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I have personally benefited from the public access mandate of the National Institutes of Health. My insurance company denied authorization for a physician-recommended treatment protocol for one of my daughters because their standards indicated that the protocol was approved for only one diagnosis. I work at a university and was able to access some articles through the databases that the university library licenses. Through these databases I found some useful articles. However, I also accessed additional useful articles published in journals that the university does not have paid access to via NIH's PubMed Central. I was able to cite research evidence indicating that the physician-recommended treatment protocol had a reasonable likelihood of success for my daughter with potentially far greater effectiveness and far fewer side effects than any other available protocol was likely to produce. This helped to persuade the insurance company to reverse their decision. This experience galvanized my feelings about public access. The vast majority of the American public does not have the kind of access I have as a university employee. They deserve access to what their taxes are paying for.

*Comment 1: 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?*

Yes. I am not personally aware of anyone who has undertaken research and published their findings for the sole purpose that they enjoy research. Research is generally undertaken to advance knowledge and bring about positive change thereby. Among other things, positive change can come in the form of new products and services which "grow existing and new markets." The single most important steps any federal agency "could take ... related to the access and analysis of peer-reviewed publications that result from federally funded scientific research" is (1) to mandate that funded researchers grant the funding agency a non-exclusive, irrevocable license (before signing copyright over to a publisher) to make the final peer-reviewed manuscript available in a publicly open repository and (2) to act on that granted license and make the publication accessible.

*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?*

Archiving publications and making them freely accessible to anyone who is interested, rather than locking them up behind a pay wall as commercial publishers are wont to do, has the distinct possibility of releasing creativity, innovation, and entrepreneurship that would not otherwise be brought to bear. Such policies will make research available to institutions of higher education who would not otherwise have access. Further research could be done. Existing business enterprises--especially smaller enterprises that cannot afford commercial publisher prices for access--could use such research to enhance existing or make new products and services. If, as I frequently hear, small business is really the engine for job growth, such policies have the clear potential to spur such growth. Insofar as improving "the productivity of the scientific enterprise" is concerned, logic indicates that improved access (and I consider free access to be a definite improvement over paid access) would lead to less duplication in research endeavors.

Increasingly, I see references to meta-studies or meta-analyses. These are also likely to increase meaning that a single study has use even beyond what those who undertook it originally envisioned. This also means more "bang for the buck."

*What are the relative costs and benefits of such policies?*

I have not personally read the several studies that have been undertaken by the economist John Houghton examining such policies in various countries. I have read summaries of Houghton's studies. The summaries suggest that the most conservative estimates indicate that such policies bring 4 to 5 times more benefit than the costs involved.

*What type of access to these publications is required to maximize U.S. economic growth and improve the productivity of the American scientific enterprise?*

The ideal type of access is both the ability to read the publications and to reuse them. I am familiar with the Creative Commons and the variety of licenses they have created. The CC license enabling both reading and reuse is the CC-BY license. Both abilities should be made available to interested users as soon as possible and, ideally, immediately with no embargo period.

*Comment 2: What specific steps can be taken to protect the intellectual property interests of publishers, scientists, Federal agencies, and other stakeholders involved with the publication and dissemination of peer-reviewed scholarly publications resulting from federally funded scientific research?*

I bristle somewhat that publishers are mentioned first in this listing of those who are potential intellectual property stakeholders. Publishers are among the last, if not THE last, to have any IP interest in a scholarly publication. Their intellectual contribution to any publication is minor at best and consists of copy-editing IF that can be considered an intellectual contribution rather than a stylistic or technical contribution. They become an intellectual property stakeholder when they force scholars to sign over their intellectual property rights.

The NIH public access policy is generally a good model to follow in this case. The requirement that a funded researcher grant a non-exclusive, irrevocable license to NIH to make the publication publicly available before the researcher signs any copyright transfer agreement with a publisher is clearly legal. If it were not the publishers would have sued to stop the NIH mandate.

The researchers interest is protected given that they retain their entire bundle of rights under copyright--at least unless or until they "voluntarily" sign them away to a publisher. Some may argue that the researcher's right is being abrogated because of the requirement that they grant the license to NIH is specious. The decision to seek NIH funding is a voluntary one. If a researcher objects to this requirement, s/he is under no obligation to solicit NIH funding.

In my view the federal agency is only a proxy for the taxpayer. The agency is the mechanism through which the taxpayer's interest is protected. Taxpayers pay for research and should be able to read and reuse what they have paid for without paying again! This leads to one of the drawbacks of the NIH policy. It does not go far enough. The NIH policy should allow not only for access; it should be modified to also permit reuse.

*Conversely, are there policies that should not be adopted with respect to public access to peer-reviewed scholarly publications so as not to undermine any intellectual property rights of publishers, scientists, Federal agencies, and other stakeholders?*

Yes. There are policies that should NOT be adopted. No attempt should be made to require publishers to open up back files of scholarly content to which they legally acquired copyright

prior to any policy enactment. I would expect them to challenge any such attempt in court and would have to stand with them if such an attempt were made.

