A Scalable and Sustainable Approach to Open Access Publishing and Archiving for Humanities and Social Sciences

A White Paper

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EXECUTIVE SUMMARY

This white paper outlines a model for open access (OA) publishing that offers a scalable, fair, responsive, and discipline-independent solution that can be applied to the entire scholarly communication ecosystem in an incremental fashion, rolled out at both small and large scale.

The solution proposed here is one that encourages partnerships among scholarly societies, research libraries, and other institutional partners (e.g., collaborative e-archives and university presses) who share a common mission to support the creation and distribution of research and scholarship to improve society and to help solve the world’s most challenging problems. Our proposal includes a plan to convert traditional subscription publication formats, including society-published journals and books or monographs, to OA; however, our ultimate goal is to present an approach to funding infrastructure for scholarly communication that is fair and open and fully supports new and evolving forms of research output.

The financial model we propose is based on an annual or multi-year payment made by every institution of higher education, no matter what its size or classification, and by any institution that benefits from the research that is generated by those within the academy. For tertiary institutions, the payment is based on the number of their students and full-time faculty on a sliding scale tied to the Carnegie (or, in some cases, Carnegie-like) classification, as well as on the number of researchers, scientists, or scholars at other types of institutions (e.g., medical research centers). The payment is modest relative to the overall budget of most institutions, but, when spread broadly across all institutions, results in a sum substantial enough to sustain a vibrant and open scholarly communication environment.

The institutional payment goes into a centrally managed fund. Institutions and scholarly societies come together in partnership to apply for funds through a competitive grant process; the funds dispensed are used to provide direct support for the distribution, access, and long-term archival preservation infrastructure of the partnerships. Because the goal of this program is sustainability, grants are open-ended so recipients are guaranteed a reliable source of income. At the same time, adherence to strict guidelines and oversight of the funding are required.
Sharing, curating, and preserving scholarship is imperative for the advancement of research, just as openness is central to the development of new modes of teaching and learning. Deep structural changes to the scholarly communication system are needed not only to respond to the current funding crises in higher education and the emerging forms of scholarship in the digital age, but also to foster and deepen the connections between the academy and the wider public. Only a model that builds collaborative alliances across a wide variety of institutions and that engages a range of stakeholders can provide a fair and equitable path to truly open and sustainable forms of scholarship.
Key Components of Our Proposal:

- We are focusing in the first instance on supporting the transition to OA in the humanities and social sciences (HSS). For all the problems inherent in an article-processing charge (APC) OA funding model, in the STEM disciplines that model does work, at least for now. HSS needs are different.
- We are looking to academic and research institutions to fund this model, not to their libraries. The dollar amounts provided in the white paper may look large to a library, but are modest at an institutional scale.
- We want full participation from the entire higher education community, from small community colleges and large research universities alike. As everyone will benefit from a world in which all research output is freely available, everyone in the academic community has the responsibility to play a part in creating this reality.
- A bold rethinking of the economics of OA, our plan is nevertheless designed to assuage the fears and embrace the investments of the stakeholders in the scholarly communication system.
- Our plan is intentionally incremental, acknowledging the inherent conservatism of academia. It also suggests employing traditional roles in evolving ways. Preservation and curation, for example, should be a primary role for libraries, because this is a natural space for libraries to occupy and has always been part of their mission.
- Our model enables scholarly societies to have the financial freedom to develop the strategies they need to continue to provide their members with services that are useful and meaningful.
- Our plan allows all the partners in the scholarly communication ecosystem to begin to work together to agree on best practices, not only for infrastructure, metadata, etc., but for business practices as well.
- Our model provides a clear but ever-evolving and expanding roadmap to address concerns about “free riders,” including a campaign in a stepwise but nevertheless assertive way to persuade all tertiary academic institutions to participate financially, raise endowment funds from foundations, accept donations from the public, and otherwise engage all beneficiaries — very much in keeping with the core mission of academic institutions, societies, and libraries: the advancement of knowledge and learning and communication of the products of those efforts to the entire world.
- And just as research and scholarship are increasingly global and collaborative, our plan is not bound by national borders but can — and we hope will — be adopted in all countries by those looking for a more equitable and sustainable OA model.
1. INTRODUCTION

In the 11 years since the Budapest Open Access Initiative launched what is now known as the “OA movement,” considerable strides have been made toward widespread adoption of the principles of OA. Practice, however, has lagged behind as both credibility and business models have struggled to gain traction. The transition to OA from subscription-based society publishing operations in humanities and social sciences (the so-called HSS disciplines) has been particularly difficult, for reasons that expose the limitations of the most popular current OA funding models: in HSS, articles are not the only publication type of value or even the most valued type of publication; external funding for research is minimal or non-existent; many (if not most) societies consider their publications to be the primary benefit they offer their members and find it difficult to imagine how they would support their society’s activities if their current publishing operation were to change.

Our model, sketched out in this white paper, tackles head-on the major drawback to the predominant OA business model at the heart of these complaints: that it is based on object-level payments made by individuals for only certain types of publications. Our model, in contrast, looks to all tertiary academic institutions to contribute to systemic support of the research process itself, including (but not limited to) its entire scholarly output, whether article, monograph, dataset, conference presentation, multimodal project, or format not yet envisioned. Our model likewise looks to societies to play a central, rather than peripheral, role within the scholarly communication ecosystem, and asks that academic libraries become true partners with them.

Kathleen Fitzpatrick, Director of Scholarly Communication at the Modern Language Association, in public comments on the White House’s Office of Science and Technology Policy’s Public Access Memorandum, eloquently described that society’s vision of the role of the society in this era:

We all — scholars, libraries, and societies — share the goal of increasing the wealth of knowledge that we hold in common. And if we focus on that collective goal, a viable path forward can be forged. There is still reason for some benefits of membership in a scholarly society to be exclusive to members if we rethink the role of the scholarly society in the digital age. The shifts [in scholarly communication brought about by technology] require us to consider the possibility that the locus of a society’s value in the process of knowledge creation may be moving from providing closed access to certain research products to instead facilitating the broadest possible distribution of the work done by its members. This is a profound change, and not just for societies but for their members: we may in coming years operate under a model in which, rather than joining in order to receive the society’s journal, one instead joins a society in order to get one’s own work out to the world, surrounded by and associated with the other work done by experts in the field.¹

Our model looks to realize this vision. And we consider societies’ both steady presence and changing role for their membership as being key to the model’s success.

In the past decade OA as a term and as a concept has become a significant part of the public dialogue. The speed of acceptance, at least philosophically, seems astonishing in an environment — whether academia or the government — known for love of tradition and adherence to the status quo. As The Chronicle of Higher Education asked last autumn, “[H]ow realistic is it to expect institutions with long histories and traditional academic structures and cultures to be able to change?” The answer to the question of why OA has moved so quickly to the fore in academic discourse may be that in practice the adoption rate has been incremental, resulting in measured, albeit transformative, change rather than sudden, disruptive change. Despite its broad philosophical appeal, OA in practice has been embraced only in certain disciplines and, for those journals that generate revenue, has firmly coalesced around one particular business model — the article-processing charge (APC) — that only works well within those disciplines. Wide adoption on a global scale requires a business model that operates at that scale. Cost-per-unit pricing, whether article or monograph, cannot easily scale.

But what is the scale we are discussing? What is the global price of scholarly communication? In 2008, the Research Information Network commissioned a study, supported by Publishing Research Consortium (PRC), the Society of College, National, and University Libraries (SCONUL), and Research Libraries UK (RLUK), to answer this question. Their conclusions, found in the report “Activities, Costs, and Funding Flows in the Scholarly Communications System,” are succinctly presented in Figure 1.

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3 While much discussion about the viability of OA has centered on the proper price point for APCs, in October 2003, when PLOS Biology was launched, the norm in science and medical publishing was — and in some cases still is — to pay page and color charges for publication. The now-canonical $3,000 was set as PLOS Biology’s APC because analysis of the competitors’ overall article-level charges (done by one of the authors of this white paper) showed an average cost to authors of $3,000, so clearly what the target market could and would bear. At that time a flat-rate of $3,000 was enviably simple in a world where charges for each page and each color figure appeared as line items on a corresponding author’s invoice.

4 The Research Information Network study remains (to our knowledge) the most thorough examination available of the global costs of the scholarly communication enterprise, but even they acknowledge the difficulty of obtaining a complete picture of the publishing landscape, including the number of scholarly journals being published worldwide. In 2008 they estimated the number of “active peer-reviewed scholarly and scientific journals currently published in English,” as per that journal’s inclusion in Serials Solutions’ Ulrich’s Periodicals Directory, to be 23,700, of which approximately 2,000 were OA. In 2011 Heather Morrison likewise attempted to answer the question of the number of “active, scholarly peer-reviewed journals” being published, expanding that list beyond English language journals, and concluded there were 26,746. Her calculations, like the Research Information Network’s, were based on Ulrich’s, in which not every journal published appears. The Directory of Open Access Journals, for example, lists 9,950 journals in its database (accessed on 5 Oct. 2013), many of which are not indexed in Ulrich’s, although some of those may not be peer-reviewed or “active.” The model outlined in this white paper, looking as it does to extend coverage beyond journals to the entire scholarly publication ecosystem, would at full maturity encompass other forms of periodicals beyond journals (e.g., monograph series), so Morrison’s total estimated number of publications (47,845), while not capturing publication types (e.g., academic blogs) not indexed by Ulrich’s, would be much
Figure 1. Annual Costs Incurred in the Global Scholarly Communication Process

(A) Global annual cost (in £) incurred during the entire research production and communication process. At £6.4 billion ($10.3 billion), publishing and distribution, further broken out in (B), make up only a small part (roughly 4%) of the overall cost of the research lifecycle.

(B) Global publishing and distribution costs (in £), broken out by activity. First-copy costs are estimated to be nearly £3.7 billion ($5.9 billion), with an annual journal article output globally estimated at 1.59 million.

Source: Research Information Network, "Activities, Costs and Funding Flows in the Scholarly Communications System: Key Findings" (Nov. 2008) (Copyright: CC-BY-NC-SA)

One takeaway from the Research Information Network report is this: Academic institutions pay the lion’s share of the cost of funding the current scholarly communication system (Figure 2). These institutions pay approximately 53% of the closer to the potential size number of publications we are suggesting would eventually be included at full implementation of our model.
global publishing and distribution costs in the form of library subscriptions. They contribute another 29% in the form of the labor provided by researchers without remuneration from the publishers (e.g., peer review, voluntary editorships), and often institutions (directly or indirectly) pick up the tab for the roughly 2% “author-side” payments. While not a trivial amount of money, publishing revenue from other sources, such as subscriptions from non-academic organizations or society memberships, pales in comparison. In urging, as we do in this white paper, that “all” that is needed to achieve full OA is to shift the way the money is spent, we are hardly novel. As Alma Swan notes, “A number of studies have been carried out [in recent years] that have examined the costs and benefits of traditional and new forms of scholarly communication. These economic studies have all indicated that moving to an Open Access literature, whatever the business model, would be cheaper overall due to efficiency gains and lower operational costs in research institutions, and would have a societal benefit.”5 The boldness of our model derives from how to accomplish that shift.

Figure 2. Global Funding Sources for Journal Article Publishing and Distribution

Current funding for the estimated global costs of $10.3 billion (£6.4bn) for the publishing and distribution of journals comes almost entirely from subscriptions by academic (52%) and other (11%) libraries and the (often unpaid) labor of researchers themselves, who do the peer review (29%). Other sources of funding — from advertising (3%), from individual memberships and subscriptions (2%), and from “author-side” (e.g., APC) payments — is comparatively minimal.

Source: Research Information Network, “Activities, Costs and Funding Flows in the Scholarly Communications System: Key Findings” (Nov. 2008) (Copyright: CC BY-NC-SA)

“There comes a time in every movement,” Heather Joseph recently observed, “when the underdog becomes the leader; recognizing that moment and effectively capitalizing on it is imperative.... For more than a decade, we’ve been fighting a specific fight; many of my colleagues have used the very apt Gandhi quote to describe our progress: ‘First they ignore you, then they laugh at you, then they fight you — and then you win.’ It’s what comes after winning that we have a collective responsibility to be deliberate about considering right now.... We are in the middle of a very eventful, somewhat messy and chaotic period where the battle for how OA is implemented is now in full swing.”

The model outlined in this white paper jumps into that fray and offers a vision for “how OA” can be implemented.

Our model builds on a number of previous reports and thought-pieces, including (but certainly not limited to) these:

- **Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications** [*Finch Report*]
- **Action Plan towards Open Access to Publications**
- **Activities, Costs, and Funding Flows in the Scholarly Communications System: Full Report**
- **Business, Innovation and Skills Committee’s Fifth Report: Open Access** [response to the Finch Report]
- **Debating Open Access**
- **Economic Implications of Alternative Scholarly Publishing Models: Exploring the Costs and Benefits**
- **The Future of Scholarly Journal Publishing among Social Science and Humanities Associations**
- **Income Models for Open Access: An Overview of Current Practice**
- **Ithaka S+R | Jisc | RLUK: UK Survey of Academics 2012**
- **Ithaka S+R US Faculty Survey 2012**
- **Ithaka S+R US Library Survey 2013**
- **Moving towards an Open Access Future: The Role of Academic Libraries**
- **Policy Guidelines for the Development and Promotion of Open Access**
- **Publishing Cooperatives: An Alternative for Society Publishers**
- **Publishing Support for Small Print-Based Publishers: Options for ARL Libraries**
- **Research Library Publishing Services: New Options for University Publishing**
- **SHared Access Research Ecosystem (SHARE)**
- **Sustaining Scholarly Publishing: New Business Models for University Presses**

Additional background reading on the issues we address in this paper can be found in Appendix E.

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1.1 The Purpose of the White Paper

This white paper proposes a model to redefine the scholarly communication ecosystem.

We invite stakeholders from institutions of higher education, libraries, and scholarly societies — as well as anyone else interested in the issue, whatever their view — to engage in this debate.

1.2 The Scope of the White Paper

The scope of our white paper is broad. It offers a dramatically new model of scholarly communication, but one that is thoughtful, even conservative in some respects. It proposes a phased approach, focused on scholarly and learned societies, that gives deference to current modes of scholarship while establishing the infrastructure necessary to support and sustain new emerging modes of scholarship. It emphasizes disciplines and societies in the humanities and social sciences (HSS), which are the ones most at risk to lose out in the current turbulent, cost-driven OA environment. Even so, our model seeks to build a path the sciences could follow as well.

While our scope is broad, our model is targeted, putting to one side many of the thornier issues of OA that, while important, are not at the heart of our proposal. We do not directly address, for example, the question of licensing, although we are most supportive of a license (e.g., CC BY) that permits broad reuse (see more in Section 3.6.2). While we applaud and support all OA publishing initiatives — including Knowledge Unlatched, Open Library of the Humanities, the Oberlin Group’s Lever initiative, and many more — we are deliberately not addressing the large number of non-society OA publishing operations; nor are we advocating for a business model that supports OA publishers that are not publishing on behalf of a scholarly or scientific society. We are also not looking for our model to support all of a society’s membership operations, just that part of the enterprise that focuses on scholarly communication and research output — so yes to journals, monographs, and datasets, but no to newsletters and databases. Similarly, we are not concerned with the role or sustainability of full-text database or abstracting and indexing (A&I) services (e.g., ProQuest, EBSCO, Swets, MLA International Bibliography). And, finally, while we acknowledge that there have been previous institution–library–society projects, such as Gutenberg-e,7 that have been criticized as grand but ultimately failed experiments, we do not feel that those projects are indicative of any systemic problem with such partnerships. Consequently, they have no bearing on our model.

2. GENERAL ISSUES

The issues we are trying to address with our model are many — and well known:

- Global inequalities in access to research output
- The inability of many institutions to build and maintain research repositories on their own
- The faculty need (especially for junior faculty) or preference for publishing in respected venues (e.g., society publications) and for credentialing by professional sources
- An increasing demand for nimbleness in accommodating new modes of scholarly communication
- The recognition that article-processing charges (APCs) are not a sustainable model for most researchers, publications, and disciplines — or for publishing modes that are not “articles” — and that this business model, with its low barrier to entry for anyone with Web skills, is rife for “predatory” practices by less-than-scrupulous “publishers”
- Decreases in public funding to support differing levels of education (e.g., community colleges, public universities, Pell grants) and severe reductions in budgets across the educational system
- The requirement of massive open online courses (MOOCs) and other open education initiatives for OA content, licensed for unlimited use and reuse
- The reality and recognition that scholarly society membership services are overly dependent on publishing revenue and journal income for survival, with their attendant focus on publishing operations rather than their core mission of fulfilling their broader public purpose
- The reality that many, if not most, library publishing services are not currently equipped to handle society publishing relationships or publishing operations at a large scale
- The unsustainability of libraries’ support for hybrid publication business models (i.e., simultaneous support for both OA and “traditional” subscription publications, often for the same journal) and the increased overhead of managing such models
- The cost inefficiencies of numerous buys by libraries of identical materials in various databases
- The reliance by authors and libraries on publishers to archive and to migrate digital materials for future use when that is not (nor has it ever been) part of their mission or built into their business practices

The current system of OA funding, with its emphasis on article-level charges, works somewhat well in disciplines in which research is well funded and the output that is rewarded is primarily peer-reviewed articles. Even in those disciplines, though, as February 2013’s memo from the White House’s Office of Science and Technology (OSTP) made clear, research output supported by funding (especially data) goes beyond that of peer-reviewed articles. (One of the problems with the publishers’ Clearinghouse for the Open Research of the United States [CHORUS] proposal to address the OSTP memo is that they focus almost entirely on peer-reviewed articles, ignoring the many other types of output produced by funded researchers.) The importance of OA to the scholarly communication ecosystem applies to much more
than peer-reviewed articles, as the academic institutions’ SHared Access Research Ecosystem (SHARE) proposal acknowledges — although that proposal, even its most recent iteration, does not go as far as we do in our model here.8

Our model looks to provide a scalable, fair, responsive, and discipline-independent solution that can be applied to the entire scholarly communication ecosystem in an incremental fashion, rolled out at both small and large scale. The details of that plan follow.

We recognize the challenges inherent within the current system that can be addressed only by many — and then most — and then all stakeholders moving out of their comfort zone. Among those challenges are the conservatism of academia, wedded as it is to the status quo and “the way we’ve always done things,” whether that is faculty and administration, society professional staff, library staff, or scholarly publishers; the investments of various stakeholders in their own processes and organizations, whether those are publishing workflows and platforms of choice, personnel roles and skills that are particularly valued, or revenue expectations; and a lack of transparency in publishing operational costs, whether through unwillingness to share this information outside the organization or simply the inability collect and analyze that information in a meaningful way.9

In the first instance, there may be only a few willing to lead. We hope many, if not all, of those institutions discussed in Appendix C are in that category, along with others that will step forward.


