

May 6, 2020

Via Email to: publicaccess@ostp.eop.gov

Office of Science and Technology Policy
The White House
Washington, DC 20500

Re: RFI RESPONSE – PUBLIC ACCESS (85 FR 9488)

Elsevier appreciates the opportunity to respond to your Request for Information (“RFI”). Scientific, technical and medical (STM) journal publishers, like Elsevier, exist to serve the global research community by organizing the review, editing and dissemination of primary research, reference and professional education content. Elsevier’s customers include scientists, academic and research institutions, students, medical and health professionals, as well as hospitals, healthcare organizations, corporations and governments. Elsevier and its sister companies employ 15,000 people in the U.S., and Elsevier enjoys principal operations in Massachusetts, New York, Pennsylvania, Missouri and California. More than 850 of Elsevier’s journals are based in the U.S., and we enjoy publishing partnerships on behalf of more than 200 American learned societies and associations. Our society partners represent well over a million researchers, clinicians and patients.

Elsevier was proud to partner with OSTP to ensure that all our publications relevant to the fight against COVID-19 were not only freely available on our own Novel Coronavirus Information Center, but also on PubMed Central in both readable and text mineable formats. We look forward to continuing this collaboration in search for a vaccine.

Executive Summary

We wholeheartedly share OSTP’s commitment to advancing an open science agenda that supports access and scientific integrity. So how do we move forward? Although the topic does not lend itself to “easy” answers, we see three areas where the White House can advance the agenda in a manner that draws broad stakeholder consensus, reinforces long-standing public-private collaborations that serve as the backbone of the U.S. research ecosystem, and supports high-quality research:

1. First, the direct results of federally-funded research—that is, the outputs directly paid by taxpayers—should be made freely and publicly available. This includes **final project reports, underlying data sets and code**, all of which remain largely inaccessible in today’s research landscape. Publishers like Elsevier make no claims to such outputs because they are funded directly by the taxpayer and do not yet include any value-add from the private sector.
2. Second, there is an opportunity to encourage greater access to and uptake of so-called “**preprints**”—which are the draft articles prepared for submission to journals. These draft articles have not yet been improved through publisher-led investments, such as peer and editorial review processes, and can be made available in a responsible manner.
3. Third, the White House could play a unique role in bringing together—in an ongoing manner—diverse stakeholders to map out a sustainable path forward under the “Open Access” model, in which authors (or funders) pay for publication costs so more **peer reviewed articles** are free to read upon publication. For this “pay-to-publish” or “open access” model to flourish, certain structural challenges need to be addressed.

We share the concerns voiced by numerous scientific and medical societies, as well as various other journal publishers, regarding proposed policies that seek to mandate immediate, free access to versions of scholarly communications that are prepared through private sector funding. We are similarly concerned with policy proposals that may dictate how and when researchers can publish their works, thereby restricting “author choice.” Any government-imposed directive along these lines would risk harming the system of peer-reviewed scholarly communication that supports science and innovation, and would be contrary to well-established U.S. commitments to public-private partnerships.

The research ecosystem is complex and subject to multiple perspectives and views *within and amongst* different stakeholders—from (1) researchers, *as readers*; (2) researchers, *as authors*; (3) funding bodies; (4) universities (*e.g.*, libraries, research officers, CIOs, faculty, etc.); (5) learned societies; (6) non-profit publishers; (7) commercial publishers; and (8) the global academic community. We urge the Administration to resist any one-size-fits-all “solution,” and to refrain from imposing any sweeping rules governing the complex and multidimensional scholarly communication ecosystem.

Guiding Principles

Elsevier remains committed to driving towards an increasingly open future. For purposes of this RFI, we have formulated a set of **“Guiding Principles”** that may be used as a tool and reference guide to advance this discussion in a clear and balanced manner that supports, and does not undermine, critical scholarly communication frameworks. These principles apply to the different types of research outputs because, in our view, it is essential to distinguish between these distinctive outputs and research stages in formulating sound evidence-based policies.

