

Transitioning a Society Journal Online: A Guide to Financial and Strategic Issues

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C O N N E X I O N S

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Chapter 1

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¹This content is available online at <<http://cnx.org/content/m34278/1.1/>>.

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Chapter 2

About the Author¹

Raym Crow is Managing Partner of Chain Bridge Group (www.ChainBridgeGroup.com), a consulting firm serving nonprofit publishers, located in Arlington, Virginia.

¹This content is available online at <http://cnx.org/content/m34277/1.1/>.

Available for free at Connexions <http://cnx.org/content/col11222/1.1>

Chapter 3

Preface¹

This guide is the outcome of one of three related projects funded by the Andrew W. Mellon Foundation to support the development of sustainable and dynamic electronic structures for scholarly communication in art and architectural history. The report of the first project, published by Hilary Ballon and Mariët Westermann as *Art History and Its Publications in the Electronic Age*,² analyzes obstacles to the development of electronic scholarship in the field and describes how scholarly journals dependent on images could be adapted to an online environment to serve the discipline's research and teaching needs. Such extended online journals would not simply replicate print publications online, but would incorporate interactive image display and manipulation available only in a digital environment. The report recommended that major journals of record develop online prototypes, and that leading professional societies such as the College Art Association (CAA) and Society of Architectural Historians (SAH) explore the establishment of a consortium for online publication to leverage intellectual, organizational, and financial resources.

To demonstrate the potential of online publishing for peer-reviewed journals in art and architectural history, a follow-up project developed a feasibility analysis for the Society of Architectural Historians (SAH) to assess the financial implications of evolving the *Journal of the Society of Architectural Historians (JSAH)* from print-only to online-plus-print distribution. The project was led by Hilary Ballon, then Editor of *JSAH*, and the feasibility analysis was conducted by Raym Crow, the author of this guide. The online version of *JSAH* will provide synchronized text and images, audio and video files, three-dimensional models, GIS map integration, zoomable images, and other features appropriate for publications in art, art and architectural history, and other visually oriented disciplines.

As no existing digital publishing platform incorporates electronic image handling and multimedia features to the extent required by *JSAH Online*, SAH undertook a thorough process to identify a publishing partner capable of providing multimedia publishing services. SAH worked with ARTstor³ to develop a prototype of the multimedia functionality required for the platform, and this prototype provided the basis for developing technical specifications for the journal's multimedia components. As a result of this process, SAH identified the University of California Press as its partner to develop the digital publishing capabilities required for image-dependent disciplines and to provide publishing services, including digital production and process support.⁴

A third Mellon Foundation grant, made to New York University's Institute of Fine Arts (IFA), allowed exploration of the possibility of a consortium between CAA and SAH to develop shared structures for electronic publication, perhaps on the model of AnthroSource, the rich consortial Web site of the American Anthropological Association. Principal Investigators Mariët Westermann of the IFA, Paul Jaskot of CAA, and Hilary Ballon of *JSAH* pursued conversations over the course of a year with the Boards and publication

¹This content is available online at <<http://cnx.org/content/m34825/1.1/>>.

²Ballon and Westermann (2006).

³<http://www.artstor.org> (<<http://www.artstor.org>>).

⁴The *JSAH* prototype is non-proprietary, however, and will be available for adoption or adaptation by other journals with medium-rich needs. The University of California Press's significant modifications to the prototype will be proprietary.

directors of the two organizations; with important providers of scholarly publications and images such as JSTOR, ARTstor, INHA, and Aluka; and with museum publication and image rights departments. As the *JSAH Online* project progressed rapidly in the same period, it became evident that a consortium might best be thought of as an advisory group of stakeholders rather than a fully integrated publishing platform for professional organizations with greatly varying constituencies, organizational structures, membership benefits, and publication and resource sharing needs. To extend the benefits of the *JSAH Online* project to CAA and other society publishers in visually oriented disciplines, the PIs commissioned Raym Crow to write this guide.

While many of the considerations in the guide would be germane to any professional scholarly society seeking to transition more fully to online publication, several sections specifically address the challenges and benefits of online publication for journals of art and architectural history. We hope that this guide also will help societies identify areas of mutual concern and potential opportunities for resource sharing. Legal advice and direct procurement arrangements with image providers for scholars, for example, are services that might be provided without full consortial contracts among societies. ARTstor's initiative to provide Images for Academic Publishing, free of charge, from key providers such as the Metropolitan Museum of Art is an example of a service that could be enhanced by bringing in more collections and building in copyright advice services.

Numerous interlocutors helped us think through the organizational challenges and potential for joint action in the development of electronic publication. We are grateful first and foremost to Don Waters of the Mellon Foundation for his thoughtful and substantive support of each of these interrelated projects. Also at the Mellon Foundation, Harriet Zuckerman and Angelica Rudenstine provided wise counsel. We could not have wished for a better advisor on our team than Raym Crow; he provided guidance throughout the consortium explorations and wrote a clear and articulate guide. The following colleagues were unfailingly generous with advice and insights: at CAA, Nicola Courtright, Linda Downs, and Eve Sinaiko; Rick Asher at *CAA Reviews*; for the *Art Bulletin*, Marc Gotlieb; at the *Art Journal*, Judith Rodenbeck; at SAH, Barry Bergdoll, Dietrich Neumann, and Pauline Saliga; at JSTOR, Heidi MacGregor and Michael Spinella; at ARTstor, James Shulman, Gretchen Wagner, and Bill Ying; at INHA, Olivier Bonfait; and at the Metropolitan Museum of Art, Doralynn Pines and Susan Chun. For grant management support at the Institute of Fine Arts, we thank Michele Marincola, Stanley Ng, and Lisa McGhie.

At the time of writing, most scholarly organizations face truly daunting financial challenges. Full mobilization of the Internet's great promise of open, diverse, and vigorous scholarly communication may seem beyond imminent reach as these societies focus on consolidation rather than new initiatives. We hope that, even or especially in this moment of retrenchment, this guide may chart a clear path to the long-term benefits of online scholarly publication.

Mariët Westermann

Hilary Ballon

Paul Jaskot

March 2009

Chapter 4

Introduction¹

4.1 Overview

Of the approximately 24,000 peer-reviewed scholarly and scientific journals, some 60 percent to 90 percent are now available in online editions.² Not surprisingly, large publishers, both commercial and nonprofit, were among the first to move their journals online. However, most society publishers are quite small—almost 90 percent of societies publish just one journal³—and a significant number of these small societies have yet to move online. With library demand for online editions increasing each year, many societies that publish exclusively in print are experiencing mounting pressure to make their journals available online. In many instances, their ability to respond to this market pressure is hindered by a lack of information, resources, and perspective.

Societies publishing in fields that depend on the use of high-quality images—including art and architectural history, studio art, film and media studies, visual anthropology and sociology, and visual culture studies—confront additional challenges. Some of these challenges, such as image permissions costs and copyright restrictions, pertain for both print and digital publishing. Others—including the expanding use of enhanced digital functionality and digital preservation and format migration—apply exclusively to digital publications.⁴

Despite clear market demand for online access,⁵ introducing an electronic edition of a society journal can entail risk both to existing revenue streams and to the value that individual members perceive in belonging to the society. Although this risk can be assessed and mitigated, small society publishers seldom have the business analysis resources necessary to assess the implications of moving their print publications to an online environment.

Absent a systematic evaluation of the benefits and risks involved, many small society publishers hesitate in moving their publications online. However, a society that manages this risk solely by avoiding it may forgo opportunities to strengthen its publishing operation in the long term by better positioning it to serve its members, fulfill its mission, and remain financially self-sustaining.

¹This content is available online at <<http://cnx.org/content/m34281/1.1/>>.

²One survey suggests that over 85 percent of small nonprofit journals are available online, although this may be skewed by the composition of the survey's respondents. Cox and Cox (2008), 26. An analysis of Ulrich's Serials Database (see Crow (2006)) suggests that about 60 percent of all journals were available online in 2005. For an overview of the size and complexion of the peer-reviewed journal market, see Morris (2007).

³Crow (2006).

⁴See Ballon and Westermann (2006), 30-55; Bielstein (2006); and McGill (2008), 35ff.

⁵See Sections 2.2 and 4.2.

4.2 Intended Audience and Purpose

This guide provides an overview of the issues that confront a small society publisher as it evaluates whether to offer an online version of its journal. The guide describes the types of business analyses that a society should undertake, and summarizes relevant literature on key topics to help a society make an informed online publishing decision. Although the guide focuses on issues relevant to visually oriented disciplines producing image-intensive journals, many of the topics discussed apply to society publishers irrespective of discipline.

There are many practical issues—financial, technical, editorial, and cultural—involved with moving a journal online. Although we provide an overview of the types of issues that a move online entails, we do not attempt to treat exhaustively all of the technical, editorial, and outsourcing issues that a society might face. Comprehensive primers to online journal publishing⁶ and guides to selecting an online publishing partner already exist,⁷ and these have been supplemented by detailed examinations of specific issues, including online licensing, technical standards and protocols, and marketing and sales issues.⁸ To complement these existing resources, this guide:

- Describes the current institutional library market for peer-reviewed journals to provide context for a society's analysis;
- Summarizes information relevant to answering the questions societies confront most frequently as they consider whether they should move an image-dependent journal online, including print and online pricing, online distribution and outsourcing options, cost issues, and member retention; and
- Describes business analyses necessary to assess and mitigate the risks particular to membership societies as they transition to online access.