9 The recent UK Parliament’s Business, Innovation, and Skills Committee report on OA (issued 3 Sept. 2013) took aim in particular at the lack of transparency in the costs of publishing, including OA publishing, recommending in strong terms the need for independent studies to be conducted to determine actual APC pricing, institutional subscription expenditures, and a full cost–benefit analysis of the OA policy recommended by the Finch Report. They demand in particular "genuine price transparency from publishers," insisting as a first step that there be no non-disclosure clauses in publishing contracts.
3. PROPOSED SOLUTION

“Those who want to live in a world where all peer-reviewed ... literature is free online are themselves growing in numbers and will soon hold power in universities, libraries, learned societies, publishers, funding agencies, and governments. Generational change is on the side of OA [open access].”

— Peter Suber, Open Access

The solution offered in this white paper encourages partnerships among scholarly societies, research libraries, other institutional partners (e.g., collaborative earchives, university presses, etc.), and scholarly publishers to publish and preserve the research and scholarship that is generated, including, but certainly not limited to, monographs and journal articles.

The financial model we propose is based on an annual or multi-year payment made by every institution of higher education and any institution that benefits from the research that is generated. The payment is based on the number of students and full-time faculty on a sliding scale tied to the Carnegie classification for institutions of higher education and on the number of researchers, scientists, or scholars at other institutions (e.g., medical research centers). The payment is modest relative to the overall budget of most institutions, but when spread broadly across institutions results in a sum substantial enough to sustain a vibrant and open scholarly communication environment.

The institutional payment goes to a centrally managed fund that is used to provide direct support for the distribution, access, and long-term archival preservation infrastructure of the partnerships. Institutions and scholarly societies apply for the funds through a competitive grant process. Because the goal of this program is sustainability, grants are open-ended so recipients are guaranteed a reliable source of income. At the same time, adherence to strict guidelines and oversight of the funding are required.

While the goal is long-term sustainability, the plan recognizes that evolution in scholarly communication is important and inevitable. Partnerships are non-binding and may be dissolved when it no longer makes sense for them to exist; however, measures must be taken to ensure that the published product is preserved.


11 The idea of partnerships is not a new one, of course. In particular Raym Crow, October Ivins, and Judy Luther have all proposed publishing collaborations of various kinds (see Appendix E). What makes our model different from theirs is in the particulars of the partnership business model.
More details on the financial model can be found in Section 3.6.

3.1 Mission-Driven Alliances

Underpinning our proposal is the belief that societies, colleges, universities, libraries, presses, and other scholarly institutions and organizations share a common mission to support the creation and distribution of research and scholarship to improve the lives of people and to help solve the world's most challenging problems. John Willinksy makes a particularly convincing case for OA along these lines in his book *The Access Principle*.\(^\text{12}\) Few question the societal benefit of providing wider access to research that could help citizens make informed decisions about their health care or enable a small business to innovate and help fuel the economy, but an equally compelling case can be made for providing access to political or policy research that improves the effectiveness of an NGO working in the Democratic Republic of the Congo or literary criticism on the works of Alice Munro or Edwidge Danticat that inspires students at an under-resourced high school. Restricting access to research benefits no one and runs counter to the stated mission of educational and not-for-profit institutions. While our proposed model admittedly challenges the traditional focus, work processes, and financial operations of our institutions, it also enables them to more fully achieve their mission.

Figure 3 suggests some possible partnerships or collaborations among these mission-driven organizations.

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Figure 3. Examples of Possible Partnership Collaborations

(A) Humanities. In this example, the Modern Language Association (MLA) partners with the Columbia University Libraries/Information Services’ publishing operation, the Center for Digital Research and Scholarship (CDRS), and with the California Digital Library (CDL) to edit, produce, host, and archive the society’s journals (PMLA and Profession) and book series (Approaches to Teaching World Literature, New Variorum Edition of Shakespeare, Options for Teaching, Teaching Languages, Literatures, and Cultures, Texts and Translations, and World Literatures Reimagined). MLA, CDL, and CDRS might also decide to partner to create a discipline-focused repository and to develop enhancements to the MLA Commons platform. Out of scope for funding under our model would be the bulletins, the newsletter, the job information list, the MLA Handbook, and the MLA International Bibliography, all of which would remain revenue-generating properties, with access limited to members or subscribers.

(B) Social Sciences. In this example, the American Anthropological Association partners with Duke University Libraries and Wiley-Blackwell to edit, produce, host, and archive their journals: American Anthropologist, American Ethnologist, Annals of Anthropological Practice, Anthropology and Education Quarterly, Anthropology and Humanism, Anthropology of Consciousness, Anthropology of Work Review, Archeological Papers of the American Anthropological Association, City and Society, Cultural Anthropology, Culture, Agriculture, Food, and Environment, Economic Anthropology, Ethos, General Anthropology, Journal of Latin American and Caribbean Anthropology, Journal of Linguistic Anthropology, Medical Anthropology Quarterly, Museums Anthropology, North American Dialogue, PoLAR: Political and Legal Anthropology Review, Transforming Anthropology, Visual Anthropology Review, and Voices. In this example, Duke University Libraries takes responsibility for the back-end infrastructure and archiving of the publications, while the AAA contracts with Wiley-Blackwell for professional editing and marketing services. Out of scope for funding under our model would be Anthropology News, the AnthroGuide, the Abstracts of the AAA Annual Meeting, and other products such as the bulletins (e.g., Bulletin of the National Association of Student Anthropologists), newsletters, DVD products, and so on, all of which would remain revenue-generating properties, with access limited to members or customers. Books, monographs, and conference proceedings may or may not be included, as determined by the partners.

3.2 Case Study

The following hypothetical case study further illustrates what an OA collaboration might look like:

The Learned Society for Academic Studies (LSAS) has over the last several years faced increasing pressure from its members to make the content of their two highly regarded journals not only immediately freely available but fully open access with a CC BY license to allow the fullest possibility for use and reuse; the leadership has also been asked to consider making its other publications freely available as well. While the Society’s Executive Director has not been opposed, until recently she could not imagine how the LSAS could continue to exist without the income generated by its publications.

Her primary concerns have been twofold. Although in the past the publication revenue had been significant, it has recently leveled off, and in some parts of the publishing operation, revenue has even begun to fall. The Society publishes two quarterly journals, a book series, and a bibliographic index. The LSAS Review, the Society’s flagship journal, has always made money, but just
enough to subsidize the second journal, Perspectives on Academic Studies, which has experienced several years of declining subscriptions. The most recent financials showed that annual individual and institutional subscription revenue from the two journals was $660,000, while the annual cost to publish the two was $631,200, resulting in a small surplus of $28,800. The Society also received revenue from the electronic versions of the journals, which are currently hosted by and made available to libraries through the InfoKnow platform.

Book sales from the series have been steady, but they are not as robust as they once were; at present, sales from books are entirely used to offset the cost of producing them. The Society has yet to invest in producing and distributing electronic versions of the series, despite several offers from large university presses for the series to be included in those publishers’ e-book offerings. LSAS feared entering into such an arrangement would mean the loss of control over the series’ branding.

The revenue stream from the Society’s once-revered bibliographic index is likewise less certain than it once was. As the popularity of single-search discovery services increases across academic libraries that subscribe to the bibliography, the LSAS Index’s current vendor, InfoKnow, has warned LSAS to expect diminishing future sales.

As if news of the decline in publication revenue were not troubling enough, membership dues, another important source of revenue for the Society, have also been on the decline for the last several years. The latest annual report showed a 4% decline in membership, the third drop in as many years, despite concerted recruitment efforts, especially at each of the annual conferences. Another worrisome statistic has been demographic: of the Society’s roughly 2,000 members, over 70% are 50 years old or older. LSAS needs to find new ways to attract younger scholars, many of whom have little use for print copies of the journals or even for the slight member’s discount on the book series.

13 Although the situation and characters described in the case study are fictional, the numbers provided are based on actual figures drawn from comparable societies and publishers. For 2014 the institutional pricing per journal listed by Duke University Press averages $279 for print only and $300 for print and electronic together. We assume for this case-study model that institutional subscriptions cover the first-copy costs of publishing the journal as well as costs for institutional print and distribution, while member dues cover the costs for the print copies of the journal supplied as a member benefit; therefore, the revenue numbers reflect institutional subscription revenues only. We assume for this model an institutional circulation of 1,500 for the LSAS Review and 700 for Perspectives, both priced at $300/year; the two journals are not bundled together.

Waltham’s 2009 study (http://www.nhalliance.org/bm~doc/hssreport.pdf) put the average cost per page for HSS journals with print at $526. For our case-study model, we determined that LSAS Review publishes 800 pages/year (200 pages per issue) and Perspectives publishes 400 pages/year (100 pages per issue).

The annual grant funding of $275,000, while only 41.67% of current revenues, should, we argue, be sufficient for the Society to cover its publication costs and maintain its small surplus. Waltham shows average HSS journal per-page costs without print average $360, with a low-end of $90/page. Assuming workflow efficiencies along with the elimination of print for both LSAS Review and Perspectives, the cost to produce for both journals, based on Waltham’s figures, would be $108,000; the $150,000 in grant funding to cover those two journals would still provide $30,000 in surplus. In addition, the Society would receive $25,000 to invest in the formerly unsupported graduate journal, thereby ensuring its sustainability.
Both the journals and the books can usually be obtained through their institutions’ library, either by purchase or through interlibrary loan.

The Society’s annual conference — one of the members’ most valued benefits — has also proven to be a mixed bag financially. Conference registration and exhibitors/vendors’ booth rentals have remained strong, but conference expenses have also been on the rise, and the periodic contributions, gifts, and small investment income have barely covered the prestigious research prize given out annually.

LSAS has taken measures to reduce expenses. Five years ago, following the retirement of three Society staff members, the Board voted to outsource the print publishing operation, along with its membership management services, to a university press for what seemed to be a considerable savings in salary and expenses. Unfortunately, there have been clear signs recently that the press has also been struggling, and recent communications with the client services representative at the press suggest a price hike in next year’s contract renewal is imminent.

The remaining paid staff has been limited to the Executive Director, whose compensation is modest and is partially subsidized by the university department where she also serves on the faculty; the administrative assistant; and a handful of graduate assistants responsible for adding to the bibliographic index, whose salaries are paid from the Society’s budget. Two of the graduate students recently started an OA journal run on the open-source Open Journals System (OJS) software, a journal that has been sanctioned by LSAS, but has received no financial support from the Society. Additional expenses include legal and accounting fees, advertising, the IT vendor that hosts the Society’s Web site, office rent, travel, conference operations, and insurance.

In early 2014, after studying the current situation for much of 2013, the LSAS Executive Board (which includes the president, vice-president/president-elect, past-president, secretary, and treasurer — all elected but unpaid) decided bold action was required. By unanimous vote they chose to follow a different path and put forward their plan to the membership, the majority of whom approved it. Partnering with the State University Press, the State University Library, and the Digital Preservation Network (DPN), the Society applied for a multiyear OA Publishing and Archiving Grant.

The Association for the Advancement of Scholarship, the grants’ oversight organization, awarded the group an ongoing annual payment of $275,000. Of the $275,000, $100,000 has been earmarked to make the Society’s high-impact journal LSAS Review open and accessible to everyone in the world. Under the terms of the partnership arrangement, the Library manages the online peer-review system and hosts the journal online, while the Society and the University Press have joined together to provide high-quality editorial services; the Society provides editorial oversight of the journals through its selection of editors, who in turn oversee the peer-review process, while the Press supplies the copyediting service. The University Press also handles whatever print subscriptions need to be fulfilled. Another $50,000 of the
annual grant covers the costs associated with publishing Perspectives on Academic Studies, a journal that has always required “camera-ready copy” from its authors and so has lower overhead than does the flagship journal. The peer-review process for both journals continues to be overseen by their editors and editorial boards. The partners have also devoted $25,000 of the grant to the graduate journal, which has proven successful at attracting a new group of younger scholars to LSAS; with this money, the graduate school editors can now afford regular redesigns of the site and add new functionality.

The final $100,000 has been designated to support the Society’s book series, which has been recast as an innovative digital initiative that will be built on a new multimodal publishing platform. The new platform, which will also be hosted by the Library, will enable authors to incorporate a variety of multimedia and interactive functionality into their works, something authors have been requesting for years, while still employing an editorial process that provides the credentialing of the content by the Press.

Because the Library already participates in CLOCKSS/LOCKSS and Portico, the cost of preserving the content of all the publications in perpetuity is covered through the Library’s existing budget. The cost for inclusion in DPN is also included through the Library’s membership in that organization.

While the partners who applied for the grant have committed to maintaining the highest editorial standards, they are equally determined to find efficiencies where they can. In addition to automating and streamlining several of the operational workflows, the Press is looking to net additional savings by limiting the print run of the journals to individual and institutional subscribers who truly want that medium. Similarly, instead of mailing a print copy of both journals to each member as a default member benefit, LSAS members are now given a choice of membership levels and can choose to pay for print-on-demand services if they wish to have a print copy of one or both of the journals.

The positive results of the move to OA have been immediate and dramatic. Search engine optimization techniques, spearheaded by the Library, have raised the visibility of the journals, the authors, and their research. As a result, international interest in the Society, which has always been primarily North American in its focus, has grown, as has its membership — for the first time in years. Scholars from Latin America, Europe, the Middle East, Asia, and Africa, as well as independent researchers, have discovered the Society and joined, significantly raising income from member dues.

With the annual grant monies now covering the cost of much of the publishing operation, the Society has been able to use more of its membership dues to pay the cost of its annual conference and its competitive research prize. Revenue from subscriptions of the LSAS Index continues to allow the production of the Index, with the small surplus from that source going to support a new LSAS Unconference and other social media ventures, thereby engaging a new generation of members. As a result, more of the younger members have volunteered their time to add content to the Index, turning it
into an increasingly crowdsourced project that over time may be less reliant on paid staff and eventually be converted to an openly available resource.

The Press and the Society still make a modest profit on the Society’s monographic series and the LSAS Index, but if the experience with the journals is any indication, the partners are all confident that LSAS will not just survive, but will thrive in this new — entirely open access — scholarly communication ecosystem.

While this hypothetical case study illustrates how our model might work, the actual roles in our model are detailed below.

3.3 Role of the Scholarly Society/University Press

“Happily the best interest of scholarly society publishers is the best interest of the scholars themselves, namely as rapid a transition to open access as possible. So scholarly societies should be doing what they can to speed that transition …”

—Stuart Shieber, 2013

While fewer and fewer societies are involved in the production side of their publishing ventures and, as a group, their publication title list represents only a third of the scholarly publishing enterprise, societies continue to play a significant role in ensuring that what is published under the auspices of the society is of the highest quality. In a rapidly evolving information environment, faculty and researchers at all levels look to their societies to provide some of the most respected venues for their scholarship. For many in the academy, society-sponsored conferences, journals, and monographic series provide the imprimatur scholars need for credentialing within their disciplines, whatever form it takes.

The most recent Ithaka S+R Faculty Survey found that 90% of faculty were members of at least one scholarly society, with more than half being members of more than one. What these faculty most value about their societies is the society-facilitated exchange of information with their peers, whether by attending conferences, reading scholarly publications, or engaging in informal but professional communication via blogs or listservs.


16 It is unclear how many societies there might be worldwide. One attempt to document this information found 4,157, but the editor had a strict definition for what counted as a society and eventually seems to have abandoned the project, which has not been updated since 2009. Our own criteria for inclusion as a “society” are much broader, extending not only to societies but also to their affiliates, which are often other nonprofit groups such as museums or policy institutes. The 765 organizations meeting our criteria that were examined for this white paper can be found online in Table A1.
Like their members, societies believe their primary role is facilitating information exchange, but many view that role more in terms of "disseminating information" than in the activities of "coordinating a body of peer interaction" and "networking" that seem to be most prized by their members; in a 2012 survey of societies conducted by Allen Press, more than 85% of respondents indicated that they considered publishing to be their most important role. The insistence of professional staff on retaining subscription-based publishing models, however, often puts the society's publishing operation in conflict with their members' desire for unfettered information exchange. As Konrad Lawson points out, "When one presenter at a recent open access panel at the American Historical Association asked the important question, 'To what problem is Open Access the answer?' the first answer that came to my mind was rather simple, 'My problem, and the problem faced by people whose historical work I care about: access.'"

Given that research has shown that OA articles are read and cited more than non-OA, it is hard to imagine how greater access would not be welcomed by a society’s membership. Moreover, societies do a disservice to authors, especially their member authors, when they contract with publishers — both commercial and not-for-profit — who have restrictive copyright policies for authors. By acquiring copyright or an exclusive license from authors, such publishers are essentially able to establish what Stuart Shieber describes as a "monopolistic good," which seems to be at odds with the public purpose required of a not-for-profit entity such as a society.

The greatest challenge for a society in shifting to OA, however, is often not philosophical, but financial. Societies and the services they offer their members are often overly dependent on publishing revenue, including journal income, and in the aforementioned Allen Press survey, an “overwhelming 70%” viewed OA as both “an

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22 Although most society publishing operations are small — the survey by Allen Press of society publishing operations found that 61% published only one journal and in our own sample that was true of 82% — almost all of these societies (88%), according to the same survey, offered at least one of their journals as a society member benefit; most (68%) provided all of them for free to members.
opportunity and a threat.” Raym Crow has identified the special challenges facing society publishing operations: “Most society publishers face structural constraints — including insufficient market leverage, low tolerance for risk, undercapitalization, and lack of specialized business expertise — that prevent them from sustaining themselves effectively in an increasingly competitive market for academic journals, thus jeopardizing the sustainability of society publishing in the long-term.” He has urged the creation of “publishing cooperatives,” which he argues would “have the potential to provide a powerful financial and organizational model that will allow society publishers to serve their dual imperatives of honoring their missions while remaining financially sustainable.”23 The challenges are considerable, but they can be overcome, particularly in partnership with others.