Outputs	Guiding Principles	Recommendations
Publicly Funded Research Results <i>E.g., Final Reports, Data Sets, Code, etc.</i>	If taxpayer funded, with no publisher contribution, it should be freely available	<ul style="list-style-type: none"> ➤ OSTP should facilitate access to project reports ➤ OSTP should explore incentives to help researchers share data without undue burdens (& unfunded mandates)
Non-Funded or Post-Grant Authorship, With No Publisher Value-Added Services <i>E.g., Preprints/Submitted Manuscripts</i>	If outside of grant, and work contains no publisher contribution, authors should be free to share as they choose	<ul style="list-style-type: none"> ➤ OSTP could encourage greater uptake & early sharing ➤ Important to emphasize that these drafts have not been fully vetted by the scientific community and are not considered formally published works
Private-Sector Value Added Works <i>E.g., Accepted Author Manuscripts (“AAMs”) and Published Journal Articles based on federally funded research</i>	If enhanced article is produced by way of a <i>non-governmental</i> peer review & editorial process, the resulting work should be subject to market principles	<ul style="list-style-type: none"> ➤ Diverse publishing funding models should continue to be respected, including pay-to-publish & pay-to-read options ➤ If articles are not funded via a pay-to-publish model, then articles/AAMs may be freely shared after 12 months

RFI Responses (By Output)

Based on these principles, we have arranged our comments primarily by the *nature of the output*, with a corresponding reference to the RFI topic as applicable. This allows us to address the ins-and-outs of articles, data and code in a more consolidated answer, especially seeing that all of the RFI topics focus on some version of accessibility—*e.g.*, “public access” (Topic 1), “free” access (Topic 2), and “immediate access” (Topic 3). To do otherwise artificially bifurcates the proposed opportunity across the three interrelated “access”-based questions.

A. Publicly Funded Outputs (e.g., Project Reports, Data & Code). We agree with OSTP’s objectives to ensure that the results of federally-funded research (RFI, No. 2)—that is, the outputs directly paid by the taxpayers—are made freely available. As noted below, however, the peer-reviewed author manuscript is not funded by taxpayers, as this value-added version exists as a collaboration between authors and publishers. As a result, we focus here on those facets of the research lifecycle that are directly funded by taxpayers, and not otherwise touched by publishers.

A great deal more can be done to make taxpayer funded outputs more available. Publicly funded research (as all research) generates numerous outputs. For example, final project reports are required to be filed with all funding agencies under federal acquisition regulations. In most cases, these reports remain wholly unavailable and an untapped resource.¹ Final project reports represent perhaps the most effective vehicle for public understanding of how taxpayer funds were used. Focusing only on peer-reviewed outputs limits the universe of publicly financed research to a smaller subset of projects.

Similarly, Elsevier is eager to work with OSTP on improving the uptake of open research data practices in order to embed reproducibility firmly into the scientific process. Our shared goals on reproducibility could help create a more supportive environment for researchers to make their data free, open and discoverable to all researchers wherever possible. Open research data practices are therefore best implemented through a range of incentives, delivered through a positive policy ecosystem and complementary tools to make the process of sharing data seamless and unobtrusive to researchers’ work.²

B. Non-Funded or Post-Grant Authorship - With No Publisher Value-Added Services. Moving a step further away from the direct results of publicly funded research, “preprints” (or “submitted manuscripts”) are another avenue to accelerate open science. A “preprint” is the original draft article to which no value has been added by publishers (through

¹ The America Competes Act requires, for example, that the National Science Foundation make available to the public in a timely manner all “final project reports” resulting from research funded, in whole or in part, from the Foundation. *See* 42 U.S.C. § 1862o-2.

