



A BIMONTHLY REPORT ON RESEARCH LIBRARY ISSUES AND ACTIONS FROM ARL, CNI, AND SPARC

IMPROVING ACCESS TO PUBLICLY FUNDED RESEARCH: WHAT'S IN IT FOR THE INSTITUTION? CAN WE MAKE THE CASE?

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Editor's note: Dr. Shulenburg delivered the following remarks on October 20, 2006, at a forum in Washington, DC, cosponsored by ARL, the Association of American Universities (AAU), CNI, the National Association of State Universities and Land-Grant Colleges (NASULGC), and SPARC.

It would be disingenuous for me to pretend that I come to this forum with an open mind on public access; I have written and spoken for far too long and too widely for that to be a credible strategy. Instead, I acknowledge that I fully support the aims and the specifics of the Cornyn/Lieberman Federal Research Public Access Act as I begin my remarks and you may be certain that I will not talk myself out of that position by their end.

Now that the suspense has completely dissipated, the question I've been asked to address is, "What's in it for the institution? Can we make the case?"

I will be liberal about the definition of the word "institution" and interpret it as "The Academy" rather than US universities, as I think the case for free availability of published scholarly research findings is best made at that broad level, not a lower one.

In 1999 I served on a committee made up of AAU [Association of American Universities] provosts charged with examining how universities should handle intellectual property in the face of "new media."¹ It seems long ago and far away when Jonathan Cole convened the committee on which I served along with Jeff Stone, then of Chicago; John Wiley, then provost at Wisconsin; Peter Low, then of Virginia; Jim Maher of Pittsburgh; and John Vaughn of the AAU. The new media we focused on then, online journal articles, has over the intervening six years become the dominant form in which journal articles are distributed.

But what is important to me today about that committee and its report is not that we settled for all time the issue (as I believe we left a few loose ends), but the lens through which we chose to conduct the analysis. Our decision was that our "...discussion should focus on the bases for creation of works, the status of the contributors, the resources and facilities necessary for creating the work..." and not on whether electronic journal articles belonged to category "x" or category "y" and should therefore by analogy be treated like other objects in that category. The decision essentially was to examine the ecology necessary for the generation of research. That led us to tease out five properties that we identified as "the norms and values of scholarly and scientific work;" they are:

- open, free exchange of ideas;
- publication in scholarly and scientific journals;
- meritocracy, which rewards people on the basis of the quality of their work;
- organized skepticism, which enjoins faculty and researchers to withhold judgments about the validity of ideas until those ideas are tested and the weight of evidence dictates their acceptance; and
- common ownership of goods, which holds that research and scholarship are products of social collaborations and are assigned ultimately to the community.

To this listing we added an ultimate test of the desirability of any policy: therefore, the policies or rules used to govern the new technologies and their development "should not interfere in any way with the ability of faculty members to pursue their research and freely present their ideas to their colleagues, their students, and the world at large."

Now, roll forward in time until May 2, 2006, when S2695, the Federal Research Public Access Act, was introduced. That bill finds:

- (1) the Federal Government funds basic and applied research with the expectation that new ideas and discoveries that result from the research, if shared and effectively disseminated, will advance science and improve the lives and welfare of people of the United States and around the world; and
- (2) the Internet makes it possible for this information to be promptly available to every scientist, physician, educator, and citizen at home, in school, or in a library.

Note the complementarity with the norms and values list above. S2695 begins with findings about the ecology of research and follows with the observation that a specific technology, the Internet, makes it possible for that ecology to function almost perfectly. It then prescribes that the portion of scholarly work arising from federal grants that is subjected to scholarly scrutiny and survives to be published in scholarly journals would become “free online...not later than 6 months after publication.”²

The only point of the research ecology the Cole committee identified that is not reinforced by S2695 is the “meritocracy plank” and that it simply does not address.

Thus the initial question of whether we, that is, the academy, can make the case for the bill is that it passes the Cole report test of furthering the ecology of research and that is a test that, if failed, would argue against support of the bill.

But there are those who object to the bill precisely because they believe it will damage one part of that ecology, the refereeing process, and therefore threatens publication of scholarship in scholarly and scientific journals. The damage is alleged to be done by the bill’s reduction of the period that the journal of publication holds exclusive right to publish a scholarly manuscript from infinity, at present, to only six months. This truncation of the now exclusive publication window gives readers of journals the option of accessing the published manuscript without subscribing to the journal or being part of an entity that subscribes. The prospective reader need wait only six months until the article becomes available for free. The scenario that follows is that journal subscriptions fall as subscribers become patient waiters while financially weakened journals that are not able to support the cost of the refereeing process go out of business. What of the patient-waiter scenario?

Clearly, if the six-month limitation on exclusive publication destroys the economics of scholarly journals and refereeing perishes along with scholarly journals, the ecology of the academy is seriously damaged and the environment for research is worsened, not improved by passage of the Federal Research Public Access Act.

