

January 21, 2010

Executive Office of the President
Office of Science and Technology Policy
Attn: Open Government Recommendations
725 17th Street
Washington, DC 20502

The University of Minnesota Libraries write in response to the request for information issued December 9, 2009, by the Office of Science and Technology Policy regarding public access policies for science and technology funding agencies across the federal government. We fully support the government's move to enable public access to journal articles reporting on research funded by these agencies. The proposed policy is consistent with the University of Minnesota's land grant mission, and the policy's implicit principles are captured in the University's Board of Regents Policy on Copyright: "[T]he University encourages faculty and students to exercise their interests in ownership and use of their copyrighted works in a manner that provides the greatest possible scholarly and public access to their work."

RATIONALE

The history of scientific discovery is rich with examples of breakthroughs made possible by building on previous research, and a more robust and enabling information infrastructure – content and associated access and preservation systems – will be required to ensure contemporary advances in health, technology, agriculture, and a host of science and technology domains. Currently, access to the record of research, a critical element of information infrastructure, is a very real problem. Despite the size and breadth of academic programs supported at the University of Minnesota, researchers and students do not have direct access to all of the scholarly literature they need. Further, the subset of journals that is accessible via library subscriptions varies widely from institution to institution, creating inequities and also barriers for collaboration in the context of global research communities.

Economic models and costs for the scientific literature are also consistent barriers. *Library Journal*, in its annual Periodicals Price Survey, predicted that in 2010 journal prices would increase by an average of 7.6%. Cost increases of this magnitude (and often much higher) have challenged institutional and library budgets for decades, and the rise of electronic formats and associated licenses have not diminished these cumulative increases. In the context of flat or declining resources to support library subscriptions, access to research literature will be further constrained.

Scientific publishers cite the legal provisions and well established protocols for interlibrary loan as alternatives to open access. However, as libraries move to electronic journal subscriptions, licenses often prohibit the use of the electronic source for interlibrary loan services. Another option offered by some commercial publishers (e.g., Springer Open Choice), allows individual authors to pay for their individual articles to be made freely available. In these cases, the individual author pays and the library likely also pays for a complete subscription to the journal. While the individual articles may be "open," they are embedded in the context of the journal's licensed system, a less than optimal context for access.

USER BASE

Currently users of research journals are primarily researchers at institutions that can afford the costs of these publications, typically provided by the library's institution-wide license. But there are many more individuals and groups, who could make productive uses of this research, that do not now have access. These include populations that have rarely had access – smaller colleges and universities, research centers, and public libraries and their users.

Some in the publishing industry claim that the general public would be confused by freely available peer-reviewed literature on the web. Biomed Central has refuted this argument, using the medical literature as its example: *“Can it really be beneficial for society as a whole that patients should have access to all the dubious medical information on the web, but should be denied access to the scientifically sound, peer-reviewed research articles? [...] [P]atients suffering from diseases are understandably motivated to put in the effort to learn more about their conditions, as the success of patient advocacy groups in the USA has shown. Patients absolutely should have the right to see the results of the medical research that their taxes have paid for.”*

ROLES OF AUTHORS, LIBRARIES, UNIVERSITIES

Most scholarly content is produced and peer reviewed by individual researchers within academic institutions, and the majority of journals are also edited by faculty. In most cases these individuals receive no compensation for these substantial contributions. A recent study conducted at the University of Minnesota-Twin Cities campus identified over 550 faculty with editorial roles for over 750 publications. Above and beyond the creation of the research articles, these review and editorial functions represent significant contributions to the ecosystem of publishing.

In addition to acquiring subscriptions and licenses to the research literature, many academic libraries also maintain institutional open-access repositories to preserve and make available the scholarly output of the institution's researchers. Libraries are champions of broad access to the scholarly literature as a public good, not only preserving such resources for the long term but also teaching researchers and their students how to find research by others. Further, research librarians play a vital role in assisting faculty in depositing works in institutional, domain, or federal repositories. There is also growing investment from the library community in the development of domain repositories and virtual communities. At the University of Minnesota, our decade-old repository for applied and agricultural research, *AgEcon Search*, represents a longstanding institutional commitment to providing access to this global research literature base. Notably, *AgEcon Search* also represents publisher partnership, including publications deposited by society/association publishers within the field.

One of NSF's cyberinfrastructure priorities has been the development of virtual communities, fully functional online environments that comprise the content, tools, and services to facilitate research within global research communities. Libraries are also beginning to play a role in this arena as well. The University of Minnesota, for example, has taken the lead in launching *EthicShare*, a virtual community for Bioethicists. *EthicShare* provides an online service that harvests distributed content and enables collaboration with discipline-sensitive tools. Created as partnership between the Libraries and the scholarly community, it offers an example of emerging new models to support research communities that span institutional boundaries.

IMPLEMENTATION CHOICES: VERSIONS AND EMBARGO PERIODS

Current models for open access employ varying standards for what version of the article is deposited in an open access venue. Such variation introduces confusion in the scholarly record with respect to versions of each paper. Standardizing on the final published version of an article for open access deposit is preferable and will ensure that users are reading and citing the same version, one that includes all tables, graphics, and data sources.

Currently, embargo periods between the time of publication and the time of open access deposit also vary. While immediate free access upon publication is ideal, there is justifiable concern within the publisher community that such ready open access would have a negative financial impact and reduce their subscriber base. To address this concern, public access policies can allow for an embargo period before making articles publicly available. The embargo period should be consistent across agencies, to reduce author and user confusion. A six month embargo would harmonize U.S. policy with those already in place in Canada, the United Kingdom, and

the European Union while better serving the needs of scholars and the public. There is now evidence that shorter embargo periods – even as short as two or three months – do not prompt libraries to cancel journals. The length of the maximum embargo period could be revisited over time as more evidence becomes available, with the goal of providing more immediate access to research information while taking into account true financial implications for publishers.

To ease the burden of compliance by grantees and to reduce costs, a central consolidated repository using open standards and designed for interoperability with other repositories would be ideal. Agency-specific repositories would introduce confounding complexity, particularly given the model of multiple funding sources that is not uncommon for research. Less ideal, would be to rely upon existing repositories (institutional, consortial, or disciplinary). Experience has shown that interoperability among repository systems can be difficult, and consolidation would ensure interoperability, consistency of deposit processes, and uniform preservation practices. The latter is imperative to ensure long term access.

ENHANCING USABILITY

A number of document and system requirements would further access and preservation to the scholarly record. Standard document formats and metadata tagging using standard schemas and controlled vocabularies will ensure that articles will be easily discoverable by web search engines and searchable across repositories. Persistent URLs will ensure that readers in the future will still be able to retrieve articles that are cited now. Publicly available statistics on article downloads would provide useful data for assessment. Making the Applications Programming Interface (API) available would spur further valuable development within the Internet community.

Two years of experience with the National Institutes of Health mandate has shown that requiring deposit is more successful than making it optional. With an optional deposit system, NIH averaged about 1000 submissions a month in the year before the NIH mandate went into effect in April 2008; now deposit hovers at about 5000. We strongly encourage adoption of a mandatory model across federal agencies, creating consistency in requirements for researchers and predictability of access for the research and the general user communities.

Thank you for the opportunity to provide input into this important process. The benefits of open access and associated infrastructure offer significant promise for the future of discovery and advancement in science and technology.



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