ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI, and SPARC (US ISSN 1050-6098)
is published six times a year by the Association of Research Libraries, 21 Dupont Circle, Washington, DC 20036.
202-296-2296 FAX 202-872-0884
http://www.arl.org/newsltr/
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Subscriptions: Members—$25 per year for additional subscription; Nonmembers—$50 per year plus shipping and handling.

252/253 Special Double Issue on University Publishing June/August 2007

252/253 (June/August)

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ARL

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

252/253 SPECIAL DOUBLE ISSUE ON UNIVERSITY PUBLISHING

June/August 2007

THE CHANGING ENVIRONMENT OF UNIVERSITY PUBLISHING

by Karla Hahn, Director, ARL Office of Scholarly Communication

The rapid change in scholarly communication practices ushered in by the advent of the Internet and the Web has prompted the consideration of previously unexamined assumptions, giving rise to a fundamental question: to what extent should the institutions that support the creation of scholarship and research take responsibility for its dissemination as well?

Some, but not all, means of production of scholarly works have long resided within research institutions: many institutions sponsor university presses; departments, campus institutes, and other units manage specialized series or occasional publications. However, scholars often give their research results to nonuniversity publishers, who edit, package, and sell those results to libraries. In the digital age, a wide range of campus servers host new kinds of digital scholarship created within and disseminated from academe—a renaissance of campus publishing has been seeded.

In this emerging landscape, publishing extends well beyond the traditional bounds of monographs and journals. An efflorescence of new kinds of digital works of scholarship has occurred on the Web as scholars and researchers use new technologies to convey content and relationships that could not be communicated in print media. The Web too has fostered new growth of working papers, technical reports, preprints, conference proceedings, and other valuable but previously hard to find types of works.

A first generation of new publishing models has illuminated the potential of digital scholarly publishing, as well as many inefficiencies of the outsourcing model that burgeoned in the latter half of the 20th century. In re-evaluating the university's role in disseminating scholarship, we must consider the value of the dissemination of new knowledge as an engine of knowledge creation and the consequences of ceding control of knowledge to nonuniversity disseminators.

Although it isn't necessarily appropriate, possible, or desirable that research institutions publish all works of scholarship themselves, there are many indicators that university publishing is on the rise—a trend that should be appreciated and fostered in a digital age. Leaders at research institutions are being encouraged to initiate campus-wide discussions of university publishing, including taking responsibility for ensuring that dissemination models are fully congruent with the mission of cultivating new knowledge and learning.

This special issue of the ARL *Bimonthly Report* presents a number of perspectives on the changing environment of university publishing, paying special attention to new ways in which libraries are taking responsibility for exploring solutions. This is not to suggest that libraries alone can take care of these issues. Rather, these articles collectively provide a basis for promoting a broad consideration of the purpose of, and need for, significantly enhancing university publishing capabilities. The authors paint a picture of what campus publishing capability can look like (in embryo form) and frame the opportunity for engagement, not from just a few leading institutions but as a fundamental role of the research university.

University Publishing in a Digital Age: Highlights of the Ithaka Report

by Laura Brown, former President of Oxford University Press USA; Rebecca Griffiths, Director of Strategic Services, Ithaka; and Matthew Rascoff, Strategic Services Analyst, Ithaka

In the fall of 2006, we launched a study to examine US university presses and their role in scholarly publishing. The study evolved into a broader assessment of the importance of publishing to universities, culminating in the July 2007 report, "University Publishing in a Digital Age."[1] By publishing we mean simply the communication and broad dissemination of knowledge, a function that has become both more complex and more important with the introduction and rapid evolution of digital and networking technologies. There is a seemingly limitless range of opportunities for a faculty member to distribute his or her work, from setting up a Web page or blog, to posting an article to a working-paper Web site or institutional repository, to including it in a peer-reviewed journal or book. In American colleges and universities, access to the Internet and World Wide Web is ubiquitous; consequently nearly all intellectual effort results in some form of "publishing." Yet universities do not treat the publishing function as an important, mission-centric endeavor. Publishing generally receives little attention from senior leadership at universities and the result has been a scholarly publishing industry that many in the university community find to be increasingly out of step with the important values of the academy.

As information technology transforms the landscape of scholarly publishing, it is critical that universities deploy the full range of their resources—faculty research and teaching activity, library collections, IT capacity, and publishing expertise—in ways that best serve both local interests and the broader public interest. In this report we argue that a renewed commitment to publishing in its broadest sense can enable universities to more fully realize the potential global impact of their academic programs, enhance the reputations of their specific institutions, maintain a strong voice in determining what constitutes important scholarship and which scholars deserve recognition, and in some cases reduce costs. There seems to us to be a pressing and urgent need to revitalize the university's publishing role and capabilities in this digital age.

The study was sponsored by JSTOR and Ithaka and was led by Laura Brown, former president of Oxford University Press USA, in collaboration with Ithaka's Strategic Services group.[2] This is not a report presenting findings from an objective, empirical survey of the field. Instead, it is a qualitative review, informed by a survey and interviews as well as the knowledge of the investigators. We began this project with a set of hypotheses and views based on our own experience and prior discussions with people in the community. These hypotheses were tested through an extensive series of interviews with university administrators, press directors, librarians, and other stakeholders on campus. We also conducted a survey of press directors to understand better their relationships to their host institutions, progress in getting online, and ability to develop new programs. Some of what we learned through this process confirmed our sense of how the world is changing, but we also heard views that we had not expected. We were particularly surprised by how critical many were of university presses and the difficulties they have had in adapting.

What the World Looks Like and Where We Are Headed

Formal scholarly publishing is characterized by a process of selection, editing, printing, and distribution of an author's content by an intermediary (preferably one with some name recognition). Informal scholarly publishing, by comparison, is the dissemination of content (sometimes called "gray literature") that generally has not passed through these processes, such as working papers, lecture notes, student newsletters, etc. In the past decade, the range and importance of the latter has dramatically expanded through information technology. Scholars increasingly turn to preprint servers, blogs, e-mail lists, and institutional repositories, to share their work, ideas, data, opinions, and critiques. These forms of informal publication have become pervasive in the university and college environment. As scholars rely more heavily on these channels to share and find information, the boundaries between formal and informal publication will blur. These changes in the behavior of scholars will require changes in the approaches universities take to all kinds of publishing.

Universities have traditionally participated in the formal publication of their intellectual output through a network of presses, though most publishing of this output, especially in the sciences, has long taken place outside the university sector. For a variety of reasons, university presses have become less integrated with the core activities and missions of their campuses over the years—a drift that threatens to continue as information technology transforms the landscape of scholarly publishing. The responsibility for disseminating digital scholarship is migrating instead in two other directions.

One direction is toward large (primarily commercial) publishing platforms that offer economies of scale in crucial areas, such as aggregation of content, technology development, and marketing. There are risks associated with this strategy. Highly specialized scholars produce research that may be of interest to only a small number of

peers, and its commercial value is quite low. The value in terms of scholarship, however, may be much higher—and in some cases the impact is not evident for years or even decades after the research is first published. This kind of scholarship may be overlooked by for-profit publishers. Moreover, the segmented nature of the scholarly communications marketplace exacerbates the power of the largest publishing entities to exploit highly resilient niche "monopolies"—some use their market power to raise prices.

The second direction is toward informal channels operated by other entities on campus, primarily libraries, academic computing centers, academic departments, and cross-institutional research centers. These entities can all play a critical role in scholarly communications[3] and bring new skills and resources to the table, but they are relatively new to the publishing realm. University presses have developed publishing skills and experience over many years that are also very valuable in this new context and that would be costly, if not impossible, to replicate. Furthermore, university-based and other not-for-profit presses are accustomed to grappling with the often conflicting claims of scholarship and cost recovery. If these publishers disappear, authors will be left with fewer and perhaps less desirable options, and many universities will not have a place at the table.

Publishing in the future will look very different than it has looked in the past. Consumption patterns have already changed dramatically, as many scholars have increasingly begun to rely on electronic resources to obtain information that is useful to their research and teaching. In fact, we have heard from many scholars that, from the perspective of today's students, "if it isn't electronic, it doesn't exist." Transformation on the creation and production sides is taking longer, but ultimately may have an even more profound impact on the way scholars work. Publishers have made progress putting their legacy content online, especially with journals. We believe the next stage will be the creation of new formats made possible by digital technologies, ultimately allowing scholars to work in deeply integrated electronic research and publishing environments. These environments will provide tools and resources for conducting research, collaborating with peers, manipulating data sets, and publishing working papers and conference papers. They will support real-time dissemination, dynamically updated content, and multimedia formats, as scholars increasingly seek to incorporate video and audio in their research and teaching.

