Response to
Request for Information: Public Access to Peer-Reviewed Scholarly Publications Resulting From Federally Funded Research

From
Shirley Baker, Vice Chancellor for Scholarly Resources and Dean of University Libraries, Washington University in St. Louis

Washington University is a member of the Scholarly Publishing and Academic Resources Coalition (SPARC) and the Coalition of Open Access Policy Institutions (COAPI). Both who will be submitting extensive and heavily referenced responses. My comments will be less formal.

Comment 1: Are there steps that agencies could take to grow existing and new markets related to the access and analysis of peer-reviewed publications that result from federally funded scientific research? How can policies for archiving publications and making them publicly accessible be used to grow the economy and improve the productivity of the scientific enterprise? What are the relative costs and benefits of such policies? What type of access to these publications is required to maximize U.S. economic growth and improve the productivity of the American scientific enterprise?

Response:

"The Faculty of Washington University in St. Louis is committed to making its scholarship and creative works freely and easily available to the world community." (WUSTL Open Access Resolution). Full, immediate open access to research articles drives scientific innovation and productivity, delivers more value than an environment in which access and use are restricted, and can be implemented in a cost-effective manner.

Type of Access:

- All articles resulting from publicly funded research should be made freely accessible and fully reusable without commercial restriction, with no embargo or the shortest possible embargo that can be tolerated by all interested parties.
- Public access policies can be successfully implemented within the current copyright framework through the use of appropriate licenses.
- Although the request here is for comments on federally funded scientific research, the same principles apply to humanities and social sciences research. Scholarship is increasingly interdisciplinary.

Benefits:

- Enabling broad/full reuse means that researchers will be able to find and build on the results of others, rather than repeating research that has already been done. This will extend the value of the taxpayers' initial investment.
- There are over 25,000 peer-reviewed research journals across all scientific and scholarly fields worldwide. Most universities and their researchers can only afford access to a small and shrinking fraction of these journals. Open access to research from publicly-funded work will solve some of the barriers to access.
- Allows an increasingly number of diverse users to stay current on cutting-edge research.

- The use of new tools such as machine reading also opens up new research pathways, making new connections possible and allowing users to identify relevant articles, access them, and read more information faster.
- Encourages contributions by "unforeseen participants" – expanding the potential for innovation and interdisciplinary application of the research.
- Promotes commercialization of discoveries in the form of new products and services.
- Open access to the peer-reviewed scientific literature allows scientists to incorporate new findings into their thinking faster, thereby increasing the productivity and innovation of the scientific enterprise.
- Open access maximizes research impact and progress and thereby maximizes the return on U.S. taxpayers investment in research. See: Bibliography of Findings on the Open Access Impact Advantage http://opcit.eprints.org/oacitation-biblio.html
- May increase government agency accountability and support informed, transparent, and evidence-based budget and policy decision-making.
- Provides congressional budget drafters, appropriators, and authorizers with better information to assess the value of existing expenditures and better target funding.
- Provides direct access to federal, state and local government representatives who might need the research results themselves to more effectively accomplish their work.
- Provides the public direct access to federally funded research when the need arises and when there are no alternatives.

Costs:

- A public access policy would be a cost-corrective modification to the current system where the public pays for the research, then does not have access to it without paying again. The relative cost would be reduced (and an imbalance rebalanced) from a broader public access policy.
- Since the NIH public access policy, Washington University Libraries has cut many journal subscriptions due to budget and use considerations, but none because all or part of the journal was available in PubMed Central, with or without embargo. No data has been provided by any publisher that the public access policy (with 12 month embargo currently in use by NIH and numerous other funders around the world) has harmed them. Since embargo periods are more protective to publishers than the lack of such embargoes, it can be surmised that publishers have not been harmed. There may be costs to publishers but that cost would be minimal.
- The actual costs of permanent, interoperable, fully searchable storage are not really known. This depends on what mechanism(s) are used (see Comment 3).

    - The benefits of an open-access policy similar to the NIH policy are estimated to be approximately 8 times greater than the costs. Cost/benefit issues are summarized in Houghton, J.W. & Oppenheim, C. (2010) The Economic Implications of Alternative Publishing Models. Prometheus 26(1): 41-54 DOI: 10.1080/08109021003676359.
    - Washington University is committed to curating the scholarly article output of its researchers with a digital repository, hence another vision to consider would be multiple institutional and subject archives operating (independently) to standards which allow searching, finding and using from all. New tools and standards would certainly develop for enhance access and use of this increased amount of content from publicly-funded research articles wherever it is stored.

