

Rethinking What's *Public* in the University's Public Mission

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As Jennifer Washburn rightly warns in *University Inc*, higher education is in danger of losing its standing as the hallowed halls of learning as it is viewed more and more by certain forces within and outside the university as “a knowledge factory capable of spawning cutting-edge ideas, high-tech corridors, spin-off companies, and jobs.”¹ Just how far this commercialization and privatization of the university has gone can be seen in recent Congressional hearings on the universities’ tax-exempt status, with some challenging exactly what these institutions are giving back to the larger community, beyond the benefits provided to students who pay tuition and to alumni, as well as other donors, who collect tax advantages.² This is indeed a time to rethink the research university’s public mission.³

Yet rather than joining those helpfully documenting the diversion of the university’s public mission by corporate interests in research agendas and campus real estate, I want to focus on what is decidedly *not* changing to the degree that I believe it should be, in terms of that mission. That is, the current transformation of scholarly communication has yet to do all that it can to advance the university’s public mission. That transformation, having affected every other aspect of how we work, has not substantially transformed public access to research and scholarship in ways that it easily could, judging by the many demonstrations of open access to this work that are now operating.

Public access to research and scholarship may be a small, if vital, part of this mission, I will argue, but it also bears on circulation of knowledge more generally. On the other hand, to ignore current opportunities to greatly increase access to this knowledge is to stand by while the public status of this work is increasingly eclipsed by huge gains in public access to many other sources of information and knowledge. That is, not only is the oft-noted increasing expense of journals diminishing the public quality of this work, but more importantly the very standard for what it means to make something public has radically changed.

Today, when government-funded work is made public, people expect to be able to find it freely available online. It was once more than enough to make such work public by printing it in a newspaper or selling it in bookstores. One might consider *The Pentagon Papers* as a prime instance. Now, government documents, agency reports, court decisions, foundation-funded studies, as well as the scandalous Abu Ghraib documentation, are all part of the web's public sphere.⁴

This shift in what it means to make something public sets a new standard for judging, to take a relevant example for this collection, the Social Science Research Council's mission to "mobilize existing knowledge for new problems... and enhance public access to information." Just so, SSRC now admirably supplements its book publishing program with a series of Online Forums and Essays that make freely available the work of scholars who have come together to address such themes as "Is 'Race' Real?". Anything less than affording the public some measure of, if not complete, access to this knowledge work diminishes, or so goes my claim, the institution's claim to a public mission.

Putting the materials online for readers turns out to be only half the story for this new public sphere. Public access can also be defined in terms of a swell in critical engagement with these freely posted materials. The resulting exposure, citation, commentary, and critique—in blogs, wikis, bulletin boards, and social networks—is no less a part of the newly digitized public sphere. The Internet has radically altered the technical and economic basis on which the public sphere operates, revitalizing its standing as a place of ideas, information, and debate. Of course, many of those ideas are based on debatable misinformation. But then how fair is it for the academic community to complain about information quality online, when most of what the university produces in the name of rigorous scholarship is essentially sealed off from the public sphere? While the news media have been restlessly searching for the best business model for operating within this new public information zone, the *New York Times* recently decided to provide readers with open access to all of the newspaper, going back 20 years (instead of just seven days).⁵ I am not going to suggest that any one model will fit all players (let alone one based on advertising revenue). I do want to outline below ways for universities to make a much greater contribution to what is otherwise an increasingly well informed and accessible space.

Up to this point, a number of faculty members, groups of researchers, society publishers, research libraries, and entrepreneurs have taken advantage of this communication revolution to increase the contribution that research and scholarship make to the public sphere. At best, perhaps 15-20 percent of the work produced and published each year has been made open access.⁶ It is a significant token, but no more than a token compared to how entirely involved universities have been in establishing more open forms of communication, beginning with the original ARPANET, and continuing with their leading role in the cooperative development of open source software for educational and research purposes. The spirit of technologically enabled openness within the academic community has also evolved into open data movements⁷ and forms of open notebook science⁸, and follows on researchers' increasing use of blogs and wikis⁹. MIT has been putting course outlines and slides online through MIT OpenCourseWare since 2002, and Stanford is offering free recordings of lectures through iTunes U.

All of this activity only points to questions about why more of the research and scholarship published by research universities in peer-reviewed journals, now that it exists almost entirely, if not exclusively, online, is only available to the public, professionals, and policymakers if they are able to visit a research library with public-access terminals, subscribe to a journal for at least a year, or pay up to \$40 to view a single article. The journal publishing system that has developed since the seventeenth century has indeed proven to be an effective way of maximizing the distribution and circulation of knowledge in the world of print. It was not, by the late twentieth century, a very efficient economic system, judging by what commercial publishers charged for journal subscriptions compared to what non-profit societies charged for their often more highly ranked journals.¹⁰ In that sense, the notion of making this work public, in a financially responsible and accessible way, was already in a state of serious decline by the time the Internet arrived on the scene.¹¹ Since then, with a proportion of this published and peer-reviewed work currently open, public, and free, it is clear that something is even further amiss in this particular knowledge economy.

For the university to carry on business as usual in the face of these two closely related phenomenon— that is, with a new standard for making information *public* and many viable demonstrations of open access to research—is to miss the chance to give

new meaning to the institution's public mission and its place within the public sphere. More than that, this body of knowledge is subject to the increasing control of a handful of commercial journal publishers that make it subject to a business model that only serves to further restrict its circulation among researchers. My hope is that this chapter will make it a little harder for those who address the university's public mission to ignore these developments in scholarly communication, while making it at the same time somewhat easier for them to get behind the open access movement in higher education by setting out for them a few simple steps to follow. I want to suggest how universities, scholarly societies, research libraries, faculty and students can further fold this new public element into the flow of scholarly communication. It is within our reach to add a greater part of this public good to an otherwise revitalized public sphere. The public and professionals are showing a good deal of interest in the latest research, whether out of personal concerns in the area of health or through broader interests with *Wikipedia*.¹²

I realize that research and scholarship contribute a great deal to the public good without this work ever having to find its way outside of the university libraries that subscribe to the requisite journals. Research does lead to public benefits and contributes to human understanding without entailing any form of public access beyond its publication in a scholarly journal of whatever cost. But in that sense, as well, greater public access also means greater scholarly access. The work that is being made freely available is, for example, being cited by researchers more often than articles that have not (yet) been made open access.¹³ And this global circulation of knowledge is no less basic to the advancement of research, and thus essential in that sense, as well, to the university's public mission. But still it turns out that much of what is said about the public mission of the university bears just as much on this question of direct public access to knowledge as it does on the indirect public benefits of research and scholarship.