Alongside these changes in content creation and publication, universities must revisit traditional views about how publishing is supported. The actors in the new system may be different, especially with user-generated content. Already, alternative distribution models (institutional repositories, preprint servers, open access journals) are emerging with the aim to broaden access, reduce costs, and enable open sharing of content. Different economic models will be appropriate for different types of content and different audiences. It seems critical to us that there continue to be a diverse marketplace for publishing a range of content, from fee-based to open access, from peer reviewed to self-published, from single author to collaboratively created, from simple text to rich media. This marketplace should involve commercial and not-for-profit entities, and should include collaborations among libraries, presses, and academic computing centers.

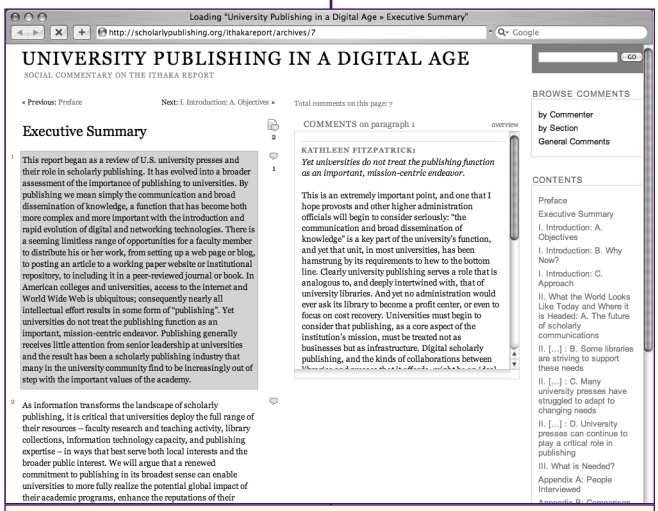
What will, or should, the future scholarly communications system look like? First, every university that produces research should have a publishing strategy. Second, the actors will change. Much of the content produced in the future will be disseminated electronically, and a new constellation of skills (including those that currently reside in presses, libraries, and IT groups) will be required to do this most effectively. University presses will have to change. Some universities will encourage and enable their presses to grow and take more of a leadership role. Other institutions may decide to open new presses. Others may close their presses or let their presses evolve into more specialized enterprises with a focus on editorial and credentialing services while depending on external entities for core infrastructure and marketing services. What seems clear is that to succeed presses are going to need to be a more important partner in helping their host institutions to fulfill their research and teaching mission. Third, in the digital environment certain activities and assets (e.g., technology development, marketing) will be consolidated onto large-scale platforms. These new digital publishing activities are central to the research and teaching missions of universities, and it therefore seems critically important that the university community be able to influence strongly the development of these platforms to ensure that they support long-held university values, rather than allowing them to be driven primarily by commercial incentives.

Role of Libraries

Among the librarians consulted for this study, we perceived a high level of energy and excitement about the "reinvention" of the librarian's mission. This reinvented mission involves a combination of:

- serving faculty research, teaching, and publishing agendas (building collections to support faculty research, providing tools, delivering everything they want to the desktop, developing technological expertise for their publishing projects, supporting the infrastructure for their courses);

- serving student study needs (creating new physical and virtual spaces for private and group work, helping students to become more efficient researchers);
- preservation (supporting digital archiving efforts);
- making scholarship available to the wider world (open access, digitizing special collections);
- lowering the cost of scholarship (alternative publishing, legal experts to negotiate contracts); and
- supporting scholarly communications (providing robust online collections, creating research environments that will help faculty and graduate students create the scholarship of the future, finding ways for the institution to take back more control and lower the cost of scholarship, and developing infrastructure and tools to enable multimedia).



The University of Michigan Library hosts Social Commentary on the Ithaka Report using CommentPress, an online textual annotation tool. This screenshot shows the Executive Summary with a reader's comment. For more on the CommentPress version of the Ithaka report, see the accompanying article by Maria Bonn.

Increasingly, these roles bleed into what might be considered "publishing." The role of librarians has always been, in part, to provide services to the local community that help them find information, or learn how to find information. With the advent of online resources, librarians developed skills in accessing and managing online data. It therefore is not surprising that many faculty members and students have turned to librarians for assistance in producing electronic resources. At the same time, several librarians conceded to us that they are good at organizing information but lack expertise in choosing or prioritizing what merits publication. Libraries provide tools and infrastructure to support new forms of informal publishing, but these tend to be inward focused (toward the home institution) rather than externally focused (toward the best scholarship in a given discipline), limiting their appeal to users. Attempts by librarians to create new online resources by digitizing special collections often fail to take into consideration the potential market for those materials or what is really needed. Likewise, librarians have limited skills and experience in marketing content to build awareness and usage. And library publishing options lack the prestige that a university press imprint confers on scholarship. These are all areas in which the librarians consulted believe that university presses can play an important and ongoing role.

Role of University Presses

Presses are facing a growing set of formidable challenges: their printed products have experienced waning demand, more library acquisition resources are expended on scientific journal literature distributed by large publishers, the open access movement is contesting the traditional business model of publishing, and administrators are increasingly looking to other parts of campus to assume publishing-related responsibilities for digital content. While many presses have been remarkably nimble in making do on a diet of modest subsidies, shoestring budgets, and programs that painstakingly try to balance cost-recovery goals and scholarly value, those days may be numbered.

One issue is that over time, and in pursuit of the largest public service to the global academic community, presses have tended to grow disconnected from the administrations at their own campuses. This is due in part to the fact that they primarily publish works from scholars located at other institutions. As a result, university presses are viewed by their administration as largely a general service function for higher education, not as adding value to their local institutions. Commitment to their longevity therefore tends to be low.

The second issue is that university presses have struggled to develop workable business models for publishing electronically. As journals have gone online, many have migrated to commercial platforms that offered more attractive terms and services than university presses could provide. We are concerned that monographs and, perhaps more importantly, new forms of scholarship will follow a similar path. Scholars in certain disciplines rely heavily on university presses for their credentialing, and it is not clear that commercial publishers would serve the needs of authors as well.

What Needs to Be Done

In our interviews we detected significant detachment from administrators about publishing's connection to their core mission; a high level of energy and excitement from the librarians we consulted about reinventing their roles on campus to meet the evolving needs of their constituents; and a wide range of responses from press directors, from those who are continuing to do what they have always done, to those who are actively reconnecting with their host institutions' academic programs and engaging in collaborative efforts to develop new electronic products. Many press directors have a sense of what needs to be done to jump-start their new enterprises, but lack the financial capital, technical staff, and technological skills to pursue this kind of agenda. Librarians and press directors acknowledge that they have limited experience in collaborating effectively with one another and operate on different business models that make collaboration challenging. At the same time, we found that they have an appreciation for the unique skills and experience that each brings to the table.

Administrators, librarians, and presses each have a role to play (as do scholars, though this report is not directed at them). The vision put forward in the full report is unlikely to materialize without leadership from these three constituents, particularly from presidents and provosts. Due to the siloed structure of universities, real collaboration is difficult to enact without impetus from the top. We encourage senior administrators to embrace the fact that in this digital era, publishing, broadly defined, is an integral part of the core mission and activities of universities, and to take ownership of it. They should take inventory of the landscape of publishing activities underway within their universities to understand how resources are currently being used. They should work with librarians, press directors, IT directors, and faculty to develop a strategic approach to publishing, encompassing what publication services should be provided to their constituents, how these services should be provided and funded, how publishing contributes to their institution's reputation, how publishing should relate to tenure decisions, and what their position on intellectual assets should be. Finally, they should create the organizational structures necessary to implement this strategy and leverage the resources of the university. These parties should work together to create a shared electronic publishing infrastructure that will save costs, create scale, leverage expertise, innovate, extend the brand of US higher education, create an interlinked environment of information, and provide a robust alternative to commercial competitors.

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Encouraging Public Commentary on the Ithaka Report

by Maria Bonn, Director, Scholarly Publishing Office, University of Michigan Library

On July 26, 2007, Ithaka released "University Publishing in a Digital Age."[1] The academic community has received the report with great interest and lively discussion.

Coincidentally, that same week, the Institute for the Future of the Book released CommentPress, an online textual annotation tool with great promise for promoting scholarly discussion and collaboration.[2]

At the Scholarly Publishing Office of the University of Michigan Library[3] we have watched both of these developments with keen interest. Our work as online scholarly publishers, our role as publisher of the *Journal of Electronic Publishing*,[4] and our close affiliation with the University of Michigan Press through our joint initiative, digitalculturebooks,[5] direct us to pay close attention to both the conditions and tools of scholarly publishing.