*Comment 3: 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? 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?*

I do not know all of the pros and cons of these approaches. One of the pros of a centralized approach is that NIH has already paved the way and it is reasonable to expect that other agencies could get up and going much more quickly because of NIH's experience (or that some agency could be tasked to be the central repository of all funded research from whatever agency). Another pro of a centralized approach is that it would provide consistency for researchers. Another is that if the federal government is likely to be more stable and enduring than any other enterprise whether commercial or non-profit, private or public.

Frequently, the federal government is neither nimble nor innovative. These qualities are more likely to be found in smaller entities. These qualities of a large federal bureaucracy are definite cons to a centralized approach.

The best approach might be a combination of approaches. If the decision is made not to establish either a single federal repository covering all agencies or repositories in each agency but to allow researchers to deposit in non-federal repositories meeting at least a set of minimum standards, then the federal government should somehow maintain a copy of publications from funded research in the event of a failure in/disappearance of non-federal repositories. Single copies are never a good idea to ensure long-term stewardship.

*Comment 4: Are there models or new ideas for public-private partnerships that take advantage of existing publisher archives and encourage innovation in accessibility and interoperability, while ensuring long-term stewardship of the results of federally funded research?*

Nothing immediately comes to mind as a model of such a partnership. There may well be and, due to the lack of nimbleness and innovation that too frequently characterizes the federal bureaucracy, may be an attractive alternative. Publishers should not have to participate if they choose not to but their participation should be welcomed IF (1) the price is right; (2) the intent of funder mandates to provide freely available access and, I would hope reuse, is not in any way compromised; and (3) a mirror site(s) is/are maintained to ensure the long-term stewardship as mentioned in Comment 3.

*Comment 5: What steps can be taken by Federal agencies, publishers, and/or scholarly and professional societies to encourage interoperable search, discovery, and analysis capacity across disciplines and archives? What are the minimum core metadata for scholarly publications that must be made available to the public to allow such capabilities? How should Federal agencies make certain that such minimum core metadata associated with peer-reviewed publications resulting from federally funded scientific research are publicly available to ensure that these publications can be easily found and linked to Federal science funding?*

I do not consider myself qualified to answer this question. I do know that standards help and that there are likely to be a number of both established and potential standards (some likely in

draft form already under consideration) covering a variety of areas of relevance. I also know that standards evolve and, typically, improve. All of this should be taken into consideration. However, adopting public access policies across federal funding agencies NOW is more important than waiting for some standard to be approved.

*Comment 6: How can Federal agencies that fund science maximize the benefit of public access policies to U.S. taxpayers, and their investment in the peer-reviewed literature, while minimizing burden and costs for stakeholders, including awardee institutions, scientists, publishers, Federal agencies, and libraries?*

To my mind, consistency is a critical factor in maximizing the benefit to taxpayers while simultaneously minimizing the burden and costs for other stakeholders. Preferably a single policy covering all current agencies (and any future agencies that might be created) would be established or, alternatively, identical policies for the different agencies would be established. Inconsistency breeds confusion, compliance headaches, and reduced benefits.

Another key piece to *maximizing* benefit is to build reuse rights, not just access rights, into the policies. This shortcoming of the existing NIH policy should be rectified.

*Comment 7: 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?*

Potentially. From an internal logic standpoint (i.e. the taxpayers are funding it and therefore have every bit as much right to it) this makes sense. However, as I understand it, the bulk of the scholarly publications stemming from federal funding of scientific research is in the form of articles in scholarly journals. There is every reason to move forward expeditiously on this front especially given the existing NIH mandate and all that has been learned from the NIH experience. The policy could later be extended to cover additional publication types/outlets if warranted.

*Comment 8: 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? Please describe the empirical basis for the recommended embargo period. Analyses that weigh public and private benefits and account for external market factors, such as competition, price changes, library budgets, and other factors, will be particularly useful. Are there evidence-based arguments that can be made that the delay period should be different for specific disciplines or types of publications?*

In my opinion, there is no appropriate embargo period. Ideally the material is immediately accessible and reusable. An embargo period assumes that a commercial publisher's interests are of more importance than the interests of all other stakeholders in this process and that is, to my mind, a false assumption. An embargo period may, nevertheless, be necessary for political reasons. If that is the case, the embargo should be as short as possible and no more than 6 months. The empirical basis for that statement is that, aside from the NIH, embargoes allowed by other research funders with public access mandates are 6 months at a maximum. The NIH is an outlier and outlier should not be the basis for a policy decision.

*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.*

In an earlier career, I was a Foreign Service Officer with the Department of State. I know that the United States government expends a considerable sum on aid to foreign countries and that many Americans question the wisdom of doing so. Making federally funded research openly accessible to taxpaying Americans will inevitably open it up to researchers and the general public outside our borders as well. In my mind, that is an additional boon to the adoption of such policies. It is potentially the least expensive type of foreign aid we could engage in and has the possibility of generating significant and long-lasting good because it is more in line with the proverb that "If you give a man a fish you feed him for a day but if you teach a man to fish you feed him for a lifetime" than is much of our foreign aid.