To jump back a century or two, Henry Malden, for example, in his 1835 book *On the Origin of Universities and Academic Degrees*, which had been commissioned by the Privy Council of the British government (in relation to petitions to granting the University of London a charter), conveys this public mission's legendary standing in the "spontaneous" formation of these bodies: "The oldest universities of Europe sprung up

in the twelfth century, and were formed by the zeal and enterprise of learned men, who undertook to deliver public instruction to all who were desirous of hearing them”.¹⁴ And today, nine centuries later, those who would serve as the public figureheads of the resulting institutions that undertake public instruction miss few opportunities to reference the public service and mission of the university, all the more when it comes to the presidents of elite institutions.

Among recent university leaders, Harold T. Shapiro, former president of Princeton University and the University of Michigan, was quick to state in the 2003 Clark Kerr Lectures that “private and public universities... serve society as both a responsive servant and a thoughtful critic,” referring to this service as “the university’s public trust”.¹⁵ On the specific point of public access to knowledge, Shapiro has no trouble bringing forward rhetorical precedents of this civic-minded sensibility by drawing on Harvard president Josiah Quincy whose 1833 appeal to the Massachusetts’s legislature reminded that public body of, in Shapiro’s words, “the public character of Harvard’s library assets”.¹⁶ Shapiro, in turn, makes it clear that Princeton is “not some kind of private social club,” as all of its assets also “exist to serve a public purpose”.¹⁷ One form which that service takes is to connect “our rapidly accumulating new knowledge” with “the appropriate response of public policy,” while recognizing that “the application of science is a social decision”¹⁸. Shapiro recommends creating “venues for serious conversations” between scholars and the public.¹⁹ Having greater access to the scholar’s work, in its published form, would seem conducive to such conversations, not as a requirement but as a courtesy and point of openness and respect for those with whom one is inviting such conversation.

While Shapiro addresses the current threats posed to the university’s public mission, Derek Bok, former president of Harvard University, is certainly more adamant about the threat of commercialization in every area of university practice (except scholarly publishing), pointing out that “in the past twenty-five years, the number and variety of commercial activities on the campuses of research universities have reached proportions never dreamed of in earlier periods”.²⁰ On the one hand, as he sees it, “the profusion of these commercial ventures reflects the critical importance of research and advanced education to contemporary society”,²¹ while on the other hand, these ventures have led to more than a few research scandals and faculty conflicts of interest or what he

politely refers to as “unwise compromises with basic academic values”.²² Although he considers the undue educational influence of athletic programs, over-priced professional programs, and pharmaceutical research funding, Bok doesn’t look at the increasing commercialization of scholarly publishing and the relative decline in the “public” nature of access to this knowledge as contributing no less to this breach in public trust.

If overlooking the potential for increasing public access to knowledge is a common pattern among those higher education leaders, it is no less absent, unfortunately, among those who find their calling in the study of higher education.²³ For example, Adrianna J. Kezar, Tony C. Chambers, and John C. Burkhardt, in their recent collection *Higher Education for the Public Good: Emerging Voices from a National Movement* express a deep concern over “a shift, and perhaps loss, in the role higher education plays in serving the public good”.²⁴ They are encouraged, as am I, by “an emerging movement in higher education related to the public good” that has arisen in response to the loss.²⁵ This movement seeks to “examine and build the role” that universities “play in the larger public good,” as it seeks to develop “strategies to craft organizational cultures and environments that contribute to the public good”.²⁶ My case is, of course, that far greater university and faculty involvement in open access approaches to publishing is just such a strategy that would contribute to the public good.

The book includes one chapter that deals directly with the access to research issue, Judith A. Ramaley’s “Scholarship for the Public Good”.²⁷ In a passionately argued essay that makes a succinct case for the “engaged university,” Ramaley focuses on “the appropriate goals of scholarship” by calling for greater balance between “theoretical and analytical conceptions” of research and “addressing very practical problems for which new knowledge or the integration of knowledge is needed”.²⁸ She would engage students in this process “and thus prepare them for citizenship and for the professional responsibilities that they will later assume” to which I want to add, they will assume after they have lost any right or ready ability to access the new knowledge or the integration of knowledge that is needed. Ramaley goes on to speak of creating “a student for life,” of the importance of fostering “communities of learning” in relation to industry, schools, health services and other areas of modern life, and of “collaborative learning” in which knowledge is generated, applied and interpreted”.²⁹ And while I think Ramaley’s vision of research is as encompassing and open as I would like to see it, my question

here is about access.³⁰ That is, how can we reasonably expect such learning to continue to happen among adults when access to the most vital and vibrant sources of knowledge—with universities working to foster, in Ramaley’s words, “a thirst for knowledge and a desire for practical outcomes”³¹—are effectively cut off for those lifelong students and communities of learning. Graduating students are needlessly being cut off today for no other reason than it is taking some time for universities to realize how readily they might take hold of current opportunities to make this knowledge a far greater part of the public sphere.³²

Let me offer a final instance among contemporary calls for improving scholarship’s public reach, this time from the American Sociological Association (ASA). Scholarly societies are particularly focused on the research side of academic life, and, as such, are often responsible for the leading journals in any given field. The ASA recently sponsored a collection on “public sociology,” following on its 2004 annual conference on this theme (which stands as its best attended and most widely discussed annual meeting). Michael Burawoy, in his presidential speech to the meeting, makes it clear that he sees public sociology revitalizing the discipline, repositioning it once more as “the angel of history” as sociology “represents the interests of humanity—interests in keeping at bay both despotism and market tyranny”.³³ When it comes to the active defense of humanity, to setting up of a public conversation based on public sociology, when it comes to “making the invisible visible and the private public,” he ends up pointing to the ASA’s public work which includes “congressional briefings and its regular press releases ... [and] the column of our newsletter, *Footnotes*”.³⁴ I want to respectively suggest that, in addition to these pieces, as well as op-ed articles in newspaper and the rare popular book written by public sociologists, much more can be done to advance the ASA’s newfound public mission, which would indeed make it feasible for the public and sociologists, in working together or independently, “to draw on a century of extensive research, elaborate theories, practical interventions, and critical thinking”.³⁵

