

Written Testimony of Steven J. Breckler, Ph.D.
On behalf of the American Psychological Association
Submitted July 29th, 2010 to the
United States House of Representatives
Committee on Oversight and Government Reform
Subcommittee on Information Policy, Census, and National Archives
The Honorable Wm. Lacy Clay, Subcommittee Chair

Hearing on *Public Access to Federally-Funded Research*

Mr. Chairman and Members of the Subcommittee, I am Dr. Steven Breckler, Executive Director for Science at the American Psychological Association. APA is the largest scientific and professional organization representing psychology in the United States and the world's largest association of psychologists with over 150,000 researchers, educators, clinicians, consultants, and students. APA is also the largest publisher of behavioral science research, with 56 of the premier scholarly journals in the field of psychology.

APA strongly supports the goal of enhancing public access to the results of federally-funded research. However, it is not at all clear what the best methods are for accomplishing the goal. The methods implemented to date, and the ones currently under most active consideration, do not necessarily represent the best possible methods. Furthermore, they carry substantial risk of harming scientific scholarship and impeding our ability to accomplish the ultimate goal of enhancing public access to the results of federally-funded research.

APA urges the federal government to refrain from mandating a public access policy that would apply across agencies without further study. In 2009, the Committee on Science and Technology of the United States House of Representatives, in coordination with the White House Office of Science and Technology Policy (OSTP), created a Scholarly Publishing Roundtable to develop a consensus on expanding public access to scientific journal articles. The Roundtable issued its report in January, 2010. Among its many recommendations were the following:

- Agencies should work in full and open consultation with all stakeholders.
- Longer embargo periods may be necessary for some fields of science.
- OSTP should establish a public access advisory committee.

APA supports these recommendations. Indeed, new or expanded public access policies should not be rushed without full consideration of their strengths and weaknesses, with particular emphasis on understanding potential negative consequences and harm that may result to an otherwise strong and vibrant system of scientific research and scholarship.

The Potential for Harm

In a December 8th, 2009 memorandum to the heads of executive departments and agencies, Office of Management and Budget Director Peter Orszag articulated an "Open Government Directive." The guiding principles of this directive included "transparency, participation, and collaboration." Indeed, the memorandum concluded with this statement: "Moreover, nothing in this Directive shall be construed to suggest that the presumption of openness precludes the legitimate protection of information whose release would threaten national security, invade personal privacy, breach confidentiality, or damage other genuinely compelling interests."

As a publisher of scientific scholarship, APA believes that the future of scientific publishing should certainly be regarded as among the "genuinely compelling interests." Possible unintended consequences of public access policies, including those already implemented, are a reduction in the number of peer-reviewed journals, a shift toward "author pays" models of publishing, privileged access to publishing based on ability to pay, and commercial exploitation or re-use of content that is otherwise protected by the legitimate copyright and intellectual property interests of authors and publishers.

Economic Considerations

Federal agencies play a critical role in the development of scientific knowledge by supporting the conduct of research and the generation of research findings that are presented in manuscripts submitted for publication. Scientific publishers promote and disseminate scientific communication and advance scientific knowledge through their investment in a wide range of critical functions. These include editorial selection, peer review, copyediting, design production, marketing, distribution, and preservation. What at times is overlooked in discussions of public access is the value added by the publisher in the development of the peer-reviewed manuscript. This reflects years of investment in developing a journal brand recognized for its merit and standards of excellence in the scholarly community, the process of carefully reviewing articles for further consideration, the selection of peer reviewers, administrative management of the process, and editorial assistance to enhance the quality and readability of the manuscript.

It is important to note that the administration and infrastructure of the peer-review process, even with the reviews being conducted by volunteers, is a costly activity. These costs include honoraria for editors and associate editors, salaries of manuscript coordinators, editorial office expenses, and programming and maintenance costs of the journal manuscript tracking system. On average, for every article that appears in an APA journal, there are five manuscripts requiring peer reviews. After peer review, the accepted manuscript then goes through a production process to make it ready for final publication. At present, the costs associated with peer review and publication production are offset by fees from licenses and subscriptions to APA publications and databases (mainly from libraries).

A viable public access policy must acknowledge that copyright protection extends to the entire work, including the peer-reviewed manuscript, when the author transfers the copyright to the publisher. Such a policy would retain financial incentives for publishers to invest in the scientific enterprise through peer review and the other vital functions related to journal production. Our overriding concern is that when peer-reviewed manuscripts are made widely and freely available on-line, the commercial value of the finished, published work is likely to be seriously diminished, with resulting declines in subscriptions and licensing agreements. This loss of income is likely to lead to less science publishing, and thereby, less public access to research findings.

