Sustaining Scholarly Publishing: New Business Models for University Presses

A REPORT OF THE AAUP TASK FORCE ON ECONOMIC MODELS FOR SCHOLARLY PUBLISHING

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Within the scholarly communications ecosystem, scholarly publishers are a keystone species. University presses — as well as academic societies, research institutions, and other scholarly publishers — strive to fulfil our mission of 'making public the fruits of scholarly research' as effectively as possible within that ecosystem. While that mission has remained constant, in recent years the landscape in which we carry out this mission has altered dramatically.

The expertise residing within university presses can help the scholarly enterprise prosper in both influence and impact as it moves ever more fully digital. However, the simple product-sales models of the twentieth century, devised when information was scarce and expensive, are clearly inappropriate for the twenty-first-century scholarly ecosystem.

This report (a) identifies elements of the current scholarly publishing systems that are worth protecting and retaining throughout this and future periods of transition; (b) explores business models of existing projects that hold promise; (c) outlines the characteristics of effective business models; (d) addresses the challenges

of the transitional period we are entering; and (e) arrives at recommendations that might allow us to sustain high-quality scholarship at a time when the fundamental expectations of publishing are changing.

EXECUTIVE SUMMARY

Within the scholarly communications ecosystem, scholarly publishers are a keystone species. University presses—as well as academic societies, research institutions, and other scholarly publishers—strive to fulfil our mission of 'making public the fruits of scholarly research' as effectively as possible within that ecosystem. While that mission has remained constant, in recent years the landscape in which we carry out this mission has altered dramatically. From new technologies to new economic conditions to changing relations with stakeholders, the world of scholarly communication in 2011 looks very different than it did a generation ago.

The technological and cultural shifts of the last decade—the transformation from a print-based system of content scarcity and centralization to a digital, decentralized system of content abundance, easy access to expertise, attention as the coin of the realm, handheld connections, and distraction as a big business—not only challenge publishers' business models but may even threaten many of the intellectual characteristics most valued by the scholarly enterprise itself: concentration, analysis, and deep expertise.

In the developing environment of information hyperabundance, scholarship itself may struggle to be heard. For many information consumers, scholarly publications are increasingly distant. Monographs remain largely static objects, isolated from the interconnections of social computing, instead of being vibrant hubs for discussion and engagement. Both for scholarship and for university presses, this is undesirable, but it is also an inevitable consequence of the business model (of self-funding through product sales) that many parent institutions currently expect from their presses.

University presses are enthusiastic to engage with and publish many of the worthwhile but experimental projects that inventive scholars are creating. The editorial, presentational, promotional, and business inventiveness demonstrated in the publishing projects described within this report makes it clear that university presses are wellsprings of expertise ready to engage with the future of scholarship. The expertise residing

within university presses can help the scholarly enterprise prosper in both influence and impact as it moves ever more fully digital.

However, the simple product-sales models of the twentieth century, devised when information was scarce and expensive, are clearly inappropriate for the twenty-first-century scholarly ecosystem. As the report details, new forms of openness, fees, subscriptions, products, and services are being combined to try to build sustainable business models to fund innovative digital scholarly publishing in diverse arenas.

This report's conclusions about sustainable business models for scholarly publishing are, of course, painted with a broad brush. The cultural changes we will see over the next decade no one can accurately predict, and we will be in transition for decades to come.

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Among the report's recommendations are the following:

- Active, structured, open sharing of lessons learned by participants in existing digital publishing projects should be an ongoing process.
- Existing partnerships between presses, libraries, and other scholarly enterprises are vital models for collaboration to learn from and build upon.
- The support of foundations, libraries, and university administrations in providing funds to work toward the digital future has been, and will remain, crucial.
- Open access is a principle to be embraced if publishing costs can be supported by the larger scholarly enterprise. University presses, and non-profit publishers generally, should become fully engaged in these discussions.
- Proposals and plans for new business models should explicitly address the potential impact of the new model on other parts of the press's programs, as well as explicitly addressing the requirements, both operational and financial, for making the transition to a new model.

As a keystone species within the larger academic ecosystem, university presses can imagine themselves to be independent. This task-force report makes clear, however, that during a time of dramatic transition, all members of the relevant scholarly communities—presses, authors, libraries, administrators, scholarly societies, and funding agencies—will need to be enlisted in open-ended and open-minded discussions, to ensure a robust scholarly communication ecosystem in the future.

ENSURING A ROBUST SCHOLARLY ECOSYSTEM

Publishers were essential to the scholarly ecosystem of the pre-Web age. For scholars to see their work disseminated within their scholarly community, it had to be published by a publisher. For some, this pre-Web reality implies that university publishers are no longer required, because the conditions have changed.

For unfiltered, direct dissemination, the Web is without peer—which is its primary strength as well as its weakness. Today we are moving beyond information abundance to information surfeit, a hyperabundance that can be both a wonder and a tremendous distributed inefficiency in wasted time. Raw dissemination is now so easy that anything, and everything, can be 'published' online—made available to Google, and Bing, and that moment's Twitter feed.

For scholarship, dissemination is a precondition for impact, but it is likely insufficient for promoting the long-term significance of a work of quality scholarship. The scholarly enterprise is in it for the long haul, not the next viral hit. As such, the scholarly ecosystem—libraries, universities, scholarly publishers, scholars—needs to ensure that the entire ecosystem remains strong over time, and that scholarship is well served by the systems we construct.

The publisher's role is more complex than mere dissemination. Quality assurance and filtration, presentational enhancement, metadata crafting and maintenance, meeting new market demands, establishing authoritative versions, as well as the continuing tasks of outreach, promotion, impact, and connecting to other scholars and scholarship—these elements are essential to effective scholarly communication. Some are necessary regardless of medium; others are responses to the particular conditions of online publication.

Historically, for university and other scholarly presses, selling books has been simply a means to an end—to publish more and better scholarly

books. Presses further leveraged the print-only business model into a tool for scholarly independence: to provide independence from university administration pressures, independence from the cyclical nature of the marketplace by having many disciplinary eggs in our baskets, and independence from the vagaries of budget cycles within home institutions.

This independence is intertwined with scholarly quality, because it is the press's own investment in a title that is at risk. The financial investment of printing and physical distribution typically comprises about a fifth of the costs; far more is invested in the time of acquiring and developmental editors, copy editors, project managers, proofreaders, and indexers, as well as lights, copiers, office space, and other overhead costs involved in publishing that book. Thus, one of the drivers that ensures quality publishing—and part of what enables publishers to maintain their expertise—is having a financial interest in the success of a publication. Perhaps paradoxically, these financial constraints help ensure quality by raising the stakes for publication. In the print-only environment, virtue and necessity combined to make independent vetting, robust distribution, and financial motivation work together to form an essential part of the scholarly ecosystem.

When financial constraints are removed—when anything and everything *can* be 'published'—different forces come into play. The challenge for the scholarly enterprise is to ensure that the best characteristics of selectivity, enrichment, authority, and imprimatur can be retained in the hyperabundant landscape, where market forces no longer dictate a particular kind of limit.

Below is a list of some of the services that university presses currently provide. Our cultural challenge within academia is to identify what must be retained and to devise models that can support those services, to ensure that the new system of scholarly communications and publishing remains strong.

Selectivity

In an environment of hyperabundance, assured quality will continue to matter, perhaps more than ever; even in a surfeit of content, there can be scarcity of quality. Editorial selection processes (selective acquisition, organized peer review, editorial boards) require both time and expertise. Social-network voting models of any kind (often touted as a replacement

for editorial selection) will naturally be gamed by interested parties. Fame and popularity and the ability to get lots of votes are not a proxy for scholarly merit. How do we ensure that the scholarly cream is able to rise to the top?

Editorial Engagement

Even the best writers can become overwhelmed by their own engagement in a topic. Some of the best scholars may not be the best writers, even if their intellectual work is of the highest calibre. Editorial development can pare, enhance, and focus a work. Interested editorial distance can allow constructive critique in ways that friends and colleagues (and even completely disinterested strangers) may not be able to do. How do we best underwrite editorial participation?

Presentational Expertise

Few authors, institutional repositories, librarians, or graduate students are award-winning typographers, jacket designers, or layout experts. While not every work needs presentational development to shine, the publisher-driven additions are frequently visual icons of substantiality. Rare is the book that is not a visual improvement over a manuscript. How do we fund graphic and typographic expertise?

New Marketplaces

Maintaining a proprietary interest in an intellectual property creates a motivation for eliciting continued promotion into any new marketplaces, new communities, and new intellectual arenas. As a context, an institutional-archive publication from 1999 (which might have had cutting-edge promotion at the time) is functionally invisible in the context of the current e-book market. Without a motivation for paying attention to metadata improvement, for active engagement in this year's NetLibrary, Google Editions, or iBookstore, possible audiences and impact are lost. Every arrangement with a distributor, whether digital or print, requires attention to their requirements, and may require contractual negotiations; any new venue may have different mechanisms for metadata ingestion, cover-image provision, and format constraints. How do we best promote scholarship long after it's fresh, and ensure that every new market is entered?