This guide is intended for professional society managers (including executive directors and publication program managers) who manage journals on a day-to-day basis, as well as for society officers and board members charged with overseeing their society's publishing program. As the guide aims to serve the needs of small societies, it draws its examples primarily from situations likely to pertain for a small society publishing a single journal, and particularly those societies with publications that depend on a variety of media. Moreover, it focuses on the issues that confront U.S. scholarly and professional societies. While many of these issues will be relevant to society publishers elsewhere, issues specific to online publishing in other regions necessarily fall beyond this guide's scope.

Society publishers, participating simultaneously in the market economy and in the intellectual commons of the academy, must balance the twin imperatives of financial sustainability and mission fulfillment. Pursuing a surplus-maximizing strategy can result in pricing and market practices that compromise a society's mission by limiting its ability to disseminate research broadly in its field. At the same time, competitive market pressures require society publishers to operate efficiently to ensure financial sustainability.⁹ The pricing and distribution approaches described in this guide are intended to help societies maximize the output of their publishing programs—with output being measured by access to their research as well as by financial return.

⁶See, for example, Morris (2006) and Waltham (2002). For general introductions to journal publishing, see Page, Campbell, and Meadows (1997) and Brown, Stott, and Watkinson (2003).

⁷See, for example, Powell (2005), Ware (2007), and Page (2000).

⁸The Association for Learned & Professional Society Publishers (ALPSP) Advice Notes series covers many of the topics, although access to the notes requires membership in the association.

⁹For a fuller discussion of the structural issues that challenge society publishers, see Crow (2006).

Chapter 5

Benefits of Online Dissemination¹

5.1 Mission Alignment

The first question confronting scholarly societies considering online distribution is *why* they should publish online. It makes sense, therefore, to review some of the principal benefits of publishing online—for authors, readers, and the society itself.

Most societies operate under charters directing them to promote research and the advancement of their field, and a society's publication often represents the most visible manifestation of its mission. Online dissemination further supports the mission by increasing the access, reach, and visibility of a society's journal.

Further, online publication provides a logical component of a more ambitious and progressive online presence for a society, including sponsoring an online community that maintains the society's relevance by engaging its membership more actively.² Although societies have historically been at the center of scholarly communities, they risk being marginalized as their members embrace the emerging scholarly communications mechanisms enabled by ubiquitous networking and digital publishing technologies. Societies should recognize online social networks as a cost-effective means of communicating with their members and increasing their visibility.

Although few small- and medium-size publishers have implemented social networking features—including blogs, online forums, podcasts, and wikis—a recent survey indicates that approximately 15-25 percent of these publishers intend to deploy such functionality in the future.³ Although online social networking media are in the early stages of development, societies should experiment with such media and allow their applications to evolve along with the tools themselves. In this way, a society can exploit the capabilities of digital networking to maintain its relevance within its specific field and as part of the global scholarly community. An online publishing program, in this context, will represent an integral component of a society's broader digital communication and membership strategies.

5.2 Author and Reader Benefits

5.2.1 Author Benefits

An online edition of a journal provides several benefits to authors, including:

- Access to digital functionality in presenting their research, including images, video, audio, and other media not easily included in print publications;

¹This content is available online at <<http://cnx.org/content/m34279/1.1/>>.

²For example, the SAH's online digital image archive not only provides images but has also helped to foster a new sense of community within the society.

³Cox and Cox (2008), 89 and 91.

- Greater reach and access to readers in their field; and
- Greater impact for their research.

5.2.1.1 Digital Functionality

Publishing online provides authors access to digital functionality—including support for large supplemental data sets; multimedia features, including audio and video, animation, and three-dimensional modeling; deep searching and linking through semantic tagging; low-cost color; indexing and searching for charts, illustrations, images, tables, and graphics; the ability to manipulate supporting data sets; and social networking capabilities (e.g., online collaborative authoring, wikis, collaborative taxonomies), tools for communication between readers, support for RSS feeds, and other features not possible in print.

In some disciplines, authors have already begun to take advantage of this added digital functionality. In others, the needs of authors for innovative online features are just beginning to emerge. As an example of the former, beginning with the 2010 volume year, the Society of Architectural Historians (SAH) will make its journal available online with enhanced digital functionality. In addition to delivering the articles published in the print edition, the journal's online version will incorporate multimedia features, including film and video clips, sound, 3D computer models, zoomable images, and GIS map integration. As part of the transition, the journal's editors are seeking submissions from authors whose work will take full advantage of the capabilities offered by online presentation.⁴

5.2.1.2 Greater Reader Reach

A number of surveys indicate that researcher preference for online journals continues to increase, allowing online journals to reach larger, wider audiences than do print-only journals.⁵ Significantly, such audience reach is consistently considered among the most important characteristics cited by authors—along with a reputation for quality and selectivity—in selecting publishing venues. Several recent author preference studies—including faculty across the arts, sciences, and professions from around the world—rank wide circulation and readership within one's field as the most important characteristics in selecting a publishing venue.⁶

Online publication also facilitates an author's compliance with a funder-mandated requirement to deposit sponsored research in an online repository. Several large government and foundation research funders now mandate such online deposit, and an increasing number of funders are adopting such policies.⁷ Additionally, online publication makes it easier for authors to voluntarily self-archive their work by posting electronic versions to personal Web sites and to institutional and discipline-specific online repositories.

5.2.1.3 Greater Research Impact

Author surveys consistently report the importance to authors of the impact of their research, whether ranked by ISI/Thomson Scientific Impact Factor or measured by new Web-based bibliometrics.⁸ Not only do online journals get used more heavily than their print counterparts, but evidence continues to mount that online availability increases citation rates for published research.⁹ Additionally, the ability to provide large supplemental data sets or, potentially, a wider variety of visual evidence, can also positively affect citation impact.¹⁰

⁴SAH press release, "JSAH Receives Grant from The Andrew W. Mellon Foundation; SAH Will Move JSAH Online Within a Year," dated January 21, 2009 (www.SAH.org).

⁵For an overview, see Rowland (2007); also see Brown and Swan (2007); Inger and Gardner (2008); Tenopir (2003); and Stanford (2002).

⁶Housewright and Schonfeld (2008), 20-21; Rowlands, Nicholas, and Huntingdon (2004); and Harley *et al.* (2007).

⁷On research deposit mandates, see "Open Access," in Chapter Five.

⁸Housewright and Schonfeld (2008) and Rowlands, Nicholas, and Huntingdon (2004).

⁹See, for example, McDonald (2006); Chu and Krichel (2007); Kurtz *et al.* (2005); and Hitchcock, "The effect of open access and downloads ('hits') on citation impact: a bibliography of studies." *OpCit Project* (<http://opcit.eprints.org/oacitation-biblio.html> (<<http://opcit.eprints.org/oacitation-biblio.html>>)). This site is not limited to studies of open-access models.

¹⁰Piowar, Day, and Fridsma (2007).

5.2.2 Reader Benefits

Online journals also deliver benefits to researchers as readers. These advantages include the ability to search within and across large collections of content; locating specific articles or data; the convenience of locating relevant content via hyperlinks; access outside the library; deeper searching and linking through taxonomic structures and semantic tagging; the ability to copy and save articles; 24/7 availability; the ability to use task-oriented online tools;¹¹ and access to online articles ahead of print.¹²

Researcher behavior studies and preference surveys indicate an accelerating comfort with—and demand for—online access to peer-reviewed journal content.¹³ One indicator of this comfort is the extent to which researchers, at least in North America, have grown willing to accept their library cancelling the print edition of a journal in favor of electronic access.¹⁴ This is true not only of STM (science, technical, and medical) journals, many of which moved online early, but also for journals in the humanities and social sciences. Increasing online access to journals in these fields—bolstered by the reach of the JSTOR online archival collections in academic research institutions—has changed research behavior across all disciplines.¹⁵

Although researchers in the sciences and social sciences use electronic resources more frequently than most researchers in the humanities, usage patterns differ considerably between disciplines. Indeed, usage studies indicate that, on average, art historians use electronic resources more heavily than others in the humanities.¹⁶ This frequent use of electronic resources relates to the discipline's particular research methods, the online resources available,¹⁷ and the widespread use of digital technology for classroom teaching.¹⁸

As Ballon and Westermann note, “[a]rt history is characterized by a computer-literate professoriate, an established commitment to digital presentation, and an appreciation of the analytic potential of electronic tools.”¹⁹ This familiarity with digital resources suggests an openness on the part of art historians to innovations in online journal publishing models, such as those being implemented in the online edition of the *JSAH*.²⁰

5.3 Establishing Realistic Expectations

Online dissemination responds to a growing market demand for electronic content (a topic we discuss in detail in Chapter Four, “Effect of Online Access on Institutional Subscriptions”). It is no surprise, then, that over 60 percent of peer-reviewed journals are now available online—including a significant percentage of society-published titles in the social sciences and humanities. In the face of accelerating market demand, inaction entails real and significant risks, and a society that fails to make its journal available online may jeopardize the journal's relevance and weaken it as an attractive publishing venue.

At the same time, a society should have a realistic understanding of the benefits of online distribution. Online publication is sometimes presented as a solution for many, if not all, of the problems that confront the publishers of scholarly journals. While online information technologies and ubiquitous networking will

¹¹For example, Zotero, Xanadu for course packs, learning management systems, etc.

¹²See Inger and Gardner (2008), 21-25; Schottlaender *et al.* (2004), 34-36; and Diane Harley *et al.* (2006), 6. The advent of the Web has also made it easier for researchers and teachers to identify, locate, and license digital images, although this is not a benefit of online journals *per se*.

¹³See Inger and Gardner (2008); Rowlands (2007); and Tenopir (2003). Another study suggests that, if a desired journal is not available online, users tend to resort to sources of lower quality and less relevance that are available online. See Prabha (2007), 4 and 12, n4.

¹⁴See Schonfeld and Guthrie (2007), 8-9, and Schottlaender *et al.* (2004).