We now have significant experience with journals that voluntarily have permitted articles they published to be

made available for free after delay periods ranging from zero delay to one year and that evidence is not consistent with an apocalyptic collapse of the subscriber base. Indeed, project Romeo finds that 70% of scholarly journals worldwide give authors blanket permission to post their papers immediately on publicly accessible Web sites. These journals would not have taken that step voluntarily had they been overly concerned about catastrophic loss of subscribers. There is much evidence that significant value arises from immediate access to published journal articles and that the overwhelming majority of subscribers or their agents, generally libraries, are willing to pay for immediate access rather than wait six months.

Some open access proponents have concluded that making articles freely available six months after publication has no economic impact on journals. I simply do not agree with that judgment. I believe that public access will have at least the potential of some impact and I rather hope that it does. If there were no economic impact on publishers, I am convinced that science and technology journals would continue to escalate their subscription rates into the indefinite future, at least at the 7.6% annual overall inflation rate for journals libraries experienced over the last 20 years. This rate, more than double the 3.1% annual increase in the CPI and 1.5 times the 5% rate at which library budgets advanced over the period, has had significant impact on library collections, with most libraries being forced to cut both journal subscriptions and monograph purchases. (Although, of late, the bundling practices of some commercial journals have caused the total number of paid journal subscriptions to increase while libraries continued to selectively cut individual journals.)

What S2695 will do is to remove from some journal publishers part of their market power, that is, part of their ability to raise prices. The mechanism by which the effect will be worked out is the market. There are some university libraries that are not at all price sensitive to top journals in their fields while there are others that in a Cornyn/Lieberman world, when faced with a 20% subscription price increase or even a 7.6% price increase, would cancel a subscription and ask faculty to wait six months to obtain general access to the federally funded portion of its contents. It would not take a very large portion of a market’s participants resisting price increases in this manner for publishers to change behavior as they got the message that above-inflation price increases are unacceptable and not in their long-term best interest. The availability of the bulk of a journal’s content for free after six months will put some brake on journal price increases and perhaps will even cause some very high-priced journals to reduce prices.

It is true that STEM [science, technology, engineering, and medicine] journals often argue that declining subscriptions and cost increases for everything from postage to adding features like CrossRef have forced their

prices to go up. Those who make this argument seem to believe that producers who take on additional cost or are simply passive victims of cost increases, somehow are entitled to raise their prices without experiencing adverse sales consequences. The fact is that only economic entities with significant market power can raise prices unilaterally without significant loss of sales. Competitive markets exact a huge sales retribution on those who raise prices. Generally prices can be increased with minimum sales impact only when demand for a product is increasing or when the market for a specific product is characterized by price-inelasticity. Top journals in each field have market power, that is, they operated in price-inelastic markets. Their publishers have used that power to increase prices because journal subscriptions were falling or cost increases were mounting or because they simply had the opportunity to do so to increase their operating margins.

As an aside, I note that had STEM journals found ways to avoid extraordinary price increases, the pressure to take away part of their market power would never have increased to the point that a Cornyn/Lieberman bill would have been proposed or would have generated much support. But they did not show restraint and STEM journal prices have now risen far too high for the pressure to abate even if price increases became quite modest.

It is time for top scholarly journals to begin increasing their prices less than library budgets increase or, preferably, to hold prices steady or to reduce them. If this happens STEM scholarly publishers will have to change the way they do business. Perhaps they will have to adopt electronic-only journal formats, reduce staff, or make hard decisions about whether to add new features that aid journal readers. I do not raise these possibilities lightly. I do so weighing whether permanently canceling subscriptions to five, \$200 journals in the humanities, something an additional 5% or \$1,000 increase in the cost of \$20,000 science journal might necessitate, is a worthwhile trade-off. Is acquiring 20 fewer monographs this year and every year in the future an acceptable price to retain this one subscription? At \$50 per monograph, that is what an additional \$1,000 or 5% increase in an expensive STEM journal really costs. And of course this is just an illustration of the opportunity cost of a single expensive journal's inordinate price increase. Price restraint and cost cutting by STEM journals clearly is preferable to suffering these losses.

Universities have increased their allocations to libraries relative to other university functions over many years. Public universities have about the same quantity of real resources per student as they had in the early 1990s. That is, we are now educating each student at the

same cost as we were at that time. We have raised tuition dramatically but just enough to offset state government budget cuts. Given universities collective fiscal situation, they cannot offset inordinate journal price increases; STEM journal prices increases must be slowed if additional harm to libraries is to be avoided.

And I do not regard as probable the prediction that passage of the Federal Research Public Access Act will threaten the survival of refereeing. When any living organism or organization's survival is threatened, it begins to shut down peripheral functions to support the core. Core functions are the last to be shut down, not the first.

Refereeing is a core function. Its presence and its quality are what distinguish the top-quality journals from the also-rans. Support from journal revenues for non-publishing society functions, the addition

of finding aids, and prime locations for journal offices, etc., would go long before refereeing was threatened.

And, in the unlikely event that existing STEM journals got to the point that they cannot or will not support refereeing, would refereeing die? I rather think not. Most colleagues say "yes" when asked to referee a paper and they do so without monetary compensation. To the young in the disciplines it is a great honor to be asked to serve as a referee. To the seasoned, refereeing is a duty they owe to their discipline, a duty that must be carried out if the discipline is to advance. Accordingly, reports that 80% of colleagues agree to serve as referees when asked to do so are not uncommon. Faculty members are willing to serve as referees.