What can be readily done today to extend the public mission of research universities is make far more research and scholarship available to more people. Or rather what can be done to prevent sociology and botany, for instance, from becoming relatively less public, and less a part of the public sphere, given the current growth in

access to information through other channels, is to explore how the new technologies of openness that the university is otherwise contributing to can be used to make more what researchers are doing and have long done public. To achieve this, university leaders, research librarians, authors, editors, scholarly societies, and anyone else who is concerned with the commercialization of higher education and earnest about restoring, if not extending the public mission of research universities, need to endorse and support what are now well-established paths to open access for this body of knowledge. They also need to be open to innovation and leadership in scholarly publishing models, given how fast these online knowledge economies and technologies are developing and reshaping knowledge production, as already noted.

There are principally two methods for improving access to research. The first of these is referred to as *author self-archiving*. This entails authors taking a few moments to upload copies of their published work to open access sites, such as their own website or a library-run archive, under terms set out by publishers. The second path is *open access publishing*. This involves journals, for the most part, that have found a means to make their content free to readers immediately on publication or some period of time after their subscribers receive their issue. I will briefly describe both of these initiatives with an eye to how university leaders, research librarians, authors, editors and scholarly societies could play a more informed role in fostering access to knowledge as part of the university's public mission. But before I do that let me again address the most reasonable of concerns about this approach, this time concerning how making this body of work public, in this basic sense of not charging someone to read it, will have little value in itself.

I would be the first to acknowledge that *free access* is not the whole of the issue. Getting on a bus and handing out offprints of Talcott Parson's "The School Class as a Social System" would result in little more than a mess of paper on the floor of the bus. It would do nothing for university's public mission. To start making public the latest studies in sociology or biology carries with it responsibilities that have to do with the full meaning of *accessible*. That is why a number of us who are working on increasing access to research are also designing and analyzing new online reading environments that support greater engagement with scholarly work, not only for scholars but for this wider readership among the related professions as well as the public. As a result, journal

articles can be accompanied by a series of tools that provide readers with additional context and background tailored to the specific article they are reading.³⁶ These tools encourage readers to ask whether there are other studies that come to a similar conclusion, whether the concept in question can be further understood by reading about it in other contexts (including encyclopedia and the media), or whether there are government policies or materials on this topic. We may have only begun to design effective tools for this purpose, and the research on this is still underway, but I would hope it is clear that the preliminary nature of this work is not a reason in itself to hold off providing public and global access to research and scholarship. This is about a right to know, to dig as deeply as one is inclined and able into all that is known, rather than a matter of establishing that the public has a proven ability to take advantage in every case of this right to know. It is also well to remember that what makes this body of work valuable, above all, is how it is addressed to other researchers able to build on, extend, and challenge this work in the ways that it takes to advance knowledge.

In the case of author self-archiving, the viability, not to mention legality, of this path to greater access has now been guaranteed by a majority of journal publishers. These publishers, including some of the biggest such as Elsevier and Springer, now expressly permit authors to post the work on their own website or an institutional repository.³⁷ Some of these publishers permit posting while the paper is in review, and others ask authors to wait until they are submitting their final peer-reviewed copy, which they can then post (rather than posting the publishers' final PDF, which they may not be permitted to post). Some ask authors to wait 6-24 months after publication before posting this post-review version. This means, in effect, that the archives represent a parallel universe of research papers, made up of work that is not-quite-identical work in terms of time and version to what has been published. This suggests, to me at least, that authors archiving their own work is more about establishing the principle – as well as the value – of open access. The risk that needs to be acknowledged with this approach hangs on whether author-archiving will simply (a) extend current levels of executive and coach class access to knowledge, much as the subscription pricing model sustains among well-funded and hard-pressed research libraries, or (b) provide a temporary intermediary step on the way to establishing an open access basis for the entire universe of research and scholarship.³⁸ Still, Stevan Harnad is right to

insist that this form of self-archiving, an initiative to which he has contributed perhaps more than anyone, currently stands as the most direct, easily realizable, route to open access for a good proportion of the literature.³⁹

It's true that this right-to-archive has not been widely embraced up to this point by the authors of research articles. It is as if researchers have learned the publish-or-perish lesson all too well. To have had the work published is the end of story, and on to the next study. Taking advantage of the Internet to make the work available on a global basis has yet to register in any significant way among busy and productive researchers, despite the evidence that it does the work and its new readers a fair bit of good. For example, when the U.S. National Institutes of Health *requested* in 2005 that grantees archive "an electronic version of the author's final manuscript upon acceptance for publication," it saw but four percent of the eligible papers archived by authors in the first eight months of the policy initiative.⁴⁰ Rather than wait until this idea of making federally financed research publicly available to catch on, the NIH has come back with proposed legislation to turn this *request* to archive into a *requirement*. A number of scholarly publishers, including scholarly societies, have been lobbying against this mandating measure in Congress, revealing in the process a certain limit to the publishers' endorsement of self-archiving as a means of contributing to the public good.⁴¹

Whatever the fate of this particular legislative measure, a number of funding agencies in various parts of the world, as well as a few universities, have instituted archiving mandates requiring authors to post copies of their published work in an institutional repository some months after its publication.⁴² At the same time, Alma Swan reports that nearly half of faculty in 2005 report that they engaged in some form of self-archiving with their publications, with the number self-archiving having doubled from the year before.⁴³

This is the very point when the universities need to step in and support the value of open access, that is, after the initial swell of interest and support has demonstrated its value and viability, and when the publishers, after initially permitting it, are now turning against it. Bringing the particular focus of the research university's public mission to increasing the amount of work publicly archived would add much to the compelling case for open access. There is much that universities, departments, and

research units can do to get behind this idea, even if they are understandably reluctant to put archiving mandates into place, given the need to respect faculty autonomy and rights over their intellectual property (which the same faculty are only too happy, the cynically inclined might note, to turn over to commercial publishers).

