

January 20, 2010

Dr. Dianne DiEuliis
Assistant Director, Life Sciences
Office of Science and Technology Policy
Executive Office of the President
725 17th Street, NW
Washington, DC 20502

RE: Request for Public Comment on Public Access Policies for Science and Technology Funding Agencies Across the Federal Government

Dear Dr. DiEuliis:

On behalf of the American Psychological Association (APA), we are pleased to respond to the Office of Science and Technology Policy (OSTP) notice in the December 31, 2009 Federal Register (Volume 74, No. 250) requesting public comment on "Public Access Policies for Science and Technology Funding Agencies Across the Federal Government." APA is the largest scientific and professional organization representing psychology in the United States and the world's largest association of psychologists with 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.

Our association strongly supports the goal of enhancing public access to scientific publications. Accordingly, APA also endorses the guiding principles of "transparency, participation, and collaboration" that provide the cornerstone of the "Open Government Directive" that Office of Management and Budget Director Peter Orszag detailed in his December 8th memorandum to the heads of executive departments and agencies. The last line of this memorandum is particularly instructive for OSTP as it relates to the *Federal Register* notice on public access policies: "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." The future of scientific publishing should certainly be regarded as among these "genuinely compelling interests." Possible unintended consequences of public access policies include 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.

Given all that is at stake, we urge the federal government to refrain from mandating a public access policy that would apply across agencies without further study at a minimum. Such an

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action would draw funds away from research and stifle innovation in a rapidly evolving industry. Publishers are currently engaged in and exploring a variety of approaches to increase public access to their publications, which include free access to abstracts with reasonable costs for the full article, free access for patients, and free access to developing countries. The National Institutes of Health (NIH) and the National Science Foundation (NSF) are 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.

In short, the federal government would be well advised to view this situation as 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 the *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.

We would now like to address the questions posed in the Federal Register notice that are of most interest to our association:

1. How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now, and how might this change under a public access policy?

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 advance and disseminate 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.

APA and other publishers are engaged in efforts that promote public access to scientific publications, including in developing countries, that do not carry with them the type of unintended adverse consequences associated with some public access proposals. APA, through its own publishing program, and through partnerships with other publishers, provides state-of-the-art public access to scientific publications. For example:

- APA's PsycARTICLES Direct electronic product allows Internet access to a database of full-text articles from journals published by APA, the APA Educational Publishing Foundation, the Canadian Psychological Association, and Hogrefe Publishing Group. No fee is charged to search the electronic database, or to read and print the abstracts.
- APA participates as a publisher partner with the Health InterNetwork Access to Research Initiative (HINARI). Sponsored by the World Health Organization, HINARI (www.who.int/hinari/about/en/) provides free or very low-cost online access to the major journals in biomedical and related social sciences to not-for-profit institutions in developing countries. HINARI includes over 2000 journals from 70 publishers.
- APA has entered into an agreement with the Wellcome Trust to make articles funded by the Trust publicly available on the Internet upon publication. The Wellcome Trust recognizes the significant costs for publishers associated with public access and has taken the financial responsibility to examine ways to help offset publication costs.
- APA provides the table of contents (ToC) for every issue of all of its journals, which is published on the APA Web site with links to each article's abstract. We also send e-mail alerts about those ToCs to anyone who signs up to receive them. The ToC with links remains posted on the Web until the journal's next issue is off-press and then it is replaced by the new one.

 APA's new Web site offers a state-of-the-art search engine, which allows visitors to search on a term (e.g., depression) and view results of relevant documents within APA's public content, as well as obtain free access to abstracts of articles within APA subscription databases. This new search feature provides public access to both the summarized psychological literature written for the lay public, as well as links to abstracts of the actual published research.

2. What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?

There are many factors to consider in developing a public access policy (e.g., form of the research findings to be made available and length of embargo period), which are addressed in other questions. Yet, it is critical to also consider the economic impact of such a policy. 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.

3. Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?

They access these papers through direct or library journal subscriptions and through circulation of papers within the relevant scientific community. In our view, these papers are already easily accessible within the academic and scientific research communities. Increasing access to these papers to broader audiences would not increase their use among members of the general public, would not promote broader knowledge dissemination across the many fields of science, nor would it enhance the public's appreciation of the scientific research enterprise. As we suggest in addressing the next question, accomplishing those goals will require that papers be presented in different formats.

4. How best could federal agencies enhance public access to the peer reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?