² *See* Elsevier Policies, “Research Data,” at <https://www.elsevier.com/about/policies/research-data>; and the Elsevier-Leiden University report on data practices, “Open Data: The Research Perspective” (2017), at <https://www.elsevier.com/about/open-science/research-data/open-data-report>.

editing, peer-review, and other processes). Although this output is typically voluntary, and may occur outside of the grant cycle, preprints have not yet been touched by publishers (*i.e.*, no “value added”). For this reason, Elsevier has long espoused the position that [*“Authors can share their preprint anywhere at any time.”*](#)

There is a robust and growing culture for sharing this type of work, and Elsevier’s own [SSRN](#) is an excellent example of a community that has been developed around the free sharing of preprints. While many preprints are shared this way, there remains a large corpus of similar content that is not. OSTP may want to consider how to further encourage the uptake in a responsible manner, in line with researcher needs and associated integrity and public health concerns.

C. Private-Sector, Value-Added Works. Getting the results of research out to the public is one thing; getting a *specialized, improved version* of articles analyzing that work is another. With respect to the former, researchers can get their work out to the public in a number of ways. They submit research findings to funders (who are in a position to share the works, as noted above), and they are free to publicly share their research finding and post their papers, including preprints, in publicly accessible repositories. However, if a researcher has the further aim of ensuring his/her work receives specialist support—that is, is assessed for validity, significance and originality, and is produced in the form of a high-quality article—he/she will turn to a publisher for support. This activity benefits the author and reader alike, lifting the entirety of the research ecosystem. **All of these publishing activities occur outside of any grant obligations, public funding, or governmental oversight, and constitute a separate private sector-led value-added service.**

As U.S. CTO Michael Kratsios noted in an article titled [Connecting Americans to Coronavirus Information Online](#), “there is no shortage of coronavirus content on the internet,” the challenge lies in ensuring that people have access to “the most up-to-date” and “most relevant” information. Publishers play a critical role in highlighting the most promising developments in research, while also ensuring that fake science does not pollute the mainstream. When faced with a flood of information, busy scientists, clinicians and other professionals will turn to and rely upon the imprimatur of authoritative journals—many of which have decades of renown in their specialized fields—to stay up-to-date on the latest developments. In a pointed [interview response](#), Dr. Fauci said that he handles the pandemic’s “information deluge” by relying on trusted journals: “If something is published in places like *New England Journal of Medicine, Science, Nature, Cell*, or JAMA—you know, generally that is quite well peer reviewed because the editors and the editorial staff of those journals really take things very seriously.” Put simply, mere (free) access to content is not enough when unaccompanied by some indicia of trust and quality. The RFI’s focus on “access” should not cause the complexities and nuances of the research system to be overlooked.

The challenge is not in increasing open science outputs, but rather how to get there in a sustainable manner while supporting diverse researcher needs. To this end, we see some opportunities, and share some existing barriers that need to be overcome through further engagements and collaboration. These include:

1. Accelerating Open Access. Each year, approximately 2.5M articles embodying the advancements of science are published. Roughly 80% are published on a subscription basis, meaning it’s free for authors to publish their works while subscribers pay to read them. The remaining 20% are published on a “Open Access” basis, where authors (or funders) pay an Article Publication Charge (APC), removing the need for a subscription and providing immediate and free access.

Elsevier supports a flexible environment where researchers have a variety of options on how to publish. Elsevier has pursued innovative business models to support authors in the manner that they request. In 2019, Elsevier published almost 50,000 Open Access articles, making Elsevier one of the world’s largest “OA” publishers. The challenge before us is how to both increase adoption of this pay-to-publish model while supporting a well-functioning and sustainable system.

For a number of reasons, this model has not been widely adopted in the U.S. or around the world. By way of example, NIH allows researchers to use grant funds to publish papers on an “open access” basis. Elsevier currently observes 24% uptake among NIH-funded authors for the open access model, whereas 76% elect not to do so. There is more work to be done to increase demand for, and support adoption of, a pay-to-publish model, and Elsevier welcomes the opportunity to work with OSTP on ways to build on the open access participation figures. Researchers, funders and publishers need to better understand the current limitations to increase adoption and drive the necessary change. For example:

- *Are articles being submitted after grant closure?*
- *Do OA levels fall upon 2nd+ article submissions?*
- *How do different grant ranges and disciplines fare?*
- *Would an escrow arrangement encourage uptake?*

During our February roundtable session, OSTP acknowledged that it does not yet have answers to these and other questions necessary to inform public and private sector actions. More evidence, and piloting of models, is needed.