The first step for a university is to establish a repository for such archiving. A number of well-supported open source software systems for archiving are available to assist in the uploading, management, and indexing of such materials.⁴⁴ With a repository in place, the university can then recognize and actively promote work that is made open access by featuring it on library, departmental, or other websites. It can build collections of open access materials that speak to issues of interest to the public and professional communities, with follow-ups to the media on particularly timely topics. It can ask for faculty to designate in their annual reports on their activities that part of their work has been archived, in light of its additional contribution to the global academic community, as well as to the public sphere. In this way, the university can greatly increase its position, given growing public and media expectations that access to information is a basic right and a necessary aspect of life in the twenty-first century.

By the same token, scholarly societies should first of all make sure that their journals have simple, easy to follow, self-archiving policies that are clearly posted and actively supported as a point of pride for the association, as it represents a recognition of author rights and opportunities, as well as a service to the global community. The societies could feature archived articles on their websites in a similar fashion to the universities.⁴⁵ This greater openness will lead to increases in the journals' impact factor, as well as add to the authors' citation count, as a number of studies have shown.⁴⁶ As for the impact of self-archiving on a journal's subscriptions, the longest standing example is with high energy particle physics, where arXiv.org Eprint Archive is now a dozen years old and archives almost the whole of the current literature. The publishers of the relevant journals report no decline in subscriptions to their relevant journals, at least none over and above the general decline that journals are experiencing as more titles come on the market.⁴⁷

While mandated author self-archiving is the most straightforward means of achieving open access, universities have reason to investigate ways of supporting open access journals.⁴⁸ There is a need, for example, to create a publishing alternative to the

growing degree of corporate concentration and market share taking place among a small number of commercial publishers (namely, Elsevier, Springer, Wiley-Blackwell, and Taylor and Francis), which is leading to further limitations on research library holdings.⁴⁹ At stake are the scholarly society journals that are being turned over to these commercial giants (in return for highly professional publishing services, online and in print, as well as considerable increase in revenue for the society beginning with a cash advance in some cases).⁵⁰ New approaches to open access publishing could also serve to strengthen journal publishing in developing countries.⁵¹ It can mean the difference between struggling to publish a print journal with but a handful of subscribers (including donor-supported subscriptions), and struggling to publish a journal online that is available world-wide and indexed in Google Scholar, with its articles immediately and freely available to readers. Enabling new journals, as well as helping existing ones go online, would give a boost to the research and review culture within this academic community.

The public mission of the university can be furthered, in other words, by supporting not only the archiving of published articles but by participating in journal publishing. For universities and their libraries to support the publishing efforts of scholarly societies and groups of faculty speaks not only to the current economics of publishing. It also creates a responsive channel for new intellectual developments and thus serves as a source of academic freedom and innovation, as open access publishing allows journals that form around new ideas to immediately circulate within the global academic community.⁵²

As to the economic viability of open access journals, it is fair enough to speak of it as an unproven model. There may be three thousand active open access journals listed in the Directory of Open Access Journals, but one is no older than the Internet itself, which made this form of publishing possible. Among those titles, a substantial number in biomedical field and related sciences (that are relatively rich in grants) are able to charge author or publication fees (much as a number of subscription journals in these fields do with “page charges”) that are currently in the area of \$2-3,000.⁵³ Open access journals in other fields, however, are not in a position to charge authors a fee, given the level of research grants in others areas.

Here the key economic strategy of open access journals is to substantially reduce publishing costs by forgoing a print edition, which is making increasing sense as many research libraries are dropping print editions (where they have a choice) because not only of storage and processing costs, but principally because their patrons are now using digital titles above all. As part of this cost reduction, many open access journals are also tapping into another element of this revitalized public sphere by utilizing open source software to manage and publish journal, which further reduces their costs while offering a sustainable means of keeping up with technical developments in taking advantage of this new publishing medium.⁵⁴ The costs that remain, whether for copyeditors or layout, are then covered by institutional or association subsidies, perhaps in the form of a graduate assistant.

For those titles that cannot imagine going without a print edition at this point, there is the example provided by those journals that provide what is known as *delayed open access*, with content released for free reading some period after its initial publication. The *New England Journal of Medicine* is a leading instance, with everything made free six months after publication. It is hosted by Highwire Press, a division of Stanford University Libraries, that has over 1,000 journals from which it is able to provide free access to 1.8 million articles, largely on the basis of delayed open access.

Certainly, a real issue for the non-profit scholarly association journals is how for a number of societies subscription sales of their titles have come over the years to generate a “surplus” that funds other activities within the society.⁵⁵ While in the biomedical field enormous surpluses can be generated by pharmaceutical and medical device advertising raising its own set of ethical issues for scholarly publishing,⁵⁶ in other fields societies have grown dependent on these library subscriptions. While recognizing the critical role that societies play in establishing the highest standards for scholarly work in their fields, this may not be an insurmountable problem for research universities interested in increasing access to research and scholarship.

A common thread here, with Highwire Press at Stanford University Libraries as well as Open Journal Systems at Simon Fraser University Library, is the new role that research libraries are playing. They are becoming actively involved in scholarly publishing, developing software, hosting journals, and operating repositories of work

published elsewhere. Library associations, such as the Association of Research Libraries and the American Library Association, have been active lobbyists for open access initiatives. It is tempting, then, to hinge the conclusion of this chapter on the central role that the library can play in increasing public access to knowledge.

