

Subject: Response from Provost of The University of Kansas

Date: December 21, 2011 1:20:51 PM EST

Background: The University of Kansas has demonstrated over the past 10 years a strong commitment to the principle and practice of making scholarship publicly accessible. In 2009, for example, the faculty adopted an open access policy, and revised and strengthened it in 2010. In the summer of 2011, the University of Kansas became a founding member of the Coalition of Open Access Policy Institutions (COAPI) and most recently in the fall of this year the Chancellor of the University signed the Berlin Declaration of Open Access. The faculty, university administrators and librarians are committed to policy enactments that provide public access to the research that the public funds. We take active steps in sharing the work that we, at KU author, and strongly support a broadening of the federal government's funding agencies' mandate on public access to publicly funded research.

1. Question 1 in four parts:

- a. 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?

First and foremost, in order to ensure the widest exposure possible, peer reviewed scholarly articles resulting from research funded with public funds must be made permanently publicly available. When publicly available, such access encourages investigation, interdisciplinary and innovative thinking across commercial sectors which can lead to new products, as well as the creation and support of new, growing and even struggling markets. With unfettered and immediate access to such works, the opportunity for rapid commercialization quickens the research life cycle allowing the untapped potential of such research in various sectors (agriculture, technology, energy, publishing, medicine, public policy, education, digital humanities, to name a few) to be fully realized.

Additional uses of such freely accessible works include the public's ability (in various industrial, research and education environments) to text mine, data mine, compute on the data from such work, and create derivative works, all without the commercial restrictions that closed access and rights-limited research are subject to. Innovative small businesses, individuals, research and educational centers can use this information to create new services and products and encourage new and as yet not fully realized economies. Already there are companies that use public research data (like data provided by the National Weather Service) and build products and services like the, Google Scholar, goPubMed, local and regional news and weather providers.

Agencies can help ensure that publicly available research will be fully utilized by promoting standard-based resource description and data exchange. This includes the use of existing and emerging standards such as, for example, Dublin Core, the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH), Resource Description Framework (RDF), and the Simple Web-service Offering Repository Deposit (SWORD). It will be crucial for this metadata to extend beyond simple resource description to rights and reuse statements, in order to facilitate the proper use, analysis, and reuse of publicly available research. Published APIs for the exchange of data in standard formats such as JSON and XML can enable machine-interoperable exchange of resource metadata and full-text, greatly expanding the potential use and re-use of publicly available research.

- b. How can policies for archiving publications and making them publically accessible be used

to grow the economy and improve the productivity of the scientific enterprise?

Public access to research offers greater opportunities for serendipitous contributions in the scholarly and research endeavor and increases the opportunities for the cross-fertilization of ideas, innovative outcomes, as well as new products created by a wider and perhaps unexpected group of citizen scientists. Unexpected/unforeseen participants, including international ones, who can access work otherwise outside of their reach, can offer contributions downstream that can lead to advancements in new research, discovery, and commercialization of knowledge. This can have tangible economic and marketable effects.

An expanding range of applications are expected when more segments of society can access the results of research. Publicly accessible research is cited more often, providing the opportunity for greater reach and follow-on research. (See Fionna Murray paper - <http://www.nber.org/papers/w14819> and Furman & Stern paper <http://www.nber.org/papers/w12523.pdf>. Note the papers cited here are publicly accessible research papers and are thereby available to policy analysts and the general public without having to pay (again) for them.)

c. What are the relative costs and benefits of such policies?

There are many benefits associated with such policies and all benefits bring some costs. Many such benefits have been reported in the Houghton report, (See Houghton, J., & Sheehan, P. (2006). *The Economic Impact of Enhanced Access to Research Findings*. CSES Working Paper No. 23. Centre for Strategic Economic Studies. Victoria University. Melbourne, AU. Retrieved from <http://www.cfses.com/documents/wp23.pdf>. Note that this document is also a publicly accessible research paper that citizens' tax dollars, somewhere, funded.) It has been demonstrated that there is an increase in the return on investment, maximizing productivity; that the benefits of public access are eight times larger than the costs; and that a public access policy is cost-effective—NIH's costs are 1/100th of 1 percent of its overall budget, with visitors from the public, private, commercial sectors (patients, doctors, researchers, inventors...downloading publicly accessible research.).

Public access increases citations and supports new and diverse research questions and investigation. (See Murray and Furman & Stern papers referenced above) and provides a means for technology to be used to identify, analyze, and mine information, metadata, and data from publicly accessible research reports.

Costs can continue to be kept to a minimum by utilizing existing infrastructure and investments made already in the NIH public policy, for example. Open sharing of federally funded research endeavors can also demonstrate the cost efficiency and accountability for the public funds spent to sponsor this research. It also provides transparency for the return on investment.

d. 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 type of access needed is immediate, public access with reuse rights in order that future scholars and citizens may fully engage and build upon the work—leading to new uses and outputs for future works.