Comment 2: What specific steps can be taken to protect the intellectual property interests of publishers, scientists, Federal agencies, and other stakeholders involved with the publication and dissemination of peer-reviewed scholarly publications resulting from federally funded scientific research? Conversely, are there policies that should not be adopted with respect to public access to peer-reviewed scholarly publications so as not to undermine any intellectual property rights of publishers, scientists, Federal agencies, and other stakeholders?

Response:

Under the Copyright Act, copyright in a work resides with the author until the author shares or surrenders some or all his rights. The intellectual property interests of publishers should be honored to the extent that they are given the necessary rights or permissions to distribute publicly funded works; however, they should not be granted rights that they do not need to accomplish the objective of distributing the work. As such, a balance can be made where authors grant to publishers the rights needed for a given period of time while retaining enough rights themselves to meet their own research and teaching obligations, as well as any conditions required under institutional or funder agreements. Creative Commons licenses, such as CC-BY, have been used by several commercial and non-profit journals (BioMed Central and PLoS) for years.

The Faculty of Washington University in St. Louis is already committed to making all of their scholarship and creative works freely and easily available to the world community. Faculty members are encouraged to seek venues for their works that share this ideal. In particular, when consistent with their professional development, members of the Faculty are encouraged to amend copyright agreements in order to retain the right to use his or her own work and to deposit such work in the University's digital repository or another depository, which is freely accessible to the general public.

Comment 3: What are the pros and cons of centralized and decentralized approaches to managing public access to peer-reviewed scholarly publications that result from federally funded research in terms of interoperability, search, development of analytic tools, and other scientific and commercial opportunities? Are there reasons why a Federal agency (or agencies) should maintain custody of all published content, and are there ways that the government can ensure long-term stewardship if content is distributed across multiple private sources?

Response:

Federal archive(s) may be the simplest and most cost-effective mechanism. The Washington University Libraries has some concerns for long-term stewardship by the federal government since it needs to maintain budget flexibility and agencies can die or be cut with little warning. Using federal libraries, such as the National Library of Medicine, the National Agricultural Library, the Library of Congress, and the National Archives may be more appropriate since they have a mission for long-term storage.

As long as the archives are secure for the long term and created to standards for interoperability, a decentralized approach might be just as effective. Challenges for a decentralized approach include accountability to the federal agencies and confusion for funded researchers especially if different agencies have different policies.

Comment 4: Are there models or new ideas for public-private partnerships that take advantage of existing publisher archives and encourage innovation in accessibility and interoperability, while ensuring long-term stewardship of the results of federally funded research?

Response:

The Washington University Libraries see ample opportunities for public private partnerships that could allow for innovation in access to information without closing access to academic scholarship.

Publishers represent one type of entity that might be encouraged to participate in public/private partnership by providing repositories that meet conditions for public accessibility, use rights, interoperability and long-term preservation of publicly funded articles. However, the following should be noted:

- Under no condition should a publisher site – or any other stakeholder site - be the single point of access for publicly-funded articles. Publishers regularly buy and sell journals and their archives and occasionally drop journals and their archives entirely.
- With their extensive experience and existing archive infrastructure, universities and libraries have the opportunity to play an expanded role, and should be actively encouraged to partner with federal agencies.
- None of the 50+ research funders who currently have public access policies are using publisher sites as permanent archives. However, some funders have partnered with academic and research institutions in this role.

Comment 5: What steps can be taken by Federal agencies, publishers, and/or scholarly and professional societies to encourage interoperable search, discovery, and analysis capacity across disciplines and archives? What are the minimum core metadata for scholarly publications that must be made available to the public to allow such capabilities? How should Federal agencies make certain that such minimum core metadata associated with peer-reviewed publications resulting from federally funded scientific research are publicly available to ensure that these publications can be easily found and linked to Federal science funding?

Response:

Interoperable search, discovery and analysis capacity across disciplines and archives is already being developed and will certainly grow when more open access content becomes available.