In the first instance, a number of universities have set up offices of scholarly publishing in association with their libraries (e.g., Harvard University and University Michigan). Such offices are in an excellent position to offer faculty currently involved in and thinking about becoming involved in scholarly publishing suggestions and support that would lead to increased access and readership. Such offices could, for example, help faculty members bring forward self-archiving policies for their scholarly associations that strengthen the associations' service to its members and the larger community. These offices could assist faculty working on journals by working out financial models based on open source software and perhaps library website hosting, that would enable the journals to offer open access (perhaps on a delayed basis while still selling subscriptions). Libraries at Rutgers, Vanderbilt, Emory, and Toronto are just a few of the universities that are already contributing to an alternative library-based publishing economy for journals that offer open access. Not only do the journals benefit, but so do the libraries as they reduce publishing costs for research and as they contribute in very public ways to the university's public mission.

Having come this far, I would introduce a more radical version of library participation in scholarly communication. After all, while libraries have every reason to support high-quality open access journals, they end up supporting only those journals that charge reasonably priced, not to mention higher and higher priced, subscriptions. Any money the library saves when journal goes open access goes, in effect, into the increased subscription prices. It does not seem such a large step, then, to imagine libraries, which are already forming consortia to negotiate discounts with big corporate publishers, going on to form an open access publishing cooperative with scholarly associations and other academic groups. That is, the libraries would contribute to the cooperative the equivalent of subscription fees to cover journal editing costs, in addition to providing hosting and cataloguing services, as well as library-supported publishing software and distribution networks, while the societies would provide highly

professional open access journals that would reach the widest possible readership with the library's assistance.⁵⁷

University libraries are already involved in establishing open access endowments that have the same effect, in the case of *Stanford Encyclopedia of Philosophy*, an online, open access, peer reviewed reference work of the highest caliber. In the course of raising a \$4 million endowment to ensure its sustainability, the encyclopedia has managed to secure commitments of \$15,000 from 75 of the 118 institutions which offer a doctorate in philosophy (in addition to major allocations from Stanford and the National Endowment for the Humanities). The libraries at these institutions recognize that they are primary benefactors of this work, with the open access it affords a bonus in the way of the library's public mission, rather than representing some sort of loss of proprietary interest in exclusive access. While there is no discounting the special institutional situation of Stanford in this case, there is still no reason to think that universities working in conjunction on this common cause of creating far more of an academically based knowledge commons. Certainly, outside of the academy, new models for creating public intellectual resources have been appearing, with *Wikipedia* and *The Encyclopedia of Life*, both with considerable contributions from the research community.

The time is certainly right for those who would champion the research university's public mission to come forward in support of approaches to scholarly publishing that increase access to this knowledge. Still, they would need to go into this understanding the challenges, risks, and objections. They are bound to hear some express concerns that open access will undermine the economic stability of scholarly publishing, placing peer review and journal quality in jeopardy.⁵⁸ Of course, if all was truly well with the traditional subscription model, libraries wouldn't be forced to cut subscriptions in the face of rising prices, while the idea that open access poses a threat is belied by the growing number of open access ventures such as Oxford University Press's Oxford Open, Springer's Open Choice, and the Public Library of Science's top-ranked *Biology*, as well as the already mentioned *New England Journal of Medicine* and many of the publications handled by Highwire Press that make their content open access, if some months after their initial publications. It is true that in the decade of experimentation no single economic model for open access has come to dominate the

market in the way that subscriptions did in the past. Yet what is common to the various open access approaches is a recognition of what it contributes to research and scholarship, as well as for the larger community.

That still leaves reasonable concerns over potential abuses of this knowledge now to be made so readily available, and there have been instances of the public running ahead of the proper research clinical trials.⁵⁹ Again, this risk needs to be compared to how responsible it is to restrict, in effect, physician and patient access to research, leaving them subject to a web that is otherwise filled with health information that has not been subjected to the standards for evidence and peer review. Certainly, caution can be shown in how open access research that could potentially lead to harmful effects is framed, as assistance provided to those who want to stay on top of relevant developments, as well as possible contribute to the advancement of such work.

All of which is only to say that we have the technologies and demonstration projects, amid a variety of economic models, that seem to hold great promise for enabling scholarly societies, research groups, and university libraries to greatly increase the amount of research and scholarship that is publicly, globally available. Through author-archiving mandates and open access journals, there are ways of stocking the public sphere with a new wealth of intellectual resources. These are the resources, of course, that we hold are critical to education and that we work so hard to help our students critically engage with during their brief time with us.

Having taught students how to think and reason in the context a dynamically advancing body of knowledge, why would we not want to take advantage of these new technologies to enable these same students to continue to draw on this work? Why would we not want to help these students, as well as others who did not attend university, to see that this open and shared pursuit of knowledge is fully a part of a democratic culture, adding to its deliberations at times, and speaking, at others, to a basic right to know? Such initiatives, I reiterate, will first and foremost improve access for scholars around the world – as they will remain the primary audience for this work – but such initiatives will at the same time, and at no additional expense, stock the open shelves of the public sphere with an ever-growing body of breakthroughs, demonstrations, challenges, critiques, and reviews, as well as the most ordinary works of science. It will bring to the knowledge economy and the age of information a much

needed infusion of learning, which seems entirely worthy of any claim to be made on behalf of the research university's public mission.

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Notes

¹ Jennifer Washburn, *University, Inc.: The Corporate Corruption of Higher Education* (New York: Basic Books, 2005), 171. When it comes to the public status of research, Washburn's focus is on patent law, but her concerns apply no less to scholarly publishing: "The question of who *owns* academic research has grown increasingly contentious, as the openness and sharing that once characterized university life has given way to a new proprietary culture more akin to the business world" (p. xi).

² Andrew Delbanco, "Academic Business: Has the University Become Just Another Corporation," *New York Times Magazine*, September 30, 2007, 25-29.

³ At the root of this commercialization and privatization in higher education is a loss of state support, or as Edward P. St. John and Michael Parsons put it, "in the late twentieth century the underlying rationale for the public funding of higher education in the United States broke down"; "Introduction" in *Public Funding of Higher Education: Changing Contexts and New Rationales*, ed. Edward P. St. John and Michael Parsons (Baltimore, MD: Johns Hopkins University Press, 2004), 1. On reduced government support has led to an increasing dependence on tuition and earned income, see Douglas Priest, Edward P. St. John, and Rachel Dykstra Boon, "Introduction," in *Privatization And Public Universities*, ed. Douglas M. Priest and Edward P. St. John (Bloomington IN: Indiana University Press, 2006). On the broader commercialization that has affected the teaching, athletics and research funding of public and private institutions, see Derek Bok, "Benefits and Costs of Commercialization," in *Buying In or Selling Out?: The Commercialization of the American Research University*, ed. David Stein (New Brunswick, NJ: Rutgers University Press, 2004).