A public access policy must not have a negative economic impact on publishers, either in this country or internationally, nor on U.S. business or industry, that would undermine our nation's high quality of research. This is likely to occur if publishers are required to forego their copyright interests without just compensation for their vital investments in the scientific enterprise. To address this concern, the public access policy could allow for the use of grant funds for the payment of publication fees, which is not standard practice for social and behavioral science publishing. (Historically, most social and behavioral science publishers have not assessed publication fees.) Alternatively, a federal agency could set aside funds to enter into direct licensing arrangements with publishers to deposit copyrighted work on behalf of authors as some other non-governmental funding agencies have done, such as the Wellcome Trust and the Howard Hughes Medical Institute.

Disciplinary Considerations

Public access policies must take into consideration the inherent variability among scientific disciplines in the nature of research, types of data, and dissemination models. Such factors as frequency of journal publication (e.g., weekly or quarterly) and the shelf-life of articles have significant implications for the development of public access policies for Federal science agencies.

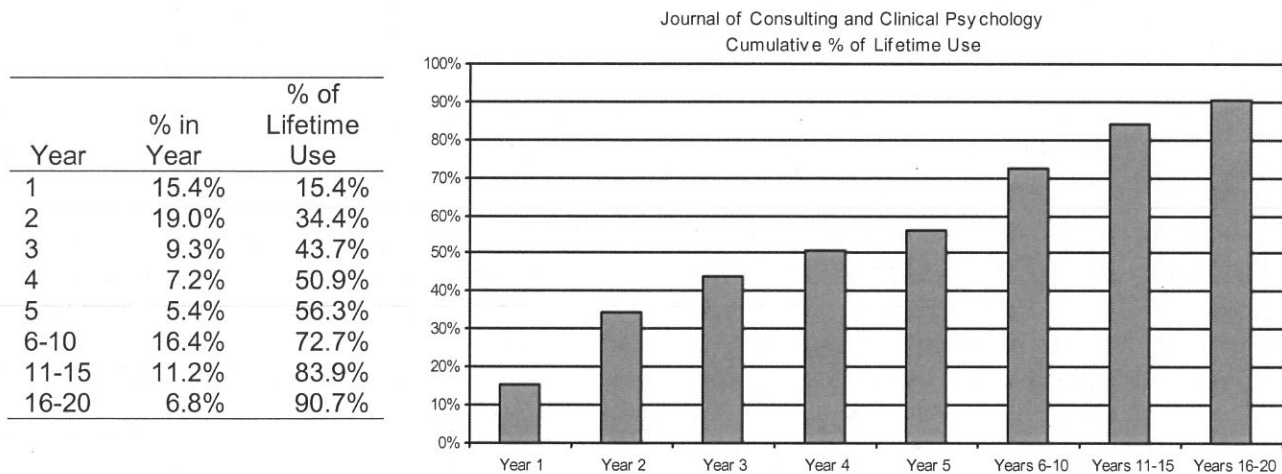
The "embargo period" – the lapsed time between publication and public availability – must reflect sensitivity to the scientific field and the frequency of publication (e.g., weekly, monthly, quarterly). For instance, publishers of biomedical research may be able to generate sufficient revenue within a 12-month embargo period to cover their expenses and thus sustain their publishing programs. Significant sources of revenue include a high volume of subscribers, large amounts of paid advertising, and collection of submission and/or publication fees. The articles in these journals typically have a "shelf life" (how long the article is used over time) that falls within a 12-month period (and often much shorter than that).

In contrast, the vast majority of publishers of social and behavioral science research tend to have fewer sources of revenue and their articles tend to have a shelf life that greatly exceeds 12 months. This is especially true in APA's experience, where most journals are published quarterly. The cutting-edge research in psychology published by APA is rarely obsolete within a year and may have a shelf life of 5 to 10 years, or more.

Furthermore, only 16% of the eventual “lifetime” usage of APA journal articles—in the form of downloads—occurs within the first year after publication.

APA tracks the usage of individual journal articles and conducts annual data analyses on a journal-by-journal basis. Usage statistics are generated based on annual journal data and lifetime article data. APA’s PsycARTICLES full-text database is used to estimate the shelf life of an average journal article by examining downloads by copyright year.