Access to scholarship that does not allow for robust reuse rights limits the kind of engagement that researchers, scholars, inventors, creators can have with the published works, as individual works or more broadly as bodies of work. Broad reuse rights permit researchers far into the future to revisit older works and engage them fully. Remember that copyrights and restrictive licenses on scholarly work generally last (and are transferred to others for) 70 years past the life of the author. Without liberal permissions to use the work now, fully, and into the future, scholars, the public sector, and inventors (etc.) are handicapped to extract the full potential of the work.

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?

Read-only access to the results of scholarship and/or the online publicly accessible databases in which they would reside is not sufficient to allow the full suite of public and private interests to exploit the work, the metadata and the data.

Rights belong originally to the authors (who are funded by the public and thereby are stewards of the public access). Publishers need only certain copyrights to distribute/publish the work. We recommend that non-exclusive rights be granted to publishers, with copyrights remaining with the author. A limited embargo on the public access to the papers published in journals would allow publishers to still attract subscribers (in a closed-access environment) for periods of time. The author, retaining rights, could then provide Creative Commons Licenses (or similar licenses) post-embargo to all readers, such as the CC-BY License (Creative Commons, Attribution license) that allows the work to be reused with attribution to the original author.

In the NIH model, the government makes no claim on the work itself, but must be granted the permissions (license) to make the work available (disseminate) to the public. The terms of the sharing of intellectual property between the author and publisher happen prior to the work being deposited in a central repository. It is highly recommended that an author retains his/her copyrights but grant the needed licenses to the publisher and the federal agency as well as future readers to disseminate and use/reuse the work as needed. It would be important to consider offering a single template for rights transfer, to ease the processes involved for authors, author's institutions, publishers, federal agencies and future readers/users of the work.

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?

The published results of scholarship/research are funded by the government on behalf of the public, which means that the results are a public good. It stands to reason that the government should maintain shared custody of that work on behalf of the public it serves. As recipients of public funds, universities are a primary locus of production of this public good. It follows that the universities as proxies for the government could be good candidates to assist in the stewardship of the work on behalf of the public.

Many universities around the U.S. have established digital and publicly accessible archives for just such scholarship. A network (and digitally interconnected) of such repositories could serve as excellent secondary holding spaces for such work. Such a network can be enabled through the adoption of standard-based approaches to creation and exchange of resource metadata, including rights and re-use statements. In the case of such networks, emerging standards such as Open Researcher and Contributor ID (ORCID) will help enable the seamless exchange of distributed metadata.

It is not appropriate for commercial entities to be the sole custodians of the public's research results. Commercial publishers merge, change policies, shift priorities, go out of business, and do not have at the center of their mission nor the incentive to provide the long-term essential public access needed. Partnerships with universities or publishers to house, store and provide access to scholarly papers are possible. However, at minimum the government should be required to maintain mirrored, public online versions of the content, perhaps via a

portal or e-hub mechanism. Federal stewardship (as mentioned earlier) is cost effective—see the case of NIH’s operating budget to run the PMC public access program—costs of less than 1/100th of one percent.

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?

The use of proprietary (and/or privately controlled) archives is a risky business and to be strongly discouraged. Currently none of the over 50 research funders with public access policies use propriety sites as the final archive. A good example would be funders partnering with academic and research institutions that have similar interests in the wide and public access to the work and whose primary stakeholder/constituency is NOT stockholders.

A carefully coordinated effort between universities with open archives for scholarship could be utilized to advise or assist in the federal efforts to house and guarantee access to the scholarship which its public funds.

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?

A fundamental reason to use an open access model, aside from the principle of “public funding = public good,” is that research is increasingly begun in open internet search engines (see Schonfeld, Roger C., and Ross Housewright. 2010. Faculty Survey 2009: Key Strategic Insights for Libraries, Publishers, and Societies. Ithaka S + R.) Closed-access represents at best “friction” or, at worst, an impediment to both discovery and access. This means that research practices are driven down the path of least resistance. It follows that openly accessible literature will be seen and thus considered by the largest number or researchers, while non-open access literature will remain “hidden” from researchers and evade the reach of at least a percentage of inquirers. Outsell, in its 2009 report (Open Access Primer (Public Version): a report by Outsell Vol. 3, December 14, 2009. Outsell, Inc. p.33) finds that approximately 9.4% of scholarly journal articles are currently publicly accessible (without subscription). Although 100% of such research is funded ultimately by the public, the public can only access about 10% of the work without a subscription, or affiliation with a subscribing institution. As open access becomes the norm, closed-access-only will increasingly become, in practice, “no-access.” This makes public access an imperative rather than merely a best-practice.

Published texts can be used as data objects making the metadata an important feature in discoverability. Metadata should not be viewed as solely descriptive of the work itself but as a means for enabling discoverability, use, reuse, and analysis and be machine readable and interoperable, utilizing appropriate standards.

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?

Consistent public access policies across federal agencies are critical to minimize the burden on authors, database submitters, publishers and the public and reduce the complexity of submission, discoverability and cost.

Such changes in policy would begin to mitigate a long-term burden on the public: lack of access to the research it has and will continue to fund. Such a policy would correct a moral wrong: without public access to this research, the public (including small business, K-12 and higher education) has limited access and bears the cost burdens without benefitting from access to the products it funds.