⁴ George C. Herring, *The Pentagon Papers* (New York: McGraw-Hill, 1993). It is not that I imagine that information can somehow be free in any economic sense. Rather the costs associated with printing, binding, and distribution are not borne by Internet access and computing expenses.

⁵ Vivian Schiller, "A Letter to Readers About TimesSelect," *New York Times*, September 19,

2007, <http://www.nytimes.com/ref/membercenter/lettertoreaders.html>. On greatly increasing free access to the newspaper, the *New York Times* informed its readers that “we believe offering unfettered access to New York Times reporting and analysis best serves the interest of our readers, our brand and the long-term vitality of our journalism. We encourage everyone to read our news and opinion – as well as share it, link to it and comment on it.”

⁶ Chawki Hajjem, “L’objet de cette étude est d’évaluer la variation de l’avantage de l’impact de citations des articles en accès libre,” (University of Quebec at Montreal, 2005), <http://www.crsc.uqam.ca/lab/chawki/graphes/EtudeImpact.htm>.

⁷ Paul F. Uhlir and Peter Schröder, “Open data for Global Science,” *Data Science Journal* 6, Open Data Issue (2007): 36-53.

⁸ Jean-Claude Bradley, “Open Notebook Science,” Drexel CoAS E-Learning (Blog), <http://drexel-coas-elearning.blogspot.com/2006/09/open-notebook-science.html> (accessed September 26, 2006).

⁹ Alexander P. Bock, “Scientific Blogging as an Important and Innovative Research Tool To Get Health Data in a Changing Societal Environment” (paper presented at the American Health Association, Washington, DC, 2007), http://apha.confex.com/apha/135am/techprogram/paper_156533.htm.

¹⁰ Ted Bergstrom, “Journal Pricing Page,” University of California- Santa Barbara, <http://www.econ.ucsb.edu/~tedb/Journals/jpricing.html> (accessed 2006).

¹¹ M.H. Black, *Cambridge University Press 1584-1984* (Cambridge, UK: Cambridge University Press, 1984), 8, 16. It is worth noting that at the very origins of scholarly publishing, with the founding, for example, of Cambridge University Press (the oldest continuous press publishing in English), the university was very much involved in ensuring that fair rates were charged for printing services and working closely with the trade guild, lending capital at times.

¹² For example, the Pew Internet and American Life Project has established that 36 percent of those online consult Wikipedia (Lee Rainie, “Wikipedia Users.” Pew Internet and American Life Project (2007), http://www.pewinternet.org/PPF/r/212/report_display.asp), while 87 percent have sought scientific information (John Horrigan, “The Internet as a Resource for News and Information about Science.” Pew Internet and American Life Project (2006), http://www.pewinternet.org/PPF/r/191/report_display.asp).

¹³ For a bibliography and discussion of studies that measure the impact of open access on citations, see Steve Hitchcock, “The Effect of Open Access and Downloads ('Hits') on Citation Impact: A Bibliography of Studies” (Southampton, UK: University of Southampton, 2007), <http://opcit.eprints.org/oacitation-biblio.html>.

¹⁴ Henry Malden, *On the Origin of Universities and Academic Degrees* (London: John Taylor, 1835), 2.

¹⁵ Harold T. Shapiro, *A Larger Sense of Purpose: Higher Education and Society* (Princeton, NJ: Princeton University Press, 2005), 4-5.

¹⁶ Ibid.

¹⁷ Ibid., 5-6.

¹⁸ Ibid., 158.

¹⁹ Ibid., 159.

²⁰ Derek Bok, “Benefits and Costs of Commercialization,” in *Buying In or Selling Out?: The Commercialization of the American Research University*, ed. David Stein (New Brunswick, NJ: Rutgers University Press, 2004), 32.

²¹ Ibid.

²² Ibid., 46. In an op-ed piece in the *Boston Globe*, Derek Bok, while noting that 10 percent of faculty pay any attention to the research on teaching and learning in higher education, coolly observes that “empirical studies command respect only when they are used to investigate institutions and professions other than those to which professors themselves belong”; “Are Colleges Failing? Higher Ed Needs New Lesson Plans,” *Boston Globe*, December 18, 2005, http://www.boston.com/news/globe/editorial_opinion/oped/articles/2005/12/18/are_colleges_failing/.

²³ The sterling exception here is David E. Shulenburg, who as Provost of the University of Kansas, has applied his economic training to devising ways of increasing access to scholarly publishing. See D.E. Shulenburg, *Moving with Dispatch To Resolve the Scholarly Communication Crisis: From Here to NEAR*. (Association of Research Libraries Proceedings, 1998), <http://www.arl.org/arl/proceedings/133/schulenburg.html>.

²⁴ Adrianna J. Kezar, Tony C. Chambers, and John C. Burkhardt, *Higher Education for the Public Good: Emerging Voices from a National Movement* (San Francisco, CA: Jossey Bass,

2005), xiii.

²⁵ Ibid., xv.

²⁶ Ibid.

²⁷ Judith A. Ramaley, “Scholarship for the Public Good: Living in Pasteur’s Quadrant,” in *Higher Education for the Public Good: Emerging Voices from a National Movement*, ed. Adrianna J. Kezar, Tony C. Chambers, and John C. Burkhardt (San Francisco, CA: Jossey Bass, 2005), 166-181.

²⁸ Ibid., 167.

²⁹ Ibid., 178-179.

³⁰ I would argue against limiting the goals of research in the way, for example, Kelley Ward advocates when stating that “to fulfill the goals of the scholarship of engagement, scholars must link their teaching, research, and service to community problems, challenges and goals”; Kelly Ward, “Rethinking Faculty Roles and Rewards for the Public Good,” in *Higher Education for the Public Good: Emerging Voices from a National Movement*, ed. Adrianna J. Kezar, Tony C. Chambers, and John C. Burkhardt (San Francisco, CA: Jossey Bass, 2005), 231.