¹⁵JSTOR provides complete runs of over 1,000 journals online to over 4,300 library subscribers. On the effect of JSTOR on researcher behavior, see Guthrie (2002) and Seeds (2002), 120-122.

¹⁶See Harley *et al.* (2006), 4-35ff. and Heterick and Schonfeld (2004), 229.

¹⁷Housewright and Schonfeld (2008), 17.

¹⁸Ballon and Westermann (2006), 56.

¹⁹Ballon and Westermann (2006), 58.

²⁰Starting with the 2010 volume year, the *JSAH* will include articles that apply multimedia capabilities, including audio, video, animation, zoomable images, fly-throughs, and three-dimensional modeling. For a press release describing the online journal, see http://ucpressjournals.com/assets/JSAH_UCP_Press_Release.pdf (<http://ucpressjournals.com/assets/JSAH_UCP_Press_Release.pdf>). Another Mellon-funded project, *caa.reviews*, established an early online presence for art history.

continue to have a transformative effect on scholarly publishing, online distribution does not remedy all the deficiencies of scholarly and scientific journal publishing. Recognizing the practical limitations of online dissemination will help a society avoid overstating its benefits.

5.3.1 Faster Publication Speed

Many authors and researchers express dissatisfaction with long publishing cycles that can delay an article's appearance for a year or more. Online publication is sometimes presented as a mechanism to reduce such delays since it is possible to publish articles online immediately, as they become available. However, inordinately long latency periods typically result not from printing delays but from lengthy peer review and editorial cycles, and these will not be shortened simply by moving to online publication.

Online editorial workflow management systems, which are often integrated into an online publishing regime, can accelerate the process and help increase publication speed, but it is more difficult to quicken the pace of reviewers and editors.

5.3.2 Lower Costs

Online publication is frequently cited as an opportunity to lower the cost of scholarly publishing. Indeed, a complete transition to online-only publication eliminates print production costs (in effect, shifting the costs onto the user who prints articles out locally), assuming that the journal's production process is reengineered accordingly.²¹ Even if printing and print distribution costs are eliminated, however, the "first copy" costs of the journal remain. Further, online production, fulfillment, and hosting add new costs to the publishing process. While online distribution offers many benefits, a substantial reduction in total publishing costs is not among them.²²

5.3.3 More Extensive Use of Images

The ability of authors to make greater use of images—especially color images—is often cited as one of the benefits of online publishing. This assumption is based on the relaxation of physical page constraints and the lower cost of digital image reproduction. It is true that an author can supplement an online article with more images than would be possible in print, and that the cost of distributing color images digitally is lower than the cost of print reproduction. However, online publication does not change the fundamental copyright restrictions and permissions costs that encumber the use of images in print. Nor can free online image exchange services be relied upon to provide the level of image quality required for publication.²³

Digital publishing technologies and ubiquitous networking have not led to more flexible rights terms and lower permissions costs, as some had anticipated. Rather, conservative interpretations of fair use and the expansion of copyright protection have resulted in higher permissions costs for peer-reviewed journals.²⁴ As Ballon and Westermann note, "[i]t is a paradox of the digital revolution that it has never been easier to produce and circulate a reproductive image, and never harder to publish one."²⁵

5.3.4 Greater Reach and Increased Citations

As noted above, online dissemination can expand a journal's reach and increase the citation rates of its articles. However, realizing these benefits requires that a society implement enabling policies.

²¹Relatively few journals—probably less than 10 percent—are distributed exclusively in online format. See Ware (2005a).

²²For a description and discussion of journal publishing costs, see King (2007), Clarke (2007) and Fisher (1999).

²³Developing a curated online exchange for high-quality digital images can provide a society with a significant benefit to offer to its members. For one example, see the plans for the SAH ARA image exchangeservice being developed by the Society for Architectural Historians (<http://www.sah.org/clientuploads/TextFiles/4AVRN.pdf> (<<http://www.sah.org/clientuploads/TextFiles/4AVRN.pdf>>)).

²⁴For a discussion of copyright, fair use, and permission fees for images, see Bielstein (2006), 71-100 and 132-137 and Ballon and Westermann (2006), 30-42.

²⁵Ballon and Westermann (2006), 30.

By lowering the marginal cost of dissemination to near zero, online publishing offers societies the opportunity to introduce pricing that makes a journal available to audiences—including smaller institutions and international markets—that might previously have been unable to afford the journal. To realize this potential, however, requires a pricing structure and less-developed countries (LDC) access policy designed to achieve greater market reach and penetration.

Likewise, online publication can result in greater exposure and increased citation impact. However, the extent to which this will be the case will depend on how easily a journal's content can be discovered online. This will depend on whether the journal's content has been indexed by Google and other major indexing services, whether the journal participates in CrossRef, and whether the journal's access and pricing policies facilitate researcher use of an article once discovered.

It is not unusual for Google to account for over 75 percent of all referring URLs for an online journal. If you partner with a nonprofit or commercial publisher to distribute your journal online (as described in "Online Publishing Options," in Chapter Six), the publisher will typically assume responsibility for ensuring that your site is indexed appropriately by Google, Google Scholar, and other general search engines.²⁶ Indexing by Web search engines complements the subject-specific indexing and abstracting services that have traditionally covered print journals,²⁷ and which still provide the principal starting place for researchers seeking articles on a specific topic.²⁸

²⁶Search engine optimization (SEO) for a self-published journal is beyond the scope of this guide. For good basic introductions, see "About Google Scholar" <<http://scholar.google.com/intl/en/scholar/about.html>> (<<http://scholar.google.com/intl/en/scholar/about.html>>), "How Google Works" <http://www.googleguide.com/google_works.html> (<http://www.googleguide.com/google_works.html>), and Bapna and Acharya (2004).

²⁷For example, in art and architecture, indexes such as the *Art Index*, *Architectural Periodicals Index (RIBA)*, *Artbibliographies Modern*, *Avery Index to Architectural Periodicals*, and the *Design and Applied Arts Index (DAAI)*. For indices by discipline, see Balay, Carrington, and Martin (1996).

²⁸See Inger and Gardner (2008), 10.

Chapter 6

Potential Effects of Online Access on Society Membership¹

6.1 Membership Exposure to Institutional Site Licenses

The value that members perceive in society membership comprises many benefits—both tangible and intangible—that the society delivers. Typically, the primary motivation cited for society membership is community affinity, with a journal subscription being an important, albeit secondary, benefit.² However, there may be some individuals for whom a journal subscription represents the sole motivation for membership, and these members might not renew if access to the society’s journal becomes available via an electronic site license at their home institutions.

Despite the growing number of online journals, there is no publicly available empirical data that documents the effect of institutional online site licenses on society membership. Although there is little evidence to suggest that societies have experienced significant declines in membership as a result of making their journals available online, some societies will find this lack of negative evidence insufficient. A society that is apprehensive may want to analyze for itself the potential effect of online availability on the society’s membership.

An online version of a journal might result in individual members not renewing their membership when both of the following conditions pertain:

- The member has ready access to the journal through an institutional site license; and
- The member does not perceive sufficient value in the other member benefits.

We describe below some simple analyses that a society can perform to assess the extent to which these conditions pertain to its members and thus better understand the risks to its member base of online distribution. The force of these analyses will often depend on the depth and quality of demographic information that a society has about its members. Some societies gather this information as part of the membership process, others gather it (typically, with less specificity) through Web-based member surveys, while others rely solely on experience and intuition. In the latter case, a society may have little choice but to rely on general or discipline-specific trends.

These analyses also rely on the society having sound data about the characteristics of its institutional subscribers, including institution type (college, university, public library, museum, etc.), geographic location, and the institution’s subscription profile (for example, whether an institution holds duplicate print subscriptions to the same journal). In some cases, the society will need to retrieve this information from a publishing

¹This content is available online at <<http://cnx.org/content/m34285/1.1/>>.

²On the motivations to society membership generally, see Tschirhart (2006), Dalton and Dignam (2007), and Waltham (2008). See also the “Reasons for Society Membership” table below.

partner or subscription agent. As with member demographic data, the value of the data available will vary from one society to another.³

6.2 Assessing Exposure to Online Licenses

As a first step, a society needs to examine how many of its individual members are actually exposed to non-renewal due to online institutional subscriptions. It is important to note that this analysis, by itself, does not determine the extent of a society's risk of lost membership. However, it does provide the basis on which other empirical and behavioral information can be overlaid—as described in "Quantifying the Potential Effect of Online Access on Membership," in Chapter Three—to provide a more accurate assessment.

Essentially, such an analysis involves the following steps:

- Identify the society members affiliated with an academic institution (or other institution eligible for an online site license);
- Identify the institutions subscribing to the society's journal; and
- Correlate the two lists.

Example A: Analysis Based on Detailed Data	
Institutions Subscribing to Society's Journal	900
Individual Members	3000
Percentage of Members Exposed	20%
Number of Members Exposed	600

Figure 6.1

A society with detailed and consistent data on both its individual members and institutional subscribers should be able to correlate the two lists with a fair degree of precision; for example, determining exactly how many members teach, do research, or curate at each subscribing institution.⁴ The results of such an analysis might be summarized as in **Example A**.⁵

However, a society that only has information about members by profession or title (for example, academic, professor, architect, student, consultant, etc.) will be limited to determining the approximate percentage of its members that might be exposed to an institutional site license.⁶

³There are several research tools that a society can apply to gather data about its members and their perceptions of a society and the benefits it delivers. McQuarrie (1996) provides an excellent basic guide to the tools of market research. A survey specifically designed for membership organizations is available from the ASAE and the Association for Association Leadership (www.asaecenter.org/decisiontojoin) (<<http://cnx.org/content/m34285/latest/www.asaecenter.org/decisiontojoin>>)) and described in Dalton and Dignam (2007).