Our model builds upon Crow’s, but is more targeted. We suggest in the first phase bringing those very societies most struggling with OA — those in the humanities and social sciences — together with publishing partners, particularly within the academic library community, best suited to provide those services that are the most difficult for these societies to fulfill, particularly online hosting, search engine optimization, and long-term archiving. In the case of those societies already publishing with commercial entities or university presses, we urge them to consider how they also might partner with an academic library or consortia to develop greater workflow efficiencies, to enhance discoverability of content, and to ensure access and long-term sustainability for the multimodal projects not accommodated by the current infrastructure.

Still residing with the society would be the editorial functions that ensure the quality of their publications, including (1) soliciting and handling submission, (2) managing peer review; (3) accepting materials for publication that pass review, and (4) overseeing copyediting.

For those societies that have not already outsourced publishing production, our plan requires that current inefficiencies be streamlined through technology partnerships that would provide cost-effective peer-review systems and online hosting platform support. Moreover, our model shifts responsibility for indexing, distributing, archiving, or migrating digital materials for future use from the societies to the academic and research libraries, which have always had as their core mission ongoing access to and long-term preservation of materials.

Another important aspect to our model is its extensibility to other forms of scholarly communication beyond journal articles.24 Our model encourages partnerships that would further enhance the valued role of communication facilitator played by the society, with these technology-focused publishing partner(s) perhaps providing subject-specific or data repository services, supporting informal communication platforms (e.g., blogs), and advising on multimodal works, all offered under the auspices and with the imprimatur of the society or society coalitions.


24 For a complete and complex picture of the whole research lifecycle that might provide a starting place for discussion among collective partnerships, see the graphic by the University of Central Florida Libraries Research Lifecycle Committee, “The Research Lifecycle at UCF.”
Within our model, we consider university presses to be similar entities to societies. Like societies they are intimately connected to the academic community through their engagement with faculty who not only publish with them but who sit on their boards; in particular, presses conscientiously publish not only works by scholars from their home institutions but also very deliberately those from the broader academic community. University presses, like societies, also struggle with the tension between their mission to make information widely available and the very real requirement that they be financially viable. And like societies, university presses are quite often thought as peripheral to the core activities of most faculty. In a passionate plea for more attention to be paid by institutions and faculty alike to their university presses, Sheldon Pollock urges, "In sum, universities need very seriously to rethink their commitment to their presses and to increase it. Presses need very seriously to rethink and increase their commitment to themselves, by developing new fundraising initiatives and new models of faculty participation. And faculty need to be far more engaged in and creative about supporting their university presses: it is part of their core professional obligation." Other than the appeal for university-level commitment, the same could also be said for societies and their membership.

Like societies, university presses quite often have formal or informal connections to library (and library publishing) operations, making them logical (if not always natural) allies in the collaborative publishing partnerships we propose. As more university presses report into their institutions’ libraries — as of March 2012, 19 of the 112 members of the Association of American University Presses (AAUP) who responded to a biennial survey did so — presses may become more integral to the library role we describe in the next section; however, for the time being, considering them more like societies than libraries makes the most sense within the context of our model.


27 See Press Reporting Structures (available to AAUP members only). Jennifer Howard’s report on the 2013 AAUP annual meeting (“For University Presses, a Time of Fixing Bridges, and Building New Ones”) cites a figure of “20 or so” of the association’s 130 members who report to their institution’s library.
3.4 Role of the Library/Consortia

“The great libraries of the past — from the fabled collection at Alexandria to the early public libraries of nineteenth-century America — stood as arguments for increasing access.”

—John Willinsky, 2006

While institutions of higher education are responsible for generating knowledge and understanding, it is the libraries or consortia of libraries that operate within and among those institutions that actively engage in collecting, preserving, and providing access to the scholarly and creative output that is generated. For decades now, librarians and scholars have railed against the runaway costs of commercial publishing of scholarly content. In a 1998 special issue of Policy Perspectives, David Shulenburger, then Provost of the University of Kansas, described the situation bluntly:

Between 1986 and 1996, the consumer price index increased 44 percent. Over that same decade, the cost of monographs increased by 62 percent. The price of health care increased by 84 percent. And the cost of scholarly journals increased a whopping 148 percent — more than three times the rate of inflation and nearly twice the rate of growth in health care costs.

Since that time, academic and research libraries have spent enormous resources to make available the research produced by scholars from their own colleges and universities. They build and maintain what Barbara Fister describes as “walled gardens” constructed to restrict access to current affiliates within the academy. Graduates or scholars who leave an institution suddenly find themselves cut off from the information they have been trained to rely on.

In an attempt to combat price increases and expand access to scholarship, academic libraries and consortia have taken on the additional responsibility — for many, if we are honest, the burden — of supporting OA initiatives, from developing their own OA publishing endeavors to assisting faculty with payments for APCs. As we have said several times already, the current focus of most OA funding schemes on institutionally supported individual cost-per-unit pricing structures detracts from the broader mission of institutions to support the entire research enterprise, not simply one small aspect of it. We believe it is time for research libraries to focus their resources on reclaiming their historic role in curating, preserving, migrating, and providing ongoing


access to the scholarly record. We believe libraries and consortia have a key role to play in shaping a new and evolving information landscape.

Our model capitalizes on the existing institutional repository and digital publishing infrastructures that many research libraries have in place to support an expanded OA publishing enterprise. By partnering with scholarly societies, libraries fulfill their mission to capture and preserve the intellectual capital generated by our institutions.

A key role for these libraries/consortia will be to ensure that content is preserved (in “dark” archives) and migrated for ongoing access (“light”). (See Appendix D for an environmental scan of current preservation options.) At the local level, many large academic and research libraries already provide access to and maintain the integrity of digital content, and related metadata (such as administrative, technical, and preservation), in their institutional repositories and digital libraries or archives in accordance with standard preservation principles. This approach allows institutions to maintain control over the entire preservation process for faculty’s, researchers’, and students’ work and for all other content they own. Drawbacks to such a strategy, however, include the expense of onsite staff and technology for digital preservation and the limited range of geographic distribution offered by a centralized operation. Approaches to digital curation and preservation currently underway include independent and integrated efforts by institutions and libraries to protect scholarly output nation- and worldwide, as well as commercially driven approaches developed beyond the institution and library.

To be capable of long-term preservation for digital content, a digital repository must be conformant with the digital archiving infrastructure articulated in the recommended practice of the Consultative Committee for Space Data Systems’ Recommendation for Space System Data Practices’ Reference Model for an Open Archival Information System. Furthermore, digital repositories should demonstrate the necessary organizational infrastructure, digital object management capabilities, and technical infrastructure to provide long-term access to digital content for its designated community. The highest standard to which a digital repository can be held is Trusted Repository Audit Checklist (TRAC) certification.

Integrated efforts involve collaboration among research libraries to create the preservation infrastructure that meets consortial members’ needs. Partner or member institutions contribute content from their central repositories and libraries to a collective preservation network for faceted and distributed access and/or preservation. Examples of community-driven approaches include the Digital Preservation Network, MetaArchive Cooperative, Chronopolis, DAITSS, HathiTrust, and LOCKSS. These solutions can be distributed, such as the MetaArchive Cooperative, or centralized, such as HathiTrust. Although they offer geographically diverse preservation opportunities that allow expertise to be built within the institution, with each constituent library maintaining control over the preservation process, such collaborative approaches run the risk of the creation of asymmetrical

31 One such example is the Chronicling America Collection, sponsored jointly by the National Endowment for the Humanities and the Library of Congress, that provides access to historic newspapers.
partnerships or other inequities that need to be clearly addressed in any agreement among the parties.

Not-for-profit and commercial digital preservation options are available to institutions without the technical or organizational support necessary to create a local preservation program. Such third-party service providers include Portico, Ex Libris’s Rosetta, and the OCLC Digital Archive. These products provide preservation solutions for some institutions, but the expense associated with these products still presents a barrier for a number of institutions. Using a commercially created digital preservation product also limits the control institutions have over both the digital content and the preservation process.

In addition to collection and preservation, many libraries have expanded their role to include publishing services. The Library Publishing Coalition was formed both in recognition of this growth area for libraries and as acknowledgment of the community need to “foster collaboration, share knowledge, and develop common practices, all in service of publishing and distributing academic and scholarly works.”

For those research libraries capable of developing or expanding their publishing operations, additional services may be required to support current modes of production. Resourcing these new services may require the transformation of many traditional library departments, as well as the roles and responsibilities of current staff. Staff currently focused, for instance, on serial acquisitions and subscription maintenance could be deployed to assist with society or partner relationships; serials catalogers could assign metadata and other knowledge organization enhancements (e.g., microdata, linked data, search engine optimization) to society publications and other scholarly output; systems staff involved in maintaining authentication systems could tackle new infrastructure development, and so on.

We contend that all of these efforts already underway — both in preservation and in publishing — place the academic library in what we argue is its rightful place in the scholarly communication ecosystem. However, we recognize that moving to a new model of scholarly communication such as we propose has the potential to alter much of the function and focus of every college and university library. Shifting the library’s role from that of “purchaser,” which faculty in both the United States and the United Kingdom believe is the most important role the library plays,32 to that of “producer” and “archiver” is not without significant challenge and risk.

While we believe all libraries will benefit from the move to OA, we also recognize that not all academic libraries are in a position to develop the kind of publishing partnerships proposed here. As the scholarly information ecosystem transitions to OA, librarians will need to redefine the role they play within their organizations. Ideally, the role of the library will continue to evolve from one of a gateway to subscription collections to one of enhanced and engaged instructional and research support. As our students graduate into a world where scientific and scholarly information is readily accessible, the ability to identify and use high-quality information becomes

even more critical. Further, partnering with faculty to ensure students have the critical analytical skills and technological competencies need to create as well as consume information will ensure the librarians place in the academy.

We acknowledge that these transformations require significant re-skilling and investments in continuing education for the existing library workforce, as well as a shift in organizational design, recruitment, and development. Adjustments in the curricula of schools of library and information science would be required to make sure future librarians are prepared to enter a dynamic and evolving and highly technical field.

In the recent Ithaka S+R | Jisc | RLUK UK Survey of Academics, one of the key findings noted that “Academic libraries collections are most likely to be seen as an important source for providing journal articles and books for research and teaching purposes, but following closely in second place are freely available materials online.” OA will happen. Our hope is that academic and research libraries position themselves to play a leading rather than supporting role in this new scholarly information ecosystem.

3.5 Role of the Institution

“Research universities are long-lived and are mission-driven to generate, make accessible, and preserve over time new knowledge and understanding.”

— SHared Access Research Ecosystem (SHARE) Development Draft

In our model the primary role of the role of the institution is to provide financial support through an annual payment based on the number of its full-time faculty and its student population, as per its Carnegie classification in the U.S. and Canada and a Carnegie-like classification for institutions outside North America (see Section 3.6). While many research universities are well-positioned to play a leading role in a new scholarly communication ecosystem, not all have the capacity to support even the most basic institutional repository, let alone a major scholarly publishing enterprise. Nevertheless, every institution of higher education, the researchers and scholars they employ, and the students they educate would benefit from wide and unfettered access to the information that is produced and distributed by these institutions. Small- and medium-sized state universities, private liberal arts colleges, and community colleges, as well as government agencies, hospitals, and other independent research centers, have a vested interest in and — we would argue — the responsibility to support OA publishing.

Institutions of higher education are under more pressure than ever to deliver quality education at a reasonable price. Proposed changes to the accreditation process,


including a possible federal rating system for colleges and universities, come on the heels of the White House's Office of Science and Technology Policy (OSTP) memorandum requiring federally funded research be made more easily accessible to the general public. Our model addresses these issues by ensuring that students get access to the best research produced in North America and (eventually) the world, while at the same time developing the infrastructure needed to support research data and new forms of research output that do not follow traditional constructs.

The global economic crisis has resulted in decreases in public funding for colleges and universities, and stagnant endowments that have forced many institutions to make hard budgetary decisions, including those by academic libraries to cut journal subscriptions or curtail the monograph purchases on which researchers depend. Exacerbating the inequity in access to research output further obstructs researchers by constraining collaborative efforts to solve society's most intractable problems. As institutions attempt to control the runaway costs of education by launching massive online open courses (MOOCs) and other open education initiatives, they are limited by the amount of OA content that is licensed for open and unlimited use and reuse.

Most importantly, the very nature of research and the outcomes produced are changing and institutions must be prepared to support new models of scholarly communication. As a new generation of scholars harnesses technologies to advance their research and embrace new forms of peer review and distribution, we urge institutions to encourage, recognize, and accept new modes of scholarly communication as criteria for faculty hiring, tenure, and promotion. One example of the importance these new ways of communicating research comes from Daniel Little, Chancellor for the University of Michigan – Dearborn, who describes the role his blog Understanding Society plays in his research and scholarship: “You might say I’ve become an ‘open-source’ philosopher — as I get new ideas about a topic I develop them through the blog. This means that readers can observe ideas in motion.”

In addition to the critical funding and credentialing roles institutions play in our proposed model, a key role is to provide administrative guidance and support for the library, university press, or other institutional entity within the institution who partner with a society or societies to launch an OA publishing operation. For those institutions whose libraries are not engaging in a publishing collaboration, guidance and support will still be needed as library administrators retrain their staff and restructure their organization to support new roles that continue to engage and support the educational mission of the institution.


36 For a list of some of the emerging roles librarians are beginning to play in higher educations, see Janice Jaguszewski and Karen Williams' 2013 study "Transforming Liaison Roles in Research Libraries."
3.6 The Model

“Nothing ... will ever be attempted if all possible objections must be first overcome.”

— Samuel Johnson, *The History of Rasselas, Prince of Abissinia*

The model we propose, outlined in Figure 4, is designed to be fair, to cover all disciplines (albeit in the first instance with a focus on HSS) and all types of scholarly output, both known and not yet known, and to be scalable across all institutions globally. We suggest an incremental, phased approach, described in Section 3.6.4.

The model is designed to support scholarly communication infrastructure, rather than specific packages (e.g., journals or monographs), projects, or platforms — an approach that requires a substantive departure in considering how money for publications could and should be allocated, shifting from thinking about cost per unit to considering overall infrastructure efficiencies. Crucial to the success of our approach is the willingness of the publication partners to be transparent about true operational costs, to embrace technological efficiencies that will enable cost-effective workflows and outputs, and to be honest about the sometimes entrenched investments each partner may have in personnel and cultural practices that may slow adoption of new modes of operating. Successful implementation of our model would result in the ability to fund proposal applications that address these areas and suggest solutions that over time will result in cost savings both for the partners and for the broader scholarly communication ecosystem.
The five most critical components of our model are these:

(1) Although the model does cover the costs for traditional formats for publication, such as articles and monographs, our approach looks to fund the entire scholarly communication infrastructure, not simply certain types of research output. Because none of us can predict what new forms or formats will come into use in the next few years, our model looks for a way to support whatever new modes of communication may arise.

(2) We are suggesting putting together societies, libraries, and institutions in collaborative ways that haven’t been tried before, at least not at scale — admittedly quite challenging, but potentially greatly rewarding. Although certainly an institution or its library can “go it alone” in terms of supporting the publication of its researchers’ output — and many may well do so — the funds collected and expended under our model are allocated expressly for the support of collaborative partnerships, an approach designed to establish and reinforce a stable and sustainable infrastructure.
(3) We are focusing in the first instance on the humanities and social sciences. For all the problems inherent in an APC OA funding model, in STEM that model does work, at least for now. HSS needs are different.

(4) We are looking to the institutions to fund this model, not necessarily to the libraries. The numbers we quote may look large to a library, but are quite small for an institutional-level budget.

(5) We are requesting full participation at some level from the entire higher education community, from small community colleges and large research universities alike, eventually at global scale. As everyone will benefit from a world in which all research output is freely available, everyone should pitch in to make this the reality.

In the sections below, we outline the application process for partners to obtain funding (Section 3.6.1), the evaluation process to determine which partnerships to fund (Section 3.6.2), and the funding model itself (Section 3.6.3), from launch phase to global adoption (Section 3.6.4).

3.6.1 APPLICATION PROCESS

To obtain the funds detailed below in Section 3.6.3, applicant partners would draw on the centralized funding pool described in that section, following a process not dissimilar to applying for a federal or foundation grant. To be successful, the application should provide a multi-year roadmap (e.g., “In Year 1 we will do this; in Year 2 we will do that,” etc.). As a matter of course, what would be funded are publications as currently defined by the society or university press partner, back issues and backlist of publications by the society or press, and archiving costs, whatever the proposed archiving solution (e.g., institutional/society repository as the “light” archive solution and DPN, CLOCKSS/LOCKSS, or Portico as the “dark” solution [see Appendix D]). Also available for funding are less “traditional” products, such as multimodal Web sites or software.

Minimal criteria for an acceptable application are these:

- Of primary consideration is the positive impact on the scholarly communication ecosystem, especially increasing access while decreasing costs. For example, how many publications will convert to OA, how much of the backlist will be made available, what savings will there be to libraries’ budgets?
- Collaboration involves at least one academic institution and one scholarly society or university press.
- At least one partner must be either a unit of a state, provincial, or local government or private nonprofit organization that has tax-exempt status.
- Financial transparency of costs and workflow processes associated with the publishing operation must be part of the agreement between partners.
- Evidence must be provided for how the funding plays into the long-term budget and planning process of the society to ensure the evolution of its publishing program.
- Minimally all applications must include an archiving and preservation plan that employs best practices for standards, metadata, access, and sustainability.

37 “Academic institution” may refer to an academic or research library or a university press.
Partners must have mutually agreeable plan for modifying, amending, or terminating memoranda of understanding.

Assuming the minimal criteria have been met, the partners may apply for grants up to $100,000 per project per annum, with a cap of $500,000 per application. Projects may be journals, books, multimodal sites, repositories, software, platform development, etc. Multiple projects and multiple years may be proposed within a single application, and multiple applications can be submitted by each entity. (For example, the Modern Language Association [MLA] might request $100,000 per year to publish its flagship journal *PMLA* as OA and another $100,000 to build a repository, both of these projects in partnership with Columbia University and California Digital Library, but they might also join with the CUNY Graduate Center to request $100,000 to turn MLA *Commons* into a more robust online publishing platform and request another $400,000 together with NYU and its press to make MLA’s book series OA.) Applications may include costs for project management; peer-review platforms and editorial assistance; copyediting and proofreading; metadata creation and remediation; XML markup; software development or licensing; online design and hosting; ingest, migration, storage, and other archiving costs; marketing; administrative overhead. Print cannot be included as part of the application unless it is print-on-demand and contains an explicit plan for cost recovery.