Refereeing will continue, probably in existing journals, but if not in them, in new journals that, like hydra, will arise to take existing journals' places if they fall and may attempt to take their places while they remain strong. I note in this regard that the number of paid journal subscriptions at the average ARL library grew from about 16,000 in 1986 to 22,500 in 2004, with the latter figure being inflated by quasi-compulsory bundled purchase plans. During the same period, unpaid subscriptions grew from 3,300 to 10,400, with most of that growth occurring since 1999 when 6,500 such journals were received. Paid journal subscriptions grew at 2% per year over the 20 years while unpaid grew at a 6.3% annual rate. I do not equate every unpaid journal in quality to every paid journal but there are many high quality "free" journals. The point is that the rapid growth of "free" journals plus the continuing growth in paid journals, demonstrates the value that the community places on the scholarly journal as the venue of choice. Neither the institution of the scholarly journal nor refereeing is about to die or even wane if the Cornyn/Lieberman bill becomes law.

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We have had much experience with the public asking government to increase access to public goods. Over time our government has changed the practice of essentially giving away the right to freely discharge effluent into the air and the water, to making available at little or no cost to industry mineral rights, timber rights, and grazing rights to public lands, and to distributing to broadcasters for nominal fees the rights to place their transmissions into the spectrum. Every proposed change in sales, lease, and use or allocation practice for goods in this category has been met by industry protest and prediction of disaster for the industry and the public if the changes under discussion were put in place. The protests of the industries affected by such changes are inevitable.

Those in the scholarly journal publishing industry, whether in private corporations or not-for-profit scholarly societies, may find this set of analogies uncomfortable, but it is apt. An important portion of the public is asking for improved access to goods that have been obtained largely through public funding. Some publishers who now own significant rights to those public goods are predicting grave consequences for themselves and for the public if the terms under which they currently acquire manuscripts and are permitted to use them are restricted. Legislators will have to sort through the contrasting claims and decide which claims have the greatest merit. I clearly believe that scholars and the public are on the right side of this matter. Cornyn/Lieberman should become law.

In previous remarks on this topic I have observed that our failure to address the major problems of the scholarly communications system was due to the unknowability of the potential gain from making the scholarly literature widely available. With passage of this act the problem of the subjunctive, I believe, is about to be overcome. Scientists at our less wealthy institutions in the US and in the many impoverished universities throughout the world will have six-month-old scholarship at their fingertips. Relatives desperately wanting to know about the diseases their loved ones have and about the range of treatments available will have that knowledge. I suspect the additional lives saved or extended and the additional scientific advances made ultimately will cause us to question how we could have permitted knowledge to be locked away by high-cost access indefinitely from those who could and would use it so productively.

Novel idea making information more freely available, isn't it?

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¹ AAU Intellectual Property Task Force, "Intellectual Property and New Media Technologies: A Framework for Policy Development at AAU Institutions," 1999, <http://www.aau.edu/reports/IPReport.html>.

² Federal Research Public Access Act of 2006 (Introduced in Senate), 109th Congress, 2nd Session, S2695 May 2, 2006, <http://thomas.loc.gov/cgi-bin/query/z?c109:S.2695>.

HIGHER EDUCATION AND LIBRARY LEADERS VOICE SUPPORT FOR FREE ACCESS TO FEDERAL RESEARCH

In remarks at a forum on "Improving Access to Publicly Funded Research," leaders of major higher education and library organizations voiced their support for the goals of recent measures to expand public access to research funded by the US Government. The forum was cosponsored by ARL, the Association of American Universities (AAU), CNI, the National Association of State Universities and Land-Grant Colleges (NASULGC), and SPARC.

The forum attracted 170 participants who were a representative mix of the different constituencies within the higher education, scholarly, and research library communities. As a result, the audience was well prepared to engage an impressive lineup of speakers on the many dimensions of the issues involved in expanding access to publicly funded research.

The access policies that garnered the most attention at the forum were the National Institutes of Health (NIH) Public Access Policy, which makes the results of NIH-funded research freely available, and the Federal Research Public Access Act (FRPAA). Introduced in May 2006, FRPAA (S2695) would require all US federal agencies that fund over \$100 million on external research to ensure that the resulting peer-reviewed research articles are available free on the Internet within six months of publication. FRPAA is sometimes called the Cornyn-Lieberman bill, named after its bipartisan Senator sponsors.

The forum also showcased practical strategies for facilitating the new access policies. Librarians from the Massachusetts Institute of Technology and the University of California described local efforts to aid faculty in retaining rights to deposit their works in open online archives. Librarians from Cornell University, Pennsylvania State University, and the California Digital Library described D-Pubs and e-Scholarship as strategies being used to enhance institutional publishing.

The presentations at the forum by David Shulenburg, Vice President for Academic Affairs of NASULGC, and Clifford Lynch, CNI Executive Director, are included elsewhere in this issue of ARL. Papers and slides from other speakers at the forum are available at <http://www.arl.org/forum06/>.