⁴Such comparisons often require extensive and tedious data cleansing—for example, ensuring that all the permutations of an institution's name have been normalized. If, as is not uncommon, subscription agents do not provide detailed subscriber data for their customers, the society will need to extrapolate from the known data.

⁵The analysis may reveal that a relatively small number of institutions represent a disproportionate number of exposed members. If this is the case, the society should be able target membership marketing efforts to remind members of the society's benefits.

⁶Further, a society that has gathered its member profile information by means of a survey has the additional issue of sample size to contend with, and the validity of extrapolating the survey's results to the society's entire membership.

Example B: Analysis Based on Non-specific Data	
Institutions Subscribing to Society's Journal	900
Individual Members	3000
% of members, faculty	50%
% of members, students	10%
Percentage of Members Potentially Exposed	60%
Number of Members Assumed Exposed	1800

Figure 6.2

Lacking more precise data requires the society to make assumptions about its exposure. An analysis such as that provided in **Example B** indicates that the society's exposure could be anywhere from 0 to 1800 members. A society with considerable aversion to risk would be tempted to err on the high side, probably overstating its actual exposure, while another society might understate its exposure. Although the analysis illustrated in **Example B** is imperfect, it provides a basis for assessing the worst-case risk scenario.⁷

Note that in both of the examples above, in the absence of any other market data, the analysis assumes that every institution subscribing to the print edition will opt to transition to online access (whether in combination with a print subscription or as online-only). As we discuss in Chapter Four, given the trends in academic library purchase behavior, this results in a conservative but reasonable assumption.

Some societies have membership levels—including patrons, sponsors, lifetime members, and the like—that reflect exceptional commitment to the society. Although they seldom constitute a significant proportion of a society's membership, members at these levels may be considered impervious to the effects of online institutional access. If a society has a significant proportion of such members, it should exclude them from the exposed member category.⁸

The analysis above reflects the situation for a society with a single journal provided as a benefit of membership. Some societies offer discounts off the price of a journal, and societies that publish more than one journal sometimes provide one journal without charge and offer discounts on additional member subscriptions. These and other variations on a society's "cafeteria plan" of benefits add too many permutations to be covered comprehensively here. However, the logic of the above analysis will apply in most cases, and a society can adjust its estimation of exposed revenue accordingly.

6.3 Assessing Countervailing Member Benefits

As noted above, the number of society members exposed to online site licenses does not itself determine a society's risk. To refine this assessment, a society must adjust its total estimate of exposed members to take into account mitigating factors.

Fortunately, few individuals join a scholarly, scientific, or professional society solely to get a subscription to the journal.⁹ If a society has surveyed its members about the value they perceive in the society's various benefits, it can then apply that insight to refine its estimate of members exposed to online site licenses.

⁷The analysis of institutional subscribers by subscriber type can also help inform the society's online pricing decisions; for example, to determine whether tiered pricing, by institution size or type, might be warranted. See below, "Tiered Pricing Models."

⁸Members at this level might also provide an opportunity for planned giving and other fund development programs. On establishing a planned giving program, see Jordan and Quynn (2002).

⁹See "Motivations for Society Membership," in Chapter Three.

However, as relatively few societies will have access to reliable empirical data about its members' preferences, we describe below an approach that may be applied by those societies without such data.

6.3.1 Motivations for Society Membership

In the absence of survey data from its own members on the perceived value of society membership, a society will need to rely in part on responses to multiple-discipline surveys regarding participation in learned societies. The table below lists the most frequently cited motivations for joining a society, in order of importance, according to studies commissioned by the American Council of Learned Societies (ACLS) in 2001¹⁰ and the American Society of Association Executives (ASAE) in 2006.¹¹

Both the ACLS and ASAE surveys indicate that the predominant motivations for joining a learned society are the intangible benefits of community participation and professional interest, and the ASAE study indicated that academics are the strongest supporters of their membership organizations.¹² In the absence of data specific to its membership, a society may reasonably assume that its members will exhibit the same motivations to membership as the ACLS and ASCE surveys suggest.

In addition to the intangible benefits of society membership—such as maintaining professional identity and expressing community affinity—a society offers additional tangible benefits that its members value. The pressure that online institutional site licenses exert on a society's membership will depend, in part, on the perceived value of the society's entire suite of benefits. The following sections discuss typical member benefits and how they might be perceived by a society's membership.

¹⁰Rudder (2003), 17, Table 24.

¹¹Dalton and Dignam (2007), 56, Exhibit 7.4.

¹²Dalton and Dignam (2007), 58.

6.3.1.1 Reasons for Society Membership

Reason for Joining Society	ACLS Survey	ASAE Survey
	% Very or Somewhat Important	Rank
Track Research/Methodology in the Field	88%	1
Maintain/Establish Professional Relationships	83%	2
Express Professional Responsibility and Identity	80%	3
Read/Discuss Across Disciplines	68%	
Present Papers/Conference	62%	
Build Relationships Face-to-Face	61%	
Represent Field to Wider Public	51%	
Publish in Refereed Publication	47%	
Contribute Active Support to Profession	41%	
Involve Students in the Profession	39%	
Improve Pedagogical Skills	35%	
Find Employment/Access to Career Information	25%	

Figure 6.3

6.3.2 Publication Benefits

The manner in which a society's publication benefit is structured—in particular, the provision of a member print subscription—can deliver value that complements member online access. Therefore, a society should assess how its members perceive its entire suite of publication benefits.

6.3.2.1 Convenience of Print Subscription

While researchers value the discovery power and added functionality of online journal content, many continue to value the convenience of a personal print subscription. This preference for print is driven by the positive attributes of working with paper, an aversion to reading large bodies of text online, and perceived deficiencies in online journals. And while it is slightly more likely to be perceived by faculty in the arts and humanities and social sciences, it exists across all disciplines, including the sciences.¹³ For such members, online institutional access seems an insufficient motivation to cancel their memberships in a society, even were the journal the sole benefit of membership. Obviously, this situation could change over time, if online reading technologies improve sufficiently. However, the dearth of electronic-only journals suggests that most publishers recognize that print, at least for now, retains its value for many subscribers.¹⁴

¹³See Sellen and Harper (2002), esp. 75f.; Schottlaender (2004), 37-42, which examines preference and use across disciplines and by user type and other variables within the University of California system; King and Montgomery (2002), which compares faculty and graduate student use in the sciences; and Anderson (2004), which compares print and online use for the *New England Journal of Medicine*.

¹⁴See Ware (2005a).

That said, a society must assess the extent to which its own members value print. While a number of studies examine how usage of print and online resources varies by discipline, user type, age, and other characteristics,¹⁵ there is relatively little data that speaks directly to the retention of personal print subscriptions. In terms of age, there are some indications that availability of a journal in print format is less important for authors and readers under thirty-five.¹⁶ Thus, the age of a society's membership may also affect the extent to which individual members value print. A society that gathers sufficiently detailed demographic data from its members can use age information, in the aggregate, to gauge the potential for print retention on the part of its members.

A Stanford University online journal user survey examined the behavior of faculty users of electronic journals who had joined societies and who ordered or cancelled personal subscriptions in the previous year.¹⁷ The Stanford study indicates that the most frequent reason for faculty cancelling a journal subscription was an abrupt price increase rather than free access to the journal via an online library subscription.¹⁸ This suggests that a sharp increase in a journal's individual member dues would pose a greater threat to a society's individual membership base than would electronic site licenses.

Faculty attitudes towards their libraries' retention of print subscriptions may provide some insight into print preference by discipline. For example, we can interpret responses to a faculty survey, conducted in 2006, to determine the approximate percentage of faculty, by discipline, that continue to hold a strong preference for print access.¹⁹ The survey suggests a strong preference for print by discipline as follows:

Classics: 65%
 History: 60%
 Philosophy: 50%
 Law: 45%
 Sociology: 40%
 Art History: 35%
 Biological Sciences: 30%
 Economics: 30%
 Engineering: 25%

Given the highly variable and constantly changing demand for print by discipline, the best indication of the value that a society's members place on a personal print copy of a journal will be a recent, methodologically sound, survey of a society's membership. Lacking such data, a society may need to rely on general indicators by discipline and age such as those discussed above.

6.3.2.2 Other Publication Benefits

Some societies may offer other publication benefits, in addition to a peer-reviewed journal, that members value. Such benefits can include:

- A member newsletter—member newsletters and magazines can help retain members, as long as they are not included as part of an institutional membership;
- Publication of non-peer-reviewed—but valuable—scholarly material, such as conference proceedings, online archival collections, special program papers, and posters;

¹⁵For an overview of such use-preference studies, see Rowlands (2007); Tenopir (2003), 28ff. Also see Tenopir and King (2002), 173-175.

¹⁶See Tenopir (2003), 30-31; and Rowlands, Nicholas, and Huntingdon (2004), 12.

¹⁷Stanford University Libraries (2002), 21-22.

¹⁸About 22 percent of respondents in the Stanford eJUS survey reported having cancelled a journal in the previous year; 18 percent reported subscribing to a new journal. Stanford University Libraries (2002), 21.

¹⁹Schonfeld and Guthrie (2007), 8-9. The survey asked whether faculty were prepared for the library to cancel a print edition of a journal, as long as the journal remains available in electronic format. We have interpreted responses that do *not* agree with that statement as a broad indication of preference for print. Researcher preferences for online access to journals, by academic discipline, is discussed in Section 2.2.2.

- Lower or waived submission or page charges when publishing in the society's journal— in disciplines where page charges are prevalent, members that contribute to the society's journal will benefit from savings on page charges;²⁰
- Discounts on other journals and/or monographs, whether from the society itself, in cooperation with other societies, or negotiated with commercial publishers;
- The society's membership directory—whether online or in print;
- Members-only personalization features (for example, email alerts, personal work spaces, etc.) for the society's online content.