The happy simultaneity of the release of the Ithaka report and CommentPress prompted us to view the report as ideal material with which to experiment with CommentPress. With the cooperation of the authors of the report, we have created a version of "University Publishing in a Digital Age" that invites public commentary and that we hope will serve as a basis for further discussions in our community.

We are watching this experiment with interest. In the first three weeks that the Ithaka report was available in CommentPress, this version of the report was viewed thousands of times. We received dozens and dozens of e-mails and verbal reports from members of the academic community noting their enthusiasm for the projects. And yet, the discussion the report invites has been relatively quiet. We look forward to seeing if the level of discussion remains constant or increases and to performing some analysis to see what this experiment can teach us about the appropriate alignment of content, user communities, and technology.

The Scholarly Publishing Office's version of the Ithaka report is available for comment at http://scholarlypublishing.org/ithakareport/. We welcome your feedback, both on the report itself and on the value of its expression in CommentPress.

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[1] Laura Brown, Rebecca Griffiths, Matthew Rascoff, "University Publishing in a Digital Age," Ithaka Report, July 26, 2007, http://www.ithaka.org/strategic-services/university-publishing/.

[2] http://www.futureofthebook.org/commentpress/

[3] http://spo.umdl.umich.edu/

[4] http://journalofelectronicpublishing.org/

[5] http://www.digitalculture.org/

Clearly this is too ambitious an agenda for institutions to pursue individually. Creating these sorts of platforms requires scale and investment of substantial capital, and commercial entities are far ahead of the university sector in investing the necessary level of resources. Each institution must determine what it can do locally, and if and when it should combine forces with other institutions. One of the objectives of this study was to gauge the community's interest in a possible collective investment in a technology platform to support innovation in university-based, mission-driven publishing. This infrastructure could serve as the foundation for new forms of university-centered academic publishing in the digital age. We heard a strong sense that a new third-party enterprise or at least a catalytic force is needed to: facilitate the investment of capital; lead the community toward a shared vision of the scholarly communications landscape; help institutions find their place in that new system; marshal the necessary ongoing resources; and help motivate collaboration both within campuses and across institutions.

— Copyright © 2007 Laura Brown, Rebecca Griffiths, and Matthew Rascoff

[1] The full report is available at http://www.ithaka.org/strategic-services/university-publishing/.

[2] Laura Brown is a JSTOR Trustee, and Kevin Guthrie, who is president of Ithaka and contributed extensively to this report, serves as JSTOR's chairman. Both Ithaka and JSTOR are keenly interested in the current state and future of scholarly publishing, and the Strategic Services group of Ithaka specializes in gathering, analyzing, and sharing information on topics at the intersection of higher education and technology.

[3] In the past, terms such as "scholarly communications" and "scholarly publishing" were often used to depict research outputs that met certain criteria, such as certification, selection, and preservation. We argue here that the lines between formal and informal publication are breaking down, and thus the definitions of these terms are in flux. We use them in this paper to refer to the broad spectrum of ways that scholars share their research with one another.

UNIVERSITY RESEARCH PUBLISHING OR DISTRIBUTION STRATEGIES?

by David Shulenburger, Vice President for Academic Affairs National Association of State Universities and Land-Grant Colleges (NASULGC)

The following remarks were presented by the author at the 151st ARL Membership Meeting in Washington DC on October 11, 2007.

I will focus my remarks on a narrow slice of "University Publishing in a Digital Age," specifically on the paper's recommendation that universities develop research publishing strategies.

> What will, or should, the future scholarly communications system look like? First, every university that produces research should have a publishing strategy, but that does not mean that it should have a "press."
> — Laura Brown, Rebecca Griffiths, and Matthew Rascoff, "University Publishing in a Digital Age," Ithaka Report, July 26, 2007, pg. 4, http://www.ithaka.org/strategic-services/university-publishing/.

When I read the paper I was not familiar with any NASULGC university's formal research publishing strategy, so I inquired of 215 NASULGC provosts, primarily provosts of the nation's large, public, research universities, providing context and repeating the normative statement of Brown, et al.: "…every university that produces research should have a publishing strategy…."

My query to the provosts was:

> Does your university have a formal, written research publishing strategy? If so, would you please email that document to me? If your university has a well understood but unwritten research publishing strategy, would you send me an email briefly outlining its elements? If your university has neither, would you simply reply with the words "No strategy"?

The overwhelming majority of provosts who responded replied, "No strategy."

Of those responding affirmatively, all but a few submitted only faculty evaluation policies detailing the role of published research in evaluation.

Among the few exceptions are a couple of notable ones: one University of California provost, in addition to sending a faculty evaluation policy, appropriately suggested that their system's strategy may come to include the policy under consideration that requires submission of published work to an open access repository unless the faculty member specifically opts out.

Only MIT's provost responded with a reasonably formal strategy. "Collectively these elements sufficiently represent, in our minds, the essence of a research publishing strategy." The elements MIT submitted included (1) the university mission: "The Institute is committed to generating, *disseminating*, and preserving knowledge…"; (2) a policy declaring that research funders may not restrict research publication unless an exception is granted; (3) a description of DSpace, a facility with the stated intention among other things of "*disseminating*" MIT research; and (4) a description of the MIT press.

Perhaps MIT's submission stands out because MIT is unique in having developed a research publishing strategy. While I suspect this is partially true, I expect that the real reason MIT stood out in my small survey is because MIT's provost was smart enough to refer my question to Ann Wolpert, MIT's distinguished Director of Libraries, for an answer. But the word "disseminating," a word that occurs twice in MIT's submission, is a key word to which I will return.

Interestingly, while provosts of many universities with university presses answered my query, MIT's provost mention of the university press as part of their strategy was also nearly unique.

> *My query to the provosts was: "Does your university have a formal, written research publishing strategy?"… The overwhelming majority… replied, "No strategy."*

What inferences do I draw from this survey?

First, the term "research publishing strategy" is not familiar to most provosts. (This is not entirely an inference as many of the respondents asked me to define it.)

Second, provosts don't see institutional repositories as integral to their universities' "research publishing strategies." A significant number of the respondents have institutional repositories but only two university provosts mentioned them in their replies to me.

Third, university presses don't spring to mind when considering such strategy. Instructive is the Ithaka paper's finding that most university press publication lists had far less than 10 percent of content from their own university's faculty. It appears to me that provosts do not regard presses as relating to their university's publication strategy at all; rather, presses are regarded as relating to the publication strategy of the academy at large.

Fourth, to provosts the mysterious term "research publishing strategy" most frequently brings to mind only faculty evaluation criteria. This is the only realm in which provosts normally discuss research publication strategy. Finding appropriate outlets for research publication is viewed in these policies as the *duty* of individual faculty members and universities appear content for faculty careers to rise and fall on the basis of success in finding such outlets.

Now, the authors of "University Publishing in a Digital Age" did not intend that the term "research publishing strategy" encompass only faculty evaluation criteria. Thus their prescriptive "should" statement either describes a publication future so distant that myopic provosts of this day cannot resolve the vision or else the "should" statement describes a hoped-for world rather than the one in which universities live. I think it is the latter.

Why?

It appears that universities want to take little direct responsibility for ensuring that the research done by their faculties is "published." Perhaps now is the time to define what I, as a long-time faculty member and former provost, mean by "published"; I mean research findings that have been vetted at least by competent editors, if not also by referees, and deemed through the vetting process to be sound and worthy of publication to the wider community. I believe this to approximate the definition used by the provosts responding to my survey. While there are more expansive definitions of "publication," the relevant one for this conversation is the one used by this group of administrators.

It is not appropriate for university provosts or faculty outside the field to evaluate whether their colleagues' research findings are publishable. On the other hand, I submit that they do have reasons to ensure that the faculty research that has been vetted and published is distributed broadly.

The call made for universities to have research publication strategies might be better received if it were instead a call for universities to develop and articulate research *distribution* strategies.

Let me tease out both the negative and positive reasons for the greater acceptability of the word *distribution.*

First the negative. The Brown paper makes the argument that libraries are well equipped to distribute material electronically but poorly equipped to decide what should be published. This observation is even truer of university central administrations than of libraries.

Libraries lack the disciplinary expertise to determine whether new work makes sufficient contributions to merit publishing. University central administrations clearly share this deficiency but, in addition, have a conflict of interest that makes them even less suited to determine what should be published. Central administrators are both the employers and evaluators of faculty. These dual roles make any picking and choosing among scholarly work particularly treacherous as choice of publishing one work and not another carries

with it evaluation that affects the rewards they as employers allocate.

Universities have learned through hard experience to leave judgments about research publishability to those disciplinary experts who are at arm's length from the researcher. Let me remind you of Utah's cold fusion debacle. While Utah's "publication" took the form of unveiling that research in an unvetted form at a press conference, it clearly was placing its evaluative stamp on this as-yet-untested work. I am sure that Utah had a much more satisfying event last Tuesday [October 9, 2007] when the Nobel Prize Committee announced the results of its vetting.

