



American Educational
Research Association

Response to Request for Information (RFI): “Public Access to Peer-Reviewed Scholarly Publications Resulting from Federally Funded Research,” Office of Science and Technology Policy (OSTP)

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**American Educational Research Association
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About AERA

The American Educational Research Association (AERA) is the major national scientific association of 25,000 members dedicated to advancing knowledge about education, encouraging scholarly inquiry related to education, and promoting the use of research to serve the public good. Founded in 1916, AERA as a scientific and scholarly society has long been committed to knowledge dissemination, building cumulative knowledge, and promoting data access and data sharing. AERA publishes six highly ranked, peer-reviewed journals in the field and holds an annual meeting with approximately 14,000 participants, among other initiatives. In 2010, AERA introduced an online paper repository as a further vehicle to foster the sharing and dissemination of work prior to publication. AERA disseminates one of its highly ranked journals freely on its website.

AERA applauds the principles that lead OSTP to think through policy issues supporting the scientific enterprise and public access to knowledge. There are complex issues involved in assessing the responsibilities of the federal government and scholarly societies in such endeavors. The responses below seek to foster further examination of this issue, including the appropriate role of the federal government, from the vantage of sound research policy and viable business models of publishing.

As a non-profit research organization, AERA plays a key role in facilitating scholarly communication and knowledge dissemination. As with other associations in the social and behavioral sciences, AERA needs to maintain a peer review process of the highest quality (in an era of diminishing support for doing so); to provide access to publishing opportunities based on research quality, not individuals’ resource availability; and to serve science and society through affordable publishing and archiving. Because a short

embargo period that is inconsistent with a model of social science publishing would be problematic, AERA renews its previous recommendation advanced in a similar comment period in January 2010 to implement publisher-provided tollfree hyperlinks from federal agencies to the version of record immediately on publication. We speak from the vantage of a research society committed to affordable, sustainable publishing and maximizing opportunities for publishing research of the highest merit irrespective of the source of its funding. This step would efficiently and effectively achieve that goal.

Responses to RFI Questions

(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?

The federal government and its agencies could take steps to grow markets for access and analysis of research by endeavoring to support sustainable publishing efforts. Since the 1990s, publishers have invested heavily in online publishing platforms, tools, and functionality, and those platforms have both alleviated print archiving burdens on libraries and expanded opportunities for access to research. AERA has digitized the entire back content of its six highly ranked peer-reviewed journals and offers a wide variety of access options, including free access to *Educational Researcher* through the AERA website, a variety of subscription models—including discounted consortial packages—to address libraries' needs, pay-per-view options, and discounted and free online subscriptions to nonprofits in countries with low GDPs per capita. AERA also offers tollfree hyperlinks to its authors who wish to link to the version-of-record (VoR) of their AERA journal article, and these tollfree links may be implemented in institutional repositories or institutional webpages. Through these initiatives, AERA seeks to make peer-reviewed research available to the broadest possible audience while sustaining its publishing endeavors. Since moving to its current online platform, the number of institutions with access to AERA journals has increased dramatically: from 2,450 institutions in 2006 to 6,550 institutions in 2011, for a 167% increase.

In addition to the traditional models for access to research journals, AERA remains interested in alternative models such as open access, provided there are funds that will sustain the enterprise. The inclusion of author publishing fees in all government grants, including grants that fund social science research, would be one significant way that federal agencies could support accessible publishing models. It should be noted, however, that a more cost-effective cooperative endeavor between the federal government and publishers would be the acceptance of publishers' tollfree hyperlinks for implementation in grant agency databases. Such an approach also averts using

federal funds for such purposes or fostering a system where investigators without large grants or federal grants at all would have an undue burden.

(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?

Publishers such as AERA acquire from researchers license to publish peer-reviewed research in return for the publishing channels they offer and grant to researchers, in return, the license for certain noncommercial (e.g., educational) uses of the VoR. AERA also offers each researcher a tollfree hyperlink to the journal article VoR. AERA also provides Federal employees the ability to publish journal articles in AERA journals with the government retaining the right to use the VoR for government purposes.

In return for the considerable investments made in online publishing channels and platforms, publishers need the opportunity to recoup funds that help sustain the publishing endeavor and preserve their digital archives for access. Any federal mandate for full-text deposit less than 5 years after initial publication would endanger the social science publishing enterprise because social science journal articles are more expensive to produce than those of other disciplines and, thus, social science publishers require longer to recoup costs. Tollfree hyperlinks can be utilized immediately upon publication without danger to sustainability of the enterprise.

(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?

A centralized approach to managing public access has the advantage of yielding the most federal control but the disadvantages of (a) encumbering the federal government with long-term archiving expenses and (b) likely endangering publishers' enterprises that sustain their peer-review processes and their digital archiving solutions. A decentralized approach that features federal agencies partnering with publishers and other stakeholders could leverage the special strengths of those stakeholders and allow the federal government to focus on research oversight.

Within the decentralized approach, the federal government could ensure long-term stewardship of content if it includes deposit of a full-text VoR that remains dark to all users. This would act as an insurance policy if the published VoR becomes inaccessible. If tollfree hyperlinks were in use in the government database, the full-text VoR could be a backup in case the link ceases to function.

Most publishers' online platforms allow the use of searching and other interoperable functionality at no cost to online readers, and AERA's journals are on such a platform. If the federal government would wish to develop searchability and other interoperable functionality within any of its research databases, then a dark full-text VoR would enable searchability that could lead to the publisher's VoR.