2. Barriers and Limitations. RFI No. 1 asks about barriers affecting the adoption of some of these initiatives. With respect to accelerating open access, one leading study found that both researcher attitudes and associated costs, at both the individual and institutional levels, pose challenges to a greater adoption of a pay-to-publish “open access” model.³ This thoughtful study, funded by the Mellon Foundation and conducted on behalf of the University of California Libraries, recognized a great opportunity to advance the pay-to-publish model, however, in doing so the study also found:

a. ADDED COSTS AND OPEN QUESTIONS AROUND FINANCING MODELS:

- “[F]or larger research-intensive institutions,” a flip to a single pay-to-publish model will cause a “significant funding gap” as “the total cost to publish...will exceed current library journal budgets.” (PIF at 6-7)
- “[F]unds available to the researcher, including grant funding, should be considered” to cover publication costs (PIF at 116)

b. RESEARCHER ATTITUDES – NO WIDESPREAD “BUY-IN”:

- “From the authoring point of view, concern was expressed about the financial ramifications of widespread open access, not only personally, but also as it might impact departments[.]” (PIF at 12)
- “Opinions about publishing in open access outlets, and the model in general, ranged from extremely positive to extremely negative, with most participants somewhere in the middle.” (PIF at 22)
- “[O]pen access was rated the lowest in importance across all position types and...disciplines.” (PIF at 28)
- “[R]espondents were reluctant to pay author charges to publish their papers...For the amount respondents would be willing pay from their personal research funds, the majority...chose ‘none’ (55.2%)[.]” (PIF at 29)

c. THE NEED FOR FURTHER EVALUATION AND OPERATIONAL INFRASTRUCTURE:

- “[S]uch a transition [to a pay-to-publish model] will be *extremely complex*, with *significant risk* on many sides. Moving in this direction will *require careful balancing of resources* and the *development of entirely new operational infrastructure*[.]” (PIF at 131, emphasis added)
- “The shift to an APC funding model implies the introduction of a *new socio-technical system* for scholarly publishing. This will undoubtedly produce *changes in workflow for numerous stakeholders*[.]” (PIF at 19, emphasis added)
- “[C]onverting the cost of scholarly communication to an ‘author pays’ or, potentially, an ‘institution pays’ model has *huge implications* for large research institutions...Finding the *right financial model* to pay for a more open form of scholarly communication...requires *significantly more evaluation*.” (PIF at 10, emphasis added)

These concerns are real and would not disappear by the issuance of a top-down policy directive. Instead, thoughtful pilot projects could be developed to find sustainable solutions to such well-recognized difficulties. These projects could bring together funders, researchers, publishers and universities to work together to support a sustainable path forward.

The White House has been engaged in one-on-one meetings and a few sector-specific roundtable discussions since Dr. Droegemeier’s confirmation. Yet to date there has only been one (1) convened cross-sectoral group including publishers to begin to talk through specific action items around open access uptake on publisher produced article outputs. This meeting just took place a few days ago, on April 30, and we respectfully submit that this first meeting should not be OSTP’s “final” multi-stakeholder meeting to work through transition models recognized as being “extremely complex, with significant risk on many sides.” Only through continued dialogue and a data-driven *test and pilot approach* can we ensure that the right mechanisms are in place to collectively overcome funding flow and related challenges.

³ See University of California Libraries. “Pay It Forward: Investigating a Sustainable Model of Open Access Article Processing Charges for Large North American Research Institutions” (Oakland: 2016), hereinafter the “PIF” report. Last accessed at: https://www.library.ucdavis.edu/wp-content/uploads/2018/11/ICIS-UC-Pay-It-Forward-Final-Report.rev_.7.18.16.pdf.