To replace "publication" with "distribution" eliminates for administrators both the disciplinary expertise and conflict of interest problems. Universities are free to proclaim that all faculty research should be distributed without becoming involved in the very fraught process of determining *whose* research is worthy of publication. With this change, I heartily agree that universities *should* have research distribution strategies. Let me briefly describe what I think might be included therein.

The call made for universities to have research publication strategies might be better received if it were instead a call for universities to develop and articulate research distribution *strategies.*

First, a policy statement is required to set forth the rationale for the university's role in research distribution. Most frequently this statement would include a public acknowledgement of the importance of wide distribution of university faculty research. Such an acknowledgement would recognize that a scholarly work's value is multiplied as it becomes more widely available; that value is enhanced not only for students but for other researchers in the field as it becomes possible to learn from and build upon extant research rather than duplicate it. Most would recognize that value is increased even more as research passes through the sifting and winnowing of the refereeing process before distribution where that is possible.

I would hope that such policies acknowledge that both university and faculty self-interest are furthered by broad research distribution. Faculty self-interest is readily manifest in increased citation counts. University self-interest is advanced by the same mechanism and is manifest in improved national research council rankings and other markers of university prominence.

For public universities, the benefit of wide and open distribution may be most evident in additional political (and perhaps financial) support as ready access to faculty research causes citizens and legislators to realize that "their" university faculties are working on many of the very real problems that confront them.

The policy might also acknowledge the parsimony of having a unified research distribution policy as many grantors require that research results, including data generated by research, be made available for public access. Assigning responsibility to a single entity for such distribution would reduce the expensive duplication of effort that currently characterizes the response to such mandates.

Finally, and at the risk of sounding like a one-trick pony, I believe universities should acknowledge in their policy statement the public-goods nature of faculty work and proclaim that all work published by their faculties ultimately should be available to the public, for free. I have said much on this point on other occasions and will not make this case again here.

University research distribution policy statements would then be followed by the strategies that would bring to life their policy statements, i.e., the specifics about what research should be distributed, how, and to whom.

Probably universal among the distribution specifics would be the currently ubiquitous faculty evaluation policies with their specifications that faculty seek appropriate refereed publication outlets for their work. Thus scholarly journals would become incorporated in each university's strategy.

Most libraries have major research distribution ability; increasingly, it is formalized in an institutional repository. Some repositories are passive, merely storing and distributing material published by others. But many libraries include carefully refereed university-published journals in repositories and many universities now assign theses and dissertations to these facilities. Because of NIH and NSF policies on data retention, I would imagine that retention and distribution responsibilities for institutional repositories will soon include at least the smaller data sets. Similarly, taskforce reports, final grant reports, and other documents of value to scholarly colleagues, students, and citizens could be assigned here to ensure their availability and preservation.

Strategies would include university presses where they exist but I do not warm to the notion of building such strategies around university presses. Presses are relatively few in number and cannot therefore be a core element for all universities. In addition, the orientation of the presses, at least as judged by the positions taken by their association, the American Association of University Presses, is extremely hostile to the notions of open access that librarians embrace. Making the presses key to university research distribution strategy would

involve convincing them to alter this stance. Further, presses will lose their scholarly cachet if they are perceived as house organs for their own faculties' research. I rather hope that this portion of university strategy would acknowledge the true purpose and mission of the press.

While I acknowledge that presses must remain independent arbiters in order to add value to the works they publish, let me emphasize that they nevertheless do belong to their home universities. It would seem appropriate for those universities to specify in their strategies that press books, once they lose the majority of their market value (perhaps after five years), would be made available electronically, for free, to benefit scholars everywhere. You, of course, recognize this as an undisguised plea for public access. Such a change could not be made retroactively but future author's agreements could reflect such codicils. Electronic distribution of such works could be made available through press facilities or through university institutional repositories.

A final word on presses. To make existing presses integral to their home institutions' strategies would be to replace them with something that more serves narrow institutional aims than the broad aims of scholarship. I believe it a mistake to try to "save" presses if the method of so doing destroys their function.

I am concerned about scholarly works of manuscript length that are worthy of publishing but find no "market." These orphan works often are greeted by university presses with an anguished rejection notice from the editor: "Professor Dumbarton, your manuscript is exquisite. I found it to be of highest quality and a significant advance of scholarly knowledge. Unfortunately, the market for such works is not sufficient to cover our publication costs." Faculties in fields like art history are accustomed to such letters. Universities do have the obligation to help such work get distributed if traditional mechanisms fail.

Unfortunately, distribution of such work without scholarly review diminishes its value to the faculty member and to the discipline. I renew a suggestion that I made at the CIC symposium on the scholarly monograph a few years ago. It would be most appropriate for scholarly societies to form peer review bodies to examine such work of minor pecuniary value and to certify their scholarly worth in a manner that might, in time, develop the cachet of the best presses. The works could be entered into a series distributed by institutional repositories but carry the imprimatur of the scholarly society that vetted them.

While I agree that, with the one word change, university research distribution strategies are desirable, I do not see a need for an inter-university infrastructure to help implement them. Institutional repositories using state-of-the-art systems are fully visible over the net and capable of presenting works in appealing ways to users. The added expense of supporting yet another new infrastructure simply does not appear to have adequate offsetting benefits.

The Ithaka report's argument that increased scale is necessary to mount this effort is based largely on the fact that commercial firms are rapidly increasing in size, largely through mergers and acquisitions. Their motivation for growing has little to do with the need to attain scale and a lot to do with the desire to attain market power. Given that attaining market power is not a motivator for university expansion in research distribution capability, attaining scale should not be an important objective.

What probably is needed are cooperative agreements between universities that have institutional repositories and those that do not, which will permit the latter to place selected materials in existing repositories. Just as we do not appear to need a national infrastructure to support digital materials, we also do not need every university underwriting the cost of building, staffing, refreshing, and updating institutional repositories. University strategy ought to address whether building capacity or acquiring excess archival and distribution capacity from others is in the university's best interest.

My listing of strategic distribution elements clearly is not exhaustive. Creative universities would surely find additional novel and effective distribution strategies.

In conclusion, while each university's research distribution strategy would differ by reflecting unique missions, I can see real benefits to universities and the public of developing and implementing such strategies. This represents a shift from a passive role in research distribution to an active one. The effort to develop policy and strategies will undoubtedly cause greater appreciation of the value of university research within the university community and enhanced distribution will increase research value externally. "University Publishing in a Digital Age" does universities a great service by suggesting that universities create such strategies. I urge my provostial colleagues to set in motion on their campuses the appropriate process to have this important matter thoroughly considered.

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THE UNIVERSITY OF CALIFORNIA AS PUBLISHER

by Catherine H. Candee, Director, eScholarship Publishing Service, California Digital Library,[1] and Lynne Withey, Director, University of California Press

The eScholarship Publishing Service of the California Digital Library and the University of California Press have partnered on a range of scholarly publishing projects since 2000. In 2007 they will formalize their collaboration.

The publishing initiatives of the California Digital Library (CDL) and the University of California Press (UC Press) reached an important milestone this year. After a half dozen experimental publishing efforts and a growing sense of urgency about transforming scholarly publishing, we realized we had gone as far as we could in our current ad hoc arrangement. Early this year, under the guidance of the university-wide standing committee on scholarly communications, we set out to survey the landscape of scholarly publishing at UC and to determine our next steps. Our aim was to evaluate current and emerging faculty publishing needs, identify opportunities to strengthen publishing support to emerging research areas, and recommend an appropriate role for the university in scholarly publishing. Concurrent with our study, a university-wide long-range planning effort was coming to a close, which added both context and urgency to our fact-finding effort. This auspicious intersection has resulted in a set of broad aims and ambitious goals for UC scholarly publishing services and a program that has at its heart a new model: the university as publisher.

The vision for the university that surfaced in the long-range planning process, and was endorsed by the regents in May 2007, is simple in concept but profound in its implications. Captured in the phrase "the power and promise of 10," it is built on three interrelated propositions:

- the university's research, teaching, and public service missions are served best by 10 campuses that distinguish themselves from one another by building unique profiles of complementary strength;
- by working together as a single institution, bringing together the complementary strengths of 10 distinctive campuses, the university will more effectively bring together the sum of its creativity and resources;
- by working together when it makes sense, the university can provide and continue to enrich, extend, and support scholarly innovation with basic infrastructure that is commonly required by the campuses but not as effectively supplied by them when acting independently.

