

Viewpoints

Federal Repositories: Comparative Advantage in Open Access?

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By spending billions each year on scientific research, the U.S. government is at the same time responsible for the creation of a large volume of peer-reviewed research articles. Much of this valuable content is published commercially and available only to subscribers of what are often high-priced periodicals. However, publications by federal employees as a part of their official duties are not subject to exclusive copyrights, and several recent initiatives have attempted to publicize this exemption more widely. With web servers and related information technology a routine part of government services, exploiting the public domain status of the federal scientists' publications would be an easy way to both maximize the impact of agency research and at the same time benefit scientists everywhere.

In most cases, papers submitted to peer-reviewed journals by federal scientists are not subject to copyright transfer to the publisher as would be the case with a university or other private sector author. Publishers appear to be aware of this situation. Many manuscript submission forms today allow federal authors to declare that their paper meets this criterion for being in the public domain and journal web sites sometimes include a note identifying federally authored papers.

The recent policy encouraging deposit of publications resulting from NIH-funded projects into the PubMed Central (PMC) digital repository is helping to focus attention on the issue of access to federally funded science. Although deposit in the archive is not mandatory and includes manuscripts from non-federal authors, it is a good first step in acknowledging provenance over federally funded science. The basic argument behind the initiative is that since the research is taxpayer-funded, there is no reason that it should be restricted or "owned" by anyone. This exemplifies the spirit of the copyright law provision

mentioned above. Although preliminary evidence points to a slow adoption of PMC deposit by many authors, this may reflect uncertainty by non-federal employees (NIH grantees, contractors and others) about rights to deposit a manuscript which has been published commercially. However, this impediment should not exist where the author is a federal employee.

The NIH isn't the only government agency creating or financing scientific research, however. Many other government bodies create peer-reviewed science every year, much of it published commercially and restricted to subscribers. A PubMed or BIOSIS search on the Author Address (AD) field, for example, shows a large body of peer-reviewed science authored by taxpayer-funded scientists. Because scientists throughout the world often work in underfunded facilities where library budgets are strained, it is time for government agencies to help one another by collecting and making publicly available their peer-reviewed scientific output in a systematic way. Open access digital repositories from scientific agencies (e.g. USDA, Dept. of Interior, NOAA) would free up volumes of research which should be publicly available. Although well-known efforts at the Los Alamos National Laboratory and other U.S. Dept. of Energy offices have made progress in freeing up federal research through e-print repositories, much more can be done.

By adopting models in place at universities and other nonprofits, a series of federal science e-print repositories could make a large body of peer-reviewed works available to the scientific community. Complying with current repository standards (OAI-PMH, for example) would expose these publications to information harvesters and web crawlers, making it easier for those who most need the material to discover and use it. This clearly supports the mission of most scientific organizations.

Preliminary evidence shows that open access to scientific papers increases citation rates and readership, and while that may be a debatable measurement of scholarly achievement, it is the wider dissemination of scientific research that should be the main factor in propelling this change. This is after all one of the primary goals of scientific research: to build on the work of others and guide future inquiry. A strong policy from federal agencies that ensures the availability of the results of their scientific research would contribute to the momentum already begun by the NIH and others. The absence of restrictions on making the peer-reviewed manuscripts of U.S. government scientists publicly available should be exploited given that the technology is no longer a barrier.

According to Roy Tennant of the California Digital Library, the first consideration in the creation of a digital library is whether one has the rights to reproduce the material. With this hurdle removed and many technological barriers falling, federal government agencies should begin capturing and providing access to the fruits of their labor. In economics

this is known as "comparative advantage" and it behooves federal agencies (and their libraries) to exploit this loophole both for their own benefit and that of the scientific record.

Caveat: I am neither an attorney nor an intellectual property expert so I would welcome any comments or clarifications on this topic by librarians, lawyers or publishers.

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