Metadata Authority and Enhancement

Information about a book goes far beyond simply title and author. ISBNs, CIP data, categorization, multiple versions of descriptive copy (for different purposes), copyright date, rights-holder information about images and tables included within the book, number of pages, and far more must be not only retained but distributed to others with certainty and authority. And, ideally, it is enhanced over time—for example, with review quotes and links to reviews themselves, with new edition information upon republication, and with connections to new related publications. These are the mundane but vital tasks that enable the book to be discovered within the hundreds of thousands of books published every year, year after year. How do we ensure that these vital tasks have a motivation for being performed?

Rights Authority and Licensing

Translation rights, distribution arrangements, excerption permissions, and more require attention and time as well. While Creative Commons–based licences can elide some of this, and one could argue that open access solves it completely, there are some protections from misuse (or resale, or mistranslation, or misrepresentation, or other abuse) that copyright affords, and which many authors and institutions will insist upon. How can we institutionalize these issues?

Non-digital Distribution Arrangements

Printed books will remain a necessary distribution container, for a multitude of reasons: customers in bookstores operate differently than on Amazon or Google Books or on the Web, and authors want their books in every possible venue and format. A large number of readers will prefer bound books out of habit, utility, and training, for at least the next decade, and markets for bound books bundled with digital versions continue to grow. Given these realities, a multiple-venue, multiple-format approach to publishing is required. The time-consuming details of physical distribution and sales are best handled by professionals—especially when digital promotion and dissemination can work hand-in-glove with physical promotion and dissemination. How do we take full advantage of both the print *and* the digital, as the information landscape continues to change?

Multiple Formats

For two decades, we've been 'just around the corner' from a universal format for digital publications. Until we turn that corner, it is likely that market channels will continue to evolve to take advantage of different formats. For example, PDFs are currently not accepted by the iPad (only EPUB files), and that situation is unlikely to change. Google Editions (now Google eBookstore) avoids the issue of PDFs by ingesting into its own proprietary reader, but the Kindle wants its MOBI format just so. Older titles must be upgraded to the best flavour of the next format. Search engines may want blurb copy in easy-to-process HTML, while distributors want their data in ONIX. TEI XML may be best for some purposes and future audiences, while NLM XML may be best for others. Perhaps the most complex problem is setting the level of quality assurance and proofreading that is necessary for every format, since a PDF is a different representation than a reflowable EPUB in an iBookstore, or the same book on a Kindle. How do we build quality assurance, in multiple formats, in a way that will be able to evolve along with the reader, browser, and library systems in the future?

Independence

University presses, while deeply associated with their parent institutions, are able to operate without direct pressures based on academic fads, expectations of colleagues, or obligations imposed by university executives. That independence also means that the publisher can focus on helping develop a limited number of fields, with authors from any university, rather than being a generalized publisher for only one university. When questions of free speech and academic freedom arise, having an independent publisher *not* operating at the behest and budget of the provost is very useful. The ecosystem of scholarship is fostered and nurtured by those independent centres of expertise as well. How do we ensure that editorial independence and objectivity continue to support scholarship?

Imprimatur, Tenure, Promotion, Prestige

Because all of the above requires time, effort, energy, and money, getting a book published by a university press means it has passed through a gauntlet of selectivity: Is this book sufficiently valuable to scholarship

to invest tens of thousands of dollars of effort, as well as risking the prestige of the press, to publish it? That gauntlet distinguishes quality, and is used as a proxy by tenure and promotion committees (as well as by colleagues in the field) for scholarly credentialing.

Ecosystems are not only wild. An apple tree, if left unpruned, just produces more and smaller apples. To get quality apples, pruning is necessary. But neither could the traditional orchard apples of the Old World survive in the Americas without hybridization with hardy wild species, much like traditional scholarship is pushing at new frontiers. New forms of scholarship and scholarly product are now made possible by new technological tools and the online environment, but the system of valuation and credentialing has not yet made them accommodation. How do we support a scholarly ecosystem that allows wild, semi-wild, and nurtured fruit to prosper?

Long-Term Availability

The 'long tail' of scholarship is very long. Any work's overall lifespan impact, its likelihood of existing in the 'marketplace of ideas,' is improved by having a publisher supporting that title. Institutional repositories are fundamentally passive archives, not active promoters of their content. Libraries and universities are ill suited to becoming businesses sponsoring unique publications. Their systems are designed for dealing with hundreds of thousands of things efficiently, not a small number of things maximally. The scholarly community benefits from having a publisher with an incentive to nurture the fruits of scholarship. Currently, that structural incentive is embodied in selling books. How do we build incentives that maintain the best balance, and retain scholarly value for both the immediate and long term?

We welcome engagement by others in addressing the questions posed above. The scholarly ecosystem will evolve, as our interconnected society discovers new ways of being connected, in ways we won't expect. But we can help direct its evolution by engaging with these issues now. Within the scholarly world, we need to help one another find the right balance: balance between openness and selectivity; balance between assured quality and diverse intellectual richness; and finally, balance between sustaining the best fruits of the earlier print-driven ecosystem, and allowing the wild and hybrid new species to flourish.

NEW APPROACHES TO SCHOLARLY PUBLISHING

Scholarly publishers have been adapting to this new world by adopting new technologies in production workflow, marketing, and distribution, and by forming partnerships to increase dissemination of intellectual property and add revenue streams from e-content as print-content revenues plateau or decline. The future of academic publishing is uncertain, but it is clear that for at least the next ten years scholarly communication will be conducted using a variety of media, on an array of platforms, funded from a range of sources, employing a variety of business models.

Traditional models for publishing are under attack from several sources: stagnant sales of print books, growing popularity of e-books, downward pressure on prices from e-book vendors, the movement for open access. The specific challenges are different for book and journal publishing, but the transition from print to digital formats is the primary driver of change. Journal publishing has made a successful transition to the digital age while maintaining its long-standing primary business model—subscription sales to institutions. Digital has replaced print as the primary edition (increasingly the only edition) while at the same time creating opportunities for new revenue streams, such as pay-per-view, single-article sales, and bundling multiple journals in single subscription packages. If anything, journal publishers are becoming victims of their own success, as pressure mounts to shift from a subscription-based model to open access (OA). The OA movement is directed primarily at high-profit commercial publishers, but university presses are caught up in the debates as university and government mandates expand even as it becomes more difficult for university presses to compete with commercial firms in acquiring journals because they lack the advantages of scale.

Book publishing, by contrast, is only beginning the transition from print to digital formats, and that transition is likely to be messier than what we have experienced with journals. The book market is more evenly divided between retail and institutional sales, requiring the development of multiple strategies simultaneously; and widespread resistance to reading long works on screen (despite the recent explosion in the popularity of e-readers) means that publishers must produce and sell print as their primary product even while developing digital editions of the same titles. So far, the market for e-books is primarily in the consumer sector, with fiction and popular non-fiction leading the way, so

pricing is a major issue. The popularity of the Kindle and Amazon's effort to corner the e-book market with its $9.99 base price further contributes to the now widespread notion that e-books should be cheap books. As long as e-books are largely additional revenue for publishers, this is not a major concern, but what happens when e-books supplant print books in a significant way? Will reductions in the cost of printing and distribution be sufficient to make up for lost revenue? This seems unlikely as long as publishers must issue both print and digital editions. Moreover, the rapidly increasing number of e-book options takes up a great deal of publishers' time and resources, even while e-book sales remain a small percentage of the total market.

Open access is not yet a major issue for book publishers, but there is some spillover from the OA debates in journals publishing. University presses are increasingly feeling pressure to experiment with OA books, which creates an additional challenge in thinking about digital publishing strategies: If digital versions of some books are offered on an OA basis, will that close off future opportunities to sell those titles as e-books?

Unlike the case with journals, there is no primary business model emerging for digital books, although most university presses are experimenting with various new approaches to publishing, promoting, and selling their books. Multiple business models will be necessary, not only because print and digital books are likely to coexist for the foreseeable future but also because it is likely that no single business model for e-books will replace the traditional methods of publishing and selling print. In addition, partnerships, always important in university press publishing, are taking on even greater importance, in large part because digital publishing benefits so much more from scale than print publishing. These partnerships may take a variety of forms: groups of presses working together; presses working with a variety of other non-profits, including museums, libraries, scholarly societies, and other research organizations; and presses creating closer alliances with other units within their parent institutions.

New approaches underway at scholarly presses may be broadly categorized as follows:

- Publishing open digital editions of books combined with paid print editions for sale using short-run or print-on-demand (POD) methods
- Publishing primarily via open access

- Issuing e-books for sale, either singly or in collections
- Experimenting with digital publishing projects that do not fit into the standard book and journal formats

Of course, many presses also publish journals in both online and print formats, a practice that is better established than digital publication in the book realm but has its own set of challenges, especially in the face of increased competition from commercial publishers.

