Response to the Office of Science and Technology Policy public consultation on Public Access to Federally Funded Research

Submitted by the international Confederation of Open Access Repositories (COAR)

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Introductory Comments

We would like to thank the White House Office of Science and Technology Policy for initiating this important consultation on public access to research outputs. The Confederation of Open Access Repositories (COAR) is a not-for-profit association of repository initiatives that was launched in October 2009. We represent 59 institutions in 23 countries from throughout Europe, Latin America, Asia, and North America. Our mission is to enhance greater visibility and application of research outputs through global networks of Open Access digital repositories. Our aim is to support the implementation of policies of governments, research funders and institutions. More information about COAR can be found on our website: http://coar-repositories.org/.

Current research dissemination practices do not adequately meet the needs of all stakeholders – especially the public who has funded much of this research through their taxes. Millions of policy makers, clinicians and practitioners, small businesses, students and educators, patients and their families, and others are without ready or affordable access. With the Internet comes the opportunity and the imperative to share these results widely so all citizens can access, use and build upon research results in new and innovative ways. (i)

In order to improve access and maximize investments in research, governments around the world are implementing policies that require the free availability of research results. The SHERPA-JULIET service in the UK, which monitors funding agency policies, now lists over 70 funding agencies with open access mandates from over 20 different countries. In Europe and elsewhere, open access is now acknowledge as an effective and low cost way to improve research impact and the efficiency of the scholarly communication system. (ii)

COAR's response to several of the questions contained in the Request for Information are as follows:

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 publically accessible be used to grow the economy and improve the productivity of the scientific enterprise?

There are two important steps that governments can take to gain further economic benefits from their investments in research and the peer-reviewed publications that result:

1. Implement policies that require researchers to deposit their articles into open access repositories.

2. Support the development of a national repository network for the collection and preservation of research outputs that is interoperable with the growing international network being developed.

Open access policies and infrastructure will enable the public, practitioners, industry, and others to make use of the valuable information contained within the peer-reviewed literature. Currently, this literature is available only to researchers who are affiliated with institutions that can afford to subscribe to these journals. Therefore there is tremendous unrealized potential for this content to be further used and exploited for the development of new products, practices and policies.

Similar to open data initiatives, open access to peer-reviewed publications will enable others to build effective value added services on top of the content. It is possible to envision the development of numerous value-added tools, such as discovery and indexing services, as well as data mining and text analysis technologies. These value added services will allow for new connections and discoveries, and lead to further scientific discovery, innovation and product development.

What are the relative costs and benefits of such policies?

There are costs associated with open access, such as staff and hardware costs for running repositories, however, these costs represent only a small portion of a nation's investment in research.

Economic analyses have shown that national approaches requiring open access

to publicly funded research papers open access system would result in significant cost savings, in comparison to the current subscription based system. A study conducted by Houghton et al. concluded, for example, that, "(s)haring research information via a more open access publishing model would bring millions of pounds worth of savings to the higher education sector as well as benefiting UK." (iii) In the three national studies of Denmark, the Netherlands and the UK, the costs and benefits of scholarly communication were compared based on three different publication models. All three concluded, “the greatest advantage would be offered by the Open Access model", via open access repositories.” (iv) The study found that open access could lead to an “ annual savings of around EUR 70 million in Denmark, EUR 133 million in The Netherlands and EUR 480 in the UK. Other analyses undertaken in Australia and the US have come to similar conclusions. (v)

In addition, much of our modern economy is already based on the free availability of information. Google, Facebook, Twitter are just a few examples of new services that have been developed because of the openness of information in the digital environment.

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?

There are advantages and disadvantages to centralized and decentralized approaches. The decentralized approach, such as a network of university repositories, ensures that the locus of deposit for articles is close to the working environment of the authors. A more centralized approach, such as PubMed Central, allows for the full corpus of literature in one field can be found in a single database. Ultimately, the best approach will likely depend on the history and traditions of a given discipline.

