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OPEN SCHOLARSHIP POLICY OBSERVATORY



The Nelson Memo: Ensuring Free, Immediate, and Equitable Access to Federally Funded Research in the US

by Caroline Winter | 9 December 2022 | English, Observations, Observations and Responses | 0 comments



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At a glance:

Title	<i>Ensuring Free, Immediate, and Equitable Access to Federally Funded Research</i> (the Nelson Memo)
Creator	Alondra Nelson, US Office of Science and Technology Policy
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On August 25, 2022, the US Office of Science and Technology Policy (OSTP) released a memo called *Ensuring Free, Immediate, and Equitable Access to Federally Funded Research* and an accompanying [media release](#). This memo, dubbed the Nelson Memo after Alondra Nelson, then acting Director of the

OSTP, outlines public access (open access, OA) policy guidance for US federal agencies that fund research and development. Also released in August 2022 was the OSTP report *Economic Landscape of Federal Public Access Policy*, which examines potential economic effects of making federally funded research open access upon publication.

The updated policy has sparked lively debate within scholarly communication community and beyond. This observation offers a brief summary of the memo's key points and a snapshot of early responses.

The Nelson Memo builds upon the US federal open access policy released by John Holdren, then director of the OSTP in 2013, *Memorandum on Increasing Access to the Results of Federally Funded Research*, referred to as the Holdren Memo. That 2013 memo called for federal agencies that provided more than \$100 million annually in funding for research and development to create plans for making research publications and data more publicly accessible, with an allowable 12-month embargo.

Two of the key changes in this updated policy are that

- It applies to all federal funding agencies
- Publications must be OA upon publication, with no embargo

The Nelson Memo states that federal funding agencies should

- Update their open access policies to make publications and data from funded research publicly available immediately upon publication
- Enact transparent procedures ensuring the scientific integrity of these policies
- Work with OSTP to ensure that funded research outputs, including data, are delivered equitably

Agencies that developed OA policies under the 2013 guidelines must complete their updated plans within six months from the Nelson memo's release, and others have just under a year to do so. All policies must be published by December 31, 2024, and come into effect by December 31, 2025.

The memo includes provisions for peer reviewed publications and for research data. Federally funded peer reviewed publications must be "made freely and publicly accessible by default in agency-designated repositories without any embargo or delay after publication" (Nelson p. 3), although the memo does not specify which version of a publication must be available (i.e., author accepted manuscript or version of record). This provision applies to all journal articles, and "may include" other peer-reviewed outputs such as conference proceedings, editorials, and book chapters. Notably, agencies' plans must consider how to "maximize equitable reach," not only by making publications open access but by considering machine readability, accessibility, and open licensing as well (p. 3).

Public access plans for research data must include policies around data management and sharing, and research data associated with funded peer-reviewed publications must be made "freely and publicly accessible by default at the time of publication," subject to legal, ethical, privacy, and other similar restrictions (p. 4). Costs associated with managing, curating, and publishing data can be included in research budgets.

The memo emphasizes the importance of public and open access for supporting scientific and research integrity and "strengthen[ing] public trust in federally funded science" (p. 6). It calls for federal agencies to develop policy for collecting and sharing metadata about publications and research data, including persistent identifiers for research outputs, researchers, and federal funding awards, consistent with the *guidelines for implementing National Security Presidential Memorandum 33 (NSPM-33)* released by the National Science and Technology Council in January 2022. This policy update must be completed by December 31, 2026, and come into effect by December 31, 2027.

The memo also addresses the need for coordinating public access plans across federal agencies. It describes the role of the National Science and Technology Council's Subcommittee on Open Science,

which was created to facilitate the coordination of plans and provide additional guidance on implementing the memo's requirements.

The Updated OSTP Policy in the Press

The policy update has been a topic of interest in the academic press. A piece in *Science* notes that, although the policy uses the term public access, it is essentially an OA policy, the result of decades of discussion about making publicly funded research publicly accessible (Brainard and Kaiser 2022). An article for *Inside Higher Ed* similarly notes that this policy update has been in development for nearly a decade under the Obama and Trump administrations, but has met with opposition from the publishing community, particularly the policy's zero embargo provision (D'Agostino and Lederman 2022).

An article in *The Chronicle* offers a snapshot of responses to the policy update from the OA advocates, who are generally strongly supportive of it, and the publishing industry, which has expressed reservations about how the policy will be implemented (Zahneis 2022). *The Scholarly Kitchen* has also run several pieces about it in the weeks after the memo's release, including responses from their team (part 1 and part 2), a piece quantifying the policy's impact, a roundup post listing numerous responses and reactions to the memo, an interview with Nelson, and some reflections on that interview. *Library Journal InfoDocket* also released a roundup post in late August.

The policy's release was also covered in the *Good News Network*, the *National Law Review*, the *New York Times*, *Publishers Weekly*, *the Register*, and *Research Information*, and the podcast *Science Friday*, among other venues.