3. Additional Considerations. The RFI’s final topic invites additional information that should be considered in connection with any federal policy around peer-reviewed content. With the RFI’s predominate focus on “access,” it is important that we close by emphasizing that publishers exist to *enable* broad access. To interpret the current debate as one between a “closed and open” framework is improper, and indeed, factually incorrect for several reasons.

First, publishers like Elsevier make *all* articles published in their journals publicly available to read *immediately* upon their publication. Researchers and the general public enjoy a broad and diverse environment in which to consume content by paying for certain versions and receiving others for free:

ARTICLES PUBLISHED OA (fee paid by authors; free for readers) <i>Available Day 1</i>	SUBSCRIPTION CONTENT (fee paid by readers; authors publish for free) <i>Available Day 1</i>	ARTICLE SHARING (free for authors & readers, see n. 4) <i>Available Day 1</i>
PATIENT AND CAREGIVER ACCESS (requested articles provided at no cost) <i>Available Day 1</i>	WALK-IN ACCESS (free public access at licensed universities) <i>Available Day 1</i>	ARTICLE ABSTRACTS (summary provided at no cost) <i>Available Day 1</i>

In addition to these Day 1 access options, subscription articles reporting on federally funded research are made *freely* available to the public at the end of Year 1. This additional form of “public access” balances the need for timely access to research with a sustainable mechanism to provide that access via subscriptions for articles that are not paid for up front. To shorten or do away with “embargo” periods, while *not simultaneously funding* open access frameworks and supporting U.S. authors, would result in a U.S. research landscape that is inefficient if not also unsustainable. Similarly, talks of “price caps” on articles ensure a non-dynamic marketplace. There exists vast diversity among journals and research disciplines.

Second, just because certain versions of value-added research may have associated costs does not mean that research is “closed.” Elsevier’s journals received over **1 billion downloads** in 2019. This is not a “closed” system. The issue, to be precise, appears not to be one of a lack of access *per se* but rather about whether and how to provide “free” access (RFI, No. 2). OSTP must understand that the value-added peer-reviewed article is not free to produce, and publishers collectively invest *billions of dollars each year* to bring these articles to readers.

Publishers work intensively with the research community and make investments that go into producing the peer-reviewed manuscript by way of operating *business frameworks, systems, processes and policies* that govern the *solicitation, vetting, curation, editing, dissemination and long-term preservation* of high-quality content. Every day, some 8,000 Elsevier employees, 22,000 editors, 80,000 editorial board members and a network of 800,000 peer reviewers support Elsevier’s 2,500 journals across a wide variety of scientific disciplines. The effective and sustainable operation of these business models—be it as a society publisher, a non-profit or commercial publisher—is critical to a well-functioning research landscape.

As a result, it is difficult to see how “American competitiveness” (RFI, No. 3) is supported if researchers face new restrictions on how or where to publish their works, or private sector investments to support the production of these high-quality outputs are undermined through overbroad regulatory policies, including a “zero embargo.” Talks of “trade-offs” (RFI, No. 3) are misplaced if they assume that the government can maintain today’s quality outputs financed by the private sector but dictate how the private sector should operate. There is a long list of unsuccessful examples of where governments have tried to fix markets by directing business models, removing market choice or flexibility, and setting price controls. The guaranteed effect is to distort behavior, create inefficiency and erode value.

Elsevier shares the goal of making high quality research outputs publicly available. We believe this must be done in a manner that is both fair to the researcher/author *and* sustainable for the corresponding partner publisher, all while ensuring that innovative business models and frameworks may be tested in the marketplace. Any one-size-fits-all government-imposed model will not drive innovation, and may needlessly undermine the robust research landscape.

We appreciate your effort to engage stakeholders on these important issues and look forward to further discussion with OSTP. If you have any questions, please do not hesitate to contact Daniel Marti at daniel.marti@relx.com.

⁴ See Elsevier Policies, “Article Sharing,” at <https://www.elsevier.com/about/policies/sharing>.