Any of these publication benefits may contribute to the perceived value of a society's membership.

6.3.2.3 Service Differentiation

Providing individual members with functionality not available through institutional subscriptions can reduce the substitution of institutional subscriptions for individual membership. Differentiating online features can include personalization and customization; member discussion groups; and support for in-process scholarly communications, including collaborative authoring.²¹

Such features may allow a society to increase the value of its membership offering by integrating the online journal into the organization's overall digital strategy for communicating with (and maintaining its relevance to) its members. Further, as faculty in art and art history cite difficulty finding digital resources as a critical barrier to their use,²² a society might extend its member services to include image acquisition and copyright clearance services for publication and teaching.²³

6.3.3 Conferences and Meetings

A society's annual meeting is often an important benefit of membership. This is especially the case if one must be a member to deliver a paper at the meeting. Even if membership is not required to participate in the meeting, registration fee discounts provide an economic benefit to members. Analyzing the society's meeting registration data can help determine the number of members for whom the meeting represents a benefit. This will be particularly useful if the registration information captures, or can be correlated with, such member data as institutional affiliation and profession.

A society should look at several years' worth of data when estimating the number of members who value the meeting. Researchers who belong to more than one society may attend a society's meeting irregularly, depending on the meeting's location or on a timely opportunity to present a paper. Sometimes the pattern of meeting attendance will be easy to discern—for example, half of the members may attend every other year—and a society can estimate the number of members for whom the meeting provides a benefit, even if every member does not attend every meeting.

6.3.4 Other Member Benefits

A society may offer a number of other member benefits, including:

- Participation in a member listserv;
- Access to special interest groups or eligibility for local chapter membership;
- Classifieds and placement services for job seekers;

²⁰In some scientific disciplines, particularly in the life sciences, society-sponsored journals frequently assess publication charges to partially offset the cost of publication.

²¹Obviously, some versioning approaches—such as embargoing content for institutional site licenses to decrease their appeal as substitutes for individual memberships—would devastate a society's ability to market an online version of the journal to institutional libraries, typically a journal's single greatest source of revenue.

²²See Harley *et al.* (2006), 4-44.

²³Again, the Society of Architectural Historians ARA image exchange being developed by the Society for Architectural Historians provides an example (<http://www.sah.org/clientuploads/TextFiles/4AVRN.pdf> (<<http://www.sah.org/clientuploads/TextFiles/4AVRN.pdf>>)).

- Eligibility for grants, scholarships, and awards;
- Insurance programs and non-publication discounts;
- Continuing education and certification programs;
- Invitations to special events, such as exhibition openings for high-level donors;
- Access to private and special collections;
- Member trips to sites of art historical and architectural note;
- Discounted memberships in museums; and
- Discounted subscriptions to related periodicals.

Some of these benefits may be valued more highly by one class of members (for example, students will especially value scholarships and career services), and, to the extent possible, a society will want to correlate its membership types to the benefits they value.

6.4 Quantifying the Potential Effect of Online Access on Membership

“Assessing Exposure to Online Licenses,” above, describes how a society might estimate the total number of members potentially “exposed” to online institutional site licenses. To refine its estimate of the likely effect of online site licenses on its membership base, a society can apply a successive ratio approach to determine the percentage of exposed members who will be susceptible to cancelling membership.

The table below shows an example analysis that identifies the percentage of a society’s members who value *either one* or *both* of two society benefits. This analysis assumes that the society cannot correlate more precisely which members value which benefit—a fairly typical situation.

6.4.1 Example Analysis of At-risk Membership

All Society Members	Members Exposed to Online Site Licenses	Society's Members Who Value the...		Total Members at Risk	
		Personal Print Subscription	Annual Meeting	Any One Benefit Sufficient	
300	60%	50%	70%	15%	270
	1800			Both Benefits Required	
				80%	1440

Figure 6.4

In the example, a society with 3,000 members has determined that 60 percent of its membership (that is, 1,800 members) may be exposed to institutional online site licenses. Of those members, the society estimates that 50 percent value a personal print subscription and that 70 percent attend the annual meeting. (This

type of analysis can be extended to include all the benefit variables for which the society has meaningful data.)

Under the set of assumptions in the table, if the society assumes that an individual valuing *either* of the benefits would elect to remain a member, then only 15 percent of the exposed membership²⁴—or 270 members—would be at risk of cancelling their membership (that is, only 15 percent of the members value neither of the benefits). If the society were to assume that only members who value *both* of the benefits would remain members, then 80 percent of the membership exposed to institutional online access—or 1,440 members—might discontinue their membership.²⁵ (Again, this analysis can be extended to include any number of variables.)

The above analysis ignores the role of professional identity and community affinity, discussed above, as a motivation for society membership. If a society were to assume that its members share the same motivations as those revealed in the ACLS and ASAE surveys (see the *Reasons for Society Membership* see figure 3), it might reasonably assume that 80 percent of its members would indeed value the intangible, affinity-based benefits of membership. In that case, only about 20 percent of the society's membership would be "exposed" in the first place.

Although a society could calculate the direct economic benefit of a membership, adding up the financial value of the various discounts and other benefits of membership, a recent study indicates that such a cost-benefit analysis seldom motivates an individual to join a society.²⁶

6.4.2 Mitigating the Risk

Once a society has estimated the number of members at risk, it should develop a strategy for dealing with the potential member attrition. The society could anticipate a potential loss of members, increasing individual member dues and/or institutional subscription prices to offset loss in individual dues income. The feasibility of increasing dues or subscription prices will depend on the specific circumstances, financial and political, of the society. A society might also compensate for lost member dues revenue by increasing its return from other publication-related revenue streams, such as advertising, sponsorships, licensing, or rights and permissions. Alternatively, the society might explore revenue-generating activities unrelated to its publishing program, such as grant seeking and fundraising.

Rather than (or in addition to) adjusting dues and subscriptions, a society can take several steps to mitigate the risk to individual memberships. These include undertaking a marketing communication program to existing members, stressing the multiple benefits of membership in the society, and strengthening existing member benefits or creating new exclusive benefits of membership.

Obviously, the analyses above will only be as compelling as the data on which they are based. To the extent that the society's risk assessment is based on analogy and multiple assumptions, it can only approximate the risk it might incur. Still, even such an approximation is preferable to speculation, which often reflects an unsubstantiated extreme of pessimism or optimism.

²⁴That is: $(1 - 0.5) * (1 - 0.7) = 0.15$ or 15%.

²⁵That is: $(1 - 0.5) + (1 - 0.7) = 0.80$ or 80%.

²⁶Dalton and Dignam (2007), 1. See also Tschirhart (2006), 526-528.

Chapter 7

Effects of Online Access on Institutional Subscriptions¹

7.1 Online Access and Print Substitution

As institutional subscription revenue represents the largest income source for most peer-reviewed journals, a society needs to assess the effect an online edition will have on its base of institutional subscribers. The fundamental issues in this respect are the value and utility of an online version relative to the print edition, and the extent to which the online journal provides a viable substitute for, or improvement over, the print edition. Understanding how institutional subscribers perceive the relative value of the online and print editions is critical to a society establishing appropriate pricing for each medium, whether they are sold in combination or separately.

For institutional libraries to cancel a corresponding print subscription, the online version must typically provide the following:

- Immediate access—the online version must be available immediately, without an embargo period.
- Reliable and perpetual access—the online version must provide for ongoing access to the content (typically through a perpetual rights clause in the license agreement) in the event of cancellation. Further, in the context of multiple-title aggregations, there must be little or no perceived volatility in the aggregation's content or title list.
- Completeness—the online version must contain all the substantive content of the print version, including all articles, reviews, editorials, letters, and other front and back matter.

How a journal is distributed online will also determine the effect on its institutional print subscription base. There are several common online distribution channels:

- *Online distribution on a single-title basis.* Assuming that an online edition meets the content criteria—immediate, perpetual, and complete access—outlined above, access to the journal on a single-title basis will typically provide a ready substitute for the print edition of the journal. This is true whether the journal is available directly from the society or from a third-party distributor.
- *Access to the journal through an online aggregation that provides a viable substitute for the primary journal.*² A subject-specific aggregation (again, that meets the content criteria above) offering multiple titles for a bundled subscription price will typically serve as a viable substitute for the primary journal. Participation in such an aggregation will not typically generate as much royalty revenue per institutional subscriber as the journal could earn through single-title sales. However, participation in

¹This content is available online at <<http://cnx.org/content/m34284/1.1/>>.

²For a discussion of substitution in the context of content aggregations, see Cox (2004).

such aggregations can make a journal attractive to institutions unable to justify a subscription to the primary journal.³ Further, participating in an aggregation may increase a journal's overall revenue if the aggregation reaches into under-penetrated markets and generates revenue sufficient to compensate for any cannibalized subscriptions in the journal's core market. Whether participating in an aggregation will generate the same level of revenue as single-title access will often depend on the aggregation's penetration of unserved or underserved markets and/or the ability to preclude access to the aggregation in the journal's core market.⁴

- *Access to the journal via an online aggregation that is not perceived, by purchasing librarians, as a viable substitute for the primary journal.* Such aggregations can include large, multiple-subject journal aggregations, such as those available from EBSCO, ProQuest, Wilson, OCLC, and other vendors. Often the journals in these aggregations are embargoed (typically, for at least one year) or their content is incomplete (for example, only research articles are included). Equally important, even when journals are not embargoed or otherwise limited, the aggregation's content is unstable (or perceived to be so) over time. Although such aggregations will not typically provide a viable substitute for institutions with a high demand for a journal, they may serve as a substitute for institutions at the margins of the journal's market. Further, under sufficient budget pressure, libraries may simply have no choice but to downgrade from a discrete subscription to access via an aggregation.
- *Pay-per-View (PpV) access to individual journal articles.* Individual article purchase options may affect a journal's subscription base at the margins—that is, for institutions with a tenuous demand for the journal. Individual article prices need to be set high enough to minimize their attraction as an alternative to a subscription, but low enough to generate new revenue.