### 3.6.2 EVALUATION PROCESS

The first level in the application evaluation process — which informs every subsequent level — involves consideration by standing independent review panels made up of panelists recruited from representative stakeholder organizations with professional, geographic, and disciplinary diversity. Key to the success of the panels is representation from across the stakeholder community and a clear and transparent process for selection and governance. Each application review panel should have at a minimum at least one representative from each of these stakeholder groups: digital archiving and long-term preservation, institutional research administration, library, publishing, and scholarly society. Representatives on the evaluation board from an affiliated society or institutional members who have a conflict of interest would be recused from the review process.

The applicants’ proposal will go through the following open-review process. A program officer from the central funding organization distributes the proposal to one of the standing review panels. The evaluators read the applications, enter their preliminary comments, and assign initial ratings: E for Excellent, VG for Very Good, G for Good, SM for Some Merit, and NC for Not Competitive. All reviews and ratings must be based on the criteria outlined below. Our review criteria emphasize the applicants’ abilities and qualifications, the proposal’s clarity of expression, and the project’s feasibility, design,

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38 We are especially grateful to Lisa Schiff for her feedback on an earlier draft of this section and her thoughtful suggestions.

39 Although no formal governance documentation has yet been created for these independent panels, such documentation would need to include a remit for the panel, including roles and authority and paths to participation; well-defined and well-communicated operational rules; membership that truly reflects the stakeholder community; and transparent rules that govern and enforce the recusal process.
cost, and work plan. While the review criteria may vary from proposal to proposal, applicants should aim to meet the following minimum standards:

(1) A compelling explanation of the positive impact their proposal, if funded, would have not only on their scholarly society and its membership but also on the broader scholarly communication ecosystem, especially increasing access while decreasing costs. Successful applications, for example, would commit the partners to ensuring that all research content being funded was made OA immediately, with no embargo period; would include a model of OA that offers clear use and reuse policies agreed upon by the partners, with preference given to those proposals that include a CC BY license[^40]; and would describe workflow efficiencies and partnership roles that would take maximum advantage of the complementary strengths of the applicants.

(2) Collaboration between at least one academic institution and one scholarly society or university press, with complete financial transparency of costs and workflow processes associated with publishing operation as part of the application process and a clear memorandum of understanding between or among partners.

(3) A preservation plan that includes deposit in a repository that follows best practices (see Appendix D), with preference given to solutions that carry Trusted Repository Audit Checklist (TRAC) certification, although alternative preservation and curation models will be accepted.

The review panel will then meet, via virtual means (e.g., conference call, Skype, Google Hangouts, etc.) or in person, for an open discussion of submitted proposals. Panelists will have an opportunity to adjust their initial ratings, but it will not be necessary for the panel to rank or reach consensus on the proposals.

After the panel has completed its work, the applications and the evaluations are submitted to the administrative for compilation and analysis. Organization. (We suggest K|N Consultants might serve this purpose.) A report of the results and the evaluations are provided to the central funding organization, its program officers, and an advisory board made up of professional staff from several umbrella organizations — for example, the American Council of Learned Societies (ACLS), the Association of American Universities (AAU), the Association of American University Presses (AAUP), the Association of Learned and Professional Society Publishers (ALPSP), the Association of Public and Land-Grant Universities (APLU), and the Scholarly Publishing and Academic Resources Coalition (SPARC) — which will determine which proposals will be funded and to what extent, with a clear reporting mechanism for describing what decisions were made and why. An appeal process will also be put in place, to allow for reevaluation of decisions. Details of these processes are still to be determined.

Once a proposal has received funding, an annual audit will be conducted and a report submitted by the publishing partnership to the central funding organization to ensure that the applicants are meeting their stated goals and that the funds are being used

[^40]: “This license lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licenses offered. Recommended for maximum dissemination and use of licensed materials.”
appropriately. In addition, there will be a regular evaluation of the application process to examine patterns of potential bias or address gaps in submissions from certain sectors of the community.

While the goal is long-term sustainability, partnerships are non-binding and may be dissolved when it no longer makes sense for them to exist; however, measures must be taken to ensure that the published product is preserved.

3.6.3 FUNDING THE MODEL

Applicant partners would draw on a centralized funding pool, as outlined in Figure 4, at least during the launch phase (described in Section 3.6.4.1) and in Phase 1 (described in Section 3.6.4.2). In later phases, more distributed funding pools might be established, based on region or discipline, but in the early phases taking a centralized approach provides for streamlined decision-making and rapid distribution of funds. While the goal is to establish a consistent flow of funds from the annual contributions to the partnerships, the model must anticipate and take into account a certain amount of ebb and flow of the funds as funding partners withdraw, costs rise, or publications cease.

The organization overseeing the funding would be an established, well-respected not-for-profit entity that would work closely with the administrative organization, which could be K|N Consultants, to ensure monies are distributed in an equitable and efficient manner. K|N would also, in collaboration with the funding agency, handle the outreach, marketing, and fundraising to ensure the broadest possible base of funding be made available. In addition to paying for the successful applicants’ projects, the institutional fees would also be used to cover the administrative overhead for the funding and administrative organizations.

On one side of the funding equation, we propose annual or multi-year institutional fees that will provide the capital for societies and their partners in scholarly communication. Critical to the success of our model is that institutions, not solely libraries, pay these fees although in some cases libraries may be the administrative unit tasked with paying the fee. Because initially this fee would be a new expense, we have intentionally set the price point low, at what would amount to the cost of a cup or two of coffee per year per student and faculty member.

Rather than a model based on item-level outputs (e.g., articles or monographs), which is not optimal for all the reasons we presented in Section 2, we propose all institutions contribute to a centrally managed fund at the rate of $0.50 per student per year of study, as determined by Carnegie Classification of Institutions of Higher Education (Associate’s Colleges, Baccalaureate Colleges, Master’s Colleges and Universities, and Doctorate-Granting Universities). An Associate’s College under our model would pay $1 per student per year; a Baccalaureate College would pay $2; a Master’s College or University would pay $3; and a Doctorate-Granting University would pay $5. In addition, all institutions at all levels would pay $5 per year for each full-time faculty member. (Administration, staff, part-time faculty, and adjuncts would be exempt.) We decided upon these price points as ones that would seem reasonable to most institutions, even though the cognoscenti will recognize the fee to be pitched very low indeed to cover the cost of the entire scholarly communication
ecosystem, even at full participation and global scale. With widespread adoption of our model and resulting decreases in current costs incurred to provide access and the potential for reallocation of that funding, the fee might reasonably rise as much as 10-fold, a more realistic amount, but even at 10-fold the institutional cost would be much lower than many libraries now pay for their collections. Eventually library collection budgets could be reallocated to help support OA initiatives or diverted to purchase other scholarly materials or new service initiatives.

Table 1 provides examples of the fee structure.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Carnegie Classification</th>
<th>Students</th>
<th>Full-Time Faculty</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest College</td>
<td>Associate</td>
<td>2,047</td>
<td>79</td>
<td>$2,442</td>
</tr>
<tr>
<td>Gustavus Adolphus College</td>
<td>Baccalaureate</td>
<td>2,526</td>
<td>190</td>
<td>$6,002</td>
</tr>
<tr>
<td>Pacific University</td>
<td>Master’s</td>
<td>3,417</td>
<td>244</td>
<td>$11,471</td>
</tr>
<tr>
<td>UC San Francisco</td>
<td>Medical</td>
<td>3,137</td>
<td>3,237</td>
<td>$31,870</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>Research</td>
<td>24,725</td>
<td>4,718</td>
<td>$147,215</td>
</tr>
</tbody>
</table>

Table 1. Examples of Institutional Annual Fees
The table shows how the proposed annual fee structure would work for a community college, a liberal arts college, a master’s degree-granting college, a medical school-focused university, and a research university. See Table C1 (available online) for the full list of institutions analyzed. (All numbers as of 23 August 2013.)

For comparative purposes, we looked at current institutional costs for 988 journals from 765 societies, mostly HSS. In our sample, the per-institution cost for that collections of journals ranges from $174,647 for online-only subscriptions to $261,315 for online-and-print and print-only subscriptions. Under our model, almost all institutions would pay less than these amounts, while receiving even more journals than those in our sample. Complicating these calculations, however, are the costs to any particular individual institution of its full-text database subscriptions or of individual contractual site license agreements for online access to a particular publisher’s content. Because those forms of access are often the only online version of a journal in our sample, the online-only subscription costs reported here are likely much lower than they would be with more transparent pricing. See Appendix A for more detail.

For the launch phase (see Section 3.6.4.1), selected institutions from across the higher education spectrum (e.g., community colleges, liberal arts colleges, research universities) would be asked to pay 10% of their calculated annual fee or $1,000 (whichever is higher) for each of three years to seed the funding pool and establish the
first of the partnerships. These funds would be considered a downpayment on the annual fee structure that would be put into place for Phase 1. The number of contributors and the amount of contribution will determine the number and types of collaborative partnership proposals funded in this phase. During this period, outreach and development strategies would be established to ensure the success of Phase 1.

For Phase 1 (see Section 3.6.4.2), we propose targeting 1,038 institutions (see Table C1), concentrated in the United States and Canada, but with representation throughout the globe (Figure 5), resulting in $56,993,479 in annual revenue, to provide the seed money for the partnerships in this proof-of-concept phase. We would start the outreach efforts with the universities that appear in the 2013–2014 World University Rankings for Arts and Humanities and Social Sciences, but ensure all universities on our list are given the opportunity to contribute. Rather than relying solely or primarily to the institutions that are members of the Association of Research Libraries (ARL) or to the members of the Association of American Universities (AAU), U15 Group of Canadian Research Universities, or to other research-intensive universities, our model asks every institution in every category to contribute to making OA a reality, especially those, such as liberal arts colleges, that would most benefit from OA to HSS publications. That said, even in Phase 1, ARL institutions are paying only 33% of the total cost ($18,669,880 vs. non-ARL institutions’ $38,323,599). See Appendix C for more details on the institutional side of the equation.

Figure 5. Phase 1 Institutions

Although the concentration of Phase 1 institutions is in the United States and Canada, representative institutions have been selected from around the world. For more details, see Appendix C.

Additional funding for partnership collaborations within our model can come from a variety of potential sources:
– Expanding the number of contributing institutions (more than 50,000 institutions worldwide; 6,742 in the United States alone\(^1\)) (see Section 3.6.3.3)
– One-time or ongoing donations/endowments
– Seed funding from foundations (e.g., Ford, Gates, MacArthur, Mellon, Moore, Sloan, Soros), especially in funding the launch phase (see Section 3.6.4.1)
– Earmarked society membership fees (e.g., $5/year/member)
– Pay-as-you-can model for institutions not able to pay the full fee
– Contributions from for-profit beneficiaries of OA content (e.g., MOOC providers such as Coursera)

Drawing on the (initially) centrally managed fund would be the collaborative partnerships described in Section 3.2. Foremost among the requirements for obtaining funding would be transparency of the partners. The true costs of running a publishing operation, especially a joint operation such as we suggest, are murky. Neither society publishing operations nor library- or institution-based publishing operations have well-documented or transparent operations, which is true as a whole of the scholarly publishing business, including OA publishing; even those experts who have tried to get a handle on such costs have been unable fully to do so.\(^2\) One particularly notably transparent operation is that run by the OA HSS publisher Ubiquity Press, who provide a breakdown of both the direct and indirect costs that go into their “base” APC of £250, $390, or €290, depending on the author’s location.\(^3\)

It is useful to contrast these prices with Mary Waltham’s evaluation of the costs of the HSS journals she examined in her 2009 study of society publishing operations:
“Journal costs analyzed on a per journal and per page basis ... indicate wide differences in the cost base for the group of journals in this study. Cost per page published in 2007 ranged from $184 to $825 (aver: $526). When the variable costs of print are removed these costs fall to a range from $90 to $652 (aver: $360).” In the Waltham study, an average length per article of 19 pages means that the average cost per article, even without print, works out to be $6,840, a figure in agreement with the global average total publishing and distribution costs per article cited by the Research Information Network of £4,000, or roughly $6,400.\(^4\) These costs are considerably


\(^3\) Among reasons Ubiquity cites for their ability to keep their costs low: no subscription management or print distribution, use of open source software wherever possible, and offshore production.

higher than those of Ubiquity, indicating that considerable efficiencies within the system could be found to lower costs.

As transparent as Ubiquity might be, the company, perhaps not surprisingly, bases its business model on APCs. While calculations for requests for funding might be based on per-unit costs in the first instance, our model encourages proposals that request support, through the aforementioned annual fee, for projects that will transform the entire scholarly communication ecosystem, rather than merely requesting funding at the object level for traditional packaging of that communication.

3.6.4 PHASED APPROACH

We believe that the route to successful adoption of the approach we are advocating is to demonstrate its attractiveness and sustainability through a stepwise implementation process. We will begin by identifying or establishing a nonprofit organization or a partnership of organizations well positioned to implement the plan, especially in terms of being able to provide infrastructure support (e.g., financial systems) — optimally a group (such as SPARC) recognized for global OA advocacy and as leaders in innovative OA endeavors, or a progressive not-for-profit organization (such as the ACLS) with deep connections with societies and experience in managing the funding for innovative projects that is able to lend credibility to this endeavor. We will at the same time identify academic libraries or library consortia best positioned to support OA publishing and archiving endeavors, along with scholarly societies willing to partner with libraries to either build up their OA publishing operations or to convert their current subscription-based publishing enterprises to OA.45 We will provide guidance on governance, including consultation on memoranda of understanding, master service agreements, and service level agreements, and advice on organizational change and service development. The final step in the process is to develop a timeline for implementation that illustrates in a stepwise fashion, outlined below, how the cost of support for OA publishing will eventually reduce overall costs while maintaining the quality of the research output and expanding access to it.

3.6.4.1 Launch Phase

To begin to prove the validity of the model, we propose an initial launch phase. In that phase, we would look to get commitments from a number of institutions to provide seed funding set at 10% of the calculated annual fee or $1,000 (whichever is higher) for each of three years. The goal of this phase is to begin to move the model from theory to practice by having representative participation by institutions from across the different Carnegie Classifications. For practical reasons, the institutional outreach for this phase would be concentrated in North America. Monies donated in 2008. Web. Accessed 22 Sept. 2013. <http://www.rin.ac.uk/system/files/attachments/Activities-costs-flows-report.pdf>

this phase would be applied downstream toward the individual institution’s annual fee.

At the same time, we will ask private foundations to commit funds to match the institutional donations up to a certain level (e.g., $1 million). The intention in requesting matching funds, rather than applying outright for grants, is both to encourage institutions to “take the plunge” financially, knowing that their own donations will be doubled by a funding organization, and to encourage foundations to support the project’s beginning stages without undue risk. We hope this arrangement, collaborative in itself, would be especially attractive for all donors.

The money raised would go to fund both the personnel who would oversee the administration and implementation of the launch phase and a few initial pilot projects, envisioned to be two or three partnerships with a small number of existing publications to be converted to OA or innovative but small-scale infrastructure development projects. An obvious question is whether an institution such as, for example, Duke might pay the $10,797 annually into the fund only then to receive $100,000 back from the same fund for a pilot project, all while having an annual fee downstream of $107,970 — but in the first instance there does need to be an established fund to draw on, and there does not seem to be any other way to prime the pump, as it were, than to take this approach.

3.6.4.2 Phase 1: Proof of Concept
In Phase 1, building on the success of the launch phase, we tackle the challenge of proof of the concept by converting a number of HSS society publications to OA.

To demonstrate that our model, which moves support for the scholarly communication system from cost-per-unit payments (whether journal subscriptions or APCs) to a sustainable ecosystem, will work across the entire academic enterprise, not only within certain well-funded disciplines, we propose developing the initial proof of concept in partnership with HSS societies rather than with scientific societies. While (as we have outlined in Section 2) there are considerable challenges inherent in the APC model, nevertheless — because of higher levels of funding and strong funder mandates requiring OA — that model is well established in the scientific, technical, and medical (STM) environment and has broad acceptance within that community, whether funders, researchers, or publishers. In contrast, the APC model has been roundly dismissed as a model for HSS publications and has been cited as the main reason OA will “not work” for HSS.

We begin this phase by marketing the new model of institutional fees to the 1,038 institutions detailed in Appendix C, obtaining funding from as many of them as we

46 That the APC model is not viable for HSS society publications is one of the main conclusions of Waltham’s study “The Future of Scholarly Journal Publishing among Social Science and Humanities Associations,” in which she observes: “[A] shift to an entirely new funding model in the pure form of Open Access (author/producer pays) in which the costs of publishing research articles in journals are paid for by authors or a funding agency, and readers have access free online, is not currently a sustainable option for any of this group of journals (within her study) based on the costs provided.” At least one publisher, Sage, seems to acknowledge a similar view from the author side, announcing that they were lowering their APCs for journals in their social sciences portfolio to $99/article in response to a survey of their HSS authors that indicated those authors had very little, if any, funding to pay APCs.
can, beginning with the global institutions that have shown a particular commitment to Arts, Humanities, and Social Sciences.47 The approaches taken to engage each institution will vary depending on local practice, but the messaging will highlight the institutional benefits outlined in Section 3.5. Targeted institutions for Phase 1 are those that are members of the Association of American University Presses, Association of American Universities, Association of Canadian University Presses, Association of Public and Land-Grant Universities, Association of Research Libraries, Association of Southeastern Research Libraries, Canadian Association of Research Libraries, Center for Research Libraries, Coalition of Open Access Policy Institutions, Greater Western Library Alliance, Library Publishing Coalition, Oberlin Group, Scholarly Publishing and Academic Resources Coalition (SPARC), and U15 Group of Canadian Research Universities, as well as those on the lists of top colleges and universities (Forbes’ America’s Top Colleges, QS World Rankings, US News & World Report National University Rankings, and 50 Best Community Colleges in the United States). Full participation by these institutions would mitigate the concerns that have been raised about “free riders.” While motivations to contribute will vary from institution to institution, those institutions that do contribute will be seen by others to be leaders committed to support through this fee the research, teaching, and learning of faculty and students at their institution and provide maximum exposure for work being done there, while collectively contributing to solving some of the most pressing problems of higher education, including those of limited access to materials and the cost to the students of their education — all for the price of a cup of coffee per year per student and faculty member.

On the other side of the equation, in Phase 1 we would build on the library–society publishing relationships already in place by encouraging them to apply for funding and would further expand the pool by putting together broader coalitions of like-minded societies and publishing operations (see, for example, Figure B5). These partnerships have the freedom within our model to develop flexible, stepwise plans to achieve full OA, by, for example, starting with only certain parts of the society’s publishing portfolio or by converting a rolling subscription wall into full OA by plotting out a timeline to shorten the time material is behind a paywall until there is no longer a paywall left.