As part of our long-range planning, we have set a goal to strengthen our support of faculty efforts to discover and communicate new knowledge. In addition to building research capacity and advancing scholarship, the university aims to integrate the research, teaching, and service missions more closely. For us, there could be no clearer call to strengthen the communication of research results in ways that will also allow us to extend access to and improve the quality of education, better inform public policy and public opinion, and appropriately shape professional and industry practice.

What Do UC Faculty Need?

Our research, which forms one segment of this broader discussion, elicited a number of important if not surprising findings. Together they provide a compelling case for focusing and redoubling our efforts to provide in-house scholarly publishing services to the faculty and researchers of the University of California.

- Traditional formats—books and journals—remain the primary vehicles for scholarly publication, but they are subject to serious economic pressures; in addition, there is a need to adapt these formats to the digital environment.
- Most traditional publishing remains discipline-based, while scholars' research and teaching is increasingly interdisciplinary in nature. Faculty feel the need to publish in discipline-based journals because of the journals' prestige, yet express concern about whether they are reaching audiences beyond their specific disciplines.
- Scholars' experimentation with nontraditional kinds of publication is growing, but we lack accepted procedures for evaluating, publishing, and preserving this kind of work. Such work is not routinely accepted for tenure and promotion, in large part because we lack such procedures.
- Informal scholarly communication is becoming increasingly digital and interactive. Scholars continue to make a distinction between informal communication and formal, archival publication, but it seems likely that the lines will blur in the future. (On this point, our interviews corroborate the research of C. Judson King and Diane Harley at UC Berkeley, who are studying faculty attitudes about publication practices, with particular emphasis on variations among disciplines.)[2]
- In fact, many scholars are interested in exploring more interactive, collaborative methods for

disseminating their research results, a trend that is likely to blur the line between informal and formal scholarly communication still more and accelerate the trend toward publishing in digital formats. Paradoxically, absent the procedures for validating nontraditional publications, the distinction between informal digital communication and formal print publication appears to be temporarily strengthened.

In light of these findings, we have identified several emerging research priorities that are likely to create a need for new publishing programs. These new or expanding research fields—notably environmental sciences, health care, global studies, and digital arts—are broadly interdisciplinary. Most deal with major social issues, and thus have significant potential for wide dissemination to audiences beyond the university.

This auspicious intersection has resulted in… a program that has at its heart a new model: the university as publisher.

Publishing of a New Type?

To respond to changing needs and opportunities in scholarly communication, we are beginning to work in three arenas that build on the work of the UC Press and eScholarship, the publishing arm of the CDL. First, drawing on our combined experience in the publication of print and digital journals and monographs, we will develop more effective ways of publishing in these traditional formats and thus extend these services to meet the rising needs of our faculty and researchers. We are especially keen to extend the model behind our monographic series, which now number five. The series seek to reduce costs by using faculty editorial boards for the selection process (following the typical journals model) and streamlining design, production, and marketing.

Second, we will focus on developing and legitimizing a process for nontraditional forms of publishing, including digital reference works, critical editions, data-rich and map-based publications, and online course materials. Consistency of presentation, version control, peer review of nonstandard scholarship, and preservation are critical issues as emerging modes of communication clash with outdated standards for tenure and promotion evaluation. The UC Press and CDL have some experience with these issues through their collaboration on Mark Twain Project Online, a digital critical edition of Mark Twain's writings, edited at UC Berkeley. This project, which will launch in October, will provide a framework that can be adapted for future projects.

A third area of emphasis will be creating new publishing programs in line with the university's research priorities. The university has the resources to act as "convener" or organizer, bringing together research results from many sources in forms that will be easily accessible not only to other scholars, but also to audiences outside the academic community. We are exploring the idea of launching one or more new publishing programs in high-priority research areas, which will include both traditional and nontraditional formats, depending on needs identified by scholars in those fields.

The activities outlined above will constitute the core of a University of California scholarly publishing program. To accomplish these plans, we are creating a more formal collaboration between the two organizations, to bring together their different strengths, increase the visibility of UC publishing activities, and institutionalize what has been up to now a series of experimental, ad hoc activities.

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[1] On November 1, 2007, Catherine H. Candee was appointed Executive Director, Strategic Publishing and Broadcast Initiatives, University of California, Office of the President.

[2] Diane Harley et al., "The Influence of Academic Values on Scholarly Publication and Communication Practices," *Journal of Electronic Publishing* 10, no. 2 (Spring 2007), http://cshe.berkeley.edu/publications/publications.php?id=260.

PUBLISHING JOURNALS@UIC[1]

by Mary M. Case, University Librarian, and Nancy R. John, Digital Publishing Librarian, University of Illinois at Chicago Library

For several years now, the library community has been discussing open access journal publishing and institutional repositories as ways to ensure broad, permanent, and persistent access to scholarly work. Combined with the power of the Internet, these strategies have the potential to accelerate the discovery of new knowledge by facilitating sophisticated searching, text mining, and deep linking of multiple formats. These strategies may also serve to engage the library community in developing the infrastructure and skills base that could support a new, distributed, scholarly communication network. The University of Illinois at Chicago (UIC) Library has embraced such initiatives as natural extensions of its tradition and incorporated them into its recent Strategic Plan.

One of the key goals in the library's Strategic Plan is to take a leadership role on campus in promoting new forms of scholarly communication. Among the tactics to be used are building and populating an institutional repository and increasing our capacity to host open access journals. To advance these efforts, a half-time Digital Publishing Librarian position was established in fall 2005. Nancy John, an emeritus faculty member who had been the Assistant University Librarian for Systems, was named Digital Publishing Librarian. Under John's leadership, the library implemented DSpace and the Open Journal Systems (OJS) as key components of the UIC overall publishing strategy. Since institutional repositories have been addressed fairly extensively in the literature, this article will focus on the library's journal-publishing program.

Journal publishing at the UIC Library is part of a long-standing tradition of exploring and exploiting technology to make content more widely available on the Internet. In the early 1990s, the library saw the opportunity to begin providing locally produced information to a clientele well beyond the campus. It recognized a new role for libraries as electronic publishers and distributors. Subsequently, as a part of the university's larger community engagement mission, the UIC Library extended its online experience to develop and host Gopher and then Web sites for a number of external organizations, such as the Chicago Public Library and the US Department of State, among others. In addition to Web sites, in 1993, the library began publishing the *AIDS Book Review Journal*, an original electronic journal edited by a member of the library faculty. The journal was delivered via e-mail with historical files online in HTML. In 1999, the library took over publication of *First Monday*, begun in 1996 as one of the first online-only, open-access, peer-reviewed journals. It was distributed through a Web site with articles in HTML and an e-mail alert service.[2]

Developing a Library Publishing Service with Open Journal Systems (OJS)

After considering several alternative publishing platforms, we identified the Open Journal Systems (OJS) as the most attractive option for publishing journals at UIC. OJS was attractive because it is open source and developed on a platform (PHP with MySQL) that matched the expertise of current staff. Despite OJS's newness at that point and its use of volunteer developers, we felt that the original developers at the Public Knowledge Project (PKP) had demonstrated a strong commitment to the software. OJS offered sophisticated functionality at a reasonable cost. We had followed the development of DPubS closely since the selection of DSpace as UIC's repository platform, but it looked like DPubS would not be available in the timeframe for this project. Moreover, while we could devote staff resources to this effort, we did not have other significant funds to invest. Other systems such as bepress and ScholarOne, though more widely in use, particularly in traditional publishing operations, were too expensive.

Designed to be installed on a local Web server, OJS facilitates electronic submission of manuscripts, manages the assignment of reviewers, tracks the progress of papers, and provides online publication and indexing. OJS enables effective scheduling of papers and planning of future issues. The look and feel of each journal can be easily customized using a style sheet and, if needed, modest PHP skills. Journal managers have options for continuous publication (publishing articles as soon as they are ready), the use of readers' tools (links that perform searches of authors or topics in Google Scholar, harvesters, etc.), and the inclusion of multiple formats such as podcasts. OJS has built its own Open Archives Initiative (OAI) harvester and is compliant with the OAI protocol to allow harvesting by other services. OJS also supports LOCKSS (Lots of Copies Keep Stuff Safe).[3]

Getting Started

Mark Mattaini, an Associate Professor in the UIC School of Social Work, played a key role in encouraging the library's role in journal publishing. He is the editor-in-chief of a journal, *Behavior and Social Issues* (*BSI*) that was freely available online and had a print version that required a modest subscription payment. In 2004, in conversations between the UIC Library and Professor Mattaini, we learned that the print subscription revenue was not sufficient to support the annual costs of producing the journal, which included payments to a

commercial ISP. To pay the deficit, Mattaini would send his co-editors an invoice at the end of the year, usually raising around $3,000. Seeing an opportunity, the library proposed to provide a reliable, cost-effective publishing platform (preferably open source), relieving the editors of the commercial ISP fee, and perhaps enabling the journal to come closer to breaking even. The move would not involve a debate of principles or significant loss of revenue, as the editors had already embraced an open access model for the electronic version of the journal.