Publishing Open Digital Plus Paid Print Editions

Many of the university presses we surveyed are making some of their backlist titles available openly online with print editions for sale, and others are planning to move in this direction. In most cases, the online editions are hosted by the campus library, while print editions are produced using short-run or POD technologies. The primary goal of these projects is to test the theory that online publication serves as a form of marketing, especially for older titles that have largely disappeared from view. In some cases, presses are reissuing books that have been out of print. Early experiments with free-online-plus-print publication suggested that making books available free online does not reduce print sales and may indeed increase sales, though further experience has indicated that this is affected by many factors of both content and format (see below for a related discussion of the National Academies Press model.) Sceptical publishers concerned about losing sales are more willing to experiment with online OA when the books involved are older volumes. Most of these projects also aim to provide a community service and/or to contribute to parent institutions' OA goals. Examples include the following:

- University of Michigan Press has a growing body of its work available for free viewing worldwide in HathiTrust (about 800 titles currently). The backlist collection is paired with a policy of making all new titles available for free viewing online as close as possible to the time of print publication. In addition, almost all titles are available in digital editions for sale through various e-book vendors, and can be ordered directly from a digital shopping cart on the press's Web site: http://www.press.umich.edu/ebooks/.
- University of California Press makes about 2000 titles online available through the California Digital Library (CDL):

http://www.cdlib.org/services/publishing/ucpress_ebooks.html.
About 500 titles (most of them out of print) are fully OA, while the
balance is open to the University of California community only.
California is extending its OA program through an arrangement
with Google, which has scanned about 2000 of the press's out-of-
print titles; they are available through Google Editions. Titles with
significant online usage will be brought back into print using POD.
There are no immediate plans to provide new titles on an OA basis,
however.

- University of Pittsburgh Press has most of its backlist (more than
  500 titles) available through its Prologue Books program, also hosted
  by the university's library: http://digital.library.pitt.edu/p/pittpress/.
  New titles will be added to the digital collection with the intro-
  duction and one chapter available initially; full text will be made
  available after two to five years, depending on the title.
- Indiana University Press has made about 400 titles available to
  the University community through the IU Library:
  http://www.iupress.indiana.edu/catalog/information.php?
  info_id=129&meid=129.
- University of Florida Press makes all titles published prior to 2006
  available through Florida's state-wide institutional repository, the
  Orange Grove: http://www.theorangegrove.org/.

In an experiment focusing on textbooks rather than scholarly mono-
graphs, the University of Florida Press and the Orange Grove, Florida's
digital repository, have collected all OA textbooks available through any
source—whether the Orange Grove or other repositories—that are used
in Florida university courses. This program, motivated primarily by con-
cern about the high cost of textbooks for students, offers POD editions
of the online texts at prices that are typically 40 to 50 per cent of those
available through other market channels. Student purchases of the print
books are currently funding the program, but the plan is to shift this to a
'tech fee' paid by the universities involved (which will require an action
by the state legislature). For new works, the press offers editorial and
peer-review services for books that will go OA in Orange Grove after
five years.

Many other presses are offering smaller collections of titles available
online. These include the following:

- New York University Press, in collaboration with the NYU Libraries, launched a collection of 125 backlist titles in fall 2010, with more titles to be added each year.
- University of Georgia Press offers fifty backlist titles in Georgia history: http://www.ugapress.org/index.php/books/ebooks.
- Fordham University Press makes backlist titles by Fordham faculty available, and plans to expand the program to non-Fordham authors.
- Texas A&M University Press offers all titles published to date in the field of analytical psychology: http://www.tamupress.com/pages/series_description.aspx
- Metalmark Books is an imprint launched by Penn State University Press and University Libraries to re-publish older books: http://www.psupress.org/metalmark.html.
- Purdue University Press's e-Pubs program offers selected book titles as well as several journals: http://docs.lib.purdue.edu/thepress/.
- University of South Carolina Press's AccessAble Books program offers titles selected from the university libraries' special collections: http://www.sc.edu/uscpress/books/accessablebooks/accessable.html
- MIT Press publishes a small number of individual titles in open digital editions, usually when subsidy is available.
- Focusing on the possibilities of online OA publishing for expanding scholarly communication in the developing world, the Society for Biblical Literature (SBL) has created the International Cooperation Initiative, which makes selected books available to anyone with an IP address in developing countries: http://www.sbl-site.org/publications/onlinebooks.aspx.

In most cases, university libraries provide hosting services to the presses at no charge to the presses; in some cases, the libraries have also digitized the books. Without this level of institutional support, these programs would not be possible. Adding future titles is made more practical because all book production is now handled digitally, and retaining digital files post-production is standard practice. A much larger issue is the concern about losing print (or, increasingly, e-book) revenue if books are made available openly online; hence most university presses have been reluctant to experiment with OA publication for new titles. This is beginning to change, however, particularly in the case of very specialized scholarly titles.

A handful of university presses, in collaboration with their libraries, are experimenting with the 'online free plus POD for sale' model for specialized series of books. For example,

- Romance Studies at Penn State University Press: http://www.psupress.org/books/series/book_SeriesNewRomStu.html
- Signale, a series in modern German studies, at Cornell University Press: http://signale.cornell.edu
- FlashPoints, a series in literary studies, as well as several series supported by the UCPubS program (see below for more information) at University of California Press: http://www.escholarship.org/uc/ucpress_flashpoints
- digitalculturebooks at University of Michigan Press: http://www.digitalculture.org/
- Select new titles at the University Press of New England in collaboration with the Dartmouth College Library

The reasons for using this model for specialized scholarly work vary among individual presses, but they include the potential value of online publication as a marketing tool and better inventory management through short-run and POD methods. Underlying these experiments is the view that specialized monographs have such a limited and inelastic market that little is lost by publishing them on an OA basis, while much is gained in expanding access to scholarship and gaining goodwill within the academic community.

However, while this model may be effective in reducing the costs of publication, it seems unlikely, based on experience so far, that POD sales will be sufficient to sustain the full costs of publication. Initial experiments in publishing books online free while selling print editions—whether new titles or backlist—indicate that online editions receive substantial usage, but print sales remain limited.[1] In addition, among publishers engaged in these projects, there is significant concern that print sales will erode even further as readers become more comfortable with reading online and libraries feel less compelled to buy print editions for archival purposes. The online free / print for sale model thus seems likely to be a transitional strategy.

The limited revenue realized from print sales of books available online free is of little concern when the books involved are older backlist

titles. Indeed, when applied to out-of-print titles, this strategy can provide a welcome new revenue stream. Presses publishing *new* titles using this model, however, must rely on a mix of revenue sources, typically including institutional support.

Open Access as the Primary Model of Publication

A small group of scholarly publishers have adopted online OA publication as their primary model, usually with print editions offered for sale. Print sales help support overall publication costs, but institutional support is a significant part of the business model for these publishers. These publishers include (1) recently established university presses launched as primarily digital, OA enterprises; (2) two publishers associated with major research enterprises, the National Academies and the RAND Corporation; and (3) a consortium of European university presses experimenting with OA publishing on a significant scale.[2]

University presses that have adopted this model include Rice, Athabasca, and the Australian National University E-Press. Rice, which offered its authors a way to use a range of multimedia—audio files, hyperlinks, and moving images—to craft dynamic scholarly arguments, used the open-source e-publishing platform Connexions. However, Rice University withdrew funding for the press in September 2010, although the university has indicated that it will continue to support Connexions. Among the reasons cited were the fact that print sales did not live up to expectations and therefore greater institutional support would be required.[3]

Operating on a much larger scale, the National Academies Press (NAP) and the RAND Corporation make all of their publications openly available. Their financial sustainability models—combining publishing income, chargeback institutional services, and some direct support (offices, payroll services, IT infrastructure)—are useful to sketch out as a contrast to most university presses' current business models.

The National Academies Press publishes about 180 books a year from the National Academy of Sciences, the Institute of Medicine, the National Academy of Engineering, and the National Research Council, collectively known as the National Academies.

The National Academies rely primarily on experts who volunteer to participate in developing reports on substantial questions asked by Congress, federal or state agencies, or non-governmental entities such as

foundations. Funds for travel, lodging, internal staff support, and over-head costs are provided when a study is requested. The internal review process is robust, but external to the press. Consequently, NAP's editorial acquisition costs are non-existent, though editorial services such as index-ing, copy-editing, and art acquisition remain, along with other publishing functions such as project management, design, composition, marketing, Web-site development, finance, printing, and distribution.

Since 1994, NAP has made every page of every new book readable free online on its Web site, while selling printed books through both tradi-tional outlets and online. Since that time, it has run its own servers and Web site, developed its own digital production and page-presentation infrastructure, and built its own discovery tools.

NAP has carefully studied and shared the results of different online digital strategies for offering online content: in different formats (HTML and PDF), unbundled into chapter PDFs, and at a range of price points.[4] A key discovery was that the availability of HTML versions did not erode print sales, but that free PDFs can. In 2003, NAP began selling PDFs on its site, while at the same time making those PDFs available for free download to developing countries. In 2004, it began making PDFs of special-interest, low-audience reports—about half of its titles—available free to everyone.

About 30 per cent of NAP's sales come through its online site; sales of digital versions (PDFs) accounted for less than 10 per cent of overall sales in 2009–10. There were 500,000 PDFs downloaded for free in 2009. In 2010, NAP had more than 4500 titles available on its site.