The goal of this phase is threefold: (1) to get buy-in from a number of institutions and societies, (2) to obtain ongoing funding and partnership commitments from those organizations, and (3) to test the assumptions of our model in practice.

Success in the proof-of-concept phase will lead naturally into Phase 2.

3.6.4.3 Phase 2: Expansion
Phase 2 expands the practical implementation of our model to demonstrate it can operate at scale. In this phase, we will pursue funding more broadly from industry, foundations, public libraries and secondary schools, governmental agencies, and the public (often considered the ultimate “free riders”) to support the growth of the service beyond academic institutional funding. Concurrently we will market the model

broadly to all degree-granting institutions, still focusing our efforts on North America but expanding to include more globally representative institutions.

We will continue to analyze the connections between and among institutions, societies, and libraries and develop a “matchmaking” mechanism to bring those organizations together. As funding solidifies and partnerships develop, we will finalize the application and review process for proposals, as described above in Sections 3.6.1 and 3.6.2.

Finally, we will do an analysis of the fee/cost structure as these have played out in practice and develop an economic model that will enable full, complete OA to all research outputs globally, testing the hypothesis that a 10-fold increase (i.e., $5 per student per year of highest degree and $50 per full-time faculty) on the fee structure proposed for Phase 1 will be sufficient at global scale.48

3.6.4.4 Phase 3: Global Adoption

In the full implementation phase, we will expand funding from industry, foundations, public libraries and secondary schools, governmental agencies, and the public to include all countries; market the model to all tertiary institutions worldwide (Figure 6); leverage the fully developed and tested matchmaking mechanism to provide connections between and among institutions, societies, and libraries at a global scale; and broaden the application and review process for proposals to include all comers, from any discipline and from any publisher (including independent publishing operations, such as PLOS or Nature Publishing Group).

48 According to the latest UNESCO data, globally tertiary student enrollment in 2011 was 182,963,126 and faculty (including part-time) numbered 11,081,158. Assuming an average of $2 per student (total: $365,926,252) and acknowledging that many faculty will be part-time but nevertheless charging $5 each (total: $55,405,790), global contributions under our model based on these numbers can be estimated at $421,332,042. At a 10-fold increase, we would be looking at $4.2 billion, which we would argue should be adequate once subscriptions, paywalls, excessive profit-margins, and inefficiencies are removed from the system. Although these numbers are not as precise as we might wish, they are indicative of the potential of our model at scale and at proper price point. On the pay side, even a 10-fold increase would be well below the materials budget expenditure of most libraries; this is certainly the case for Association of Research Libraries’ members (see the Library Investment Index).
Phase 1 targets the 1,038 institutions as described in Appendix C. In that phase, the United States is the focus, with 908 (88%) of the total; even that number, however, is only 1.4% of the 6,742 tertiary institutions in the United States. Estimates place the number of institutions worldwide at more than 50,000, the largest concentration in India, which alone has more than 18,000 tertiary institutions. Global expansion of our model would cover all 225 of the 249 ISO 3166 countries, dependent territories, and special areas of geographical interest that have tertiary institutions.
4. COMMENTS

We welcome and encourage thorough discussion of this white paper and the ideas in it. Public comments can be addressed to us via Twitter, using mentions of @knconsultants, @rrkennison, or @lisarnorberg.

Comments, observations, and suggestions can also be sent to us privately via e-mail to info@knconsultants.org, which will go to both of us, or individually at rrkennison@knconsultants.org (Rebecca Kennison) or lnorberg@knconsultants.org (Lisa Norberg).
ABOUT K|N CONSULTANTS

The K of K|N Consultants is Rebecca Kennison. The N is Lisa Norberg. Between us, we have nearly 50 years of experience in academic libraries and scholarly publishing, with expertise in strategy, research, trend-spotting, start-up operations, organizational management, academic environments, publishing, and collaborative partnerships.

In her current position as the Director of the Center for Digital Research and Scholarship (a division of the Columbia University Libraries/Information Services), Rebecca is responsible for developing the programs and services of the Center in facilitating scholarly research and the communication of that research through technology solutions and for coordinating these efforts with other library divisions. Before coming to Columbia, Rebecca worked primarily in the scholarly publishing industry, including production leadership roles at Cell Press, Blackwell Publishing (now Wiley-Blackwell), and the open-access publisher Public Library of Science (PLOS).

Lisa currently serves as the Dean of the Barnard College Library and Academic Information Services. Prior to coming to Barnard, she held public services positions at George Mason University, Penn State Harrisburg, and (most recently) the University of North Carolina at Chapel Hill. Her professional interests include user-centered design, the impact of library and information services on teaching and learning, organizational transformation in academic libraries, new models of scholarly communication, and open-access publishing.

The content of and opinions in this white paper are those of K|N and do not necessarily reflect the opinions of either Columbia University or Barnard College or any employee thereof. We alone are responsible for the accuracy (or inaccuracy) of any of the information supplied.

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More information about K|N can be found at our Web site: knconsultants.org.
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Data visualizations were produced using online software provided by DataHero and by Google Fusion Tables integrated with Google Maps.

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APPENDICES: EXPLAINING THE NUMBERS

Our model is not merely theoretical. It is backed by the numbers and readings described in these appendices.

For our society publication analysis, we began by looking at the American Council of Learned Societies (ACLS)’s 71 members’ publications. We then selected half a dozen of their larger humanities and social science (HSS) organizations — the American Academy of Religion (AAR) (9,150 members), the American Anthropological Association (AAA) (11,000 members), the American Historical Association (AHA) (14,000 members), the American Political Science Association (APSA) (15,000 members), the College Art Association (CAA) (14,500 individual members and 2,000 institutional members), and the Modern Language Association (MLA) (29,000 members) — and examined in detail the publishing operations of each of their affiliated societies.49 We did the same with one smaller ACLS society, the Association for Slavic, East European, and Eurasian Studies (ASEEES) (3,000 individual members, 60 institutional), which we used for the case study described in Appendix B. To provide a flavor of scientific, technical, and medical (STM) publishing, we also looked at the publications hosted by the not-for-profit bioscience full-text database BioOne.

Our intention through this selection methodology was to examine a sample of publications that would be somewhat representative of the HSS and small STM society ecosystem.

In total, we analyzed 765 societies (640 ACLS-affiliated) and their 988 publications (Figure 7). Because for the purposes of this white paper we were focused on journals, we intentionally excluded other types of publications not uncommonly produced by societies, including newsletters and member bulletins, books (monographs and series), bibliographies and indexes, conference proceedings, etc., unless these were considered upon examination to be “journal-like.” Of the 988 publications in our sample, 938 (95%) were classified by Ulrich’s Periodicals Directory as being a journal; of the balance, 17 were part of a monographic series, 10 were bulletins, 10 were magazines, five were newsletters, five were yearbooks, two were proceedings, and one was a handbook.

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49 Other large ACLS member organizations (those with more than 10,000 members) that, for lack of time, we did not examine for this white paper are the American Economic Association (16,944 members), the American Philosophical Association (10,400), the American Sociological Association (13,845), the Association of American Geographers (10,400), and the National Council of Teachers of English (10,822). Mary Waltham’s 2009 study (“The Future of Scholarly Journal Publishing among Social Science and Humanities Associations”) covers similar territory, although with more depth and less breadth. In that study she looked at the publishing operations for the flagship journals of several of the same organizations: American Anthropological Association’s American Anthropologist, American Academy of Religion’s Journal of the American Academy of Religion, American Economic Association’s American Economic Review, American Historical Association’s American Historical Review, American Political Science Association’s American Political Science Review, American Sociological Association’s American Sociological Review, American Statistical Association’s Journal of the American Statistical Association, and Modern Language Association’s Proceedings of the Modern Language Association (PMLA).
Although, as one would expect, the large umbrella organizations shown in this figure all have publishing operations, quite often their smaller affiliated societies do not. (Most, but not all, societies do have newsletters, but these are not included in this analysis.) Of the 640 societies included in this figure, 393 (61%) have a publishing program, which breaks down by umbrella organization as follows: AAA and its affiliates = all 17 societies (100%) have a serials publishing operation; AAR and its affiliates = 17 (47%) publish serials, 19 (53%) do not; ACLS member societies = 67 (94%) publish serials, four (8%) do not; AHA and its affiliates = 77 (64%) publish serials, 44 (36%) do not; APSA and its affiliates = 135 (62%) publish serials, 83 (38%) do not; ASEES and its affiliates = 17 (45%) publish serials, 21 (55%) do not; CAA and its affiliates = 25 (32%) publish serials, 52 (68%) do not; MLA and its affiliates = 103 (77%) publish serials, 30 (23%) do not. (N.B.: Because several societies are members of more than one umbrella organization, numbers in this figure do not equal 640. More details on the complexities of society affiliations can be found in Table A1.)

Because all societies hosted by BioOne de facto have a publishing operation, those societies and scholarly organizations were not included in this figure. BioOne journals are included in all figures other than this one.

Publications by each society were determined by going to the society’s Web site. Note was taken of whether the society published one or more journals. If it did, the title of each journal was entered in a spreadsheet; if it did not, that information was noted as well. Data points captured for each publication included the “umbrella” society affiliation, the name of the society itself, the journal title, Ulrich’s serials classification, the primary mode of online access (via subscription, full-text database such as ProQuest or JSTOR, free or OA, or print only), the institutional online subscription price, the institutional subscription price for online plus print or for print only, the publisher’s name, the publisher type (i.e., the publishing society, commercial publisher, university press, university department or center, or university library), and
For consistency, we used Ulrich’s Periodicals Directory whenever possible. When a publication did not appear in Ulrich’s, we used information gleaned from the society’s, publisher’s, or journal’s Web site. Sometimes even then determining accurate pricing at the journal level was a challenge. Subscription costs for individual journals included in “package deals,” for example, were derived by dividing the price equally among the journals included in the package.50 Journals from publishers that require a site license for access were placed into the category of “full-text database,” a classification for which no readily available pricing information was available, resulting in a null price value in the online subscription column that means that the total online costs cited in this white paper are much lower than any institutional library’s reality. Data gathering was started in April 2013, but almost all the work was done in August 2013. See Appendix A for an analysis of the results of our publications research.

For the institutional modeling data, we compiled a list of institutions that met our inclusion criteria: they were either on a recent list of top colleges and universities (Forbes, QS, US News & World Report) or they were institutional members of one of the following professional organizations: the Association of Academic Health Sciences Libraries (AAHSL), the Association of American University Presses (AAUP), the Association of American Universities (AAU), the Association of Public and Land-Grant Universities (APLU), the Association of Research Libraries (ARL), the Association of Southeastern Research Libraries (ASERL), the Canadian Association of Research Libraries (CARL), the Center for Research Libraries (CRL), the Coalition of Open Access Policy Institutions (COAPI), the Greater Western Library Alliance (GWLA), the Library Publishing Coalition (LPC), the Maryland Independent College and University Association (MICUA), the Oberlin Group, the Scholarly Publishing and Academic Resources Coalition (SPARC), the Utah Academic Library Consortium (UALC), and the Wisconsin Association of Independent Colleges and Universities (WAICU). (AAHSL, MICUA, UALC, and WAICU were included because they are consortial members of SPARC.) The result was a list of 1,038 institutions, concentrated mostly in the United States and Canada (n = 949 for the United States and Canada, 35 in Canada, the balance in the United States and its territories). (See Table C1 for the full list of institutions examined.)

Data points collected were the official name of the institution, state/province/region location and corresponding ISO 3166-2 code, type of institution (i.e., public 2-year, private 2-year, international public 2-year, international private 2-year, public 4-year, private 4-year, international public 4-year, international private 4-year), Carnegie classification (i.e., Associate, Baccalaureate, Master’s, Medical, Research), number of students, and number of full-time faculty.

For consistency, we used as often as possible the same sources for the data across institutions from the same country. “Type” classification is from United States Department of Education’s National Center for Education Statistics’ Integrated Postsecondary Education Data System (IPEDS) for all U.S. institutions and is from

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50 For example, a subscription to the Wiley-Blackwell–published Policy Studies Journal also includes Asian Politics and Policy, Digest of Middle East Studies, Latin American Policy, Politics and Policy, and Review of Policy Research, so the U.S. institutional online subscription price of $1,715 was divided by 6 and $286 was entered into the spreadsheet as the price for each of the six journals.
Wikipedia for non-U.S. ones. All private institutions in this list are not-for-profit, reducing the need for an additional type category (“for profit”), at least for this sample. Degrees are as per the Carnegie Basic Classification Categories. To keep our model as simple as possible, we deliberately chose to flatten out the hierarchy of colleges and research universities; there is therefore no distinction made within the data among, for example, types of associate’s colleges (e.g., Assoc/Pub-R-S or Assoc/Pub-S-SC), which are all shown as “Associate’s,” or between types of research universities (i.e., RU or DRU), which are all shown as “Research.” Except for Medical, which is priced in our model at the same level as Research, none of the Special Focus categories (e.g., Engineering) are listed separately; all institutions classified as “Special Focus” (except for Medical) are shown in the Master’s category, unless there are clearly no graduate degrees offered by that institution.

Student and full-time faculty numbers were likewise kept as consistent as possible by using the same source for as many of them as possible. United States figures for both students and full-time faculty came from IPEDS. All IPEDS numbers reported here were updated on 21 August 2013. Similarly, statistics for both students and full-time faculty in the United Kingdom came from a single source, the Higher Education Statistics Agency. Canadian numbers for student enrollments were provided by the Association of Universities and Colleges of Canada, which rounds those figures to the nearest 10; full-time faculty numbers were derived from a variety of sources, including Web sites, annual reports, facts-in-brief, and so on. Both student and faculty figures for other international institutions also followed this latter methodology of looking at Web sites, etc. Numbers for international institutions were compiled between April and August 2013. See Appendix C for a detailed analysis of the results of this research.

APPENDIX A: SOCIETIES IN SAMPLE

To gain an understanding of society publishing practices, we looked at 765 societies drawn from nine “umbrella” organizations: American Academy of Religion (AAR), American Anthropological Association (AAA), American Council of Learned Societies (ACLS), American Historical Association (AHA), American Political Science Association (APSA), Association for Slavic, East European, and Eurasian Studies (ASEEES) (see more detail on this society and its affiliates in Appendix B), College Art Association (CAA), and Modern Language Association (MLA), as well as the online full-text database BioOne, a not-for-profit collaborative of independent society and scholarly publishers in the biological sciences. Although our focus in this white paper has been on humanities and social sciences (HSS), we have included journals from BioOne as a first step toward showing that our model can work equally well in the STM environment.

The full list of societies and their serials publications that were examined to provide the statistics for this white paper can be found in Table A1 (“Concatenated and Deduped Society Publications”). This spreadsheet is view-only online, but can be downloaded for offline analysis.

The per-institution cost for those 988 journals from the 765 societies in our sample ranges from $174,647 for online-only subscriptions to $261,315 for online-and-print
and print-only subscriptions. Complicating the calculations are the unknown costs to any particular individual institution of the full-text databases or of the site licenses for online access to a particular publisher’s content. Because those forms of access are often the only online version of a journal in our sample, the online-only subscription costs listed here are much lower than they would be with more transparent pricing.

Publishers of society journals fell into five types: the society itself, which published its journals (and other publications) on its own; commercial publishers such as Allen Press, Springer, Taylor & Francis, and Wiley-Blackwell; university presses such as Cambridge, Duke, Johns Hopkins, Oxford, and University of California; individual university departments, centers, or institutes; and university libraries. The distribution in our sample among those various publishing outlets is shown in Figure A1.


University presses are Athenaeum (Coastal Carolina University), Cambridge, Catholic University of America, Duke, Fordham, Indiana, Johns Hopkins, Liverpool, Michigan State, MIT, Museum Tusculanum, New York University, Ohio State, Oxford, Pace, Pennsylvania State, Purdue, Sciences Po, Texas Tech, University of Calgary, University of California, University of Chicago, University of Hawaii, University of Idaho, University of Illinois, University of Michigan, University of Nebraska, University of Pennsylvania, University of Tampa, University of Texas, University of Toronto, University of Virginia, University of Wisconsin, Vilniaus Universiteto, Washington State, and Wayne State.

Universities, colleges, or other academic institutions with departments, centers, or institutes publishing on behalf of societies include the American School of Classical Studies at Athens, Appalachian State University, Binghamton University, Boston University, Brown University, California State University at Fresno, Cambridge University, Chinese Academy of Sciences, Colorado State University, Community College of Baltimore County at Essex, CUNY Graduate Center, CUNY New York City College of Technology, DePaul University, East Carolina University, George Mason University, Georgia Southern University, Harvard University, Hungarian Academy of Sciences, Indiana University, Kansas State University, Kent State University, Massachusetts Maritime Academy, Memorial University of Newfoundland, Mississippi State University, Monmouth University, New School for Social Research, New York University, North Carolina State University, Northern Illinois University, Ohio State University, Pontificia Universidad Católica de Chile, Schoolcraft College, Southeastern Louisiana University, Southern Illinois University at Edwardsville, Western State College, Stellenbosch University, SUNY Upstate Medical University, Susquehanna University, Temple University, Université Pompeu Fabra, Université Laval, University of Arizona, University of British Columbia, University of California - Riverside, University of Central Florida, University of Colorado at Boulder, University of Florida, University of Georgia, University of Manitoba, University of Miami, University of North Carolina at Greensboro, University of North Texas, University of Northern British Columbia, University of Notre Dame, University of Oklahoma, University of Pittsburgh, University of Pittsburgh at Johnstown, University of Prince Edward Island, University of Rhode Island, University of Tulsa, University of Virginia, University of Western Ontario, University of Winnipeg, University of Zagreb, Washington and Jefferson College, West Chester University, Western Kentucky University, and Western Michigan University.

University libraries that provide publishing support for societies in our sample are Brigham Young University Library, California Digital Library, Indiana University Libraries, Ohio State University Libraries, University of Iowa Libraries, University of Kansas Libraries, University of Rochester Libraries, University of South Florida Library, University of Toronto Libraries, and University of Wisconsin at Milwaukee Library.
Of the 765 societies reviewed, 522 (68%) had a serials publishing operation, resulting in a total output of 988 publications, distributed as shown across publisher types. (N.B. Publications have been de-duped for this figure.)