Mattaini agreed to test an installation of OJS at UIC and experimented for several months with a sample version of *BSI*. Mattaini soon convinced his board to move to UIC and the OJS software. Mattaini worked with the library and set up the parameters for *BSI* using the *OJS in an Hour* documentation.[4] Seven years of *BSI* PDF backfiles were added using the OJS import tool. For the first seven years of the journal, only tables of contents were available online. These were imported while library staff keyed in keywords and abstracts. Scanning of the full-text of these issues has been left to a later time.

BSI has now been running on Journals@UIC for almost two years.[5]

Mattaini reports that hits have increased significantly since moving to OJS. The journal now receives about 18,000 visits per month, up from the 6,000 per month just before moving to OJS. *BSI* is OAI-harvestable and searchable through Google Scholar. It is being archived through UIC's LOCKSS server. The journal's financial state, however, remains unchanged. While the costs of the ISP have disappeared, print subscriptions have declined. A next step might be to explore more cost-effective printing options or for the editorial board to consider dropping the print altogether.

While the editors love the capabilities for tracking manuscripts and assigning reviewers, they are not yet sending manuscripts and receiving reviews through the system. This is due partly to a trust in the paper process, but also to a need for training. Editors and reviewers from different institutions gather once a year, often in locations without technology support, limiting the opportunity for hands-on training. The library hopes to address this issue by developing a Web-based tutorial.

Once *BSI* was underway, work turned to migrating a second journal, *First Monday*, to OJS at UIC. A monthly, *First Monday* began in May 1996 and had published 137 issues with 860 papers. Ed Valauskas, the editor, was struggling to manage the influx of manuscripts through e-mail and his memory. He wanted a system that would help him manage the process and communicate more effectively with editors, reviewers, and authors. He was also interested in moving from HTML to XML and PDF versions and in improved search capabilities.

Valauskas is now using OJS to set-up and plan future issues and to receive and distribute manuscripts to reviewers. The journal is expected to be in full production on the Journals@UIC site late in 2007. *First Monday* will also be archived through LOCKSS.

Due to the number of articles, migration of the back issues of *First Monday* will take almost a year. The original HTML files must be reviewed to update links to the new site and then to create PDFs. The work is tedious and undertaken as time allows.

We have done little advertising to date of Journals@UIC. One press release was issued when *BSI* was ready to go. Most of the inquiries we have had since have been as a result of word-of-mouth among editors. Several editors have approached the library about hosting their journals on the UIC site. We have taken on a new journal, *International Journal of Internet Research Ethics*, edited by a faculty member at the University of Wisconsin–Milwaukee, and several other journals are weighing the possibilities.

Some conversations have led editors to decide to install the OJS software on their own servers after hearing how easy it is. Some editors on campus want to use OJS to manage the editorial processes of their journals even though the journals themselves are published elsewhere, including by commercial publishers.

Technical issues for us and our editors have resulted primarily from our decision to install OJS on a server managed by the academic computing center. While the library maintains its own servers for some activities, 24–7 monitoring and the archiving and backup services provided by academic computing are essential for ensuring the reliability of the system. Occasional glitches do result, however, from OJS being encompassed within the university's security system and from delays in implementing upgrades as other applications sharing the PHP and MySQL platforms need to be tested.[6] Upgrades to the software take planning and testing, and changes to other entirely separate applications may bring down OJS. While these disruptions are minimal at this point, they do require careful monitoring.

The editors are largely pleased by the manuscript management that OJS provides. However, tools to check references, create links, and standardize formatting are needed to free editors even more to focus on the content of their journals. A commercial product of such a tool has been tested, though we recently learned that an open source version is in development.

The Question of Sustainability

The library is devoting substantial non-technical resources to its digital publishing and drawing on additional resources in academic computing. A half-time Digital Publishing Librarian devotes 25% of her time to the journals publishing initiatives. A programmer at the academic computing center has probably devoted 10–20% of his time. While the Digital Publishing Librarian need not be a programmer, it is essential that this person know enough about OJS and software logic to provide guidance to the programmer during upgrades and troubleshooting.

Funding has been requested from the UIC Provost for a full-time Digital Publishing Librarian and a half-time programmer. The programmer would probably be located in academic computing. Without the $100,000 requested, the library will need to be very selective in taking on new projects until funds are found via reallocations and the full-time position is posted.

…institutionalization is more than just financial and organizational.

As editor of *BSI*, Professor Mattaini recently presented his perspective on sustainability, stating:

> Going forward, perhaps our [the editorial board of *BSI*] greatest concerns involve sustainability. The current arrangement appears to be highly dependent on particular individuals (the Editor/Publisher, the University Librarian, the Digital Publishing Librarian, the head of ACCC, perhaps even the Provost). Personnel changes might result in changing priorities, and there is not an obvious deep bench in any of these areas. Even OJS, to my eye, currently seems to depend on a very small number of dedicated individuals.[7]

The editor and editorial board's concerns are legitimate and highlight the longer-term challenge all universities face. To provide a sustainable publishing service, it must be institutionalized. Publishing must link directly to the mission of the institution and be funded accordingly. We are early in that process at UIC, but we are taking steps to that end. As mentioned at the beginning, the role of the library as electronic publisher has been supported at UIC for over 15 years. We have articulated scholarly publishing as one of the library's strategic priorities. We have reallocated funds to begin to expand our program and have engaged the academic computing center as a partner. Further funding of recurring dollars from the Provost would be a significant sign of a campus-level commitment to publishing with support for both the library and the computing center.

A next major step is to integrate the digital publishing operations into the library organization. To date, the Digital Publishing Librarian has reported directly to the University Librarian. This is not ideal and reinforces the view of the dependence on certain individuals, but it is due primarily to the fact that there has not been a head of information technology for the last couple of years. With that position to be filled by the end of the year, we look forward to an analysis of the needs of a digital publishing unit and its intersections with other operations in the library.

But institutionalization is more than just financial and organizational. The role of library as publisher must be embedded in the culture of our organization. Our bibliographers have embraced the idea that conversations about scholarly publishing with faculty are a critical part of their responsibilities. One of our bibliographers is in fact one of the journal editors using OJS to help manage the manuscript flow for a journal currently published elsewhere. She has been discussing open access with the editorial board and perhaps we will see the journal migrate to Journals@UIC in the future. It is also through one of our bibliographers that the University Librarian first met Professor Mattaini. And another has begun a project to identify the journal editors on campus.

Libraries are generating and collecting substantial amounts of digital information and the UIC Library accepts that we have a responsibility to archive and manage these resources for the long-term. The library guarantees editors that we will do everything possible to ensure that the content that we distribute through Journals@UIC is archived and will continue to be available. As stated above, we are currently using LOCKSS for the journals we have on our OJS installation. Should our program grow significantly, we may explore an agreement with Portico. As a member of the Committee on Institutional Cooperation, we are also exploring investment in a shared digital repository for Google-digitized books that would eventually be available to store locally created digital files, as well.

The Future

At this point, the UIC Library is functioning more as an electronic distributor than a full-fledged publisher. Ahead, however, are a number of decisions to be made that will affect the robustness of our efforts. Do we provide a free or fee-based back-issue conversion service for journals migrating to Journals@UIC? It would be most advantageous to users to have the entire back-run digitized if we have the rights to do so. What unit would be responsible for this digitization and how

would it be integrated into our own priorities for digitizing library content? We will also need to decide if we are willing to take on subscription-based journals. OJS includes a subscription module and we have had preliminary discussions with some subscription-based journals. In addition to the philosophical issues, what are the operational and fiscal implications? Should we seek out monographs? If so, what system should we use to make them available? (We have just mounted our first monograph on our institutional repository, an out-of-print work by one of our history professors on campus.)[8] Should we establish our own imprint as a number of other libraries have done? Do we want to help editors find and facilitate their relationships with small-run or print-on-demand printers? Do we want to focus our acquisitions of content on a few key areas, for example, titles centered on the Internet or titles in social work? And how far are we willing to go to help find new editors of journals if the current board members are ready to step down?

For now, the journals publishing program at UIC has modest goals. The first is to provide an easy-to-use, cost-effective platform to help editors sustain open access journals. If we can keep titles, especially those sympathetic in principle to open access, from moving to commercial players, we will have been successful. The second goal is to connect with faculty in one of their major professional roles where we have the opportunity to address such strategic issues as copyright, openness, findability, accessibility, and long-term preservation. Engaging with faculty as partners in publishing also helps us better understand disciplinary differences and monitor new developments in research and communication. Third, the journals publishing program will help us build staff expertise in content acquisition, editorial processes, and electronic distribution—all skills that will be invaluable in the library's own digitization efforts. And fourth, these efforts will affirm our leadership role on campus in facilitating action toward creating new systems of scholarly publishing.