Standard metadata services include support for interoperability with traditional library technologies as well as with general web operations. Repository systems should also provide support for:

- Use, reuse, and analysis of published works.
- Machine-readability and machine-interoperability (full text indexing and searching by web crawlers and commercial search engines).
- Open URL-based service.
- Meaningful and machine-navigable bridges between publications and the underlying data that support them. Examples include vocabularies for semantic relationships and unique identifiers.

Minimum standards will need to be suggested and eventually required.

Comment 6: How can Federal agencies that fund science maximize the benefit of public access policies to U.S. taxpayers, and their investment in the peer-reviewed literature, while minimizing burden and costs for stakeholders, including awardee institutions, scientists, publishers, Federal agencies, and libraries?

Response:

Any successful public-access policy must be consistent in its requirements and mandates because:

- Researchers often hold concurrent grants from multiple agencies.
- Uniform requirements and procedures regarding deposit of peer-reviewed literature will need to be established across all funding agencies involved.

Effective public-access policies can help maximize returns to taxpayers by ensuring that complete results are widely available in a timely manner. Policies should:

- Take advantage of existing protocols (e.g., SWORD) to facilitate automatic deposit of manuscripts to multiple repositories
- Encourage development of additional tools/services.
- Improve agency accountability policies in order to integrate articles with grants management systems (internal and external).

Public access policies will present opportunities to create/enhance productivity management tools for federal and internal reporting, through:

- Creation/enhancement of bibliographies and principal investigator profiles.
- Creation of opportunities for universities to better measure research output and impact.
- Use of University repositories as teaching tools (e.g., for teaching scholars about literature analytics, etc.)

It is important to note that such policy changes would only just begin to mitigate the burden lack of access to Federally funded research imposes on the public, that is, the lack of access to the research it funds.

Comment 7: Besides scholarly journal articles, should other types of peer-reviewed publications resulting from federally funded research, such as book chapters and conference proceedings, be covered by these public access policies?

Response:

Educational materials (such as such as book chapters, texts, conference proceedings) that result from publicly funded research should be made readily accessible to the public when possible:

- The immediate efforts should focus on the scholarly journal articles published as a result of federally funded research, to stay focused on the primary mechanisms that scientists use to communicate their results and the current limitations on access to such publications.
- Different conditions may apply to different types of materials (e.g., authors are generally not paid for journals articles, but may be paid for textbook chapters).
- Policies should reflect these differences; for example, the policies under which educational materials are made accessible may need to differ from those directed at journal articles.

Comment 8: What is the appropriate embargo period after publication before the public is granted free access to the full content of peer-reviewed scholarly publications resulting from federally funded research? Please describe the empirical basis for the recommended embargo period. Analyses that weigh

public and private benefits and account for external market factors, such as competition, price changes, library budgets, and other factors, will be particularly useful. Are there evidence-based arguments that can be made that the delay period should be different for specific disciplines or types of publications?

Response:

No embargo period/immediate access would be ideal to optimize scientific and commercial utility of information contained in these articles.

However, to accommodate journal publishers who rely on subscription income, an author-determined embargo period of 0-12 months has proven to be acceptable across multiple disciplines.

- No publisher has indicated that the above embargo period policy (currently in use by NIH and numerous other funders around the world) has harmed them.
- Embargos of 12 months or less are the norm in research funder policies around the globe (see http://roarmap.eprints.org/)
- Embargos of 12 months or less have been adopted by hundreds of journals.
- Even publishers who previously expressed concern that opening access to back content would result in loss of revenue have now changed their embargo practices.
- Since the inception of the NIH public access policy, the Washington University Libraries has cancelled many journal subscriptions due to budget and use considerations, but no cancellations occurred because all or part of the journal was available in PubMed Central, with or without embargo.

If subscription-based publishers contend that embargo periods negatively impact revenue (presumably through cancellations), then all factors that impact subscriptions should be accounted for, including:

- Growth of journals and papers in discipline (competitive analysis)
- Price – and pricing history – of journal and competitive titles
- Impact of required bundles vs. single journals in discipline
- Library budget numbers/trends
- Real revenue resulting from "long-tail" citation articles
- Percentage of articles derived from federal funds

Respectively submitted by:

Shirley K. Baker
Vice Chancellor for Scholarly Resources and Dean of University Libraries
Washington University in St. Louis