

gpgNet

the global network on global public goods

Reflections on the Debate

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Co-hosted by the Open Society Institute

Topic #8: Open Access to Scholarly Publications: A Model for Enhanced Knowledge Management?

Discussion Open from 20 Sep to 4 October 2004

The gpgNet Discussion Forum (www.gpgNet.net) provides a platform for carrying out public debates on key aspects of public goods - local, national, regional, and global. The views expressed in the forum do not reflect the official positions of any institution or organization, unless otherwise explicitly noted.

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The eighth Global Network on Public Goods [gpgNet] discussion forum addressed the topic of open access to scholarly publications. The forum ran from September 20, 2004, through October 4, 2004, and included over 670 registered participants, who contributed approximately 140 electronic postings to the discussion. This report is not intended to be a summary of all that transpired in the forum, but instead addresses several topics that arose and seemed to be of relatively central importance to the debate.

I. Topical Overview

As the recent gpgNet Web Forum made clear, a growing and diverse global constituency argues that the world's scholarly literature is insufficiently accessible, and that the problem is remediable. Electronic publishing and the Internet, itself, seemingly offer the promise for academic and scientific findings to be made available at little or no cost to users around the world. However, the relatively unfettered dissemination of scholarly communications is currently impeded by the explicit restrictions of intellectual property regimes, and the de facto restrictions of extremely high prices for peer-reviewed scholarly journals (even in their online incarnations). While several initiatives have made strides to remedy the latter problem in select, extremely impoverished, nations (most notably the Health InterNetwork Access to Research Initiative [HINARI] and Access to Global Online Research in Agriculture [AGORA]),¹ there remains a need for additional efforts to expand access to the content of these publications. The knowledge that is produced by scientists and scholars around the world is not yet the truly global public good that it could be.

International bodies have begun to recognize formally the need to promote and support the cause of open access to the articles in scholarly journals. The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities has been signed by dozens of the leading scientific institutions in the world.² The World Summit on the Information Society's Declaration of Principles supports a similar end, in the passage:

We strive to promote universal access with equal opportunities for all to scientific knowledge and the creation and dissemination of scientific and technical information, including open access initiatives for scientific publishing.³

The international community, in other words, has joined what began more than a decade ago as a collection of globally dispersed scientists and scholars in identifying the problem—unnecessarily restricted access to the body of scholarly knowledge published in peer-reviewed journals—and potential solutions.

¹ See <http://www.healthinternetwork.org/> and <http://www.aginternetwork.org/en/>

² See <http://www.zim.mpg.de/openaccess-berlin/berlindeclaration.html>.

³ See <http://www.itu.int/wsis/docs/geneva/official/dop.html>, paragraph 28.

The imperatives for open access to scholarly journal articles can be framed in distinctly practical terms. These publications often represent the sole tangible product of years of academic research. Open access to the academic literature would likely generate a number of positive outcomes for scholars and the public: it could expand the pool of researchers effectively able to push the frontiers of their fields; in so doing, it could accelerate the global rate of scholarly, scientific, and medical discovery. In a sense, the widest possible dissemination of a scientist's or scholar's findings is the means by which her funder (her institution or another financial backer) can maximize the impact of its investment in knowledge creation.

A mandate for the unfettered distribution of research results, some have argued, would amount to nothing more than a reasonable extension of existing institutional policies requiring the publication of academic findings. Faculty around the world are already given strong incentives to publish their work in scholarly journals, rather than merely lock it away in a filing cabinet. [They are not paid directly for their publications, but give their written work away for (among other reasons) the promise of prestige and professional advancement associated with an article appearing in a selective venue.] Similar incentives for faculty to provide open access to their peer-reviewed articles via the Internet could do for the works' online availability what mandates of "publish or perish" have done for their creation—and there are today over two million scholarly articles published each year, worldwide.

II. Strategies for Reform

Two mutually compatible solutions to the problem of needlessly restricted access to scholarly journal articles are envisioned. One strategy (often dubbed "open access archiving") is for authors to deposit their own published articles in online repositories operated by the institutions at which they conduct research. Once an article has passed peer review and been accepted for publication by a scholarly journal, authors are generally required to sign over the intellectual property rights to their work to the journal's publisher—but the vast majority of publishers nevertheless allow authors to post the "final accepted version" of their manuscript to their "institutional repository." As long as those permissions remain in place, the only obstacles to nearly ubiquitous open access (to articles accepted for publication by peer-reviewed journals) are a) the relative dearth of international academic institutions that maintain such repositories, and b) and perhaps more significantly, authors' inertial tendencies not to deposit their own manuscripts in existing repositories.

The second strategy, open access publishing, has the advantage of offering a more *prima facie* economically sustainable system for providing open access to journal articles—which typically generate a range of expenses for publishers, both in the course of their overseeing the peer review process, and in the stage between a manuscript's "acceptance" and its online publication. Open access publishers make their journals' scholarly articles available for free online, themselves (both on their own Websites and in centralized Internet archives), rather than leaving the task to authors. Because they do not generate revenues by charging fees to readers, open access publishers find alternative means of recovering their expenses and earning profits. A number of different economic models to support open access publishing are already being

utilized around the world, including institutional subsidies for journals' operating expenses, and more prominently, author-side charges for publication in lieu of user-side charges for access to articles. In the latter system, authors do not pay the fees out of pocket, but direct payments to open access publishers through their research grants or through institutional funds.