NAP's long experiment in openness has made a few lessons clear, according to NAP director Barbara Kline Pope: 'We're in perpetual tran-sition. As reading habits and expectations change among our customers and our leadership, we've had to adapt our online reading experience, our staffing, essentially all of our approaches to fulfilling the main missions of self-sustainability and dissemination.' Prior to 2004, NAP could make the case that OA increased sales, because it enabled reader discovery far more than it supplanted purchases. 'Since then, it's become increasingly clear that free content can compete with book sales,' Pope continues. 'For us, that hasn't meant "quit being open," but rather "find ways to improve efficiencies and increase the universe of people who find us, to remain open while also being sustainable."'

NAP uses a combination of chargeback mechanisms to support the small-audience, highly technical reports that are made free in PDF to anyone. So, for about half of the books published, preprinting costs are covered by direct contracts within the institution. The other half follow a standard publishing model, with publishing costs invested by NAP and supported by sales. While not yet requiring direct subvention, NAP does receive support for Web-site IT and executive compensation from its host institution. In addition, NAP historically has had the benefit of knowing that, if necessary, the institution would cover some annual deficits.

By providing valuable marketing, promotion, and dissemination services to its institution by way of about 16 million Web site visitors a year to its books, NAP has been given freedom to innovate. As Michael Jensen, then director of publishing technologies, has said, 'Part of our service to the institution is to give its reports Internet authority that is equal to the institution's long-standing scientific authority.'[5]

The RAND Corporation, a non-profit public-policy research organization, publishes approximately 250 monographs, reports, and papers a year. RAND research is supported by a global clientele that includes government agencies, foundations, and private-sector firms. In addition, philanthropic contributions, combined with earnings from RAND's endowment, support innovative research on issues that are crucial to the policy debate but reach beyond the boundaries of traditional client funding.

Peer review and quality oversight are undertaken via external review, for which an honorarium is paid, as well as internal review by research staff expert in the field and by program managers. RAND publishes only the results of research conducted through the corporation. Editorial services such as indexing, copy-editing, and proofreading, along with other publishing functions such as project management, design, and initial printing and distribution, are paid for by project funds, by the business units, or through discretionary corporate funds.

Publication of RAND research is managed by the Publications and Creative Services department. The department operates as a cost centre and charges a blended hourly rate back to the projects, which includes the costs for labour (including fringe and computing costs), occupancy, and general and administrative expense. In addition, the department has

a small overhead budget that funds minimal marketing efforts to pro-
mote major new research, to coordinate sales through a distributor, and
to convert key titles to various e-book formats for sale through more
than a dozen different vendors. Ongoing printing and distribution costs
are also covered with overhead funds and offset by sales revenue.

RAND disseminates its research findings as widely as possible as part
of its public service mission. Since 1998, all new publicly available docu-
ments are automatically published as free PDF downloads on the RAND
Web site. Hard copies of the documents can also be purchased from the
RAND site, as well as a number of other traditional outlets. As a result
of a recent effort to post legacy documents to the site, there are now
approximately 10,000 reports available as free PDFs via the RAND Web
site.

The RAND Web site is managed by the corporate IT department, in
conjunction with the Office of External Affairs' Web communications
group. The RAND publishing program's focus is to maximize impact,
rather than focusing on sales revenue and self-sustainability. In 2009,
RAND made a decision to price all e-books at $9.95. 'The ongoing cost
of selling e-books is much lower [in RAND's publishing model] than
managing print, warehousing, and fulfilment, and we are passing this
savings along,' says Jane Ryan, director of publishing and creative services.
In FY09, RAND sold 59,000 printed documents through various channels,
but, more importantly for the corporation's mission, there were 4.2
million downloads of its PDFs.[6]

RAND has seen a decline in demand for printed products over the past
two years as the number of downloads continues to escalate. Ryan says,
'There has been an increased demand for e-books through our distribu-
tion partners, and that is where we are currently focusing our marketing
efforts.' Readability on e-readers and smart phones is an important issue,
especially given the complex nature of RAND publications, which often
include complex tables, figures, and math.

Different Models, Similar Goals
RAND and NAP's approach is sometimes called 'mission-driven pub-
lishing,' but it has drivers somewhat different from the 'mission-driven
publishing' of university presses, as discussed in the ITHAKA report
'University Publishing in a Digital Age,' released in 2007.[7]

NAP operates as a predominantly independent publisher, and is expected by its parent institution to operate on a revenue-neutral basis through sales, chargebacks, and fees. RAND does not expect to recoup pre-press publication costs through sales. Both are expected to provide the mission-critical benefit of broad dissemination.

The costs of peer review found in most university presses are absent from NAP's budget — peer review is conducted by a separate division at the National Academies, while RAND pays external reviewers a nominal fee and internal review is overseen by a cross-functional team of experts. Both organizations can be assured of the quality and accuracy of their publications through this institutional review process. Unlike most university presses, they are unable to focus acquisition, marketing, and promotion to a few selected areas of strength; they are required to publish all that is produced, without thought of market demand; and they are encouraged by their institutions and authors to be as open as possible.

NAP and RAND's approaches to outreach and dissemination can be instructive, but because their publications all derive from their parent institutions, they have a different role within those institutions than the traditional university press, and operate in a different financial environment. For market success, university presses build lists in specific scholarly arenas, and rarely publish more than 10 per cent of their authors from within their own institutions.

Both NAP and RAND also have the benefit of significant institutional stature. As presses, they do not confer authority via selection and publication; rather, they publish works of known authoritative quality. This difference from university presses is not minor — neither RAND nor NAP is at risk of seeming to diminish the significance of the publication by making it 'free online.'

Neither NAP nor RAND pays royalties to their authors. For university presses, royalties are a relatively small proportion of overall costs that can loom large in terms of the concerns of their authors. NAP and RAND's authors, and institutions, want dissemination, influence, and impact; their authors are jockeying neither for tenure nor for windfall royalties.

RAND's publishing department and the NAP have significantly different tactical drivers, yet they have similar strategic objectives. They both use open content as a means of achieving the primary objectives of maximal dissemination, substantial impact, and significant influence.

Their sustainability is primarily associated with their success in meeting their mission goals.

University presses, while pressed to make their content more open, have a different set of challenges surrounding sustainability and openness. Their editorial programs are very different, with greater emphasis on the humanities and social sciences (HSS), resulting in significant implications for editorial and marketing costs as well as sources of revenue. University presses draw their authors from a broader universe and must often compete with other publishers for content. Their authors usually expect royalties, production values, and marketing that add significantly to the costs of publication. University presses' lists typically do not attract sales from government and corporations to any significant extent, but instead depend on sales to consumers (a volatile market) and institutions (a shrinking market). Perhaps most significantly, they are not so closely linked to their parent institutions as are NAP and RAND, because they focus their publishing programs on specific fields rather than on work produced within their home institutions. This fact, plus the historic pattern of relying primarily on sales to support publishing costs, has meant that university presses typically receive little or no direct support from their home institutions. University presses that aim to make a significant proportion, if not all, of their publications available on an OA basis face a particular challenge, given that they, like university presses generally, base their publishing on excellence in certain fields rather than on a tight institutional connection.

A new experiment in OA publishing, Open Access Publishing in European Networks (OAPEN), seeks to develop a new model for the OA university press by supporting publication through a combination of publication fees, grant support, and institutional support. Based at Amsterdam University Press, OAPEN (http://www.oapen.org) has offered monographs in the humanities and social sciences as of fall 2010. The consortium includes eight other European presses and has received start-up funding from the European Union. OAPEN plans to launch the OAPEN Library with about 750 titles, primarily backlist but also including some new books, increasing to about 1300 titles by mid-2011. Thereafter, the goal is to issue another 400 to 1000 titles annually. Individual publishers within the consortium will make their own policy decisions about the number and type of titles to be included. Amsterdam intends to publish most new titles in the collection, regardless of funding; exceptions will be

heavily illustrated books, texts, reference, and trade books. Several other publishers expect to follow a similar policy, while others will include books only if a publication fee is provided.

The OAPEN publication model is being promoted through several pilot projects in different European countries. In the Netherlands, a pilot program including fifty books will be published over the next two years, with funding from the Dutch national research council. A similar pilot in the United Kingdom will be managed by the Joint Information Systems Committee (JISC).[8]

The plan to support OAPEN through a mix of revenue sources is one of its key features, as is the effort to introduce publication fees as one of those sources. Publication fees—often called 'author fees,' although they are typically paid not by authors themselves but by research grants or other institutional funds—are emerging as an important model for funding OA STM journals; but the model has yet to be tried for books, or, indeed, for any type of publication in the humanities. Obstacles to instituting publication fees in HSS publications have been both cultural and financial. Since there is no tradition of fee-based publication, scholars tend to equate the model with vanity publishing. They do not enjoy the level of grant funding typical in the sciences, where research grants often cover publication fees. The cost of publishing humanistic scholarship is a further barrier. A recent report commissioned by the National Humanities Alliance, which analysed the costs of publishing flagship journals for eight scholarly societies in the humanities and social sciences, found that the per-article cost for these journals is significantly higher than for the typical STM journal, partly because articles are typically longer but also because of the high submission rates and overhead involved in processing them.[9]

Publishing e-Books for Sale

Within the past two years, most university presses have begun selling their books in electronic editions, primarily through third-party vendors. These arrangements fall into two categories: stand-alone e-books sold as individual titles, primarily into the retail market; and collections of titles sold as packages, primarily to institutions. Amazon's Kindle editions dominate the first category, which also includes many smaller vendors in the United States and abroad. The recent introduction of Apple's iPad and the forthcoming launch of Google Editions are likely to change

and expand this market considerably. The second category includes both general collections, such as those offered by NetLibrary, ebrary, and Questia, and subject-specific collections such as the ACLS Humanities E-book Project and the collections offered by Alexander Street Press. In addition, library wholesalers are now offering e-books to their customers.