A different representation of the distribution of those same publications, this time across the umbrella organizations, is shown in Figure A2. (N.B.: Some societies have two or more umbrella organization affiliations; publications associated with a particular society are included for each umbrella society, resulting in known double-counts. See Table A1 for more details.)
Societies that produce serials do so through a range of publishing outlets. Distribution of publications (n = 1,125 for this figure, with known duplications) grouped by umbrella organization is as follows:

**AAA** (n = 45): Commercial publisher, 27 (60%); society self-publication, 15 (33%); university press, 3 (7%); no university department- or library-produced publications.

**AAR** (n = 17): Commercial publisher, 7 (42%); society self-publication, 5 (29%); university press, 5 (29%); no university department- or library-produced publications.

**ACLS** (n = 164): Commercial publisher, 60 (37%); society self-publication, 53 (32%); university press, 45 (27%); university department, 5 (3%); university library, 1 (1%).

**AHA** (n = 83): University press, 39 (47%); society self-publication, 29 (35%); commercial publisher, 11 (13%); university department, 3 (4%); university library, 1 (1%).

**APSA** (n = 284): Society self-publication, 136 (48%); commercial publisher, 110 (39%); university press, 31 (11%); university department, 6 (2%); university library, 1 (<1%).

**ASEES** (n = 18): Society self-publication, 9 (50%); commercial publisher, 5 (28%); university department, 2 (11%); university library, 1 (5.5%); BioOne (n = 177): Society self-publication, 114 (64%); commercial publisher, 43 (24%); university press, 10 (6%); university department, 7 (4%); university library, 3 (2%).

**CAA** (n = 28): Society self-publication, 15 (54%); commercial publisher, 7 (25%); university press, 6 (21%); no university department- or library-produced publications.

**MLA** (n = 309): University press, 129 (42%); society self-publication, 71 (23%); university department, 60 (19%); commercial publisher, 41 (13%); university library, 8 (3%).

**Figure A3. Publishing Operations of Sample Societies**

This figure shows the provision of online access across the sample society publications (de-duped). Currently only 10% of the sample publications are available online without a subscription; 7% of publications have no online version at all, even as part of a full-text database.

It is worth noting that because 90% of access to publications from the sample societies are limited by subscription to either the journal itself (Figure A3), in print or online, or to a full-text database provider, none of the members of these societies, including members of their own affiliated societies, such as described in Appendix B, have access to each other’s journals unless they are also members of that particular society or they are affiliated with an institution that subscribes. Access to the content produced by any given society is of necessity then limited to those who can afford access, rather than open to all who might be interested in it.
Of the 988 (de-duped) publications from our sample societies, online access by publisher type saw this distribution. **Societies** (self-publication) \( n = 413 \): Full-text database, 205 (50%); subscription, 101 (24%); free (“OA”), 68 (16%); print only, 39 (9%). **Commercial publishers** \( n = 266 \): Subscription, 228 (86%); full-text database, 24 (9%); print only, 9 (3%); free (“OA”), 5 (2%). **University presses** \( n = 216 \): Subscription, 193 (89%); full-text database, 14 (7%); print only, 6 (3%); free (“OA”), 3 (1%). **University departments** \( n = 80 \): Full-text database, 30 (38%); subscription, 18 (23%); free (“OA”), 15 (19%); print only, 7 (21%). **University libraries** \( n = 13 \): Free (“OA”), 8 (62%); subscription, 4 (31%); full-text database, 1 (8%); none are print only.

Of note, as shown in both in **Figure A4** and **Figure A5**, is that societies that self-publish rely heavily on full-text databases as the mechanism for providing online access, an inefficient and expensive system that involves considerable duplication of content. Our model, in contrast, promotes free and OA in part by moving away from these databases to a single point of delivery, promoting efficiencies both in delivery of content and elimination of duplication of that content.
Online distribution of publications (n = 1,125 for this figure, with known duplications) grouped by umbrella organization is as follows: AAA (n = 45): Subscription, 33 (73%); free ("OA"), 5 (11%); print only, 4 (9%); full-text database, 3 (7%). AAR (n = 17): Subscription, 11 (64%); free ("OA"), 3 (18%); full-text database, 3 (18%); none are print only. ACLS (n = 164): Subscription, 143 (87%); free ("OA"), 12 (7%); full-text database, 8 (5%); print only, 1 (1%). AHA (n = 83): Subscription, 57 (69%); full-text database, 15 (18%); free ("OA"), 7 (8%); print only, 4 (5%). APSA (n = 284): Subscription, 140 (49%); full-text database, 100 (35%); free ("OA"), 30 (11%); print only, 14 (5%). ASEEES (n = 18): Subscription, 7 (39%); full-text database, 6 (33%); free ("OA"), 3 (17%); print only, 2 (11%). BioOne (n = 177): Full-text database, 91 (51%); subscription, 71 (40%); free ("OA"), 15 (9%); none are print only. CAA (n = 28): Subscription, 13 (47%); free ("OA"), 6 (21%); full-text database, 5 (18%); print only, 4 (14%). MLA (n = 309): Subscription, 194 (62%); full-text database, 48 (16%); print only, 43 (14%); free ("OA"), 24 (8%).

APPENDIX B: SOCIETY EXAMPLE

Appendix B visualizes the density and complexity of the publishing operation for just one society, the Association for Slavic, East European, and Eurasian Studies (ASEEES), and thus nicely demonstrates the opportunities for partnerships available through our model. Founded in 1948, ASEEES describes itself as “a nonprofit, non-political, scholarly society” that is “the leading private organization in the world dedicated to the advancement of knowledge about the former Soviet Union (including Eurasia) and Eastern and Central Europe.” It has approximately 3,000 members and is part of the larger American Council of Learned Societies (ACLS); it also has organizational ties with 37 scholarly societies and other scholarly organizations, many of which have their own publishing operations, as detailed below.52 A full list of the societies associated with ASEEES and the serials publications that were examined to provide

52Not included in our analysis were three affiliated organizations without a publicly accessible online presence: the Allan K. Wildman Group for the Study of Society, Politics, and Culture in the Russian Revolutionary Era; the Russian, Eastern European, and Eurasian Music Study Group; and Society for Albanian Studies. Also excluded were two working groups that no longer seem to have active membership: the Working Group on Cinema and Television and the Working Group for the Study of Russian Children’s Literature and Culture.
the data for this case study can be found in Table B1 (“ASEEES Affiliates and Publications”); this spreadsheet is view-only online, but can be downloaded for offline analysis.

ASEEES, along with its affiliated societies, provides an excellent example of a typical scholarly society in the humanities, in its reliance on institutional resources to support the society’s business operations, in its publishing practices, and in its density of connections with other societies. Not unlike many small societies, the executive offices and executive and elected officers of almost all of the societies (35 of 38) that make up the ASEEES association are housed within university departments, centers, or institutes or have at least some formal connection with a college or university (Figure B1). Likewise, although the number of affiliates without a journals program is greater than 50%, we see this with other societies as well. (Of the American Academy of Religion and its affiliates, for example, 53% do not publish. The percentage is even higher for the College Art Association: 68% of its affiliates are without a publishing program.)

Figure B1. Headquarters Locations for ASEEES and Affiliated Societies

Australia: International Council for Central and East European Studies (University of Sydney)

Alberta, Canada: (1) North American Association for Belarusian Studies (University of Alberta) and (2) South East European Studies Association (University of Calgary)

Ukraine: International Association for the Humanities (V. N. Karazin Kharkiv National University)

United States: Alabama: Bulgarian Studies Association (University of Alabama at Birmingham); California: (1) American Association of Teachers of Slavic and East European Languages (University of Southern California) and (2) Society for Armenian Studies (California State University at Fresno); District of Columbia: (1) Early Slavic Studies Association (Georgetown University) and (2) East Coast Consortium of Slavic Library Collections (Library of Congress); Georgia: Association for the Advancement of Central Asian
Research (Valdosta State University); **Iowa**: (1) Association for Students and Teachers of Color in Slavic Studies (Grinnell College) and (2) Czechoslovak Studies Association (Iowa State University); **Illinois**: North American Society for Serbian Studies (University of Chicago); **Indiana**: Central Eurasian Studies Society (Indiana University); **Kansas**: (1) International Studies Association’s Post Communist Systems in International Relations and (2) Slavic and East European Folklore Association (both University of Kansas); **Kentucky**: (1) Association for the Study of Eastern Christian History and Culture (Eastern Kentucky University), (2) Association for Women in Slavic Studies (University of Kentucky), and (3) Soyuz: The Research Network for Post-Socialist Cultural Studies (also at University of Kentucky); **Massachusetts**: (1) American Association for Ukrainian Studies, (2) Association for Croatian Studies, and (3) Society of Historians of East European and Russian Art and Architecture (all at Harvard University); **Maine**: Society for Slovene Studies (Bowdoin College); **Michigan**: (1) Polish Studies Association (University of Michigan) and (2) Slovak Studies Association (Wayne State University); **Minnesota**: Society for Austrian and Habsburg History (University of Minnesota – Twin Cities); **North Carolina**: (1) Eighteenth-Century Russian Studies Association (Davidson College) and (2) North American Dostoevsky Society (Duke University); **New Jersey**: North American Pushkin Society (Princeton University); **New York**: (1) Association for the Study of Nationalities (Columbia University), (2) Hungarian Studies Association (St. John’s University), (3) International Association of Teachers of Czech (also at Columbia University), and (4) Shevchenko Scientific Society (located in New York City); **Pennsylvania**: (1) Association for Slavic, East European, and Eurasian Studies (University of Pittsburgh), (2) Carpatho-Rusyn Research Center (located in Glassport, Pennsylvania), and (3) Society for Romanian Studies (also at University of Pittsburgh); **Virginia**: (1) Association for the Study of Health and Demography in the Former Soviet Union (Virginia Commonwealth University) and (2) Interdisciplinary Group for Muslim Studies (University of Virginia)

In addition to the concentration of headquarters locations, with clusters of societies located in close geographical proximity to others — sometimes even on the same campus — the ASEEES group, also like many other societies, has a density of official affiliation connections, the complexity of which is shown graphically in Figure B2. (The underlying data can be found in Table B1.) The Society for Romanian Studies, for example, in addition to being affiliated with ASEEES, is also a member of the American Historical Association, the American Political Science Association, and the South East European Studies Association; this last society itself also a member of ASEEES. This scenario is not unusual, as can be seen from the 74 societies in our larger sample that likewise have multiple affiliations (see Table A1).
Figure B2. ASEEES Members and Connections with Other Societies

Bold boxes indicate an American Council of Learned Society (ACLS) member. Arrows indicate additional membership relationships with other ASEEES societies. Colors indicate ASEEES societies with journals. (Newsletters are not included.) Red = print-only subscription. Blue = electronic-only subscription. Purple = electronic and print subscription. Green = freely available online.

Abbreviations: AAA = American Anthropological Association; AATSEEL = American Association of Teachers of Slavic and East European Languages; AAUS = American Association for Ukrainian Studies; ACS = Association for Croatian Studies; AHA = American Historical Association; APSA = American Political Science Association; ASECHC = Association for the Study of Eastern Christian History and Culture; ASEEES = Association for Slavic, East European, and Eurasian Studies; ASHDFSU = Association for the Study of Health and Demography in the Former Soviet Union; ASN = Association for the Study of Nationalities; ASTCSS = Association for Students and Teachers of Color in Slavic Studies; AWSS = Association for Women in Slavic Studies; BSA = Bulgarian Studies Association; CAA = College Art Association; CESS = Central Eurasian Studies Society; CRRC = Carpatho-Rusyn Research Center; CSA = Czechoslovak Studies Association; ECC = East Coast Consortium of Slavic Library Collections; ECRLA = Eighteenth-Century Russian Studies Association; ESS = Early Slavic Studies Association; HAS = Hungarian Studies Association; IAH = International Association for the Humanities; IATC = International Association of Teachers of Czech; ICCEES = International Council for Central and East European Studies; IDS = International Dostoevsky Society; IGMS = Interdisciplinary Group for Muslim Studies; ISAs = International Studies Association; MLA = Modern Language Association; NAABS = North American Association for Belarusian Studies; NADS = North American Dostoevsky Society; NAPS = North American Pushkin Society; NASSS = North American Society for Serbian Studies; PCSIR = International Studies Association’s Post-Communist Systems in International Relations; PSA = Polish Studies Association; SAHH = Society for Austrian and Habsburg History; SAS = Society for Armenian Studies; SEEFA = Slavic and East European Folklore Association; SEEMS = Slavonic and East European Medieval Studies Group; SEESA = South East European Studies Association; SHEERAS = Society of Historians of East European and Russian Art and Architecture; Soyuz = Soyuz: The Research Network for Postsocialist Cultural Studies; SRS = Society for Romanian Studies; SSA = Slovak Studies Association; SSS1 = Shevchenko Scientific Society; SSS2 = Society for Slovene Studies
As shown in Figure B3, of the 38 societies that make up the collective ASEEES organization, the majority do not have a publishing operation, and the balance that do are very small; only a single society (the Association for the Study of Nationalities) publishes two journals rather than one. Those 45% with a publishing operation (see Figure B2 and Figure B3) are spread across publishing types — self-publishing society, commercial publisher, university department, university press, and university library — and are available through a variety of mechanisms: freely accessible online, online-only subscription, print and online via subscription, or print only (see Figure B4). Quite often, no matter what the distribution system, the publishing operation itself is not particularly stable. Some of the journals are published on a sporadic schedule (e.g., Ukrainian Literature) or suddenly cease publication (e.g., Harvard Ukrainian Studies or Journal of Central Asian Studies), with back issues then sometimes still available and sometimes not. More details are found in the legends for each figure and in Table B1.
Figure B3. ASEEES Societies’ Publishing Operations

(A) Publishing operations (n = 38). Of the 38 societies affiliated with ASEEES, 17 (45%) of them claim to have some kind of journals publishing operation; 21 (55%) do not. Even those with journals operations may not maintain a consistent production schedule.

(B) Journals publishers (n = 18). Exactly one half of the journals (n = 9) are published by the individual society itself, with the balance spread among four commercial publishers (Slavica Publishers, with two publications, and Attempto Verlag and Taylor & Francis, each with one), two university departments (California State University at Fresno’s Armenian Studies Program and Harvard University’s Ukrainian Research Institute), one university press (Cambridge), and one university library (University of Kansas).

Figure B4 demonstrates the reliance of many of these small society publishing operations on full-text databases and on library print holdings for ongoing access to their back issues. For example, *Harvard Ukrainian Studies* seems to have ceased publication in 2010. Most of its society-held back issues are out of print; its full run is available only on JSTOR. *Balkanistica*, a print-only journal, readily admits most of its
back issues are out of print and provides a list of institutions that have copies for anyone who wishes to access content. October Ivins and Judy Luther drew attention to this not-unusual situation in their 2011 study for the Association of Research Libraries, Publishing Support for Small Print-Based Publishers, suggesting that in this small-publishing and primarily print-focused environment there is a role in particular to be played by library-based publishers, either alone or alongside their university presses.53

Figure B4. ASEEES Publication Format by Publisher

The complexity of small-society publishing operations is well demonstrated by ASEEES and its affiliates. Among the five different publisher types, there are six common ways to obtain the actual content, from print/online combinations to print-only to fully OA.

Two libraries are in fact actively engaged in the publishing operations for ASEEES-affiliated societies: the University of Kansas Libraries publishes Folklorica, the Slavic and East European Folklore Association’s journal; the University of Washington Libraries is digitizing back copies of the Society for Slovene Studies’ journal Slovene Studies. These projects, however, are currently siloed, as is the case for the entire publishing enterprise of the ASEEES confederation. By way of illustration, Figure B5 maps the associations among some the ASEEES-affiliated societies, suggesting further possible connections that could be made between and among them.

ASEEES Publications and Institutional Connections

This diagram outlines only some of the existing institutional and library support of ASEEES and its associated societies as a first step in suggesting the potential for collaboration between them. ASEEES is housed at the University Center for International Studies at the University of Pittsburgh; the society publishes one journal, Slavic Review, which is staffed by members of the Department of Slavic Languages and Literatures, the Program in Comparative and World Literature, and the Department of History at the University of Illinois Urbana-Champaign. An associated society (see Figure B2), the Society for Slovene Studies, whose editorial offices are located in the Department of German, Russian, and East Asian Languages at Bowling Green State University, publishes Slovene Studies, which is archived through an arrangement with the University of Washington Libraries, which is digitizing and hosting the backfiles free of charge (currently available: 1977–2007). Another associated society, the Slavic and East European Folklore Association (SEEFA), located in the Department of Slavic Languages and Literatures at University of Kansas, publishes Folklorica, which is hosted online by the University of Kansas Libraries as a subscription journal, with each issue of the journal then made available in an OA format three years after its publication.

A possible scenario under our model, suggested by Figure B5, would be for ASEEES and its affiliates to pool their publishing operations, bringing together operationally the production of all 18 journals in coordination with already-existing library-based publishing operations at the University of Pittsburgh, University of Illinois Urbana-Champaign, University of Kansas, and University of Washington.54 The proposal might be put together by ASEEES as the umbrella organization and by the four libraries, easily and efficiently leveraging the already-existing editorial expertise of the societies and the proven publishing expertise of the libraries.

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54 Each of the institutions has a robust library-based publishing operation. For more about library-based publishing in general and about these institutions in particular, see the Library Publishing Coalition site.
APPENDIX C: PHASE 1 INSTITUTIONAL CONTRIBUTIONS

Institutions for Phase 1 were selected by their inclusion on one or more lists of top higher education institutions or by their membership in one or more selected organizations. Lists of top institutions used were Forbes' America’s Top Colleges (all), QS World Rankings 2012 (top 100) and QS Top 100 Universities: Arts and Humanities (top 50), US News & World Report National Liberal Arts College Rankings (all ranked), US News & World Report National University Rankings (all ranked), and 50 Best Community Colleges in the United States (all). Institutions with memberships in the following organizations were also included: Association of Academic Health Sciences Libraries (AAHSL), Association of American University Presses (AAUP), Association of American Universities (AAU), Association of Public and Land-Grant Universities (APLU), Association of Research Libraries (ARL), Association of Southeastern Research Libraries (ASERL), Canadian Association of Research Libraries (CARL), Center for Research Libraries (CRL), Coalition of Open Access Policy Institutions (COAPI), Greater Western Library Alliance (GWLA), Library Publishing Coalition (LPC), Maryland Independent College and University Association (MICUA), Oberlin Group, Scholarly Publishing and Academic Resources Coalition (SPARC), Utah Academic Library Consortium (UALC), and Wisconsin Association of Independent Colleges and Universities (WAICU). These initial institutional membership organizations were chosen primarily for their knowledge of OA issues, OA publishing practices, and OA business models.