We look forward to continued development of Journals@UIC and to learning from colleagues who undertake such publishing programs at their own institutions.

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[1] This article is based to a great extent on the presentations by Mary Case, Mark Mattaini, Ed Valauskas, and Nancy John at the First International PKP Scholarly Publishing Conference held in Vancouver BC, in July 2007. These presentations are available on the PKP Web site at http://ocs.sfu.ca/pkp2007/viewabstract.php?id=17.

[2] An overview of some of these early efforts can be found in Nancy R. John, "Putting Content onto the Internet: The Library's Role as Creator of Electronic Information," *First Monday* 1, no. 2 (1996), http://www.firstmonday.org/issues/issue2/content/.

[3] Open Journal Systems (OJS) was developed by the Public Knowledge Project at the University of British Columbia. It was launched in November 2002 and is currently used by about 1,000 journals from around the world. Today, OJS is managed by a partnership among the PKP, the Canadian Center for Studies in Publishing at Simon Frasier University, and the Simon Frasier University Library.

[4] http://pkp.sfu.ca/files/OJSinanHour.pdf

[5] http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/bsi/index

[6] Details on these issues can be found in Mary M. Case and Nancy R. John, "Opening Up Scholarly Information at the University of Illinois at Chicago," *First Monday* 12, no. 10 (2007), http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/1956/1833.

[7] Mark A. Mattaini, "Liberation and Struggle: An Editor/Publisher's Experience with Open Access & OJS," presented at the First International PKP Conference on Scholarly Publishing, Vancouver BC, July 12, 2007, text provided to the authors.

[8] Michael C. Alexander, *Trials in the Late Roman Republic, 149 BC to 50 BC* (Toronto; Buffalo: University of Toronto Press, c1990), http://hdl.handle.net/10027/99.

Synergies: Building National Infrastructure for Canadian Scholarly Publishing

by Rea Devakos, Coordinator, Scholarly Communication Initiatives, and Karen Turko, Director of Special Projects, University of Toronto Libraries

Editor's note: In early 2007, the Canada Foundation for Innovation awarded funds to two digital library projects, each with a focus on the social sciences and humanities. The projects are the Canadian Research Knowledge Network and the Synergies project. Synergies will bring more Canadian research online and the Canadian Research Knowledge Network will help fund online access to social sciences and humanities literature from around the world. Both projects will receive matching provincial funding, with additional funding provided by the participating institutions. The following article reports on the four-year Synergies project that is addressing publishing and access to journals in the social sciences and humanities.

Smaller multilingual countries face particular challenges in addressing the crisis in scholarly communication. Yet a nation's voice is often defined, and refined, through its literature, including that of scholarship and research. Fortunately the academic community has benefited from a series of recent and emerging partnerships in the production and dissemination of new knowledge. This paper describes a collaborative project addressing publishing and access to research whose contribution will include testing scalability and generalizability. During its four-year grant term, Synergies will not only develop publishing services and expertise within Canadian libraries, it will deliver production-level services to publishers and editors. Synergies is a national project whose practical focus is building technical capacity, but whose intent is to provide a platform for the potential transformation of the Canadian scholarly record.

Overview

The Synergies project jointly addresses two major components of scholarly communication: electronic access to research published in Canada and digital publishing services. Synergies will develop a distributed national network for production, storage, and access to digital knowledge. Formats will include peer-reviewed journal articles, data sets, theses, conference proceedings, scholarly books, and gray literature. Leveraging the dual foundations of Érudit and the Open Journal Systems (OJS), Synergies has an initial focus on social sciences and humanities serials. The 21-university consortium is led by the Université de Montréal and five regional lead institutions.[1]

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Synergies Leading Regional Partners

Québec: Érudit

Érudit, the Québec node of Synergies, is a not-for-profit organization with a mission to produce and disseminate both backfiles and current issues of scholarly journals. Founded in 1998, Érudit is an inter-institutional consortium composed of the Université de Montréal, Université Laval, and the Université du Québec à Montréal. Services offered include:

- digital publishing of current issues in XML, PDF, and XHTML formats;
- management of institutional and individual subscriptions;
- digitization of backfiles in XML and PDF formats;
- preparation of the articles' descriptive data and delivery to bibliographical databases.

Érudit already offers over 30,000 articles in 46 journals in the sciences, social sciences, and humanities. Thanks to funding from the Québec government, digital publishing of the journals is done to XML standards using a software suite developed by Érudit, which automatically handles 90% of the editorial treatment of articles. This ensures a high quality of editorial production that conforms to international norms at low cost. Agreements between Érudit and other providers permit access to a distributed collection through one or the other of the portals. For example, the journals of both the Persée platform (http://www.persee.fr/) and the Press of the National Research Council of Canada (http://pubs.nrc-cnrc.gc.ca/) are available through the Érudit platform. Moreover, the Érudit data model, under open source license, is used by five journal platforms, both private and public, which group together over 200,000 learned journal articles in Europe and in North America.

As part of the Synergies project, Érudit will not only further develop its journals-production capabilities but also add modules for data sets and monographs. More than 95% of the content in Érudit is open access. Érudit receives a monthly average of 300,000 visits and 1.2 million documents (page views) are consulted per month. Érudit journals are indexed by sources including Google Scholar, PubMed, Repère, Francis, OCLC, Cambridge Scientific Abstract, Chemical Abstracts Service, Elsevier, National Inquiry Services Center, ProQuest, Philosophy Document Center, and Nines. Érudit is LOCKSS-compliant.

British Columbia: Public Knowledge Project

The British Columbia node of Synergies provides support for journals in several ways. The Public Knowledge Project (PKP)—a partnership of the University of British Columbia and Simon Fraser University's Library and

Canadian Centre for Studies in Publishing—manages ongoing development and support of three, key, open source software components—Open Journal Systems, Open Conference Systems (OCS), and the OAI-MHP–compliant metadata harvester—that will be used extensively by the other Synergies nodes. Simon Fraser University Library will coordinate these activities, in addition to supporting other academic digitization and repository projects.

Open Journal Systems (OJS) was originally developed at the University of British Columbia under the leadership of John Willinsky. In seven years, OJS has emerged as the world's leading open source journal publishing system and was recently recognized by SPARC as a Leading Edge Project. Over 1,000 not-for-profit, commercial, and open access journals use OJS in a variety of settings, ranging from single silo journals to national scholarly publishing portals. The software is a robust, standards-based, publication-management system for scholarly journals, providing editorial workflow management, online article access, full-text searching, and interactive reading tools. The PKP community also ranges from individuals with a professional interest in the project to large organizations, such as the Instituto Brasileiro de Informação em Ciência e Tecnologia and now Synergies.

PKP has established working relationships with Google Scholar, LOCKSS, SPARC, and other organizations to ensure that its software is designed to serve the larger scholarly community. OJS has received funds from SSHRC, the Max Bell Foundation, the Soros Foundation, the International Network for the Advancement of Scientific Publishing, and the MacArthur Foundation.

Atlantic Scholarly Information Network: Integrating Érudit and OJS

The Atlantic Scholarly Information Network (ASIN), under the leadership of the University of New Brunswick Library, has begun integrating the Érudit XML-based processes, including the Érudit rich metadata description, with the journal management and delivery services of OJS. Currently, 12 journals are either being published under this combined model or have reached agreement to do so. ASIN will also investigate new models for institutional repositories, seeking to make them more relevant to researchers. As part of this initiative, the Electronic Text Centre at the University of New Brunswick is developing an automated metadata-generation application for DSpace.

Atlantic Canada's Synergies institutions will have considerable latitude in how they contribute, but this will work within a tightly knit regional framework of standardized repository and journal services and processes. Research results will be distributed through a scholarly communication module of the ASIN portal. Guided by a regional journal advisory committee, Atlantic Canada will be providing a series of publishing services for back and current issues to journal editors. These will range from hosting an OJS instance at their institution of choice to offering full XML article markup with HTML delivery integrated into OJS.

Prairies: Preservation

Led by the University of Calgary Library, the Prairies node of Synergies will be responsible for developing the Synergies preservation program. Leveraging existing technologies, the intent is to establish a framework for trusted Canadian repositories. Initially, this node will focus on social sciences and humanities journals published through Synergies as the preservation test bed. Looking ahead, the infrastructure can be extended for institutions to store and preserve source documents, raw data, and multimedia content and material licensed through the Canadian Research Knowledge Network and other national initiatives. The Prairies node includes Athabasca University and the Universities of Saskatchewan and Winnipeg. Using the OJS software, the Prairies node will be working closely with Athabasca's International Consortium for the Advancement of Academic Publication (ICAAP).

