative (OAI), which makes the many separate archives interoperable. When the many separate archives conform to a common standard, then data services like search engines can treat them as if they constituted one grand virtual archive; users needn't know which archives exist, where they are located, or what they contain. OAI-compliant archives can be created and maintained with free software from the University of Southampton.

JM: What are the problems in establishing free online scholarship?

PS: Free online scholarship (FOS) is within the reach of scholars themselves. We needn't wait for markets or legislation, and we needn't beg others (like commercial publishers) to provide it for us. So in that sense, the main problem is that scholars need to be awakened to this beautiful possibility. Scholars are slow to pick up on the possibility for many reasons. They are focused on their teaching and research. They tend to be unfamiliar with the crisis in libraries that makes this solution especially compelling. Many think there is no problem at all and complacently reply to FOS initiatives by saying, "Don't fix what isn't broken." Some understand the problem but misunderstand the solution, falling victim to some damaging myths about FOS—for example, that it bypasses peer review, violates copyright, or costs money that can't be found. There are other impediments, but the main ones are right here at home.

Commercial publishers are not the problem; we can achieve FOS without their cooperation. The more we succeed, however, the more we can expect them to follow suit or lower their prices. Our goal is to create open access, not to put anyone out of business, though we know that success will put competitive pressure on many existing publishers.

In the May 15 issue of my newsletter, I discuss eight reasons why progress toward free online scholarship has been slower than it could have been (scroll to the second story).

JM: We know that online publication requires funding. How do you propose to support this activity across disciplines?

PS: First of all, creating and maintaining an OAI-compliant open-access archive requires little or no funding. The software is free, the labor is trivial, and universities can donate the server space without noticing.

But open-access journals have expenses. The main one is peer review. One way to cut costs is to take advantage of increasingly sophisticated software that automates the clerical work of an online journal: processing online submissions, tracking manuscripts, tracking referees, converting file formats, preparing files for the Web, posting them online, generating statistics (e.g., on acceptance rates, referee loads, and throughput times), and facilitating communication among editors, referees, and authors. Remember that for most journals in most fields, the non-clerical work done by editors, reviewers, and authors is donated. But even after taking steps to keep their costs down, open-access journals will still need some revenue, or a subsidy, to cover those costs. The general funding model is for journals to charge authors or their sponsors for the costs of dissemination. That way, they needn't charge readers or their sponsors for access. The dissemination fee for a journal article might be paid by the author, but would more likely be paid by the author's employer (university or laboratory) or funding source (foundation or government). Some publishers can supplement dissemination fees with priced add-ons to the free literature, such as current awareness services, customization, or a print edition.

In the long run, all institutions involved will pay less under this model than under the current model. Universities and their libraries will pay less because a growing number of their journals will be free of charge. Publishers will pay less because online dissemination costs much less than traditional dissemination. Moreover, priced journals will cost libraries and other subscribers less. Because they can't compete for long against free journals, either they will fold, convert to an open-access business model, or reduce their prices. If they don't, more and more libraries will cancel them.

JM: What are the incentives for authors and for-profit publishers to support free online scholarship?

PS: For authors, the answer is simple: a free online journal or archive gives their work a much larger audience, and therefore much greater impact. This impact is enhanced by the fact that powerful tools to help researchers find new works relevant to their research favor free online works over works hidden behind passwords or secluded in print. Since scientists and scholars write for impact and not for money, this advantage of open access is critical.

If the question is suggesting that authors must sacrifice something, like prestige, in order to get the benefit of increased readership and impact, then that is incorrect. The quality and prestige of a journal do not depend on its cost (free or priced) or medium (online or print). Free online journals can have eminent editors, knowledgeable reviewers, and first-rate authors, all the indicia of quality that over time give a journal prestige.

The incentive for for-profit publishers is profit. At the moment, the great experiment here is BioMed Central (BMC), the largest for-profit publisher of open-access journals. Readers get full-text access free of charge. BMC sells very attractive add-ons to the free literature, such as the Faculty of 1000 recommendation service. Authors or their sponsors pay dissemination fees. These fees are waived for authors from developing countries or authors employed by institutions paying for an annual membership. These memberships have attracted a growing number of significant scientific organizations, such as Harvard and Columbia universities, the Memorial Sloan-Kettering Cancer Center, the National Institutes of Health, and the World Health Organization. If BMC succeeds, we can be sure that more for-profit and non-profit publishers will imitate its business model.

There will always be more profit in charging exorbitant prices from the protected position of a near-monopoly publishing conglomerate. But there is nevertheless more than enough revenue in open-access publishing to offset the costs.

JM: Where do we as an academic community stand with migrating literature from print to the Internet? Does this vary by discipline?

PS: It varies enormously by discipline. Physicists are way ahead of everyone else. There is free online access to nearly 100% of physics papers today, at least as preprints. The numbers are also very high for computer science, biomedicine, chemistry, and economics. The humanities are well behind, probably because less of their research is funded and more of their publishers are non-profits.

Apart from observations like this, we can list the factors that distinguish disciplines from one another for this purpose. But we have no good way of measuring the percentage of a discipline's published literature that is available online free of charge. An army of volunteers could take the measurement, but so far no army of volunteers has been mobilized to do so for any discipline. Software cannot do the job unless supplemented by human labor to tally the print-only literature inaccessible to software. Moreover, the measurement would have to be

repeated every month to capture this very dynamic moment in history when publishers of all kinds are experimenting with ways to take advantage of the Internet.

JM: How do you see the future of free online scholarship unfolding?

PS: The long-term economic sustainability of FOS is not in doubt. But there are special problems associated with the transition from here to there, and I'm not surprised that we're facing these transition troubles. But in fact, we've made remarkable progress since the birth of the Internet (e.g., see my timeline of the FOS movement). Because progress through the difficult transition has been steady and accelerating, I'm confident that we're not far from reaching a critical mass, or a tipping point, at which priced academic journals will be on the defensive. The day is not far off when most scholarly authors and readers will expect open access as a matter of course. Journals that don't provide it may survive, but they will be resented by authors for limiting their audience and by readers for limiting their access.

I also expect that software to help readers find relevant literature will become more and more sophisticated over time, roughly matching the advances in artificial intelligence. Readers frustrated by information overload will come to rely on these sophisticated tools. Works of scholarship invisible to these new-generation searching, recommendation, and evaluation tools will be invisible to researchers. Some of these tools will be proprietary and will only search commercial databases. But they will have open-source competitors that search the much larger public Internet and offer their services free of charge. As we move further into an era in which serious research is mediated by sophisticated software, commercial publishers will have to put their works into the public Internet in order to make them visible to serious researchers. In this sense, the true promise of FOS is not that scientific and scholarly texts will be free and online for reading, copying, printing, and so on, but that they will be available as free online data for software that acts as the antennae, prosthetic eyeballs, research assistants, and personal librarians of all serious researchers.

JM: Many thanks, Peter, for informing us about this important movement.