Currently the public pays four times before it is able to have access to the results of scholarship: it pays the salaries of the scholars/academics who do the research, and review and edit for journals; it pays taxes which seed billions of dollars of federal funding agencies; it pays when the institutions in which the authors work subscribe to those journals (at the University of Kansas, close to \$4 million dollars per year for journal subscriptions) and, if not a member of such a subscribing institution, a citizen must pay a retail charge for an article on the open market (prices that are currently far from nominal—on the order of tens of dollars for a single article). These citizens are small business owners, investors, policy makers, scholars, researchers, government officials from the smallest towns to large cities. They are high school and junior college students and teachers—they are patients, entrepreneurs, innovators, parents, PTA members, investors, researchers—the unforeseen and unexpected participants in the advancement of science, public policy, education and scholarly pursuits. The current structure of scholarly publishing is perverse and abusive: the public funds are diverted from the public interest and have been captured by private, commercial interests.

Mitigating burdens on publishers, researchers and universities would include adopting compliance methods that are as consistent and stream-lined as possible for all. NIH's model would be one to contemplate and learn from.

Public access required by such policies would also assist the scholarly publishing industry to become more diverse in its own approaches to access and business models. A growing number of publishers are experimenting with moving to all-open access models for their content. We know of no publishers that have supplied data which indicate that NIH's current policy has been a financial burden on their business models. Whether those are commercial, close-access journals/publishers or open access non-profit publishers on the other end of the spectrum, publishers have learned to work within the constraints of the authors' requirements to share their work.

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?

The possibility of including other materials in such a policy certainly does exist, although at this time we would recommend keeping the focus strongly on scholarly journals. Journal articles provide more current information and they are the preference of researchers to share their work quickly among peers. The length of time for embargos and the rights issues for other types of work could be significantly different and make what are clear cut ethical/philosophical issues and more complex issues around such a public policy even more complex.

Keep the focus on scholarly journal articles at this time. Scholarly, peer reviewed journal articles are the primary method that scholars communicate. There is a clear and unbroken association between the research conducted and the primary method that scholars communicate the results of their scholarship—no matter what combination of public agencies fund the work—and that is through the aegis of the peer reviewed publications. Research “reports” are not a substitute nor are they the currency used by scholars, citizen scientists,

public policy makers (the list goes on). There is one common currency and that is the scholarly peer reviewed journal article. It is our understanding that the first COMPETES act required that NSF make public research reports and it was uniformly ignored—as an irrelevant method to communicate the results of research. Besides being un-reviewed by referees in the field, the work is not commonly used, circulated or searched for by others scholars.

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?

Immediate public access is ideal in order to maximize the scientific, commercial and public/private use of the information.

That said, in order to minimize the burden on publishers that still rely on closed-access subscription income, a modest embargo of 6 months could be considered. Embargos of 12 months or less are the norm for researcher funders with public access mandates around the world. See ROAR MAP's site which indexes such mandates, <http://roarmap.eprints.org/>. Hundreds of journals already have accepted 12 month or less embargos on their content. See Stanford's Highwire publisher's site, <http://highwire.stanford.edu/lists/freart.dtl>

Please identify any other items the Task Force might consider for Federal policies related to public access to peer-reviewed scholarly publications resulting from federally supported research.

Another year passes and additional comments are requested, when virtually all stakeholders in the system of scholarly journal publishing except the publishers consider public access to the publically funded research results self-evident. Although a very powerful lobbying machine, can commercial interests be allowed to continue to commercialize and commodify what is, in all minds, a public good—and which the public funds? Borne of public funds, public needs, public curiosity and efforts, are these results not a public good? A public access policy like NIHs would allow publishers to make a return on their efforts while the public and the nations' research enterprise can see a return on its investment.

It is time for a broader public access policy to be completed and implemented. Commercial interests harm all other stakeholders in the system of scholarly communication by preventing them from accessing, building upon and utilizing the research it funds and completes.

In short, such a policy must include federal stewardship of publicly accessible scholarship funded with public monies; the works made available must allow for robust reuse; must be available immediately or at maximum under brief, 6-12 month embargoes; must build on the successes and lessons learned during the NIH public access policy implementation; must move toward efficient and simple submissions, cross-agency consistency in policy and implementation and again, guarantee the long-term public access and preservation of the work.

Response to this RFI is voluntary. Responders are free to address any or all the above items, as well as provide additional information that they think is relevant to developing policies consistent with increased public access to peer-reviewed scholarly publications resulting from federally funded research. Please note that the U.S. Government will not pay for response preparation or for the use of any information contained in the response.

How To Submit a Response: All comments must be submitted electronically to: <mailto:publicaccess@ostp.gov>

Responses to this RFI will be accepted through January 2, 2012. You will receive an electronic confirmation acknowledging receipt of your response, but will not receive individualized feedback on any suggestions. No basis for claims against the U.S. Government shall arise as a result of a response to this request for information or from the Government's use of such information.

Jeffrey S. Vitter Provost and Executive Vice Chancellor Roy A. Roberts Distinguished Professor The University of Kansas | Web www.provost.ku.edu