Ontario: Scholars Portal

Ontario will be offering a centrally operated publishing service that is tightly integrated into the Ontario Council of University Libraries Scholars Portal services, yet with decentralized institutional identity and support. Four university libraries are involved in the Ontario node: University of Toronto (Ontario lead), University of Guelph, York University, and the University of Windsor. Services will be based on OJS, the Open Conference Systems, and DSpace. By seamlessly incorporating publishing services with Scholars Portal services, the Ontario Synergies partners will be able to provide more effective and a greater degree of information discovery and dissemination than would otherwise be possible. Specifically journal, conference proceedings and repository content will be integrated and/or exposed to Scholars Portal and other search services.

Scholars Portal is a resource-discovery service housing over 100 million citations and over 12 million full-text documents from all disciplines. From January 2005 to April 2007, 20 million searches were conducted and 12 million articles from 8,000 electronic journals were downloaded. Scholars Portal services are available to faculty, students, and staff in Ontario's 20 universities. Services will also include the secure archiving of published journals and conferences. We anticipate that Scholars Portal's traffic will generate additional use of Synergies-supported publications.

Synergies includes participants from the various milieux of the Canadian research community. These include faculty, journal editors, scholarly associations, directors of research centers, Canada Research Chair holders, librarians, publishers, and technical experts. Each of the leading regional partners brings different but complementary expertise:

- the Université de Montréal with Érudit's publishing and portal technology;
- Simon Fraser University Library with OJS, Open Conference Systems (OCS), metadata harvesters, and open source software development;
- the University of Toronto Libraries with its integration of OJS, OCS, and repository content into Ontario's Scholars Portal;
- the University of New Brunswick Library with its growing expertise in marrying elements of Érudit and OJS; and
- the University of Calgary Library with its focus on preservation and journals with limited circulation.

See the accompanying sidebar for a summary of the expertise, roles, and contributions of the Synergies leading regional partners.

Each regional leading institution will, in turn, collaborate with several universities. Local Synergies partners—currently 16 Canadian university libraries—will be able to choose from a variety of platforms and associated production tools to create and maintain content. The five regional nodes address different development segments of the overall project and will collectively provide expertise to develop, support, and coordinate the use of these systems by the local sites. In turn, the regional nodes will work closely with the Université de Montreal as the lead node to identify, develop, and implement appropriate standards and interoperability mechanisms to provide a consolidated central platform that will collect and present these resources in a comprehensive, seamless manner to all users.

A regional structure allows responsiveness to local publishing realities and reflects Canada's two official languages. A certain level of duplication and complementarity has been built in to promote face-to-face interaction with journal staff, other publishers, and researchers to distribute expertise nationally and to ensure content integrity and preservation. After the initial year of this four-year project, other interested institutions will be invited to join.

A wide range of tools to support the creation, distribution, and archiving of digital objects will be offered. The flexible infrastructure, while encouraging open access, also allows journal editors and publishers to structure subscription options and maintain revenue control. Any code developed during the project will be released open source. The appropriate license is currently being investigated recognizing the complexity arising from existing legacy projects, and hence licenses.

Program Description

Through a national portal, Synergies will present a consistent and powerful interface to Canadian social sciences and humanities publications. The system will offer a variety of indexing and discovery options and strive for further innovative approaches. Synergies technologies will support metadata standards that comply with the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH), such as unqualified Dublin Core, and other subject and discipline-specific metadata structures as appropriate and when they become available. Synergies will provide language-localization options, both for searching and displaying content, in English or French.

Aims of the Synergies Program

Moving Research and Scholarship Online

For many Canadian journals, online presence is restricted to aggregators such as ProQuest and EBSCO. The Social Sciences and Humanities Research Council (SSHRC) spends $2.2 million allocated to research and transfer journals to pay for quality assurance (peer review and professional editing and layout) and the creation of a public record. SSHRC support together with subscription income, in general, has been insufficient to fund the adoption of technologies that maximize the impact of scholarly communication. Complementing this support for journal publication is more recent institutional investments in centers of excellence, many of which have modest publishing programs. Even more recently, institutions have begun funding institutional repositories.

Electronic publishing models for the dissemination of scholarship present new opportunities for increasing the impact of Canadian research but lack the underpinnings that traditional print models have—preservation and permanent identification are but two key elements. Without this, concerns about the value of electronic dissemination will continue to be raised. This is in marked contrast to the social sciences and humanities traditional roles as gatekeepers, guardians, and servants of our social, historical, and cultural heritage. Synergies provides a long-term commitment to electronic publishing. The past activities of the five leading institutions attest to their commitment.

Enhancing Access to Publicly Funded Research

Several Canadian funding agencies are actively pursuing policies in support of open access to publicly funded research. The Canadian Institute of Health Research has

recently mandated publication in an open access journal or deposit in a repository for research grants. SSHRC's "in principle" support of open access has been hampered by lack of national infrastructure.

Building Persistent Public Infrastructure

Many countries have already developed public infrastructures for disseminating research results. However, their infrastructures are often limited to only one discipline or publication genre, such as theses or journals. Synergies will be the first infrastructure to include all types of university publications and results of research.

The complex distributed environment represents a political and social achievement. The project aims to build publishing, archiving, and dissemination capacity at the 21 participating Canadian universities, and beyond. Synergies will also establish direct links with dissemination platforms such as Project Muse in the United States, Persée in France and, at the provincial level, Ontario's Scholars Portal and the Atlantic Scholarly Information Network.

> *Synergies is a national project…whose intent is to provide a platform for the potential transformation of the Canadian scholarly record.*

Building Cross-Institutional and Cross-Sectoral Collaboration

Effectively altering the face of scholarly publishing requires continual communication across and between institutional and sectoral divides. The Synergies grant application was successful, in large part, because of the participation of key stakeholders such as granting agencies, scholarly associations, and publishers. Stakeholders continue to be integrated into decision-making processes through national, regional, and local governance structures. Indeed, Synergies has created a much needed dialogue between participants whose previous relationships could be described as competitive or minimal. Synergies will also provide an invaluable environment for new research questions in fields such as text analysis, bibliometrics, and knowledge mobilization beyond academic circles to contribute to informed citizenship and the professional and public good.

Developing Open and Robust Innovation Practices

Transformation requires scale—both in infrastructure and diversity. The diverse approaches offered by Synergies partners will provide a solid core of experience. Not only are different technology platforms utilized, the member institutions have vastly differing histories and approaches: some have long-standing scholarly communication programs while others have yet to launch; some are situated within the library as separate cost-recovery units or integrated within library departmental structures and funded through operating budgets; some report to vice presidents of research while others report with their university presses. Service levels also vary as does focus on open access publishing.

While the initial focus is on scholarly journals in the humanities and the social sciences, the project will support a variety of publication types and all disciplines. By providing robust and persistent infrastructure, it is the intent of the Synergies project to foster experimentation in scholarly communication forms and norms.

Conclusion

Synergies bears some striking overlaps with key recommendations contained in the Ithaka report, "University Publishing in a Digital Age."[2] Among their recommendations, the authors call for a "powerful technology platform" and "shared capital investment" in order to develop online publishing capabilities. Key enablers include strategic investment, the development of online publishing capacity, scalability, appropriate organizational structures, collaboration, and the inclusion of multiple medias and formats. The project also bears some resemblance to Crow's call for publishing cooperatives.[3]

But there are also some striking differences. Key is a national scale and initial focus on social sciences and humanities journals. Synergies partnerships, while situated squarely within libraries, cross sectors. While promoting a unified Canadian corpus is an intent, the starting point is the provision of a robust technical infrastructure. This project is also deeply embedded in the public sphere and shares a commitment to exploring and furthering new business models, such as open source development and open access. Synergies is a "grand experiment"—one we hope will benefit Canada and the world for years to come.

Project URLs

Synergies: http://www.synergiescanada.org/
Érudit: http://www.erudit.org/
Public Knowledge Project: http://pkp.sfu.ca/

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[1] The Université de Montréal is both the national lead institution and the regional lead for Québec.

[2] Laura Brown, Rebecca Griffiths, Matthew Rascoff, "University Publishing in a Digital Age," Ithaka Report, July 26, 2007, http://www.ithaka.org/strategic-services/university-publishing/.

[3] Raym Crow, "Publishing Cooperatives: An Alternative for Non-Profit Publishers," *First Monday* 11, no. 9 (2006), http://www.firstmonday.org/issues/issue11_9/crow/.