If, in addition to satisfying the criteria discussed above, an online journal delivers valuable enhancements over the print—such as rich multimedia functionality—institutional subscribers may well adopt it at a faster rate. Assuming that the pricing of the online edition reflects the added value of the multimedia features, this may increase the society's overall revenue from the publication.

7.2 Academic Library Purchase Behavior

For almost a decade after the introduction of online editions of peer-reviewed journals, academic libraries continued to maintain print subscriptions in addition to online access. The retention of print subscriptions reflected the concern of academic libraries about the long-term access to, and digital archiving of, online journals, as well as researchers' initial reluctance to forgo print.

Increasingly, however, academic libraries have grown more comfortable with providing online-only access to peer-reviewed journals. Several factors have contributed to this trend:

- Publisher pricing policies have evolved to make online-only access a cost-effective subscription option;
- An acceptance by libraries of licensed access to, rather than ownership of, journal content;⁵
- Recognition that online-only journals are substantially less expensive to process, manage, and archive than print journals;⁶
- Growing confidence that long-term digital preservation solutions are emerging;
- Increasing faculty acceptance of online-only access;⁷ and
- Academic library budget constraints, exacerbated by the increasing volume of published research and the exorbitant prices of some commercially published journals, which force libraries to adopt the least expensive access available.⁸

³Cox (2004), 5.

⁴On pricing for aggregations and consortia sales, see "Consortia Sales and Aggregations," in Chapter Five.

⁵See Okerson (1996), 55-76.

⁶See Schonfeld, King, Okerson, and Fenton (2004) and Montgomery and King (2002).

⁷See Housewright and Schonfeld (2008), 13-16.

⁸Tenopir and King (1999), 251-258.

7.2.1 Purchase Preference by Medium

Given the combination of factors listed above, many academic libraries have adopted a policy to opt for online-only access when a journal's pricing makes it cost effective to do so.⁹ An analysis of the changing purchase behavior of North American research libraries has demonstrated that "university libraries are clearly, steadily, and rapidly shifting away from print format and accepting electronic format as the dominant medium for journal collections."¹⁰ This analysis indicates that online-only subscriptions increased from just 5 percent of subscriptions in 2002 to over a third of all subscriptions just four years later. The table below shows the distribution of subscriptions, by medium, at academic research libraries.

Research Library Journal Medium Preferences¹¹

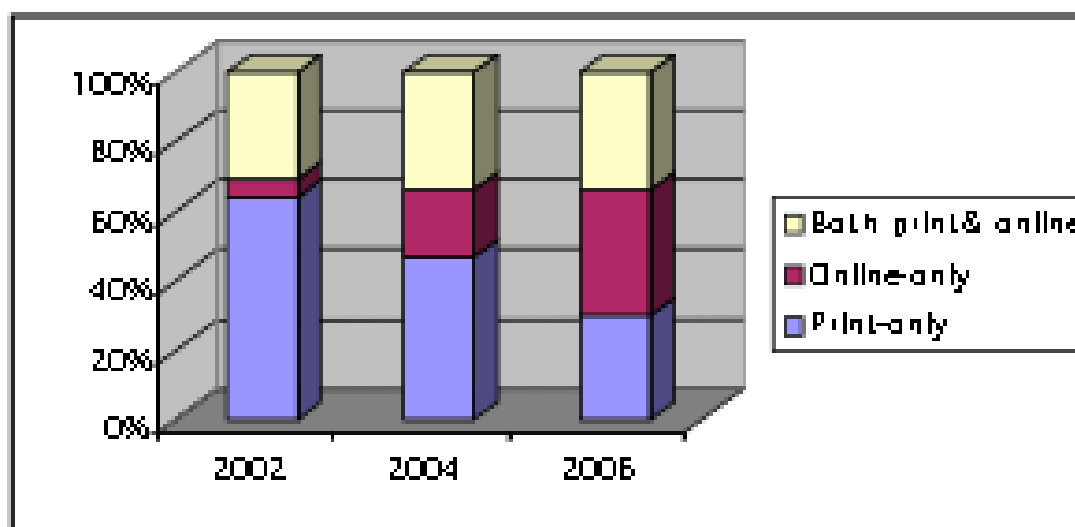


Figure 7.1

Although it is widely recognized that many academic libraries prefer online-only access to journals, the surveys of academic library purchase preferences cut across disciplines. This makes it difficult to determine the number of libraries that will prefer a particular media option for any particular field or discipline. A society that seeks information on library purchase behavior for a particular field will often have to rely on anecdotal evidence,¹² which will yield only the softest of data for estimating academic library print-retention by discipline.

⁹However, a relatively small percentage of libraries—fewer than 5 percent according to one survey—have eliminated the use of print journals in their libraries. See Primary Research Group (2008), 29. Other factors affecting institutional purchase preferences include online license terms and, in Europe, value-added tax. (In Europe, online-only journals are subject to VAT, while print journals are not.)

¹⁰Prabha (2007), 12. Although many U.S. libraries continue to purchase dual-media subscriptions, outside the U.S. the practice is far more limited. One survey indicates that U.S. libraries outspend foreign libraries on dual-media subscriptions by a ratio of 4-to-1. See Primary Research Group (2008), 27.

¹¹Prabha (2007), 8.

¹²Some fields have their own library associations, and these can be a good source of information on purchase preferences.

7.2.2 Duplicate Subscriptions

Under a print regime, some large institutions maintained multiple subscriptions in various campus locations. Although academic libraries were initially slow to cancel duplicative print subscriptions, perennial budget constraints and an increased comfort with online dissemination have resulted in such cancellations becoming increasingly common.

A society should analyze its institutional subscriber lists to determine the proportion of its subscriptions that are duplicates. Typically, subscriptions should be considered duplicative if they are held by the same library, by different libraries on the same campus, or by satellite campuses in the same metropolitan area. Subscriptions held by branch campuses in different cities are not typically duplicative if the campuses have their own acquisitions programs. If a significant proportion of the society's subscriptions are handled by subscription agents, it may be difficult to determine the exact extent of duplicate subscriptions. After determining its exposure, the society can determine whether it needs to take the potential lost revenue into account when establishing its online pricing.

7.3 Purchase Behavior: Other Institution Types

Typically, academic libraries comprise the largest group of institutional subscribers to peer-reviewed journals, often representing 70 percent or more of a journal's institutional subscriber base. If a society has a meaningful number of subscribers from other types of libraries or institutions—for example, museums, commercial firms, government agencies, or public libraries—it may need to survey those subscribers directly, as there is seldom meaningful data on the journal purchase preferences for such organizations.

In addition to determining preference for print and/or online by organization type, the society will need to determine the preferred online access channel for each organization type with a significant representation in its subscriber base. For example, public libraries may prefer to gain access to online journals through aggregations such as those offered by ProQuest, Wilson, EBSCO, and others, while commercial firms in some industries may prefer access via aggregations from LexisNexis or Thomson.

7.4 Potential Market Expansion

7.4.1 Marginal Markets and Online Cost Allocation

In an online environment, it makes sense for a society to view the profitability of marginal markets differently from that of its core markets. While a society can identify the costs associated with delivering each incremental print subscription, the marginal cost of supplying an online version of a journal to a subscriber will be near zero.

Assuming that a society covers its online publishing costs by sales to its core markets, it makes sense to assess the profitability of sales to any new markets taking into account only the incremental marketing, sales, and fulfillment costs of reaching those new subscribers. Otherwise, if a society were to consider all of its fixed first-copy costs in determining profitability, it might forgo additional revenue without reducing its actual operating costs.¹³

This frees a society from the need to allocate fully loaded online costs across all its content offerings to all market segments. However, it does require that the society clearly define what constitutes its core markets, to which it will allocate shared costs, versus marginal markets, which would only bear the costs exclusive to themselves. This definition will be critical to the society's ability to assess the relative attractiveness of various market offerings.

The core markets for many societies will comprise the society's members and four-year college and university institutional libraries in mature markets (typically North America and Western Europe). These core markets (either separately or together) need to generate sufficient revenue to cover all of the society's

¹³For a primer on these issues, see Dryburgh (2003).

shared operating costs, including content creation and online distribution. Other markets—for example, two-year colleges, special libraries, museums, public libraries, and four-year institutional libraries in emerging or underserved markets—may then be treated as incremental, and their profitability may be evaluated taking into account only those costs incurred in reaching and serving those markets.

The above discussion of online cost allocation and marginal markets is also relevant to a society's consideration of tiered pricing approaches, consortia sales, and participation in online aggregations, discussed in Chapter Five, "Consortia Sales and Aggregations."

7.4.2 Less Developed Countries

Although it will not increase a journal's revenue, a society might expand access to its journal by providing free or substantially discounted online access to less developed countries (LDCs).¹⁴ Extending free access to libraries in the world's poorest countries supports a society's mission to advance knowledge in its field, while in most cases exposing the society to little or no revenue risk. Increasing access to journal content for research and teaching communities in LDCs will be especially important for societies representing disciplines engaged in cultural, historical, or scientific studies of such regions.