Responses from the INKE Partnership

A blog post from *Simon Fraser University Library*, an INKE partner, positions the updated policy alongside the university's OA policy, which requires deposit of the finalized text of all publications by SFU author's in its institutional repository, and other national and international OA policies (Liuta 2022). These include Plan S and Canada's 2015 *Tri-Agency Open Access Policy on Publications*, which requires journal articles funded by the *Canadian Institutes of Health Research (CIHR)*, the *Natural Sciences and Engineering Research Council of Canada (NSERC)*, and the *Social Sciences and Humanities Research Council of Canada (SSHRC)* to be openly accessible within 12 months of publication (see "Tri-Agency Open Access Policy on Publications").

The *Public Knowledge Project (PKP)*, an INKE partner, expressed support for the policy update and its effects on access and research quality. In particular, it commends the policy's emphasis on transparency and the importance of public trust (Racy 2022), noting that it aligns with the PKP's *Publication Facts Label* project, currently in development.

Open Access Australasia, an INKE partner through the *Canadian-Australian Partnership for Open Scholarship*, also expressed support for the policy update, stating that policy is a crucial factor in the shift toward OA and pointing to the changes prompted by RCUK and cOAlition S policies (2022; see "UKRI Open Access Policy Review and Consultation" and "UKRI's 2021 Open Access Policy"). This statement also expresses hope that the policy will lead to a greater diversity of OA models and approaches that better reflects the diversity of the research community.

Responses from the Broader Community

The broader community has expressed widespread support for the Nelson Memo, as well as several concerns, but seems united in thinking that the policy is a turning point for OA. The *American Institute of Physics*, for instance, says it will "set off a tectonic shift in scientific publishing" (2022), and the *Association of Research Libraries* describes it as "a historic moment for scientific communications" (2022).

SPARC expressed strong support for the new policy in its [media release](#) as well as a [Fact Sheet](#).

Statements from the [National Institutes of Health](#) and the [National Library of Medicine](#) express readiness to set the policy in motion, but some stakeholders have expressed more uncertainty about how the policy will be implemented, such as the [American Association for the Advancement of Science \(AAAS\)](#), the American Institute of Physics, and the [Association of American Universities](#).

Stakeholders have also expressed several concerns related to the policy and its potential effects. Some concerns have been raised about the apparent lack of stakeholder consultation, including by the [Association of American Publishers](#) (Husband 2022; Michael, Vines et al. 2022). Although many of the major scholarly publishers have not released statements about the policy, [Taylor & Francis](#) has voiced support for the it while acknowledging the implementation challenges.

Another concern is that the memo presents recommendations rather than directives, and it is unclear what the consequences for noncompliance will be, if any (Anderson 2022; Anderson and Wulf 2022 “Thoughts”).

The primary concerns expressed about the policy have to do with its implementation, including several related concerns about funding. Although some OA publishers have expressed support for the updated policy, such as [PLOS](#) and [Frontiers](#), others in the publishing community have expressed concerns about the impact of the zero embargo provision on their financial sustainability.

The memo does not specify a particular business model, leaving it up to agencies to decide which models work best for their communities, but the elimination of the 12-month embargo will likely make subscription business models untenable for most publishers. The rate of this change will depend in part on agencies’ policy decisions, such as which version of a publication they require to be OA upon publication and how restrictive a licence must be applied (Clark and Esposito).

The memo also does not promise additional funding to support the updated policy, although it mentions that associated costs can be included in research budgets. It is not clear what the costs of implementing the policy will be, how they will be paid, and by whom. This is true for publications and for research data, which will require a great deal of infrastructure and significant long-term funding support (see Clark and Esposito; Michael, Carpenter et al. 2022). The [Data Curation Network](#)’s response to the policy update highlights the key role institutional repositories will play in providing the infrastructure necessary for its implementation. A statement from the [American Society for Biochemistry and Molecular Biology](#) points out that research funding has not kept pace with the rising cost of doing and publishing research and calls on OSTP and policymakers to address this challenge. Some have also called into question the completeness and validity of the economic report that informed the policy (e.g., D’Agostino 2022; Michael, Vines et al. 2022; White 2022).

Some stakeholders are concerned about the policy’s potential effects on equity in scholarly publishing. Although the policy does not promise additional funding and does not mandate a specific approach or model for OA, it states that “In consultation with OMB [the Office of Management and Budget], federal agencies should allow researchers to include reasonable publication costs and costs associated with submission, curation, management of data, and special handling instructions as allowable expenses in research budgets” (Nelson, p. 5). Stakeholders are therefore concerned that OA will be funded primarily through article processing charges (APCs), and that the costs of managing data will also be passed on to authors (Clark and Esposito 2022; Pooley 2022). Noting that increasing reliance on APCs is likely, Jefferson Pooley points out that APC-supported OA is already the status quo in the US, including via hybrid journals and read and publish and other transformative agreements (see [“Open Access Agreements”](#)). He calls for measures to mitigate the resulting effects, such as support for alternative models and caps on APCs. A statement from the [Subscribe to Open Community of Practice](#) supports the policy and calls for a multiplicity of approaches to achieving its objectives (2022).