³¹ Ibid., 180.

³² A similar stance is found in higher education efforts to foster “moral and civic learning,” as a means of ensuring that universities exercise “a powerful influence in reinvigorating the democratic spirit in America”; the goal is to teach students to become better citizens, so that they are able “to see the moral and civic dimensions of issues, to make and justify moral and civic judgments and to take action when appropriate.” See Anne Colby et al., *Educating Citizens: Preparing America's Undergraduates for Lives of Moral and Civic Responsibility* (San Francisco: Jossey-Bass, 2003), 8, 17. Such a well-educated citizen would seem likely to also benefit from continuing access to research and scholarship.

³³ Michael Burawoy, “For Public Sociology,” in *Public Sociology: Fifteen Eminent Sociologists Debate Politics and the Profession in the Twenty-First Century*, ed. Dan Clawson, Robert Zussman, Joya Misra, Naomi Gerstel, Randall Stokes, Douglas L. Anderton, and Michael Burawoy (Berkeley, CA: University of California Press, 2007), 56.

³⁴ Ibid., 57.

³⁵ Ibid., 58. By the same token, making a greater part of this knowledge public will address William Julius Wilson's concern, from this same collection of essays, that "some of the best sociological insights never reach the general public because sociologists seldom take advantage of useful mechanisms to get their ideas out," and Immanuel Wallerstein's apprehension that there will not be "a more plausible historical social science, a more reasonable accommodation of multiple readings of the good, and therefore ultimately a democratic political system if there is not greater openness in our public discussion". See William Julius Wilson, "Speaking to Publics," in *Public Sociology: Fifteen Eminent Sociologists Debate Politics and the Profession in the Twenty-First Century*, ed. Dan Clawson, Robert Zussman, Joya Misra, Naomi Gerstel, Randall Stokes, Douglas L. Anderton, and Michael Burawoy (Berkeley, CA: University of California Press, 2007), 118, and Immanuel Wallerstein, "The Sociologist and the Public Sphere," in *Public Sociology: Fifteen Eminent Sociologists Debate Politics and the Profession in the Twenty-First Century*, ed. Dan Clawson, Robert Zussman, Joya Misra, Naomi Gerstel, Randall Stokes, Douglas L. Anderton, and Michael Burawoy (Berkeley, CA: University of California Press, 2007), 174-175.

³⁶ John Willinsky and Mia Quint-Rapoport, "How Complementary and Alternative Medicine Practitioners Use PubMed," *Journal of Medical Internet Research*, 9(2) (2007), <http://www.jmir.org/2007/2/e1>.

Sarah Twomey, "Teacher Centered Professionalism: A Teacher Reading Group and New Forms of Access to Knowledge From a Feminist Perspective" (PhD diss., University of British Columbia, 2007).

John Willinsky, "What Open Access Research Can Do for Wikipedia," *First Monday*, 12(3) (2007), http://www.firstmonday.org/issues/issue12_3/willinsky/index.html.

John Willinsky, "Open access: Reading (Research) in the Age of Information," *51st National Reading Conference Yearbook* (Oak Creek, WI., National Reading Conference, 2003), 32-46.

³⁷ To examine Taylor and Francis's author self-archiving policy, which stands as a strong statement on the publisher's sense of contribution and control, see <http://www.tandf.co.uk/journals/authorrights.pdf>. For a database of over 300 publisher archiving policies, see SHERPA (<http://www.sherpa.ac.uk/romeo.php>).

³⁸ The self-archiving model offers the additional irony that while a good number of developing countries have full access to the published articles online, those outside of these regions at less-than-well-endowed institutions will have access to the partial record of the author's final unedited (but peer-reviewed) copies.

³⁹ Stevan Harnad, *Is OA (Gold) Really a Desirable Goal for Scientific Journal Publishing?* (American Scientist Open Access Forum, 2007),

<http://users.ecs.soton.ac.uk/harnad/Hypermail/Amsci/5957.html>.

Harnad has also contributed to the development of the open source software Eprints.org for setting up institutional repositories that includes a "request eprint" button for work which is embargoed until a certain subscription-protecting period has passed.

⁴⁰ National Institutes of Health (NIH), *Report on the NIH Public Access Policy* (Washington: Department of Health and Human Services., January 2006),

http://publicaccess.nih.gov/Final_Report_20060201.pdf.

National Institutes of Health (NIH), *Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research* (Washington: Department of Health and Human Services, 2005), <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html>.

⁴¹ See the Partnership for Research Integrity in Science and Medicine (PRISM), which has been established by the American Association of Publishers to counter open access mandates or as it puts it: "Various initiatives and proposals have been put forth by special interest groups and some legislators that would force private sector publishers to surrender to the federal government all peer-reviewed articles that report on research supported by federal research grants."

Partnership for Research Integrity in Science and Medicine (PRISM), *Current Issues* (New York: Association of American Publishers, 2007), <http://www.prismcoalition.org/>.

⁴² See the ROARMAP (Registry of Open Access Repository Material Archiving Policies) maintained by Eprints.org at <http://www.eprints.org/openaccess/policysignup/>.

⁴³ Alma Swan, "Open Access and the Progress of Science: The Power to Transform Research Communication May Be at Each Scientist's Fingertips," *American Scientist* (2007),

<http://www.americanscientist.org/template/AssetDetail/assetid/55131>.

⁴⁴ There are somewhat less than a 1,000 institutional repositories registered with the Directory of Open Access Repositories at the University of Nottingham (<http://www.openoar.org/index.html>).

Open Society Institute (OSI), “A Guide to Institutional Repository Software,” (New York: Soros Foundation, 2004), http://www.soros.org/openaccess/pdf/OSI_Guide_to_IR_Software_v3.pdf.

⁴⁵ Scholarly societies are having to rethink their service to members, now that they are no longer offering members a particularly exclusive access to their journals (which are equally available online through the research library).

⁴⁶ See n. 7.