These selection criteria resulted in 1,038 institutions, which we intend to target in Phase 1, the proof-of-concept phase of our model. The full list of these institutions and their fee structures are found in Table C1 ("Institutional Pricing"); this spreadsheet is view-only online, but can be downloaded for offline analysis. Data points captured for each institution were its location, its type of institution (e.g., public 4-year), its Carnegie classification (e.g., Master’s, Research), student enrollment, and number of full-time faculty.

These 1,038 institutions were distributed across Carnegie Classifications and Integrated Postsecondary Education Data System Institutional Types as shown in Figure C1.

55 AAHSL, MICUA, UALC, and WAICU were originally included because they are consortial members of SPARC, but they serve an additionally useful role by contributing to a more diverse distribution of institutions across Carnegie Classifications.

56 The top 20 institutions by total institutional annual fee would be these: University of Vienna (Universität Wien), $496,090; University of Bologna (Università di Bologna), $451,495; University of Barcelona (Universitat de Barcelona/Universidad de Barcelona), $443,940; University of Toronto, $420,935; Arizona State University, $379,660; Monash University, $332,955; Peking University (Beida), $312,320; University of Central Florida, $305,965; University of British Columbia, $302,655; Ohio State University at Columbus, $298,795; University of the Philippines, $284,880; University of Minnesota (Twin Cities), $282,565; York University (Ontario), $279,375; University of Sydney, $273,720; University of Texas at Austin, $273,560; University of Florida, $270,780; University of Pisa (Università di Pisa), $267,760; University of New South Wales, $265,665; Texas A & M University at College Station, $264,475; Michigan State University, $256,815.
**Figure C1. Distribution of Classification and Institution Type Categories for Phase 1 Institutions**

**A. Carnegie Classifications**

- **Associate (8%)**
  - Number of Records: 80
- **Baccalaureate (26%)**
  - Number of Records: 244
- **Master's (24%)**
  - Number of Records: 250
- **Research (39%)**
  - Number of Records: 391
- **Medical (4%)**
  - Number of Records: 43

**B. IPEDS Institution Types**

- **4-Yr Private (Intl) (1%)**
  - Number of Records: 5
- **2-Yr Public (8%)**
  - Number of Records: 80
- **4-Yr Public (33%)**
  - Number of Records: 342
- **4-Yr Private (47%)**
  - Number of Records: 462
- **4-Yr Public (Intl) (11%)**
  - Number of Records: 118

**Note:**

(A) Distribution of Phase 1 institutions (n = 1,038) according to Carnegie Basic Classifications. **Associate:** All degrees are at the associate’s level or baccalaureate degrees account for less than 10% of all degrees. **Baccalaureate:** Baccalaureate degrees represent at least 10% of all undergraduate degrees and fewer than 50 master’s degrees or 20 doctoral degrees were awarded during the last year. **Master’s:** Institutions awarded at least 50 master’s degrees and fewer than 20 doctoral degrees during the last year. **Research:** Institutions awarded at least 20 research doctoral degrees during the last year (excluding doctoral-level degrees that qualify recipients for entry into professional practice, such as the J.D., M.D., etc.). **Medical:**
Institutions award baccalaureate or higher-level degrees where a high concentration of degrees (above 75%) is in medicine.

(B) Distribution of Phase 1 institutions according to the Integrated Postsecondary Education Data System (IPEDS) Institution Type. Public: An educational institution whose programs and activities are operated by publicly elected or appointed school officials and that is supported primarily by public funds. Private not-for-profit (non-profit) (in this figure called simply “private”): An educational institution in which the individual(s) or agency in control receives no compensation, other than wages, rent, or other expenses for the assumption of risk; these include both independent not-for-profit schools and those affiliated with a religious organization. 4-year: An institution authorized primarily to award baccalaureate (or higher) degrees, such as a college or university. 2-year: An institution authorized to award associate’s degrees or 2-year or longer certificates, such as a community or technical college.

As expected, given the selection criterion for our sample, nearly half of the institutions (42%) are in the research/medical category, and there is an even stronger showing by publicly funded institutions (52%), with the vast majority of the cost in Phase 1 borne by that same category of institution (Figure C2). There are several reasons for the costs to fall strongly, as they do, on public institutions. Because of the predominance of public funding for international higher education institutions, most of the international universities on our list are in the category of public 4-year universities. All 2-year colleges on our list are publicly funded. Many of the largest American institutions on our list are public universities; the largest 10 research institutions all are.57 Because the primary beneficiaries of OA are the public, it seems only right to us that the primary contributors to the central fund to provide OA to research are the public universities and colleges.

57 The largest American institution is the privately run Liberty University, with 74,372 students (approximately 60,000 them enrolled in distance education) and 1,680 full-time faculty, but because it is a Master’s category school, the fee totals $231,516. The next largest institution is Arizona State University, with 73,378 students and 2,554 full-time faculty. As a research university, under our model they would pay an annual fee of $379,660, making it the highest contributor among American higher education institutions. The largest 10 American research universities in terms of student enrollment are all public universities: Arizona State University (73,378), University of Central Florida (59,601), Ohio State University at Columbus (56,387), University of Texas at Austin (52,186), University of Minnesota (Twin Cities) (51,853), Texas A & M University at College Station (50,627), University of Florida (49,913), Michigan State University (48,783), Florida International University (46,171), and Pennsylvania State University (University Park) (45,783).
Figure C2. Comparative Fee Distribution by Institutional Category

(A) Collective cost distributions by institutional type for Phase 1 institutions: 4-year U.S. public institutions \((n = 342)\) = $27,844,814 (49%); 4-year international public institutions \((n = 118)\) = $18,083,777 (32%); 4-year U.S. private institutions \((n = 492)\) = $9,851,212 (17%); 2-year U.S. public institutions \((n = 80)\) = $665,771 (1%); 4-year international private institutions \((n = 6)\) = $547,905 (1%). Total: \(n = 1,038\), amount = $56,993,479.

(B) A more granular view of the data in (A), showing total fee distribution for Phase 1 institutions broken down by degree as well as by institutional type: 4-year U.S. private institutions: Research = $6,413,290 (65%), Master’s = $2,187,697 (22%), Baccalaureate = $1,051,085 (11%), Medical = $199,140 (2%); 4-year international public institutions: Research = $17,776,620 (98%), Master’s = $289,562 (2%), Baccalaureate = $17,595 (<1%); 4-year U.S. public institutions: Research = $22,614,785 (81%), Master’s = $4,431,940 (16%), Medical = $472,340 (2%), Baccalaureate = $375,749 (1%); 2-year U.S. public institutions: Associate’s = $665,771 (100%); 4-year international private institutions: Research = $547,905 (100%).

Finally, given the North American focus of the selection criteria, the country distribution (Figure C3) is unsurprising. American institutions make up 88% of the sample and supply 67% of the funding. The international representation in our institutional sample therefore provides only a hint of the possibilities and
opportunities afforded by our model, and does not include entire regions of the world, such as South America, Africa, or South Asia. Even so, as shown in Table C1, 12 of the largest (and therefore top-paying) 20 institutions in Phase 1 are not in the United States: University of Vienna (Universität Wien) (92,486 students), University of Bologna (Università di Bologna) (87,418 students), University of Barcelona (Universitat de Barcelona/Universidad de Barcelona) (83,482 students), University of Tokyo (82,200 students), Monash University (62,998 students), Peking University (Beida) (58,258 students), University of British Columbia (57,200 students), York University (Canada) (54,400 students), University of the Philippines (all campuses) (52,405 students), University of Pisa (Università di Pisa) (52,000 students), University of Sydney (51,394 students), and University of New South Wales (50,516 students). Figure C3 provides details about the institutional cost by region.

Figure C3. Distribution of Phase 1 Institutions by Total Contributions

This series of charts shows the comparative distribution of the 1,038 institutions to be included in Phase 1. While the majority of the institutions (and hence the majority of the cost) in Phase 1 come from the United States (908 institutions) and its territories of American Samoa (1), Guam (1), Puerto Rico (3) and U.S. Virgin Islands (1), other countries have also been included to indicate global intent: Austria (1), Australia (12), Belgium (1), Canada (35), China (3), Denmark (2), Egypt (1), Finland (1), France (4), Germany (6), Hong Kong (4), Ireland (2), Italy (2), Jamaica (1), Japan (7), The Netherlands (4), New Zealand (1), the Philippines (2), Singapore (2), South Korea (3), Spain (1), Sweden (2), Switzerland (4), Thailand (1), Taiwan (1), and the United Kingdom (21). As shown in the bar graph, the top five countries contributing financially in Phase 1 are the United States (US), excluding its territories, $38,182,680; Canada (CA), $5,142,804; the United Kingdom (GB), $2,710,975; Germany (DE), $1,112,690; and Australia (AU), $2,261,095. The pie charts to the right show the financial distribution by region.
APPENDIX D: PRESERVATION NETWORKS

The current digital curation and preservation networks identified in this overview offer a variety of digital preservation options from which to choose in adopting a local preservation strategy. All these options are committed to ensuring the long-term integrity of submitted works by preserving the original bitstream of content and migrating it forward as needed and by maintaining the accompanying descriptive, administrative, and preservation metadata. Many of the opportunities discussed below are conformant with the Open Archival Information System (OAIS) reference model (ISO 14721:2012), employ the Library of Congress’ Preservation Metadata: Implementation Strategies (PREMIS) standard, and are built with open-source technologies.

The Digital Preservation Network (DPN) is a collaborative effort among higher education institutions to create a federated network for preserving the scholarly record. DPN collects and curates new content and collections from local repositories acting as contributing nodes. At the initial launch in 2013, the contributing nodes include the Academic Preservation Trust, Chronopolis, HathiTrust, Stanford Digital Repository, and the University of Texas Digital Repository. DPN creates multiple, federated, replicating nodes of the collections and content supplied by contributing nodes with a focus on long-term preservation. Each node maintains redundant “dark” copies of all deposited content and is unique in its geographic, financial, technical, and organizational diversity, to reduce the potential for loss or point of failure.

Chronopolis is a trusted digital repository available to anyone willing to pay a yearly, per-terabyte charge. The digital repository employs a minimum of three geographically distributed copies of the data collections, while enabling curatorial audit reporting and access for preservation clients. Further, it enables cross-domain collection sharing of a wide range of content, not tied to a single community or partner, for long-term preservation. Underlying the digital repository is the key technology Integrated Rule-Oriented Data System (iRODS), a preservation middleware software package that allows for robust management of data.

Developed in 2007 by the San Diego Supercomputer Center (SDSC) at the University of California, San Diego (UCSD), the UCSD Libraries, and other partners including the National Center for Atmospheric Research (NCAR) in Colorado and the University of Maryland’s Institute for Advanced Computer Studies (UMIACS), Chronopolis earned high marks from the Center for Research Libraries’ Trusted Repositories and Audit Checklist (TRAC) in establishing their trusted status.

The MetaArchive Cooperative, established in 2004 through the National Digital Information Infrastructure and Preservation Program (NDIPP) of the Library of Congress, provides a digital preservation strategy that relies on the open-source LOCKSS software (see below) as the network’s base. Participating institutions run a server linked securely to the network, with servers located in diverse locations and maintained by separate systems administrators, allowing them to build knowledge and infrastructure in a local institutional environment. Membership in the Cooperative involves a basic cost of purchasing a server and 2% of a systems administrator’s time. Yearly dues at one of three tiered levels of membership are available.
The MetaArchive focuses on sharing responsibility, expertise, and infrastructure to enable libraries, archives, research centers, and museums to accomplish preservation goals as a distributed community. A broad range of digital assets are stored in the MetaArchive Cooperative, including electronic theses and dissertations, newspapers, journals, and archival holdings (including video, audio, image, and other media types), as well as digital creations from the humanities, social sciences, and sciences (such as datasets, databases, portals, and other resources). This stored content is preserved at seven geographically distinct sites and includes versioning which allows changed content to be stored alongside the original digital asset so any version can be recovered.

**LOCKSS** (Lots of Copies Keep Stuff Safe) provides access to stored content whenever publisher sites are unavailable, even for brief periods of downtime. LOCKSS is a real-time backup solution more than it is an archive. In contrast, Portico (see below) is a true archive, preserving digital content in a standard format for the long term. CLOCKSS (Controlled LOCKSS) preserves content in the publisher’s original format (not in a standard archival format). Access to CLOCKSS content is similar to the Portico model, however. Trigger events must result in a sustained loss of access, and content is released only after participating publishers and libraries review the situation.

**HathiTrust** is a cost-effective, digital preservation repository and access platform that relies on community standards and best practices, including OAIS, TRAC, and metadata schemas such as PREMIS and METS, to ensure the long-term integrity of its digital assets. Additionally, the HathiTrust relies on the extensive specifications of file formats, preservation metadata, and quality-control methods for bit-level preservation and format migration of digital content. The archive is comprised of published literature from research libraries around the world, including book and journal publications, contributed by the member community in the HathiTrust partnership, including academic and research institutions.

The primary community the HathiTrust serves are the members of its partner libraries; however, digitized materials in the public domain are also made accessible to a broader public via Google, the Internet Archive, and Microsoft. Institutions can become a partner in the HathiTrust either by contributing significant amounts of digital content from their library holdings to the repository or, alternatively, by participating in the long-term curation and management of the repository in return for enhanced services for accessing and using materials in the repository. Costs associated with the partnership pay for the basic infrastructure costs of the content preserved, such as costs of storage, backup, data centers, servers, and some staff. Fees are distributed among partners based on the benefits partners derive from the aggregate collection. Partners currently involved in the HathiTrust include consortia, such as the University of California and the Committee on Institutional Cooperation, as well as colleges and research libraries from across the country.

Two centralized, digital preservation repositories for locally created content include the **Florida Digital Archive (FDA)** and the **Alabama Digital Preservation Network (ADPNet)**. Both state-run networks were developed with funding from the Institute of Museum and Library Services and focus on long-term preservation, following the dark-archive model of making content available to members only in the
event of loss of original content. The FDA relies on a locally developed OAIS- and
PREMIS-conformant, open-source software called Dark Archive in the Sunshine State
(DAITSS), while ADPNet uses the LOCKSS OAIS-conformant, open-source software.
Both of these repositories aim to provide cost-effective preservation strategies to
adapt to growing state budget concerns, especially of smaller institutions.

Commercially driven products for digital preservation include Portico, Ex Libris’
Rosetta, and the OCLC Digital Archive. Portico, a digital preservation service and
dark archive provided by Ithaka, focuses on format-based migration strategies and
allows content to be accessed only when content is no longer available because of a
so-called trigger event, such as when a publisher goes out of business. Over 1,000
publishers and libraries currently partner with Portico as part of their digital
preservation strategy to preserve a range of digital content including e-journals, e-
books, and other digital collections. Ex Libris’ Rosetta preserves content in either a
light or dark archive, making preserved digital content available via viewers for item-
level access, according to principles conformant with the OAIS reference model and
the CRL TRAC requirements. Finally, the OCLC Digital Archive provides users with a
dark archive service that can be integrated with other OCLC products such as the
CONTENTdm Digital Collection Management Software. Further, the OCLC Digital
Archive offers tiered pricing and provides monthly updates for collections through a
personal archives report portal.

APPENDIX E: BACKGROUND READING

A myriad of articles, books, reports, proposals, conference presentations, blog posts,
etc., exist that address the issues of OA for all stakeholders in the scholarly
communication ecosystem. In this appendix we are calling attention to only a few of
these — ones that in particular have influenced our own thinking on these issues.

In the spirit of our white paper, any links provided are to the freely available full text.
Articles behind paywalls are included in this list, but deliberately do not have a link to
the subscription version. All annotations were written by Nathasha Alvarez.

Brown, Laura, Rebecca J. Griffiths, Matthew Rascoff, and Kevin Guthrie. “University
Publishing in a Digital Age.” Ithaka S+R, 26 July 2007. AVAILABLE:

In “University Publishing in a Digital Age,” Brown, Griffiths and Rascoff offer a call to
action and commentary on the state of university publishing. The authors argue for a
concerted institutional commitment to publishing scholarly content produced on
academic campuses and seek to remind administrators of the responsibility held by
academic institutions in making digital scholarly content more widely available. The
goal of wider dissemination can be accomplished, they propose, through partnerships
between university presses, libraries, and administrator support in developing a
strategic plan for scholarly communication and deliver a shared electronic publishing
infrastructure.

Bruff’s blog post, “Lessons Learned from Vanderbilt’s First MOOCs” offers insight into Vanderbilt’s Center for Teaching experience in launching their first MOOCs and some takeaways for future MOOC development. The findings highlight important aspects of online learning such as the team effort involved in teaching courses online, the complications presented by copyright when creating and presenting materials for free online, and the important role of open content in developing a curriculum or lesson plan for open courses.


The House of Commons ordered “Business, Innovation, and Skills Committee – Fifth Report Open Access” provides an examination of OA reports and policies proposed by the House of Lords Science and Technology Committee, the Research Councils UK, and the Working Group on Expanding Access to Published Research Findings (the Finch Report). The authors of this report offer recommendations based on these earlier reports and policies and recommendations to facilitate the transition from the dominant subscription-based business model to OA publishing in the UK. Notable changes to government policy include support for the development of institutional repositories, increasing the price sensitivity of authors to publishing processing charges, and prohibiting the use of non-disclosure agreements as part of publishing contracts that involve public funds.


Nagib Callaos, of the International Institute of Informatics and Systemics (IIIS), in “Costs, Prices, and Revenues in Journals Publishing” provides an overview of costs and cost reduction strategies in scholarly publishing. Further, Callaos offers general guidelines and basic reference on processing costs, such as the article processing charge (APC), for publishers and editors looking to publish an OA journal.


Richard Clement’s article, “Library and University Press Integration: A New Vision for University Publishing,” provides a brief history of university presses in the United States and examines the challenges facing presses today. Clement proposes the integration of
university presses into the library as a solution to overcome the increasing isolation from institutions with which they are affiliated and their core academic mission, and the broken business models suffered by university presses. Pointing to the Utah State University merger as a successful example of integration, Clement offers positive model for the future of scholarly communication, distribution, and publication.


In the Scholarly Publishing and Academic Resources Coalition (SPARC) report “Campus-Based Publishing Partnerships: A Guide to Critical Issues,” Raym Crow outlines the challenges involved in launching library-press partnerships. The result of interviews and discussions with colleagues in libraries and university presses, this report highlights the potential for collaboration between libraries and presses to give academic institutions greater control over scholarly content. To achieve this goal, however, the short-term, experimental projects currently underway must be replaced with strategic, long-term collaborative programs.