The University of California Libraries describes the policy as supporting its efforts to advance OA, suggesting that the policy may prompt publishers to leave behind the paywalled subscription model and develop entirely different business models designed to support OA (2022; see “[The University of California’s Split with Elsevier](#)”). It also notes that any increased costs for large research institutions as a result of expanded read and publish or similar models could be offset by contributions from researchers written into funding proposals (2022). [Roger Schonfeld](#) notes that some publishers will bank on the value they offer as providing a version of record, citing as an example *Science*, published by the AAAS, which [announced a green OA policy](#) as a response to the Nelson Memo and in opposition to the exclusionary tendencies of APC-based OA.

If the pay-to-publish model becomes more entrenched, however, one implication would be to make publishing less accessible to researchers with no funding or inadequate funding, including early career researchers, those from smaller institutions, and those in disciplines with less available funding support, including the humanities. An open letter to the OSTP coordinated by [Neuromatch](#) with more than 1,300 signatures highlights this concern: “The risk is that this memorandum will improve equitable access at the cost of making participation in research less equitable, which could be devastating to research progress” (“Open Letter”).

The [Association of Research Libraries](#), however, praises the policy as advancing equity “By signaling the importance of agency policies that work equitably for people from underserved backgrounds and for early-career researchers, as well as ensuring outputs are accessible to people with disabilities” (Aiwuyor 2022). It also highlights the policy’s emphasis on harmonizing policies across agencies as a way of lessening the load for research libraries. A piece in *LibraryJournal* similarly emphasizes the policy’s aim of improving equity (Peet 2022).

The Nelson Memo and Open Scholarship

The Nelson Memo contextualizes its policy updates within the widespread shift towards OA for COVID-19 research (see “[Open Scholarship and COVID-19](#)”). It notes that “In the wake of the public health crisis, government, industry, and scientists voluntarily worked together to adopt an immediate public access policy, which yielded powerful results: research and data flowed effectively, new accessible insights super-charged the rate of discovery, and translation of science soared” (Nelson p. 2). It also states that open access is aligned with fundamental US values of “equal opportunity” and that making research public will help the US become a global leader in open scholarship (p. 2). Although an update to the 2013 policy was drafted in 2018, the momentum behind the OA movement prompted by COVID-19 has contributed to the timing of the Nelson Memo’s release; the emerging monkeypox virus and US President Biden’s personal interest in the open access issue may be contributing factors as well (Naujokaitytė and Hudson 2022; Nelson 2022). The memo’s focus on equity and need to build public trust in science also reflects Nelson’s professional values. Nelson is a professor of Sociology at Columbia University and president of the [Social Science Research Council](#), and her research focuses on intersections between social inequality and science and technology.

As noted by [SPARC](#), [cOAlition S](#), and [Creative Commons](#), the policy’s zero embargo provision aligns it to some extent with international OA policies such as [Plan S](#) and the [UNESCO Recommendation on Open Science](#) (see “[Plan S and cOAlition S](#),” “[Plan S Update: Rights Retention Strategy](#),” “[Plan S Update: The Expanding Membership of cOAlition S](#),” and “[UNESCO’s Recommendation on Open Science](#)”). However, unlike Plan S, the Nelson Memo does not exclude hybrid journals or call for copyright to stay with authors (Clark and Esposito 2022). The statement from [Creative Commons](#) celebrates the policy but calls for further support for open licensing and community-led open infrastructure (Green 2022).

The updated policy applies to all federally funded research, including humanities and social sciences funding agencies that were excluded under the 2013 policy such as the [National Endowment for the Arts](#) and the [National Endowment for the Humanities](#). The Nelson Memo, however, refers to “science” and

“scientific data” without reference to the humanities; in comparison, Plan S and the UNESCO Recommendation, which uses the term “open science,” include the humanities explicitly (cOAlition S, n.d.; UNESCO 2020). Despite this, Karin Wulf notes that the updated policy will bolster open humanities research, something she argues is “desperately” needed in our current historical moment (Michael, Carpenter et al. 2022).

The OSTP has estimated that US federal funding supported 195,000 to 263,000 articles in 2020, representing about 7%–9% of the articles published worldwide (Brainard and Kaiser 2022). How agencies implement the updated policy will to a great extent determine its effect on authors, publishers, and the publishing ecosystem as a whole. Although the Nelson Memo outlines a national OA policy, the sheer size of the US scholarly publishing endeavor means that the effects of the Nelson Memo will undoubtedly be widespread, including by contributing to the momentum of the OA movement worldwide.

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