A notable selling point of this strategy is the copyright arrangement that many open access publishers employ with their authors. The definition of "open access" in the Berlin Declaration, among other formal statements of support for the goal, includes the stipulation that genuinely "open access" articles are those whose prospective digital reuses are effectively unlimited by legal constraints. Several prominent open access publishers apply precisely such terms of intellectual property to the works in their journals, but virtually no "subscription-based" publishers do; the articles they allow to be self-archived by authors are typically not subject to any other legal reuses.

In a broad view, both strategies can boast of many strengths and a few weaknesses. The prospect of a comprehensively "open access world" of scholarly journal articles brought about through mandates for author self-archiving is generating a reaction from the publishing industry, which has suggested that permissions for such postings to institutional repositories might be revoked once subscription revenues began to be adversely affected by the free online availability of a substantial portion of a journal's articles. Open access publishing skirts the problem of relying on the magnanimity of publishers, by uncoupling revenue streams from access policies—but the author-side payment model does require some form of subsidy for authors in under-funded institutions, countries, and fields of research. Virtually all open-access publishers using the author-side-payment business model do, as a standard operating procedure, waive charges for publication for authors who cannot afford the fees. The point stands, however, that the costs of processing such manuscripts ultimately need to be subsidized through other sources.

Nevertheless, both open access archiving and open access publishing might reasonably be endorsed and pursued by the full range of stakeholders in scholarly research: governments, academic institutions, scientists and other scholars, academies of science and the humanities, other scholarly associations, and, perhaps preeminently, funding bodies. As long as many "subscription-based" publishers allow open access to the articles in their journals through authors' self-archiving their own works, institutions and funders of research must provide the infrastructure and incentives for authors to do so. Additionally, the international community must continue to facilitate solutions to the economic barriers that some open access publishing models pose, or potentially pose, for authors (as organizations like the Open Society Institute have, through directed grants programs).

III. Exploring Next Steps

While open access to scholarly journal articles would substantially benefit developing countries, the steps necessary to achieve the goal are not limited to policy changes, or funding programs targeted at institutions, in those nations. Allowing for the relatively unfettered bi-directional transmission of scholarly knowledge between the developed and the developing world would call for stakeholders in virtually all countries and from inter-governmental agencies to undertake initiatives to remedy the global imbalance in access to academic findings. Those stakeholders

include, but may not be limited to, governments, their funding agencies, public and private academic and research institutions, private philanthropies, international organizations of scientists and scholars, and international organizations of policy-makers. Ultimately, the widespread adoption of both open access archiving and open access publishing depend on individual scholars taking action, themselves, to make their own works freely available online—but individuals will likely not take action en masse absent appropriate incentives and policy frameworks.

In light of this, we explore in the following section possible actions that institutional policy-makers could take. Such actions could include, but may not be limited to, committing to investments in technological infrastructure, funding programs such as those described below (in recommendations two and four), and—perhaps most importantly—adopting policy changes. Institutions that have already expressed support for open access to scholarly findings, in particular, could implement the policies that logically follow from their declarations.

1. Public, private, and inter-governmental agencies that fund research, as well as academic and research institutions, could:

a. Require as a condition of grants and employment contracts that published articles resulting from ensuing scholarly investigations be deposited immediately upon publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving, either by:

i. authors' self-archiving the works in institutional repositories or other archives compliant with accepted technical standards;

or

ii. authors' publishing the works in open access journals (which by most definitions are necessarily deposited in full in at least one established free-to-use repository).

b. Require as a condition of grants and employment contracts that such articles be subjected to terms of intellectual property that permit their unrestricted reuse and redistribution in any medium for any purpose, subject only to the condition of proper attribution of authorship and the works' initial venue of publication.

2. Agencies that fund research, in the developing and developed world alike, could dedicate money and personnel to creating repositories for the full texts of published articles resulting from investigations they support. The repositories should meet accepted technical standards, and should be free to all users.

3. Agencies that fund research, public universities, academies of sciences and humanities, and other relevant institutions in the developing and developed world could explicitly articulate that

investigators who publish in open access journals will not sacrifice prospective professional advancement (by eschewing publications in established, subscription-based journals that are traditionally used to evaluate faculty), but will be rewarded with funding, tenure, and other gains, in proportion to the quality and significance of their work.

4. In order to allow authors from developing nations, as well as those working in poorly funded fields and institutions, to make ongoing use of open access journals, an international fund could be established to reimburse such journals for publication-fee waivers granted to such authors. The fund could be seeded and maintained by a consortial effort of international institutions and could attract funds from those organizations as well as from governments, philanthropic organizations, commercial entities, and other organizations and individuals dedicated to the open exchange of scientific and scholarly discoveries.

5. Formal statements of support for open access to scholarly findings could be amended to include timetables for the implementation of policies promoting the goals they advocate. For example, the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities could require or request that all signatory institutions mandate open access to articles produced by their faculty and researchers by a specific date. Similarly, statements on access to information from the World Summit on the Information Society [WSIS], the International Council for Science [ICSU], and other relevant bodies could also be elaborated to include deadlines and specific prescriptions for actions to catalyze the widespread adoption of open access publishing and open access archiving in scholarly communication.