The advantages to university presses of working with outside vendors are evident. Working with e-book retailers replicates the familiar business model for selling print books, where the vast majority of sales are through third parties rather than direct to consumers. The biggest challenge in making the leap to e-book sales, beyond evaluating and negotiating agreements with the ever-expanding group of players, is developing systems for file creation and transmittal to those vendors, each of which has somewhat different requirements. A growing number of presses are solving this problem by working with yet a different set of vendors, who are developing the business of digital archiving.

Mimicking the print world in selling e-books is only part of the larger picture, however, as e-books lend themselves to new forms of distribution: selling collections of titles, breaking down the concept of the 'book' in favour of packaging 'content,' and selling access to collections rather than individual downloads. Here, too, university presses have found it necessary to work through third parties, for two main reasons: as relatively small operations, individual presses have limited capacity to invest in new business ventures, and few control enough content, even in specific fields, to create marketable collections on their own. Oxford University Press is a notable exception, having pioneered the concept of digital collections of books in specific subject areas with its program Oxford Scholarship Online (http://www.oxfordscholarship.com/oso/public/index.html). The e-Duke Books Scholarly Collection from Duke University Press is another exception: it uses the ebrary platform for hosting but is sold as a separate package of nearly all of Duke's current titles (http://www.dukeupress.edu/Libraries/collectionDetail.php?collectionid=2).

The financial downside to selling individual e-books—consumer expectations for lower prices—has already been noted. In addition, if libraries begin to purchase e-books instead of print—and there are indications that this is already happening—there might well be further erosion of revenue. Libraries may be willing to pay print prices for e-books, but they may purchase only a single copy where they might formerly have purchased multiple copies. In addition, easy use of e-books in libraries

might discourage both faculty and students from purchasing their own copies. Selling e-books, or e-content, in collections presents its own set of financial challenges. The financial terms for these collections are structured in myriad ways, but in general publishers receive very modest returns, because their titles are grouped with those of so many others. As a consequence, university presses are beginning to look for alternatives for selling e-books, especially to institutions.

Four projects deserve mention, not least because they represent non-profit alternatives to commercial business ventures: a university press e-books consortium under development by the presses of New York University, Rutgers, Pennsylvania, Temple, Nebraska, and Minnesota; Project MUSE, a digital journals collection managed by the Johns Hopkins University Press, which is now planning to add books; an extension of Oxford University Press's Oxford Scholarship Online to include additional publishers; and JSTOR, which is planning to add e-books to its content collections.

- The university press consortium began in June 2009 with a research and feasibility grant from the Andrew W. Mellon Foundation to study whether it would make sense for a much larger group of presses to combine their efforts to sell e-books to academic libraries, with an eye toward eventually expanding the enterprise to include sales to faculty and students. The four presses presented the results of their research and a business feasibility study at the 2010 Association of American University Presses (AAUP) meeting, the latter outlining a possible scenario that would not only replace lost print sales to libraries but offer some degree of insurance against possible cannibalization of course-adoption sales. The presses currently expect to launch the initiative with as many presses as possible in fall 2011.
- Project MUSE, operated by the Johns Hopkins University Press, provides full-text access to online journals content from more than 440 titles representing nearly 110 non-profit publishers. In response to the needs of these publishers and library customers, Project MUSE is developing an e-book distribution service that will expand access to and discoverability of book-length scholarship and will provide a mechanism for publishers to distribute e-books. Project MUSE and JHU Press staff conducted library customer research,

technology research, and a feasibility analysis in 2009–10. Project MUSE expects to launch an initial collection of frontlist e-book titles in 2011. Eighteen publisher partners have confirmed participation in the Project MUSE Editions program.

- Oxford Scholarship Online will expand into University Press Scholarship Online (UPSO) in spring 2011 with the addition of content from other university presses. This new portal for monographic content will allow presses to retain their individual branding and searchability within the press, while also allowing users to search across the entire database. The UPSO platform will include both backlist and frontlist content from partner presses, all in XML format.

- JSTOR plans to build on a new platform set to launch in 2011, which will serve publishers selling their current journal online subscriptions alongside JSTOR's traditional archival collections, with a common navigation and search capability. Four university presses (Chicago, California, Illinois, and Indiana) are among the publishers participating in the initial launch of the new journals platform. Chicago, California, Harvard, Yale, Princeton, MIT, Minnesota, and North Carolina are the pilot presses for the books project.

NEW FORMATS — BEYOND BOOKS AND JOURNALS

Many of the examples cited thus far in this report illustrate the ways in which university presses have converted print editions to e-books and are developing new models for their distribution. An even bigger challenge for university presses is how to publish scholarship that does not fit into the standard book and journal formats. Scholars are increasingly using digital technologies to conduct, organize, and display their research; but methods of disseminating and preserving such work are only beginning to emerge.

More than fifty university press projects are experimenting with publication methods that would take advantage of the full range of features made possible by digital technology. These new forms of scholarship include reference works, encyclopaedias, atlases, and digital critical editions; multimedia projects that draw on the talents of faculty from different fields; and new online communities where faculty can find the latest research and seek rapid, well-informed responses to work in progress. AAUP recently conducted a survey of digital publishing projects in an

effort to keep track of developments and provide a mechanism for exchange of information about new publication methods; the list of projects is available online at http://www.aaupnet.org/resources/electronic.html.

These projects seek to combine the traditional academic values of rigorous peer review and intellectual excellence with a commitment to innovative digital forms of expression. Often they involve partnerships with other university departments and outside entities, including foundations. Many have been made available on an OA basis, but funding is a perpetual issue. For the most part, they have been financed with university appropriations and foundation grants, usually with the expectation that they would become self-sustaining over time. Some have succeeded in this goal, either through a subscription model or via a combination of revenue sources. Notable examples include the following:

- Columbia International Affairs Online (CIAO), one of the earliest digital publishing ventures, was launched in 1991 by Columbia University Press in collaboration with the university's library and academic computing department. It publishes a wide range of scholarship in international relations, including working papers from university research institutes, occasional papers series from NGOs, foundation-funded research projects, proceedings from conferences, books, journals, and policy briefs. CIAO is supported by subscriptions, a model that appears to be successful for digital collections focused in specific fields and providing annual updates (http://www.ciaonet.org/). Other examples include MIT Press's CogNet (http://cognet.mit.edu/) and several collections in the humanities and social sciences published by Alexander Street Press, a for-profit scholarly publisher (http://alexanderstreet.com).
- Project Euclid is an online environment for the distribution of peer-reviewed literature in mathematics and statistics, sponsored jointly by Duke University Press and Cornell University Library (http://projecteuclid.org/). The project features searchable PDF article files, COUNTER 3- and SUSHI-compliant usage statistics, interoperability through the Open Archives Initiative, and full-text searches across the entire collection. It is funded by a combination of hosting fees for a set of math and statistics journals (for which electronic access is sold by their originating publishers) and sales of

an aggregation of another set of journals (for which electronic access is not sold in any other way). The aggregation income is shared between the publishers, and some goes to Project Euclid.