⁴⁷ Alma P. Swan, “Self-Archiving: It’s an Author Thing” (paper presented at the Southampton Workshop on Institutional Open Access Repositories, University of Southampton, Southampton, UK, 2005), <http://www.eprints.org/jan2005/ppts/swan.ppt> (accessed April 4, 2005).

⁴⁸ Stevan Harnad argues that efforts to increase access are most effectively directed toward government, funding agency and institutionally mandated self-archiving, and that open access journal publishing “is and remains premature until and unless publishing costs are cut and institutional subscriptions are terminated so they can be redirected to cover the institutional publication costs [associated with the author fees that some open access journals charge].” Stevan Harnad, *Is OA (Gold) really a desirable goal for scientific journal publishing?* (American Scientist Open Access Forum, 2007), <http://users.ecs.soton.ac.uk/harnad/Hypermail/Amsci/5957.html>. My involvement in open access has been largely on the side of supporting open access journal publishing through my work with the Public Knowledge Project on open source software development as a cost-cutting measure, and my arguments here should be seen in that light.

⁴⁹ Raym Crow, “Publishing Cooperatives: An Alternative for Non-Profit Publishers,” *First Monday*, 11(9) (2006), http://www.firstmonday.org/issues/issue11_9/crow/index.html#c1.

“Commercial publishers now play a role in publishing over 60 percent of all peer-reviewed journals, owning 45 percent outright and publishing another 17 percent on behalf of non-profit organizations.”

⁵⁰ Moving a journal from non-profit society to commercial sector can lead to a five-fold increase in price, to use Ted Bergstrom’s analysis on the differences in economic journals on a per-page

basis. See Ted Bergstrom, "Journal Pricing Page," University of California- Santa Barbara, <http://www.econ.ucsb.edu/~tedb/Journals/jpricing.html> (accessed 2006). That is, the commercial publishers are charging more than five times what the societies charge for peer-reviewed published articles. Even if the articles were five times as good (and Bergstrom provides evidence based on citation counts that this is not the case), it would be difficult to account for the difference, as the authors are unpaid and select the journals to which they submit.

⁵¹ For example, we have been working through the Public Knowledge Project, largely in collaboration with the International Network for the Availability of Scientific Publications, to provide and support the use of our open source journal software (Open Journal Systems) to enable journals in developing countries to achieve a far greater distribution within the region as well as globally.

⁵² John Willinsky, Sally Murray, Claire Kendall, Anita Palepu, "Doing Medical Journals Differently: Open Medicine, Open Access, and Academic Freedom," *Canadian Journal of Communication*, 32 no. 3 (2007), <http://pkp.sfu.ca/node/776>.

⁵³ BioMed Central is a commercial version of the open-access author-fee model, with 180 titles that are only published online. The Public Library of Science is a non-profit instance that has managed to use this open access model to establish very quickly some of the highest ranked journals in their field. As well, a number of publishers offer an open access option for their otherwise subscription journals, with authors able to purchase open access for their article alone. Springer has struck deals with the University of Göttingen and a Dutch library consortium to ensure that its associated faculty's work is open access in Springer journals. See Peter Suber, "Springer deal with U of Goettingen," *Open Access News* (October 5, 2007), <http://www.earlham.edu/~peters/fof/2007/10/springer-deal-with-u-of-gttingen.html>. This purchased-open-access approach has led Oxford University Press to reduce subscriptions prices on some of its journals, as costs are borne by authors purchasing open access. See Mithu Mukherjee, *Full Year Results From Oxford Open Show Wide Variation in Open Access Uptake Across Disciplines* (Oxford, UK: Oxford University Press, 2006), http://www.oxfordjournals.org/news/2006/08/30/full_year_results_from_oxford_op/full_year_results_from_oxford_op.html

⁵⁴ An example of this open source software is Open Journal Systems from the Public Knowledge Project with the principal technical development coming from Simon Fraser University Library (<http://pkp.sfu.ca>). See John Willinsky, "Open access: Reading (Research) in the Age of Information," *51st National Reading Conference Yearbook* (Oak Creek, WI., National Reading Conference, 2003), 32-46.

⁵⁵ John Willinsky, "Scholarly Associations and the Economic Viability of Open Access Publishing," *Journal of Digital Information*, 4 no. 2 (2003), <http://jodi.ecs.soton.ac.uk/Articles/v04/i02/Willinsky/>.

⁵⁶ John Willinsky, Sally Murray, Claire Kendall, Anita Palepu, "Doing Medical Journals Differently: Open Medicine, Open Access, and Academic Freedom," *Canadian Journal of Communication*, 32 no. 3 (2007), <http://pkp.sfu.ca/node/776>.

⁵⁷ SPARC has recently explored the fiscal power of publishing cooperatives through the perceptive economic analysis of Raym Crow; "Publishing cooperatives: An alternative for non-profit publishers," *First Monday*, 11(9) (2006), http://www.firstmonday.org/issues/issue11_9/crow/index.html#c1. Where this leaves the university press remains an interesting question, although in the case of open access, there are presses, such as at the University of Michigan that work closely with the library, while at Stanford, the press is overseen by the library. The Public Knowledge Project is developing Open Monograph Press to address the parallel of open access monographs and scholarly editions, traditionally the purview of the press, that might also involve pluralistic economic models.

⁵⁸ Partnership for Research Integrity in Science and Medicine (PRISM), *Current Issues* (New York: Association of American Publishers, 2007), <http://www.prismcoalition.org/>.

⁵⁹ For example, Evangelos Michelakis, of the University of Alberta learned that cancer patients were ordering DCA online, based on his studies of how it was found to shrink tumors in mice, rather than waiting until the proper trials on humans has been conducted leading him to express concerns that this premature use of the drug could not only potentially harm patients but make it that much harder to carry out the trials if it was found to do damage through use its use in this uncontrolled way; "Untried Cancer Drug Bought on Web," *BBC News* (29 March 2007) <http://news.bbc.co.uk/2/hi/health/6506113.stm>. The University of Alberta has set up a website to

inform DCA as well as accept donations to advance this research (DCA Research Information, University of Alberta, <http://www.depmed.ualberta.ca/dca/>).