There may be a library-sponsored program designed to increase LDC access to online peer-reviewed journals in the society's field. Such programs include HINARI (biomedical fields),¹⁵ AGORA (agriculture),¹⁶ OARE (environmental sciences),¹⁷ and PERI (sciences, social sciences, and humanities).¹⁸

7.5 Effect of Online Distribution on Non-Subscription Revenue

Whether an online edition of a journal will have any negative effect on non-subscription income streams will vary by journal and field. Non-subscription revenues include advertising, permissions, reprints, individual copy sales, back copy sales, royalties (from online aggregators), and author charges (submission fees, color and page charges, etc.). As a broad generalization, subscription revenues comprise approximately 90 percent of revenues for most scholarly journals.¹⁹

We discuss below some of the issues relevant to several of the principal non-subscription revenue streams: advertising, royalties, permissions, and grants and gifts.

7.5.1 Advertising

With the exception of medical journals, print advertising accounts for less than 10 percent of gross revenue for most journals. Still, advertising can be a significant revenue source for some journals. As long as a society's members continue to receive print as a component of their membership benefit, a journal's online availability should not undermine its print advertising revenue. However, if a society elects to offer its members an online-only option, a significant decrease in member print distribution could result in a decrease in advertising revenue. Advertisers in peer-reviewed journals (a significant percentage of which are university presses and other nonprofit publishers) have yet to make the transition to online advertising. Until such time, a society will need to compare this potential lost advertising revenue against the potential savings gained from decreased print fulfillment costs.

¹⁴Publishers identify recipients of LDC free and discounted access using a variety of methods. Some publishers use schedules of countries developed by the World Bank, the United Nations, OECD, or other agencies; and others identify recipients based on existing programs (e.g., HINARI, AGORA, HighWire, etc.).

¹⁵<http://www.who.int/hinari/about/en/> (<<http://www.who.int/hinari/about/en/>>)

¹⁶<http://www.aginternetwork.org/en/> (<<http://www.aginternetwork.org/en/>>)

¹⁷<http://www.oaresciences.org/en/> (<<http://www.oaresciences.org/en/>>)

¹⁸<http://www.inasp.info/> (<<http://www.inasp.info/>>). For a list of programs intended to deliver peer-reviewed journals to developing nations, see <http://www.library.yale.edu/~license/develop.shtml> (<<http://www.library.yale.edu/~license/develop.shtml>>).

¹⁹Medical journals, which often generate substantial advertising and reprint revenues, are one exception.

7.5.2 Royalties and License Fees

The introduction of an online edition of a journal might affect royalty revenues from online aggregations in which the journal is participating. The extent to which this will be the case will depend on whether the aggregation targets a journal's core market or whether it reaches incremental non-core markets.

If the aggregation delivers the journal's content to a non-core market that the society would not otherwise reach, the aggregation's royalty stream for the journal should not be significantly affected. However, if the aggregation targets institutions in the society's core market, then the issue will be the extent to which the version of the journal in the aggregation serves as a substitute for the primary journal (see "Online Access and Print Substitution" in Chapter Four). If the version in the aggregation is embargoed or if the content is incomplete, libraries may continue to subscribe to the primary journal online, in addition to gaining access through the aggregation. The journal will likely continue to receive usage through the aggregation, especially by undergraduates and non-specialists who will rely on the aggregation for convenience.

7.5.3 Permissions

Online dissemination can also generate additional revenue through licensing at the article level.

The Copyright Clearance Center (CCC)²⁰ operates licensing programs for both print and online content that facilitate compliance with copyright law. CCC's services for academic publishers include online programs that automate the reprints and permissions process for using journal content in course packs, for electronic reserve, for institution-wide use, for use by individual researchers, for users outside of North America, and for a wide variety of other licensing programs. A society publisher can work with CCC directly, or a publishing service provider may handle registration and administration of the CCC relationship on the society's behalf, managing payments and fielding rights queries (in the latter case, the provider may take a percentage of the fee as compensation).

Although the presence of images and other copyrighted media in an online journal will limit rights and permissions revenue for art history and other visually oriented disciplines, online processing of reprints and permissions will sometimes result in either lower processing costs or increased licensing revenue.

7.5.4 Grants and Gifts

In some cases, a move to online distribution may occasion new grant seeking²¹ or philanthropic giving opportunities for the journal. For example, providing free online access to libraries in LDCs (as described in Chapter Four) may allow a publisher to ask a public or private foundation interested in the region to support the program.²² Or a journal might seek sponsorships to make selected articles from the journal available to a wide audience on an open-access basis. Such a sponsorship program would expand access to the journal's content and increase its visibility without affecting other revenue streams. The possible scope for such sponsorship programs is wide, and the low marginal cost of online dissemination increases their potential net income yield.²³

²⁰<http://www.copyright.com>.

²¹This was the case, for example, for *caa.reviews* and for *JSAH*, each of which applied technical innovations to expand the current conception of a art history journal.

²²Such a sponsorship might be priced in terms of the financial value of (theoretically) forgone subscription revenue.

²³See Crow (2005).

Chapter 8

Subscription Options and Pricing¹

8.1 Format Options and Pricing Models

As discussed in Chapter Four, the trend of academic libraries towards online-only journal subscriptions continues to accelerate, and individual society members are also growing increasingly comfortable with online-only access. As a result, a society's pricing for a journal—in terms of its member publication benefit and institutional pricing—needs to anticipate the potential for significant institutional print cancellations and a shift in preference to online-only availability.

If a society incurs additional costs from publishing its journal online, it may elect to cover some or all of the cost difference by increasing member dues and/or institutional prices; lowering its print fulfillment costs by converting subscribers and/or members to online-only access; or through some combination of the two. Even if a society outsources the marketing and sales of its online journal to a publishing partner, which will often have its own preferences for structuring print and online pricing, a society should understand its options. To provide such perspective, we discuss below some of the member and institutional subscriber pricing options available to societies, along with their implications.

8.2 Individual Member Dues

While it seems clear that the demand for print by institutional libraries will continue to decline, the prognosis for personal print subscriptions is less evident. Although multiple studies indicate that researchers prefer online journals for many research activities, and local printing of articles effectively moots the online reading issue, few studies have addressed the specific issue of preference for personal print subscriptions. In disciplines that rely heavily on visual images, the demand for print will depend in particular on the quality of image delivery in the digital environment. As it is impossible to determine when, or even if, the demand for a print edition will disappear entirely, a society will want to price its online and print editions to help manage the potential transition, whether gradual or precipitous, from print to online.

The viability of increasing member dues or modifying the member publication benefit will depend on the particular financial and (often) political situation within the society. If a society's dues level is perceived as high relative to similar societies, if it has a history of recent dues increases, or if it represents a secondary affiliation for many of its members, it may be constrained in increasing its individual dues levels or modifying the publication benefit.

A 2002 Stanford University survey examined the behavior of faculty users of electronic journals who had joined societies and who ordered or cancelled personal subscriptions in the previous year.² The study

¹This content is available online at <<http://cnx.org/content/m34287/1.1/>>.

²Stanford University Libraries (2002), 21-22.

indicates that the most frequent reason for faculty cancelling a journal subscription was an abrupt price increase rather than free access to the journal via an online library subscription.³

8.3 Member Publication Benefits

In practice, societies seem more likely to modify their member publication benefit than to increase member dues outright. The options a society will have for modifying its member publication benefit will depend on a variety of factors, including member tolerance for change and the nature of the society's print publication program and benefits. Societies that publish multiple journals often offer cafeteria plans that allow a member to receive one or more journal subscriptions with their membership, and/or discounts on subscriptions to additional journals. Depending on a society's publication program, it may have a variety of options for incorporating online access in its member benefit. These include:

- 1) Leaving individual member dues at their current level, and providing individual members with both print and online access to the journal. For most members, this will represent a net increase in the value of their membership. For academic members who have online access via institutional site licenses, this will represent an improved benefit if members have personalization features not available via institutional subscriptions. Providing society members with both print and online access to a journal without a change in the member dues is perhaps the most prevalent approach taken by societies. This approach provides society members with the best access option at a low incremental cost to the society.
- 2) Leaving individual member dues at their current level and giving members the option of receiving the journal either online-only or in print-only. Under this approach, individual members wanting the journal in both media would pay a dues surcharge (at, for example, a level equal to the marginal cost of providing the print subscription). The net revenue effect will depend on the proportion of the society's membership with online access via online site licenses through their home institutions. Although some of the options above—for example, changing the member publication benefit from print to online-only—would not, strictly speaking, represent a dues increase, members might perceive a dues surcharge for continued receipt of the print edition as an effective dues increase.
- 3) Offering individual members online-only access to the journal at a slightly lower dues level that takes into account the cost savings to the society of not providing a print version of the journal. By setting the dues differential equal to the marginal cost of providing a print subscription, this approach can be constructed to be revenue neutral. Depending on the society's objective, the differential can be set to generate a slight increase in net revenue for the society (by making the price differential less than the marginal cost of print). Whether this approach will generate additional revenue will depend on a variety of factors, particularly the proportion of the society's members with online access to the journal via their employer. While offering online-only access as an option may appeal to some members, *forcing* members to change to online-only member subscriptions can be risky. Johnson and Luther cite several instances where societies experienced significant losses of membership and advertising revenue after changing their member benefit from print to electronic subscription. In the cases cited, the societies failed to analyze the attendant risk or anticipate potential membership reaction to the change.⁴
- 4) If a society publishes more than one journal, it can offer online access to some or all of the journals online, in lieu of a print subscription to a single journal. This approach can work well as long as enough of the society's journals appeal to a cross-section of the membership. If the society's journals appeal to limited and discrete classes of members, this offer might offer little value to a majority of the society's membership.

The table below illustrates the net revenue effects per unit that might be achieved, based on the various member publication benefit options outlined above.⁵

³About 22% of respondents in the eJUS survey reported having cancelled a journal in the previous year; 18% reported subscribing to a new journal. Stanford University Libraries (2002), 21.