- Rotunda, the newest of these examples, is the electronic imprint of the University of Virginia Press (http://rotunda.upress.virginia.edu/). Initially funded by the Andrew W. Mellon Foundation and the University of Virginia, it launched in 2004 with publication of the born-digital Dolley Madison Digital Edition. Rotunda's American Founding Era collection now also includes digitized editions of the multi-volume *Papers of George Washington*, the *Adams Papers*, the *Papers of Thomas Jefferson*, the *Papers of James Madison*, and the *Documentary History of the Ratification of the Constitution and Bill of Rights*. Future publications will include digitized editions of the papers of Alexander Hamilton, Andrew Jackson, John Jay, John Marshall, and others. Rotunda also is creating subject collections in Nineteenth-Century Literature and Culture and the American Century. Rotunda publications are licensed to libraries, schools, and individuals, with pricing tiers based on Carnegie classifications. Because sales revenues do not cover the full costs of the program, however, Rotunda is developing an economic model of sustainability that will involve several sources of financing, including licensed publications; services provided by Rotunda's consulting arm, Oculus; and grant support for specific projects. As a result of the work Rotunda has already accomplished, in October 2010 the National Historical Publications and Records Commission, the grant-making arm of the National Archives, announced an agreement with the University of Virginia Press through which the press will receive a $2 million award to create *The Founders Online*, a public-access resource containing all the published papers of six founders—Washington, Adams, Jefferson, Madison, Hamilton, and Franklin.[10]

In addition to covering the costs of developing programs such as the Rotunda collections, publishers must budget for the costs associated with the new responsibilities of maintaining a digital publishing program. Andrew Jewell raised this point in a review published in *Resources for American Literary Study*:

> The potential vulnerability of digital projects, combined with the evolving nature of technology, means that the publishers of digital scholarship (in this case, the University of Virginia Press), must consider not only production, distribution, marketing, and all of the traditional services associated with print publication, but also a particularly intensive kind of stewardship. Unlike print publications, which after production are a relatively stable material reality, digital publications will require continuous updating, maintenance, and migration to new systems.[11]

Penelope Kaiserlian, Director of the University of Virginia Press, notes,

> In the end it is this perpetual stewardship that is the challenge of digital publishing. We see that the digital editions cannot be static, that they will need to have new material added, that they will need to migrate to new formats, and that they need to be safely preserved. We are committed to keeping up publication of the Founding Fathers' Papers in the digital editions and adding new volumes until they are completed. We will continue to seek ways to support this activity and to sustain Rotunda as a viable publishing outlet in several areas of the humanities.[12]

The Importance of Collaboration

University presses have long collaborated in a variety of ways: among themselves for business functions such as book distribution; with foreign publishers, museums, and other cultural institutions for co-publishing; and increasingly with libraries and other groups within their own universities, often for digital publishing projects. In addition, as already noted, presses outsource a variety of functions to commercial vendors, a practice long common in book and journal production, and now extending to technology functions as well. Such collaborations are good business practice, allowing presses to focus on what they do best while looking to partners for functions that lie outside presses' core competencies. Partnerships are also important for functions that benefit from economies of scale, such as warehousing and distribution. In an increasingly digital world, collaboration has become even more important because of the specialized skills required, the rapid pace of technological change, the level of investment required in technical systems, and advantages of scale.

Distribution systems continue to be the major area of collaboration, primarily for print, but increasingly for digital publications as well. Harvard, Yale, and MIT are partners in a distribution company, as are Princeton and the University of California. The University of Chicago, Johns Hopkins, Columbia, Cornell, University of North Carolina, and Texas A&M Presses all distribute smaller university and other non-profit presses. Chicago now offers digital archiving services in addition to print distribution, through BiblioVault. While not itself a hosting platform, BiblioVault maintains digital files for clients and converts them to the multiple formats required by commercial e-book vendors.

A number of other presses have partnered with their campus libraries to host their digital books, as detailed above. These press–library partnerships are all limited to OA publishing, however. Libraries are committed to OA as part of their mission, and digital library systems, for the most part, do not accommodate the kind of business systems necessary to sell content (although most can restrict access to a particular group, and Michigan's MPublishing program has the capacity to sell print editions of titles in its collections). A notable exception is Johns Hopkins, where Project MUSE began in 1993 as a joint project of the press and the library. Supported initially by grants from the Mellon Foundation and the National Endowment for the Humanities, MUSE began as a project to publish JHU Press journals online in 1995. Beginning in 2000, MUSE expanded into a hosting platform that now offers titles for more than 100 publishers. What started as a press–library experiment is now a business operated by the press with the ongoing assistance of the library. It has been self-supporting for over ten years.

As presses move more extensively into selling digital books and potentially other forms of content, they are likely to establish partnerships with commercial vendors, or large, well-established non-profits like MUSE and JSTOR, to host their content. This is a long-established practice among university presses publishing journals.

Editorial collaboration traditionally has involved either partnerships between two publishers to split sales territories for a given title or partnerships between a museum, research institute, or other institution and a press, in which the non-publishing institution creates the content and the press produces, markets, and sells the resulting books. Such arrangements are ways for presses to acquire books that would otherwise not be available to them and for the partner organization to gain access to

services and/or markets outside their normal scope of business. More recently, some university presses have begun working with other cultural institutions in their regions to develop and publish content in new ways; notable examples include a series of online state encyclopaedias such as the *New Georgia Encyclopedia* (http://www.georgiaencyclopedia.org), a joint project of the University of Georgia Press, Georgia Humanities Council, the University System of Georgia/GALILEO, and the Office of the Governor. Several other states and regions are working on similar projects, usually involving partnerships among presses, libraries, and other cultural institutions. These include encyclopaedias of New Jersey, Greater Philadelphia, Cleveland, Chicago, the Midwest, Tennessee, Appalachia, North Carolina, the South, New York City, New York State, and New England.[13]

Recent examples of intra-university collaboration include Quadrant at the University of Minnesota (http://www.ias.umn.edu/quadrant.php) and Publishing the Long Civil Rights Movement at the University of North Carolina (https://lcrm.lib.unc.edu/blog), both launched with grants from the Mellon Foundation. In both cases, presses are working with research centres on their campuses to develop and publish work in fields that are particular academic strengths for the universities. Quadrant, which joins the University of Minnesota Press with the university's Institute for Advanced Study, is designed to develop the press's publishing program in four areas of academic emphasis at the university and to engage the press directly in the intellectual life of its parent institution. The project brings prospective authors to campus for term-length research fellowships and shorter week-length visits, during which they present, discuss, and workshop their works in progress with Minnesota faculty.

Publishing the Long Civil Rights Movement, a collaboration between UNC Press, the UNC–Chapel Hill Library, the Center for Civil Rights, and the Southern Oral History Program at the Center for the Study of the American South, plans to publish in both print and digital formats, with the library hosting digital content. The UNC project also has as one of its goals developing new business models for disseminating content. These projects bring the particular strengths of different parts of the university to bear on disseminating research in areas of importance to the university, in a manner that is more highly focused and coordinated than would be the case if each unit were working separately.

In a different type of project, University of California Press and California Digital Library (CDL) jointly launched UC Publishing Services (UCPubS) in 2008 to offer online hosting of OA content, POD, marketing, and print sales and distribution services to small publishing programs maintained by research units throughout the ten campuses of the UC system (http://www.ucpress.edu/partners.php?p=ucpubs). Editorial development and file creation is managed and supported financially by the individual publishing programs (in some cases, with consultation from the press.) Online hosting by the CDL is provided at no charge, consistent with the CDL's mission (and university funding). Revenue from print sales is shared between the publishing unit and UC Press. This program is financially self-supporting based on a mix of institutional support and print sales; that reliance on print raises the issue of the future sustainability of the program. Harvard University Press offers similar printing, sales, and distribution services to campus-based clients at Harvard and elsewhere.

All of these initiatives are part of a broader direction in university press publishing, which emphasizes a closer alignment between press and parent institution. This approach was identified and recommended as a direction for university presses in the 2007 ITHAKA report.[14]

Collaboration across presses—rather than within a single university—for editorial purposes has been much less common. While the advantages of collaboration on business functions has been evident for decades, editorial partnerships are more difficult, because there are few if any economies of scale in editorial work and because university presses do have their competitive rivalries, if not on the scale of commercial publishers. Recently, however, some presses have undertaken experiments in editorial collaboration, spurred by a program sponsored by the Mellon Foundation. Notable among these experiments are the Archaeology of the Americas Digital Monograph Initiative (AADMI), based at the University Press of Colorado, and Ethnomusicology Multimedia (EM), based at Indiana University. Both projects move beyond publication of traditional monographs to include a variety of media, in fields where the dissemination of scholarship benefits enormously from such multimedia presentation.

Led by the University Press of Colorado, AADMI, which also includes the presses at Texas A&M and at the Universities of Alabama, Arizona, Florida, and Utah, intends to develop and publish a new generation of

enhanced monographs that will incorporate multimedia data sets that support the underlying scholarly analyses and interpretation and are made possible by digital publication (http://www.archaeologyoftheamericas.com). These enhancements may include data tables, dynamic links to databases, digital still and moving image files (such as colour GIS maps, 3D laser scans, rotatable objects, and video clips), and supplementary text. Publications will be delivered digitally in a platform-agnostic format that permits, within reasonable limits, the search, display, updating, analysis, and downloading of digital monographs and their associated multimedia data sets. In order to achieve platform independence, the presses are working to create a shared, XML-first workflow that will incorporate the appropriate digital enhancements and can be repurposed for publication through multiple consumer channels (e.g., print, online, Kindle, iPad, PDF).

In addition to funding first books in ethnomusicology, a key component of the EM collaborative is the implementation of a Web site for audiovisual material that complements or illustrates traditional monographs. An alliance of the university presses at Indiana, Kent State, and Temple, EM will include a Web portal where peer-reviewed audio, video, and static image content may be uploaded and annotated by authors and publishers and then moved to a publicly accessible Web site. The three presses are working with Indiana University's Ethnographic Video for Instruction and Analysis Digital Archive (EVIADA) to construct the site and take it live by late 2011 (http://www.eviada.org). Using tools developed in the construction of its archive, EVIADA is building an annotators' workbench online (AWB) where authors can upload audio or video content for editing and annotation and key the content to corresponding references in the text. At this writing, the AWB is being use-tested by ethnomusicologists for feedback and modification with the goal of making the addition and annotation of material an intuitive process.