The following table and corresponding graph show our analysis of the electronic usage of an average article appearing in the *Journal of Consulting and Clinical Psychology*. This journal has one of the largest subscription bases and number of NIH-funded articles. These data show the percentage of articles downloaded in a given year with copyrights of that year (Year 1), the previous year (Year 2), and continuing retrospectively for 20 years (Years 16-20). Also provided is the cumulative percentage of “lifetime use,” defined as 90% of use.



The data for this one journal are representative of the experience across all of APA’s 56 journals. These data demonstrate that articles published in APA journals have a half-life and lifetime usage of about 4.5 and 19.5 years, respectively. Because life-time utilization of APA journal articles occurs over a long period of time, a public access policy with an unduly restrictive embargo period (such as the 12 months under the current NIH policy) can be expected to have a significant, adverse impact on APA journals and all other journals with similar usage patterns.

APA’s view is that this pattern of journal article usage is typical for publications in the social and behavioral sciences. An embargo period of 12 months may be sufficient for some publications in biomedical science, but it is clearly too short for publications in other fields.

Public Considerations

An important goal of public access to scientific publications is to make the results of taxpayer-funded research available to those taxpayers. It has not been established, however, that availability of scientific publications is the best way to achieve this goal. To make federally supported research more widely available to the general public, science writers should be enlisted to create public information materials that summarize a body of research for the general public or that outline a series of research findings across areas through periodic communications (e.g., daily press releases, weekly news alerts, and monthly newsletters) written for the public on the results of federal agency-supported research. These could be made accessible through Web sites, radio, television, newspapers, and magazines. Indeed, professional societies such as APA invest heavily in these forms of public education. A mandate for federal funding agencies to engage more extensively in this form of public education is a good way to accomplish the goal.

All stakeholders should have access to scientific publications that are the result of federally-funded research. The fundamental question is who bears the responsibility for the costs associated with producing scientific publications. The current public misunderstanding is that those costs are either inconsequential, or that the federal government already bears those costs. Neither is true. Thus, *public* access to scientific publications is not properly translated as *free* access. APA supports fair pricing policies that allow public access for a reasonable price.

Alternative Models

The National Institutes of Health (NIH) and the National Science Foundation (NSF) are currently implementing two very different public access policies. The NIH model requires all NIH-funded investigators to submit or have submitted for them an electronic version of their final, peer-reviewed manuscript resulting from NIH-funded research to PubMed Central to be made publicly available within 12 months after the actual date of publication. The NSF model requires NSF-funded investigators to submit their final project reports, citations of published research documents resulting from their research, and summaries of the outcomes of their research projects, and for these materials to be made publicly available in a timely manner and in electronic form through the NSF Web site.

The current situation offers the opportunity to conduct a natural experiment with the benefits that it offers to evaluate the various public access models currently in place in both the public and private sector. This opportunity was clearly recognized by OSTP in the following statement in its December 31, 2009 *Federal Register* notice: "The NIH model has a variety of features that can be evaluated, and there are other ways to offer the public enhanced access to peer-reviewed scholarly publications. The best models may [be] influenced by agency mission, the culture and rate of scientific development of the discipline, funding to develop archival capabilities, and research funding mechanisms."

The results of such an evaluative study would help to determine whether there is indeed a one-size-fits-all model of public access for federal agencies that would address the interests of key stakeholders, and if so, what the requisite features of such a model would be. Given the potential for harm associated with public access policies of federal agencies, APA recommends further study as the most prudent course of action and prior to the implementation of more public access policies.

The NSF re-authorization bill currently working its way through both the House of Representatives and the Senate calls for the establishment of an interagency working group, with responsibility for coordinating Federal science agency policies relating to the dissemination of the results of federally-funded research. This was one recommendation of the OSTP Scholarly Publishing Roundtable. If established, the working group could help in the development of an evaluative study. But it is critical that the working group take into account the inherent variability among scientific disciplines in the nature of research, types of data, and dissemination models. APA recommends that the interagency working group receive significant input from scientific societies that publish social and behavioral science research.

Concluding Comment

APA strongly supports the goal of enhancing public access to the results of federally-funded research. However, it is not at all clear what the best methods are for accomplishing the goal. The methods implemented to date, and the ones currently under most active consideration, do not necessarily represent the best possible methods. Furthermore, they carry substantial risk of harming scientific scholarship and impeding our ability to accomplish the ultimate goal of enhancing public access to the results of federally-funded research. Without more careful consideration, public access policies run the risk of undermining scientific scholarship and impeding rather than enhancing public access to the results of federally-funded research.

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