Many governments in Europe and elsewhere are adopting decentralized approaches by implementing networks of institutional repositories to make available the publicly funded research outputs. Countries in the European Union have benefited from two European Commission Seventh Framework Program (FP7) projects, DRIVER and DRIVER II (vi), which has funded the establishment and development of a European open access repository infrastructure. The projects provided funding at the national level to implement repositories, support for national help desks that provide expertise to repository developers, and also the development of a centralized search portal. The project ended in 2009, and the central portal, called DRIVER Search Portal, is now being maintained

collectively by national partners. It currently provides free access to over 5,790,000 research publications from 319 repositories in 43 countries. (vii)

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?

There are very important reasons why federal governments would want to maintain copies of their nation's research output. This collective content represents the official record of the world's knowledge and is a valuable publicly funded asset. While libraries have traditionally been the custodians of the scholarly literature, this is no longer the case in the digital environment. Yet, there no other types of institutions currently with a mandate to ensure research papers are preserved and accessible to scholars and the public. There are numerous roles that private sources could play in ensuring the preservation of research outputs, however private industry is subject to the whims of the market and stockholders. Only stable institutions, such as universities, libraries and governments, that have a specific mandate to preserve, can be relied upon to do ensure ongoing access over the long term.

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?

Ideally, all outputs from publicly funded research should be made openly available to the public. However, there is a need to develop the infrastructure to support open access in conjunction with implementing such policies.

In Europe, OpenAIREplus (2nd Generation of Open Access Infrastructure for Research in Europe) was launched in Pisa in early December. The 30 month project, also funded by the EC 7th Framework Programme, will work in tandem with OpenAIRE, extending the mission further to facilitate access to the entire Open Access scientific production of the European Research Area, providing cross-links from publications to data and funding schemes. This large-scale project brings together 41 pan-European partners, including three cross-disciplinary research communities. (viii)

Creating a robust, participatory service for the cross-linking of peer-reviewed scientific publications and associated datasets is the principal goal of OpenAIREplus. As scholarly communication touches upon many disciplines, the

project's horizontal outreach will facilitate collaboration across data infrastructures, providing information to scientists, non-scientists as well as to providers of value-added services. The project will establish an e-Infrastructure to harvest, enrich and store the metadata of Open Access scientific datasets. Innovative underlying technical structures will be deployed to support the management of and inter-linking between associated scientific data.

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?

Policies should require that articles be deposited immediately upon publication, and made accessible within a 6-months of publication. The optimal scenario is that papers are made available immediately upon publication. However, in general a 6-month delay is acceptable in order to allow publishers maintain a revenue stream for their journals. A delay of access beyond 6 month would decrease the value and impact of the public access policy.

Publishers will adapt their business models to accommodate any requirements imposed via these policies. and already are, adapt to the new open access requirements being imposed by funding agencies around the world. Many of the large publishers now offer an open access option for publication, and

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.

Based on the previous experiences of other agencies around the world, we maintain that the following components are necessary to ensure compliance:

- Policies must be mandatory. The very low deposit rates of NIH funded researchers in response to the NIH voluntary policy demonstrated the need for a mandatory policy (ix). This was also exposed in a 2005 survey of UK researchers found that study which found that about 15% of authors are self-archiving voluntarily, but 95% indicated that they would self-archive if their institutions and/or funders mandated it.

- Policies must be monitored for compliance. Compliance with a public access policy should be attached to any future funding decisions. There are ways of monitoring this, through the use of grant numbers inserted into the metadata of the deposited papers. Grant numbers would then be searchable and granting agencies would hypothetically be able to glean

other valuable information related to funding decisions.

- Policies should be consistent across agencies. Researchers are often funded through multiple research agencies. In a global research context, it is increasingly problematic to have a wide variety of access policies with differing requirements of researchers. A consistent, nation-wide approach would cut down on confusion and greatly improve compliance levels. In addition, a uniform nation-wide approach to public access policies in the US would also be helpful for publishers in developing more consistent self-archiving policies.

- Complying with a public access policy should not be onerous for authors. Repositories can assist with deposit and much of the deposit procedures can be automated. For example, the SWORD protocol has developed a standard deposit mechanism that could be used for to simultaneous deposit into repository and publisher. (x) In addition, most repositories have the ability to embargo access for a given length of time.

References

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