EM's public site will include bibliographic data with thumbnails of books and multimedia content keyed to specific titles and labelled by corresponding page references. 'Buy book' buttons will link users to each publisher's e-commerce site. By the time the Mellon implementation grant ends in 2015, the EM collaborative expects to add content from both Mellon-funded and non-Mellon-funded ethnomusicology publications and will invite publishers outside the initial three presses to add their titles and audiovisual content for a modest hosting fee or through a revenue-sharing arrangement. While e-book editions are not

a goal of the current project, the presses have discussed including e-books on the EM site, and Indiana University's commitment to mass storage will enable EM to persist indefinitely as an online resource. By expanding EM to be the 'go to' place for published ethnomusicology research, as well as possibly adding content in related fields such as ethnic studies, musicology, and folklore, the presses hope to make EM sustainable over the long term.

It is significant that these editorial collaborations, whether involving multiple entities within a single university or multiple presses at several universities, include new approaches to publishing—where a range of skills and/or greater scale is an advantage. In their varied ways, these programs are responses to the changing landscape of publishing. They also require new approaches to generating revenue in order to be financially sustainable. Both AADMI and EM plan, in later stages, to host content from other publishers as one means of generating revenue.

TOWARD NEW BUSINESS MODELS

The level of creativity and the pace of change in scholarly publishing have never been greater, as the experiments outlined above indicate. Yet the experiments are just that: a variety of efforts to take advantage of new technologies, respond to scholars' wishes to present work in new formats, contain costs, and engage with universities' changing priorities for scholarly communication. The opportunities are evident, but the means of sustaining those opportunities are not. Publishers find themselves in the position of launching new programs with experimental business models while maintaining traditional modes of publication with their long-tested—if eroding—business models.

The new directions for scholarly publishing may be grouped under three broad headings:

- a general shift from print to digital distribution, especially for journals but increasingly for books as well;
- the emergence of entirely new forms of publication driven by the possibilities of digital technologies; and
- the movement to replace traditional paid access with open access, also driven by the possibilities of technology but even more by the ever-rising cost of scientific journals.

In all of these areas, we have seen considerable progress in solving the challenges of producing and distributing scholarship. Supporting it

financially in ways that can be sustained over time is another matter. If there is one conclusion to be drawn from experiments so far, it is that multiple sources of revenue will be necessary if scholarly publishing is to grow and continue to meet the needs of authors and readers. The point is made clearly by Raym Crow in a study of business models for OA publishing. Focusing on STM journals, Crow defines two basic types of financial support for open access: 'supply side' (principally author fees, but also including advertising, sponsorships, and institutional support) and 'demand side' (value-added services, print editions for sale, use-triggered licences, and other voluntary fees). He concludes that author fees will be the principal source of support for OA journals, but argues that, in most cases, a combination of sources will be necessary for sustainability.[15]

A similar point is made by an Ithaka S + R report on sustaining online academic resources, a category that includes a wide range of projects including reference works, original scholarship, and bibliographic databases. While most of these projects are not OA, they face challenges similar to those confronting OA journals in achieving financial sustainability, because the traditional business models are not necessarily effective or appropriate. The study distinguishes between direct and indirect beneficiaries in identifying potential sources of financial support. Direct beneficiaries include both authors and readers; forms of support include subscriptions, pay-per-use, and author fees. Indirect beneficiaries are primarily educational institutions but also foundations and corporations; support may include institutional support, sponsorships, advertising, and licensing fees.[16] A subsequent study developing these points conducted case studies of twelve successful projects, concluding that each found a somewhat different path to sustainability depending on its particular characteristics.[17]

It seems clear that future business models may not look like those of today. We can expect — and we must welcome — new players in new roles, new structures, new types of risk, and new dependencies. The list below proposes some general characteristics of effective business models.

CHARACTERISTICS OF EFFECTIVE BUSINESS MODELS

- The 'business' being modelled should be viewed as *scholarly communication*. Each new model may address a narrow or specific aspect of this broad system, but it will succeed only if it recognizes

our ecosystem—the interdependencies among the interconnected partners in the extended academic community (universities, faculty, libraries, presses, scholarly societies, government agencies, foundations, and others).

- The model should embrace *multiple content types:* books, journals, multimedia projects, and evolving new forms of scholarly work. This does not preclude models that address single types of content, but it does require their compatibility, if not interoperability, with business models for other forms. In an electronic environment these forms and content types are likely to merge and change in ways that make them less distinct from each other.

- The model should *coexist well with other business models.* No single model will work for all disciplines or all institutions. The model may usefully focus on one access objective, one audience, one payment model, and/or one funding model, but it will not be effective if it requires an exclusive commitment from the sponsor, reader, or user.

- For sustainability, the business model should depend on *financial support at reasonable cost to its funders* (universities, foundations, and others). This requires a balance between avoiding the expense of redundancies and not putting too many eggs in one basket.

- The business model will provide for *ongoing capital investment* (either internally generated or from long-term funding commitments) to support its own technological improvements as well as ongoing operating expenses.

- It should *anticipate future revision or succession.* Life cycles are especially short in today's scholarly environment, where technological and social trends are making rapid changes in how scholars work. An effective business model should anticipate its own evolution or demise with appropriate flexibility.

- The effectiveness of the business model should be *measurable* in order to support meaningful resource allocation decisions across the system. New concepts of measurement may be needed; for example, to evaluate the impact of open dissemination or the significance of rapid consultation of individual pages or paragraphs.

THE CHALLENGES OF TRANSITION TO NEW BUSINESS MODELS

Adopting a new business model for a portion of a press's program requires a transition from the old way of publishing to the new. Such

transitions are often complex, because the publishing business cycle (from content acquisition through publication) is multi-year and there are numerous players involved. If a particular series, for example, shifts from paid to open access thanks to a new sponsor, the publisher must reassess its inventory, pricing, and marketing strategies for backlist titles and titles already in production for the series as well as initiate new strategies for new signings. Any changes must be embraced by the series editors and explained to the authors.

Transitions almost always involve a financial gap of some kind: letting go of one source of support for a program in favour of a less familiar (and perhaps riskier) new source. The process of replacing established marketplace revenues with a reliable stream of subsidized funding almost always entails a period of exposure for the press's costs. There is a commitment to OA or low pricing that takes effect before new patterns of support are fully in place. Even gradual conversion strategies for subscription journals switching to OA include risk, since they rely on setting per-article fees in advance of incurring actual overhead costs for the journal. This financial gap has an obvious solution—bridge funding—but the sources for such transition support are not yet evident.

In addition, there are important transition issues around author, editor, and reader perceptions of publishing value. If one journal has author fees and its direct competitors do not, a potential contributor may well choose to submit to the competitors. If the model for one low-priced or OA book series is based on saving some traditional costs (offering POD paperbacks or e-only editions instead of hardcover or eliminating some marketing efforts), that may direct some authors to other presses. In some fields, hardcover publication as a tenure requirement is still constraining press's abilities to make new economic models work. These issues point to the need for discipline-centred efforts to change perceptions and expectations for scholarly publishing programs. University presses would welcome the opportunity to work with faculty and university administrators to forge new publishing norms for specific disciplines.

The Challenges of Managing Blended and Shifting Business Models

University presses are undergoing a fundamental transformation in response to the new environment: making the transition from a single dominant business model to a portfolio of multiple business models.

These multiple business models are constantly evolving. Experiments have become a larger part of press activities and are increasingly indistinguishable from 'core' businesses. While selling print books to retailers may remain a central activity for presses at this time, it sits side by side with numerous other publishing activities of the press and shares resources with them.

It is a very different management problem to publish with multiple models and with experiments succeeding, failing, or morphing into new experiments. Different revenue streams, pricing strategies, production processes, product concepts, and so forth are adjacent to each other in the press's overall program. There are likely many new partnerships for the press to manage. There is certainly a new complication to presenting a coherent picture of the press's imprint (critical in addressing the problem of hyperabundance) to scholars and other readers when the access models, delivery platforms, and formats of its offerings may differ so widely even within the same sub-discipline. In addition, the university press becomes necessarily more entrepreneurial: each new business model is actually a new business start-up, with all the accompanying business issues and risk.

Implications of Transition Issues for Effecting Change

The challenges of transition for university presses deserve special attention in planning for effective change in the scholarly communications ecosystem. Allowing for sufficient bridge funding and realistic timetables in the adoption of new business models is critical for their success. Transition challenges may direct a new program to start in one organization and then move to another, or to start with a small pilot or be implemented in manageable phases. Understanding the signals of a program's effectiveness during the transitional phase and revising the program accordingly may be another key success factor. Providing sufficient resources for outreach to authors and readers should be considered in funding initiatives.