In this SPARC Position Paper, Raym Crow examines the role institutional repositories fulfill in reforming scholarly communication, highlighting the integral role they play in inspiring innovation and serving as tangible indicators of an institution’s quality. Complementing the existing scholarly publishing model, institutional repositories, he notes, build on existing the faculty practice of posting research to personal pages online. Notably, institutional repositories offer a strategic response to the technological changes, increase in volume of research, dissatisfaction with journal publishing price and market models, and the uncertainty of who will be responsible for the digital preservation of scholarly content created today.


“Income Models for Open Access: An Overview of Current Practice” offers an overview of income models used to support OA distribution of scholarly and scientific journals. In this SPARC Position Paper, Raym Crow outlines supply- and demand-side income models, and includes recommendations for transitioning from a subscription-based model to an OA distribution model.

The SPARC discussion paper “Publishing Cooperatives: An Alternative for Society Publishers” proposes a scalable federation of publishing cooperatives as an alternative operating model for society publishers. Discipline-specific publishing cooperatives can provide a practical financial, organizational, and structural framework capable of sustaining society publishing programs, Raym Crow notes, and supporting the transition to an OA funding model.


“The Scholarly Book Buyer’s Decision Process: A National Survey of University Faculty Members in the United States” provides a snapshot of the buying behavior of scholarly book purchasers in the 11 different fields examined. The research report reveals patterns of behavior with respect to scholarly book purchasing, including the primary decision factors in the purchase of scholarly books for research and instructional, the common location for purchase and information about scholarly books, and the perceptions of university presses by faculty.


Julian H. Fisher reviews the cost of intellectual goods under the current model subscription-based scholarly publishing and the savings to be gained in pursuing an OA publication model in “Scholarly Publishing Re-invented: Real Costs and Real Freedoms.” According to Fisher’s calculations, the per-article cost of supporting a platform for article review, production, and display could range from $50–100 per article for OA journals. Reducing the high cost of scholarly communication will require, Fisher notes, the commitment by universities, philanthropic entities, and governments to support innovative and cost-effective approaches.


Kathleen Fitzpatrick examines the changing nature of scholarly publishing in Planned Obsolescence, focusing on recent changes to the institutional model in which scholarly publishing operates and the material form through which scholarship circulates. With the emergence of new technologies, modes of production, and means of distribution, scholars and the academy as a whole need to reconfigure the research process and
strategies for disseminating scholarly content. Web publication in particular, Fitzpatrick notes, must become as valuable as publishing in print for both adjuncts and assistant faculty aspiring to tenure track positions. To accommodate shifts in the institutional model and material form of production, scholars and institutional management will need to alter their attitudes and expectations of concepts such as peer review, authorship, and texts themselves.


The Council of Library and Information Resources (CLIR)- and Digital Library Federation (DLF)-funded research project “Fit for Purpose: Business Cases for New Services in Research Libraries” outlines a framework for evaluating potential scholarly communication opportunities using existing business models and case studies. Two areas of exploration are highlighted in this study for future library ventures: data management and curation and library-based publishing. The authors offer recommendations for developing and assessing new initiatives, including determining organizational readiness, developing a business case, conducting a pilot, and embracing the business planning life cycle.


The 2013 Global Research Council’s “Action Plan Towards Open Access to Publications” outlines a set of principles for promoting awareness and transitioning to OA and for assessing the implementation of the actions suggested. The aims of the Action Plan include encouraging and supporting publication in OA journals, author self-deposit in OA repositories, and the creation and interconnection of repositories. Using the aims and principles outlined, signatories of the Action Plan from all regions will develop their own activities regarding OA to contribute to the global vision of open availability of research information.


“The Changing College and University Library Market for University Press Books and Journals” evaluates economic trends in college and university libraries and university presses from 1997 through 2004. The authors discuss the overall economic structure of academic and non-academic libraries and the impact of the “serials crisis” on academic and non-academic library budgets and non-profit university presses. Further,
the article examines the impact of electronic distribution of scholarly content, the OA movement, and shifts to “work for hire” on the college and university library market, as well as the changes in library configurations.


Karla Hahn reports on the emerging and established publishing services offered by the Association of Research Libraries’ member libraries in “Research Library Publishing Services: New Options for University Publishing.” Publishing services are typically incorporated into established library programs rather than creating new, distinct library units and are being created in response to on-campus research demands. The primary works produced by ARL library publishing services are electronic-only journal publications with an emphasis on maintaining low production costs through the use of simplified design and reliance on open-source software. Additionally, libraries offer hosting and digitization services as part of on-campus publishing initiatives including institutional digital repositories for faculty and student deposit of current or past research and publications, digitization of back-issues of journal publications, and digitization of unique research collections.


“Moving Towards an Open Access Future: The Role of Academic Libraries,” by Siân Harris, offers insight into the observations and predictions of 14 librarians representing institutions worldwide and other industry experts examining the impact of open access on librarians and scholarly communication for academic libraries in the future. The report discusses gold and green open access publications, the benefit of open access content for institutions with international branches, and the challenges involved in spreading open access in a climate of mistrust and misunderstanding among researchers. The future of academic libraries, the group predicted, will focus on information professionals rather than libraries as such and will be judged on quality provision of services and unique collections.


A report of the Joint Information Systems Committee, “Economic Implications of Alternative Scholarly Publishing Models: Exploring the Costs and Benefits” compares...
the costs and benefits of three alternative scholarly publishing models – subscription publishing, open access publishing, and open access self-archiving. Meant to inform policy discussions and help stakeholders understand the economic implications of scholarly communication process, the report demonstrates the savings of open access self-archiving and open access publishing based on real case studies and scenarios explored in the study. The research findings offer evidence to support a move towards and reducing barriers to transitioning to more cost-effective scholarly publishing models.


Ross Housewright, Roger C. Shonfeld, and Kate Wulfson examine the results of the “Ithaka S+R Faculty Survey 2012,” investigating faculty attitudes and practices concerning the research process, publishing, scholarly content dissemination, teaching and instruction, digital technology, academic libraries, and scholarly societies. Findings from the survey suggest a continued increase in the role of Internet search engines in facilitating discovery of scholarly resources, continued value for scholarly societies as a convener of conferences, and a preference for sharing scholarly content using established scholarly dissemination methods. Further, faculty demonstrated a diminished value for functions of the academic library excluding the gateway function that involves locating research information.


“Publishing Support for Small Print-Based Publishers: Options for ARL Libraries” is the result of a project led by consultants October Ivins and Judy Luther exploring the potential for ARL libraries to offer long-term digital access support to publishers of print-only publications. The authors observed that library publishing often grows out of institutional digital repository services or other library services and is in constant development. The long-term success of library publishing operations, Ivins and Luther note, requires that libraries provide a clearly defined scope, mission, and policies for the publishing services and support for online marketing and visibility, business planning, and an understanding of the staffing and financial burden involved in running a journal.


In “Cultural Tenacity within Libraries and Publishing,” Jensen examines the unique aspects of publishing and library culture and explores their mutual dependency within
the information ecosystem. Maintaining their important role within this ecosystem, Jensen notes, will require that both publishers and libraries evaluate their relationship to individuals in creating future services and solutions when engaging intellectually with content for patrons and customers.


New companies frequently bring the most innovative products, services, and solutions to the market, whereas established companies do so less often. Such innovation is due in large part to the new business models with which these new businesses are equipped as Mark Johnson, Clayton M. Christensen, and Henning Kagermann discuss in “Reinventing Your Business Model.” The authors highlight the appropriate circumstances under which an established business should reinvent their business model and the important aspects involved in reinvention including examination of the company's customer value proposition, profit formula, key resources, and key processes.


Vikki Lassiter describes the benefits of and strategies for implementing process improvement generally and in nonprofit organizations specifically in “The Role of Process Improvement in the Nonprofit Organization.” Performance excellence, Lassiter notes, is the measure by which organizations are evaluated in both for-profit and the non-profit sector. Successful implementation of process improvement requires a firm understanding of an organization’s culture, creating an environment in which organizational learning and process improvement are embraced organizationally, and a strong commitment by management and leadership.


The 2013 version of Ithaka S+R’s Library Survey reveals shifts in the priorities of academic library directors over the past three years, especially in the areas of print collections and research support. Respondents to the survey placed less emphasis than in past years on the importance of building collections and on supporting faculty research — although many prized new innovations, especially in digital technology, and were staffing to support those new needs. In contrast, much more emphasis was given to the importance of undergraduate education, especially in research skills and information literacy.

Changes in the value of library collections and space, a reduced sense of library relevance from below, above, and within, and the management and maintenance of legacy systems were all noted as challenges and perceived risks in “Research Library, Risk and Systematic Change.” James Michalko, Constance Malpas, and Arnold Arcolio discuss an assessment of perceived academic research library enterprise risks as indicated by interviews with 15 library directors representing member institutions of the Association of Research Libraries (ARL). The concerns cited by library directors are grouped into five risk clusters - value proposition, human resources, durable goods, legacy technology, and intellectual property - with an exploration of the responses in each category.


“Library Publishing Services: Strategies for Success: Final Research Report,” presents the recommendations, recorded opinions, and lessons learned of librarians involved in on-campus publishing programs. The report also analyzes the publishing initiatives of three participating institutions – the Purdue e-pubs Journal Publishing Services, Georgia Tech Library Conference Proceedings Support Service, and Utah Scholarly Monographs. The authors of this study identify five key elements to creating a sustainable model for on-campus publishing initiatives, including a clear identification of the target audience or client segments, value proposition, core activities and resources, distribution channels, and income streams. Further, they recommend developing best practices for library publishing, collaboration to create community-based resources, and formalizing skills and training.


Jim Parrott discusses the rise in subscription costs of scholarly journals and calls on scholarly societies to take a stand against this trend in “The Crisis in Scholarly Publishing.” The devastating effects of rising journal costs on academic libraries and scholars can be mitigated by proactive involvement of scholarly societies and their members. Parrott suggests scholarly societies encourage their members to pay attention to the pricing policies of journals and refraining from disseminating content in or participating in editorial activities for journals with exorbitant pricing policies. Further, he recommends scholarly societies strive to publish journals themselves and distribute journals electronically to reduce publication costs.

The Research Information Network, together with the Publishing Research Consortium, the Research Libraries UK, and the Society of College, National, and University Libraries, examine the scholarly communication process in “Activities, Costs and Funding Flows in the Scholarly Communication System in the UK: A Report Commissioned by the Research Information Network.” The final report is an investigation into the costs involved in the various stages of the scholarly communications process, including the production of research outputs, the reading of those outputs, and the sources, nature, and scale of the research funding.


The UK Survey of Academics 2012 by Ross Housewright, Roger C. Schonfeld, and Kate Wulfson, describes the attitudes of academics toward research and scholarly communications. A large majority of respondents indicated their own personal interests guide their research and describe themselves as very dependent on their college or university library. Scholarly societies are valued by academics for organizing conferences, publishing and alerting members to new publications in the discipline, and the informal role they play in connecting academics with peers. Academics look to libraries to purchase scholarly materials necessary for their research and many also believe libraries help undergraduate students succeed in their courses.


The Ithaka S+R Faculty Survey 2009 examines the attitudes and reported practices of faculty in scholarly information use. Survey participants answered questions about digital technology and electronic resource use and the perceived library role on-campus in the scholarly communication process. Results from the survey indicate that faculty continue to value the library’s buyer and infrastructural roles on campus but are less reliant upon libraries as an intermediary for discovery purposes. Further, the survey indicates faculty have grown increasingly comfortable relying on electronic versions of journal articles for research purposes, but haven’t yet accepted electronic books as a substitute for the paper edition.

The SHared Access Research Ecosystem Development Draft proposes a solution to the White House Office of Science and Technology’s call for increased access to the results of federally funded scientific research. Under the SHARE proposal, a network of cross-institutional digital repositories maintained by universities, the federal government, and other stakeholders in the scholarly communication ecosystem will provide perpetual public access to federally funded research. This network will provide an interoperable, single point of contact for the digital data management of this research with an emphasis on long-term preservation. Each digital object within the network, including scholarly articles and data, will include key metadata fields such as a principal investigator (PI) identifier, award identification number, funding agency, usage statistics, copyright license terms, repository designation ID number, and preservation rights.


In the blog entry “Why Open Access is Better for Scholarly Societies,” Stuart Shieber urges societies and their members to make the transition from closed-access subscription publishing to open access publishing. In addition to the economic benefits to be gained by switching to open access publishing, Shieber writes, supporting open access policies and open access publications is in fact a move to support an inherent part of the research process – the dissemination of research results. The dysfunctional nature of the current journal market has resulted in steady hyperinflation of journal expenditures by research libraries and a move to open access by scholarly societies could help halt and reverse this pernicious trend.

Clay Shirky describes the innovative possibilities that exist in the current age, where free time can be treated as a general asset and used to create social goods that benefit society on the whole. Cognitive Surplus describes the shift away from passive media consumption, in the form of the television and radio, to a state of active media production and sharing with the Internet. This allows for amateurs and professionals alike to participate in the creation of media while at the same time providing a public space in which communities with shared interests to connect. The outcomes from such creation can range from pure social entertainment, such as Lolcats, to a civic tool to report on violence, in the case of Ushahidi.

Open Access provides a thorough explanation of the legal, economic, and practical implications of open access. Peter Suber begins his discussion by defining the two types of open access (libre and gratis), followed by an examination of copyright and other legal issues to be considered with the adoption of open access policies. He continues with a clarification of the many misconceptions about open access held by academics and publishers alike, including the notion that it is meant to punish publishers, limit academic freedom, or abolish copyright. Finally, Suber points to the rising cost in journal subscripting and the increasing access gap to these scholarly journals as a case in point for adopting open access policies and supporting open access publications.


“The UNESCO Policy Guidelines for the Development and Promotions of Open Access” provides an overview of the importance of Open Access for sharing information and research, as well as delving into issues such as policy development, approaches, benefits, business models, legal issues, strategies for promotion, and policy framework. The aim of Alma Swan’s Open Access guidelines is to facilitate the understanding, development, and adoption of Open Access policies for Member States and Institutions.


The AAUP Task Force on Economic Models for Scholarly Publishing’s report, “Sustaining Scholarly Publishing: New Business Models for University Presses” provides an examination of current publishing practices and the new forms of innovative digital scholarly publishing that will become more prevalent in the future. In the transition to new forms of publishing, the authors suggest maintaining some elements of the current scholarly publishing systems – such as the editorial services – while proposing, developing, and implementing new, effective business models for a digital publishing system. Successful transition to the new publishing system will require presses to collaborate with libraries, and scholarly societies, fully embrace open access, and to securing funding for the transition.

The MLA Task Force on Evaluating Tenure and Promotion’s “Final Report” highlights some of the greatest challenges facing the tenure and promotion system at colleges and universities in our time. The expectations for tenure, namely the publication of a scholarly monograph, is increasingly out of step with faculty involvement in scholarly publication activities in new media such as blogs, grey literature, etc. The Task Force provides twenty recommendations to address the issues surrounding tenure and promotion including increased transparency, recalibration of departmental expectations, and reevaluating the narrow definition of scholarship.


Kodi Tillery describes the scholarly journal price trends from 2010–2012 in the Allen Press, Inc. “2012 Study of Subscription Prices for Scholarly Society Journals.” In 2012, prices for US society journals decreased for the first time since 1989. Prior to 2012, prices have increased 7.3% on average annually and in 2012 they dropped to 6%. Overall, prices for peer-reviewed titles have outpaced non-peer-reviewed titles and prices are increasing at a slower rate than the historical average. “Free” alternatives, library budget cuts, and academic open access policies are all cited as potential causes for the slowing of price increases. The author recommends publishers remain flexible and consider changing their current pricing models to keep pace with developments in the academy that are impacting scholarly journal price trends.


The Research Lifecycle at the University of Central Florida (UCF), designed by the UCF Libraries, is a presents a visual model of integrated research support and services offered on campus. The model is divided into four interrelated cycles – the planning cycle, project cycle, publication cycle, and 21st-century digital scholarship cycle. It demonstrates a unified research model built with institutional support, outlining the stakeholders and key actors within each cycle, and serves to promote infrastructure building and to encourage campus-wide partnerships.

Richard Van Noorden looks at the cost factors involved in subscription journals for scientific research in “Open Access: The True Cost of Science Publishing.” He notes the dramatic price variance between commercial and open access journal publishing and a steady decrease in library budgets has resulted a need for more transparent, affordable, and sustainable academic publishing practices. This will involve publishers reassessing long-standing business models and researchers rethinking what form publishing will take in the future.


“Open Access Publishing and Scholarly Societies: A Guide” provides an overview of the benefits of open access for readers and scholarly societies, and outlines the financial and operational challenges involved in transitioning to open access. Written by Jan Velterop, this guide is intended to help scholarly societies and small publishers convert from subscription based to open access journal publishing.


Edited by Nigel Vincent and Chris Wickham, Debating Open Access is a compilation of articles on the topic of the open access publishing mandate in the UK. Each of the authors discuss a particular aspect of the issue, including the Gold versus Green debate, the role and survival of learned societies, the ability of UK academics to publish abroad, and the ethical necessity of open access. Further, the articles highlight other challenges posed by the Finch Report in terms of open access implementation, feasibility, and sustainability in the UK.


Mary Waltham’s report “The Future of Journal Publishing Among Social Science and Humanities Associations” reviews the scholarly journal costs and revenues, and publishing trends from 2005-2007. Her findings indicate that shifting to a new funding model to support a pure form of open access publishing would not be possible within a selection of the social science and humanities disciplines. Sources of external funding would be necessary, at least initially, for the transition to be made possible, as has been the case in STM disciplines.
In this book on open access, John Willinsky argues that it is the responsibility of scholars to share the results of their work as broadly as possible, what Willinsky calls the “access principle.” In return, the work obtains even more value. Open access thus benefits both the researcher at a large university and a teacher in a small rural school. In his book, Willinsky also examines open access business models, discusses copyright challenges, and ponders the future of knowledge creation and distribution in the digital era.


This report of the Working Group on Expanding Access to Published Research Findings, also known as the Finch Report, identifies key goals and guiding principles in the transition to expand access to peer-review publications in the UK. The report, “Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications,” was produced by an independent working group of representatives of universities, research funders, learned societies, publishers, and libraries. Among the recommendations proposed by the working group, policy creation is emphasized to support the financial, legal, and operational transition to open access publishing.