(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?

Since 2007, AERA has offered authors tollfree hyperlinks to the VoR of their published articles. In its January 21, 2010, response to OSTP's previous request for information, AERA indicated that it would do the same for federal agencies funding research published in our journals. We advance that recommendation again here. Other nonprofit publishers are increasingly making use of these tollfree links. We applaud their expanded use and encourage the federal government to accept them in lieu of full-text articles that, in a free archive, would endanger the sustainability of social science publishing.

(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?

Most publishers such as AERA have already implemented arrangements for interoperable search and discovery across disciplines and archives. AERA's journals are hosted on Stanford University's HighWire Press platform, which offers state-of-the-art search and interoperable functionality. For example, on behalf of its publishers HighWire arranges full-text indexing of journal articles by Google and other web search engines. HighWire also offers tollfree reference linking, whereby those who subscribe to one journal whose article references another journal on the HighWire platform may access the second journal tollfree. HighWire facilitates reference linking beyond its platform via the use of the CrossRef consortium of publishers. In addition to offering a HighWire-wide search function, HighWire enables its publishers to design search

widgets that target searches from outside websites to certain HighWire journal content. Federal policies that protect the sustainability of publishers' enterprises will enable such search and discovery initiatives as these to continue to serve the research community.

AERA and most other publishers already make considerable metadata about journal articles available to the public, without access control. For example, anyone with Web access can search AERA and other HighWire journals without needing access control and can access abstracts without access control. Federal agencies often currently replicate this metadata; for example, the Department of Education's Education Resources Information Center (ERIC) replicates such metadata provided to it by AERA and other publishers.

There are numerous schemas that would serve any Federal agency providing research metadata to the public. In addition to ERIC's schema, CrossRef and DublinCore offer metadata schemas that agencies might utilize. We would encourage any agency adopting or developing a schema to ensure that it includes digital object identifiers (DOIs), in order to help online readers locate the VoR.

(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?

Federal agencies can maximize the benefit of public access policies by developing such policies that allow each set of stakeholders to focus on and sustain their areas of expertise. Those policies should allow researchers to focus on their work generating new knowledge and should allow publishers to evaluate and distribute that knowledge. Those policies might also perhaps be designed so as not to encumber taxpayers with new obligations, and the ideal way to do this is to partner with researchers and publishers to utilize each group of stakeholders' core strengths.

If ensuring full open access is the goal, then federal agencies should develop funding mechanisms that allow researchers to pay author fees to open access journals, in order to sustain the publishing enterprise. As discussed above, however, there may be better ways to maximize public access through cooperative efforts with publishers and to avert some of the downsides of a fee structure that could be large for authors.

(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?

It is difficult to comment on whether the scope of such policies should extend beyond peer-reviewed journal articles to other forms of scholarly products until they are further specified. In the cycle of social science research, conference presentation papers are

frequently initial reports of research results or findings that have not yet been fully developed by the researchers or vetted through the extensive peer review that is the hallmark of scholarly publication. AERA and a number of other research societies have introduced online paper repositories for peer reviewed papers to enhance knowledge dissemination at an earlier point in the cycle of knowledge dissemination. Our repository provides authors with the capacity to point later to publications and other final products.

Book chapters may have more extensive peer review than papers or works in conference proceedings, but are they are rarely reporting on single studies and more typically are creative products of larger scale that may only reflect in part specific studies or federally funded work. Also with such works as research volumes or handbooks, chapters may be invited by, conceived as, and parts of the intellectual creative product of others serving as volume editors. Such a situation may materially vary from journal articles developed and prepared independently by scientist author(s) to disseminate their findings and results. Also, the model of publishing books, including those published by scholarly societies like AERA, differs from journal publishing. For example, the formats in which e-books are currently published do not typically lend themselves to technological solutions such as tollfree links to chapters. Each form of scholarly publication should be examined in terms of the distinctiveness as well as similarities of its development and production, where federal funding fits, and whether or not there is an appropriate federal role.

(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?

In social science and humanities disciplines, the peer-review process is more time-intensive and far more selective than in the science, technical, and medical disciplines, and therefore much more costly per published article. In social science, the median age of cited social science journal articles (aka, citation half life) can be well over 10 years; this is certainly true for all AERA's journal articles. Because of low acceptance rates in social science journals, the business model of social science publishers, encumbered by high publishing costs per article, is predicated on this half life and keeping annual subscription costs low for the several years of citation usage. The 2009 report *The Future of Scholarly Journals Publishing among Social Science and Humanities Associations* (<http://www.nhalliance.org/bm~doc/hssreport.pdf>) provides evidence of this. A 5-year embargo timeframe could be one that allows financial sustainability in social science. But immediately implementing tollfree hyperlinks to the published VoR

would be far more effective in making research accessible without increasing federal costs or burden.

Overall Perspective

In conclusion, AERA is supportive of making peer reviewed publications, including work that is based on federal support, widely accessible. A commitment to fostering wide dissemination and cumulative knowledge is central to our mission and purpose. If there is evidence that peer-reviewed publications from federally funded research are not sufficiently accessible on a timely basis, we urge that a partnership be further forged and strengthened between the federal government and scholarly societies that pools our expertise and shared interest in science and the public good to address this issue. We think that the tollfree link is an accessible and efficient solution, and we continue to urge that it be embraced.