The wording of this question presupposes that peer-reviewed scientific papers are the appropriate research product to be made available to the public free of charge. As noted earlier, there is an essential distinction to be drawn between making research findings available and making available a peer-reviewed manuscript or the actual published version of the research investigation. The latter represents a value-added investment beyond that provided by the federal government and does not account for the interests of other possible non-governmental funders of the research. If it were deemed essential to select one public access model for government-wide dissemination, the NSF model would be the most viable since this model makes research findings freely available to the public in a timely manner through both project reports and summary documents, while providing ready access to the citations of publications resulting from the research. Each such deposited record could include a hyperlink to the publisher's own system for access to the final published version, along with a link to the author's Web site. Authors and publishers could be encouraged to produce two abstracts – one for a scientific audience and one for the lay public.

6. What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?

In the best of all possible worlds, the definitive, publisher-authenticated version of a scientific paper would be made available under a public access policy to avoid compromising the quality of scientific publishing through access to other inferior versions. In the case of the NIH public access policy, for example, the peer-reviewed manuscript is made available, which has not benefited from the final copyediting, fact-checking, and proofreading required for formal publication. The integrity of scientific publishing will be severely compromised under public access policies that encourage multiple versions of the same paper being disseminated and circulated.

7. At what point in time should peer reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g., final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?

The point in time at which the peer-reviewed papers might be made available to the general public will necessarily vary by scientific field and by the frequency of publication (whether weekly, monthly, or quarterly). For instance, some of the biomedical research society publishers will likely be able to collect sufficient fees during the 12 months between the date of publication and the posting of the manuscript to cover their expenses and thus sustain their publishing programs. Some of the more well-known journals (*Science*, *JAMA*, *New England Journal of Medicine*, and *Nature*) have either atypically high numbers of subscribers or large amounts of paid advertising from pharmaceutical companies and other commercial concerns. Many also assess submission and/or publication fees of various sorts to help underwrite their expenses. These journals also typically have a "shelf life," i.e., the lifetime usage or how long the article is used over time, for the science reported in their publication(s) that falls within a 12-month period (and often much shorter than that).

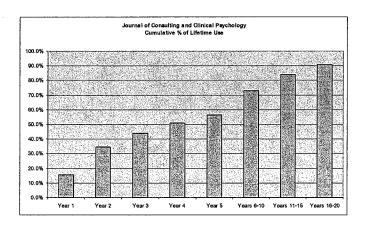
However, a 12-month shelf life is not the experience for the vast majority of publishers of social and behavioral science research and perhaps least of all for APA, which publishes mostly quarterly journals. The cutting-edge research in psychology that APA publishes is rarely obsolete within a year and 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 analysis of lifetime usage is conducted in two ways. First, individual articles are followed prospectively from their years of copyright forward. The ability to track download usage in this way is relatively recent and therefore does not allow the analysis to extend for more than five to seven years. A second method is therefore employed. This involves use of the APA full-text database, which includes the entire back-catalog inventory of APA journal articles. For a given year, download usage is computed retrospectively by computing current year usage stratified by year of copyright. This method allows the analysis to extend back in time for 20 or more years.

The following table and corresponding graph, based on this retrospective analysis, display 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.

		% of
	% in	Lifetime
Year	Year	Use
1	15.4%	15.4%
2	19.0%	34.4%
3	9.3%	43.7%
4	7.2%	50.9%
5	5.4%	56.3%
6-10	16.4%	72.7%
11-15	11.2%	83.9%
16-20	6.8%	90.7%



The data for this one journal mirrors the experience across all of APA's 56 journals. The basic pattern of lifetime usage in a given year is as follows: 16.3% in the initial year of copyright, 17.8% in the second year, 9.5% in the third year, 7.3% in the fourth year, 4.5% in the fifth year, 17.0% in years 6-10, 10.5% in years 11-15, and 7.3 percent in years 16-20. The basic pattern of cumulative lifetime usage across all APA journals is: 16.3% in the first year, 34.1% in the second year, 43.6% in the third year, 50.9% in the fourth year, 55.5% in the fifth year, 72.5% in years 6-10, 83.1% in years 11-15, and 90.4% in years 16-20.

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 NIH policy) can be expected to have a significant, adverse impact on APA journals and all other journals with similar usage patterns.

9. Access demands not only availability, but also meaningful usability. How can the federal government make its collections of peer reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers to be given the opportunity to comment or provide feedback?

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 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.

In closing, the American Psychological Association appreciates the opportunity to respond to this request for public comment on the topic of public access policies for science and technology funding agencies across the federal government. The scientific publishing community is dedicated to the widespread dissemination of scientific research and looks forward to working with OSTP and other federal agencies to ensure that the goal of enhancing public access is achieved and that the scientific publishing industry is preserved in the process. For any additional information or assistance, please contact Dr. Ellen Garrison, APA's Senior Policy Advisor, at (202) 336-6066 or egarrison@apa.org.

Sincerely

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Publisher