CONCLUSIONS

The dominant business model for scholarly publishing over the past several decades—sales of print books and journals to institutional, retail, and text markets, supplemented by modest amounts of institutional support—is no longer sustainable. The reasons are complex, but they

include shrinking markets and the accelerating shift from print to digital formats. The need for new business models is unassailable, but exactly what those models are and how they will interact with the traditional model remain unclear. Journal publishing has made a successful transition from print to digital formats while maintaining the long-established primary business model of selling subscriptions, primarily to institutions, although continued consolidation in the STM publishing industry and escalating prices, combined with economic pressures on libraries, have put enormous strain on the standard model. In book publishing, the situation is more complex for a variety of reasons, including the broader range of market channels and the slower pace of transition from print to digital.

Many experiments are underway among scholarly publishers: publishing digital editions of books in various formats; distributing digital books on an OA basis, usually combined with sales of print editions; and digital-only publications that go beyond the standard book and journal formats. Publishers are employing a variety of strategies to fund these experiments, including print sales as a means of supporting OA digital publications; subscription sales for digital book collections and digital-only projects; foundation support, usually as investment capital for new projects; and parent institution support. Other strategies are under discussion but with little actual experience yet, including publication fees (common in STM publishing but not in HSS), online advertising, and institutional or corporate sponsorships. Some of these strategies seem likely to be transitional and not sustainable in the long run, such as start-up funding from foundations and relying on print sales to support OA online publication.

The one evident conclusion that emerges from the various reports on the current state of scholarly publishing, as well as from the research undertaken for this report, is that no single new business model will replace the traditional print-based model. Rather, a mix of revenue sources will be required to sustain scholarly publishing in the future, and that mix is likely to vary for different kinds of publications. Perhaps even more important, the new models will coexist with the traditional print-based model for the foreseeable future. Notwithstanding all the experiments and the widespread conviction within the publishing industry that digital will eventually replace print, scholarly presses now derive most of their income from sales of print (in the case of books) and

from subscriptions, whether print or digital (in the case of journals). Thus it is necessary for publishers to maintain, and indeed strengthen, the standard business practices while at the same time developing new forms of publishing and revenues to sustain those new forms.

It is important to recognize that these multiple models will include both market-based revenues and institutional support. Revenue will come from both consumers *and* producers of content. At the most fundamental level, this situation does not represent a change from historical experience; scholarly publishing has always been subsidized to some degree, combining market revenues and subsidy support, as university presses and other non-profit scholarly publishers have long managed a balancing act between mission and business necessity, managing multiple product lines with varying markets (trade books, scholarly monographs, textbooks, journals). Presses have become adept at managing varied business models and adjusting the mix as market conditions change. Looking to the future, however, it seems likely that the mix of revenues, once derived primarily from the marketplace, will shift such that a greater share of revenue will come from the producers of content, whether in the form of publication fees or institutional support of other kinds.

The need for multiple revenue sources is especially evident in OA publishing, which seems certain to become a significantly larger component of scholarly publishing. Recent discussions of OA publishing have begun to acknowledge the costs involved, recognizing that open access is not 'free,' despite the potential cost savings of digital-only publication. Recent work analysing business models for OA publishing suggest that a mix of revenue sources will be essential if OA is to be sustainable over the long term.

The need for collaboration among scholarly publishers is more evident than ever. Most university presses and other non-profit scholarly publishers are small, by comparison with commercial publishers, whereas many of the new forms of publishing require considerable scale to work well. Even more importantly, most university presses lack investment capital and are unable to undertake the kind of investments in technology at the scale required by new forms of publishing. Partnerships with libraries, e-book collaborations among university presses and non-profit organizations, and editorial collaborations such as those recently funded by the Mellon Foundation are critically important, and among the most promising developments in the challenging and ever-changing scholarly publishing community.

RECOMMENDATIONS

1. While the rich diversity of experiments with new business models is all to the good and should be encouraged, we need to learn from them in a more systematic way to prevent wasteful duplication of effort and to ensure that significant developments are not lost in the clutter. Several actions that AAUP and partner organizations should consider are

   a. Sponsoring regular workshops, perhaps Web-based, for participants in these experiments to report on and evaluate progress. These might be organized around similar kinds of projects (e.g., backlist OA, editorial collaboration) to permit in-depth analysis.

   b. There should be a central conduit for sharing information about these projects. This could require an individual at AAUP designated to track the projects, maintain a sub-site or Wiki on the AAUP Web site, issue reports, and generally serve as liaison between the projects and the scholarly community at large.

   c. When projects fail, the knowledge to be gained from the failure is too often lost. We can learn as much from failure as from success, and we need to understand those projects that didn't work, and why. This may require independent analysis by external consultants, funding for which would need to be sponsored.

2. A significant number of the experimental projects now underway involve collaborations of various kinds: among groups of presses, between presses and libraries, between presses and research centres. These existing partnerships should be supported and the development of new ones encouraged; they mirror the new kinds of collaborative scholarship enabled by the Web, and offer important new ways of thinking about scholarly publishing as well as new models for the delivery of scholarly material.

   a. Editorial collaborations, like the Archaeology of the Americas Digital Monograph Initiative and Ethnomusicology Multimedia, have permitted the pooling of expertise and development of features beyond the capacity of any of the individual participants. More such collaborations should be encouraged.

   b. Effective distribution of scholarship through a variety of digital channels and devices will require specialized expertise and

significant financial investment not typically available to non-profit publishers. Collaborations among publishers, libraries, and non-profit entities offer a solution to the problems of scale.

c. Similarly, digital distribution of scholarship will require agreed-on standards and protocols. The development of such standards can only be done by presses, libraries, and scholars working together with recognized international standards-setting bodies.

3. While the dominant form of scholarly book publishing in the future will clearly be digital, as a practical matter university presses today still get at least 90 to 95 per cent of their sales revenue from printed books, even as the market for scholarly monographs continues to shrink. University presses also operate in an institutional environment that regards publishing on a break-even basis (including subsidy) as virtuous, even if that means losing ground to inflation. The combination of these factors means that it is virtually impossible for university presses to generate surplus investment capital from current operations. The role of agencies outside the presses in providing funds to work toward the digital future has been, and will continue to be, crucial.

a. The Andrew W. Mellon Foundation's Program in Scholarly Communications has a long history of enabling innovative projects at university presses, including a number of those discussed in this report. The importance of their continuing support cannot be underestimated. We urge other large funders of scholarly projects to join Mellon in thinking about how they can contribute to innovation in the area of scholarly communication, given the substantial needs for investment, research, and experimentation in this arena.

b. Several university libraries have generously funded backlist digitization projects for the presses at their universities. These projects are important to the scholarly community as a whole, as they permit the rediscovery of work that could not be kept available in print, but digitizing the backlist is beyond the resources of many small and medium-sized university presses. We strongly encourage the development of other backlist digitization collaborative efforts, and applaud those that have taken place.

    c. University administrations have in the past provided presses with occasional investment capital for experimentation or expansion and bridge funding for transitions. In the current time of rapid change, such funding is needed all the more, and on a more thoroughgoing basis.

4. Open-access publication is strongly supported by many universities and many scholars as a matter of principle and as an often-recommended solution to the high cost of journals publishing. More recently, OA has been proposed as a new model for publishing specialized book-length works that have little market value. The trend toward more OA publishing is clear; but it will not succeed unless sustainable business models can be developed to support it. Non-profit publishers, especially university presses, should become fully engaged in this discussion, with the support of their parent institutions.

5. Proposals and plans for new business models should explicitly address two issues: the potential impact of the new model on existing parts of the press's program and the requirements, both operational and financial, for making the transition to the new model. Ideally the consideration of these issues would involve the relevant author community as well as the press, its partners such as libraries or societies, and the funding agency.

THE AAUP TASK FORCE ON ECONOMIC MODELS FOR SCHOLARLY PUBLISHING

LYNNE WITHEY, University of California Press (Chair)
STEVE COHN, Duke University Press
ELLEN FARAN, MIT Press
MICHAEL JENSEN, National Academies Press
GARRETT KIELY, University of Chicago Press
WILL UNDERWOOD, Kent State University Press
BRUCE WILCOX, University of Massachusetts Press
RICHARD BROWN, Georgetown University Press, *ex officio*
PETER GIVLER, AAUP, *ex officio*
ALEX HOLZMAN, Temple University Press, *ex officio*
KATHLEEN KEANE, Johns Hopkins University Press, *ex officio*

SOURCES

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NOTES

1. See below on the National Academies Press experience. Data from our survey of university press directors also indicate that print sales do not support the full costs of online publication.

2. For a more comprehensive review of OA book programs, see Janneke Adema's March 2010 report for OAPEN, *Overview of Open Access Models for E-books in the Humanities and Social Sciences,*
http://project.oapen.org/images/documents/openaccessmodels.pdf.

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4. On the NAP experiments see Barbara Kline Pope and P.K. Kannan, *An Evaluation Study of the National Academies Press's E-publishing Initiatives: Final Report* (31 January 2003), http://aaupnet.org/resources/mellon/nap/index.html.

5. Interviews with Barbara Kline Pope and Michael Jensen were conducted as part of the research for this report.

6. Interview with Jane Ryan.

7. Laura Brown, Rebecca Griffiths, and Matthew Rascoff, *University Publishing in a Digital Age* (ITHAKA, 26 July 2007),
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