⁴Johnson and Luther (2007), 26.

⁵The table assumes that a society will produce both a print and online edition.

Example: Net Revenue Effects of Various Dues Options, on a Unit Basis

Example Assumptions

Annual Member Dues:	\$ 100
Annual Cost of Providing Print (i.e., print variable COGS):*	\$ 20
Annual Online Surcharge:	\$ 15
Online-only discount:	90%
Society Individual Membership:	3,000
Members Selecting Online-only or Online surcharge Option (where applicable):	25%

Publication Benefit Description	Dues	Net Revenue Contribution†		Variance with Current Dues Revenue
		\$	%	
1) Both print & online at same dues level	\$100	\$80	80%	\$0
2a) Member's choice at same dues level				
If print	\$100	\$80	80%	\$0
If online-only		\$100	100%	\$15,000
2b) Online available at a surcharge	\$100 + \$15	\$95	83%	\$11,250
3) Online-only at reduced dues level	\$90	\$90	100%	\$7,500
4) Multiple journals online-only at same dues level	\$100	\$100	100%	\$15,000

*The cost of goods sold (COGS) includes the direct costs related to producing a publication. Here it refers to the variable COGS for the print edition.

†That is, price less variable COGS. For the example, this is based solely on the cost of providing the journal.

Figure 8.1

Neither the list on pages tk-tk nor the examples in the table above exhaust all the possible member publication benefit pricing approaches available to a society. However, the table provides a model that a society could modify—applying its own data and assumptions—to assess the potential revenue effect of various common approaches.

While the leadership of a society often has a good intuitive sense of whether it can increase its member dues, predicting member preferences for various publication benefit options—especially when the options have many variables—will often prove more difficult.⁶ In such instances, a survey of member preferences for various publication benefit offerings would typically be useful.

⁶Indeed, one survey indicates that the perceived value of society benefits increases significantly with the level of member involvement. This suggests that the value perceptions of a society's elected leadership may not accurately reflect those of the majority of the membership who are less involved. See Dalton and Dignam (2006), 30-31.

8.4 Institutional Subscription Format Options

Societies also have several options for structuring how they price a journal's online and print editions for institutional subscribers,⁷ although this pricing typically has fewer variables than is the case with member dues.

Early pricing models for online journals were conservative and did not give libraries the option of cancelling print. To help maintain their existing revenue streams, publishers offered print-only and print-plus-online options. With the increasing demand for online editions, pricing models have evolved, and more publishers now offer an online-only option along with print-only and bundled dual-media options.⁸ Indeed, for some publishers, the pricing model has flipped completely, with print sold as an add-on to the online edition.

According to a 2008 scholarly publisher survey, the most common pricing options were print and online for one price (over 50% of small publishers), with a discounted price for online-only access (about 25% of small publishers).⁹ The table below summarizes common institutional pricing options for journals available in both print and online:

Common Institutional Journal Price Format Options

Format Option	Description & Pricing
Print-only or online-only	Either format available independently, either at the same price or at different prices (typically with online-only at a lower price).
Print-and-online	Both formats bundled for one price. Sometimes the bundle is priced at the former print-only price; sometimes at a slightly higher price.
Print-plus-online	Online available for a surcharge on top of the print-only price.
Online-plus-print	Print available for a surcharge on top of the online-only price.

Table 8.1

Relatively few publishers offer an online version exclusively.¹⁰ Exceptions include journals that have discontinued print while converting to an open-access model, or the approximately 3,300 open-access journals that have never published a print edition in the first place.¹¹

If a journal's print subscriber base were to decline substantially, the journal's variable cost structure would change—possibly affecting a journal's pricing—as overall printing costs decline while per-unit costs increase. At the same time, the advent of high-quality print-on-demand technologies makes it possible for publishers—even for image-intensive journals requiring high production values—to continue offering print editions even as the number of print subscribers approaches zero.

8.5 Institutional Subscription Pricing

As noted in Chapter Four, a lack of discipline-specific data will make it difficult for most societies to estimate institutional subscriber preferences by delivery medium with any precision. To mitigate the risk caused by this uncertainty, a society can design a journal's pricing to yield approximately the same revenue contribution

⁷Some societies refer to their institutional subscribers as “institutional members.” For most academic societies, there is little or no practical difference in this distinction, and for our discussion here we treat them as effectively the same.

⁸Prabha (2007), 11.

⁹Cox and Cox (2008), 28-29.

¹⁰See Ware (2005a).

¹¹Most of which are listed in the *Directory of Open Access Journals* (<http://www.doaj.org/> (<<http://www.doaj.org/>>)).

irrespective of format, thus minimizing the net revenue effect of the market's uptake of one purchase option over another. This approach renders the society indifferent, from a financial perspective, to the delivery format an institutional subscriber selects. In this way, the society can manage the migration of journal revenue from print to online and project revenue with confidence, regardless of the pace of change in market preference for one format over another.

The same approach described for member dues options can be applied to institutional pricing. First, the society needs to determine its revenue objective—for example, whether to maintain current net income levels or to increase revenue slightly to offset the incremental costs of online publication. The society can then use its existing print price, along with its variable cost of goods sold for delivering print, to establish pricing that render it more or less indifferent to institutional subscription uptake by medium.

The table below illustrates how a society could price its print and online options to remain more or less revenue-neutral. (Given the complexity of uptake assumptions for each of the format options, we simply show revenue contribution on an individual subscription basis.)¹²

Example: Net Revenue Effects of Various Subscription Options, on a Unit Basis

Example Assumptions				
		Annual Member Dues: \$	100	
		Annual Cost of Providing Print (i.e., print variable COGS):*	\$	20
		Annual Online Surcharge: \$	15	
		Online-only discount:	90%	
		Society Individual Membership:	3,000	
		Members Selecting Online-only or Online surcharge Option (where applicable):	25%	
Publication Benefit Description	Dues	Net Revenue Contribution†		Variance with Current Dues Revenue
		\$	%	
1) Both print & online at same dues level	\$100	\$80	80%	\$0
2a) Member's choice at same dues level				
If print	\$100	\$80	80%	\$0
If online-only		\$100	100%	\$15,000
2b) Online available at a surcharge	\$100 + \$15	\$95	83%	\$11,250
3) Online-only at reduced dues level	\$90	\$90	100%	\$7,500
4) Multiple journals online-only at same dues level	\$100	\$100	100%	\$15,000

*The cost of goods sold (COGS) includes the direct costs related to producing a publication. Here it refers to the variable COGS for the print edition.

†That is, price less variable COGS. For the example, this is based solely on the cost of providing the journal.

Figure 8.2

As the table indicates, the online-only and dual media options will yield higher returns (roughly equivalent to the variable print cost of goods sold) than will the print-only option.

¹²The table assumes that a society is committed to producing both a print and online edition.

8.6 Comparative Price Analysis

How much latitude a society will have to adjust its pricing—for example, to cover new costs associated with online distribution—will depend in part on the journal’s current price. As a society considers its online pricing options, it should also evaluate how the journal’s current print price compares with other journals in the same or related fields. There are some specialized pricing studies available, although these tend to be one-time studies that age quickly.¹³ One of the more useful recurring analyses is that published each April in *Library Journal*.¹⁴ The *Library Journal* price index provides four-year pricing information for journals, including breakdowns by the following Library of Congress subject areas:

Agriculture	General Science	Music
Anthropology	General Works	Philosophy & Religion
Art & Architecture	Geography	Physics
Astronomy	Geology	Political Science
Biology	Health Sciences	Psychology
Botany	History	Recreation
Business & Economics	Language & Literature	Sociology
Chemistry	Law	Technology
Education	Library & Information Science	Zoology
Engineering	Math & Computer Science	
Food Science	Military & Naval Science	

Table 8.2

8.7

Maintaining a history of a journal’s pricing over time allows a society to compare the rate of the journal’s price increases against comparable journals in the same field. The table below illustrates a price comparison for a hypothetical art history journal. In the example, the journal’s price has been increasing at a slightly faster rate than the average for all history journals, and has an institutional subscription price 20% higher than average. In this case, the society might forgo a price increase, recognizing that pricing the online-only format option on par with print can increase net revenue resulting from institutional libraries’ growing preference for online-only access.

Sample Art History Journal Price Comparison

¹³See, for example, White and Creaser (2004) and (2007).

¹⁴For 2008, see Van Orsdel and Born (2008). The *LJ* periodicals price index surveys journals covered by several Institute for Scientific Information (ISI) databases—Arts & Humanities Citation Index, Social Sciences Citation Index, and the Science Citation Index—as well as titles in EBSCO Publishing’s Academic Search Premier. The annual pricing survey published by Allen Press (Kean (2007)) summarizes other journal pricing indexes for society journals in science and medicine.

Sample Price Comparison	Cost per Title					
	2004	2005	2006	2007	2008	CAGR
All Art & Architecture Titles*	\$176	\$188	\$210	\$222	\$243	8.4%
Sample Art History Journal (SAHJ)	\$200	\$220	\$240	\$260	\$290	9.7%
Variance SAHJ vs. All Art Journals	14%	17%	14%	17%	19%	

*Per Van Orsdel and Born (2008).

Figure 8.3

8.8

In some instances, it will also be useful to compare a journal's pricing against that for the most directly comparable titles (in terms of editorial scope, audience, reputation, and publication frequency).

Another useful resource for determining a journal's price and value relative to comparable journals is the "Journal Cost-Effectiveness" database developed by Ted Bergstrom and Preston McAfee, economists at the University of California at Santa Barbara and Caltech, respectively.¹⁵ The database uses cost-per-article and cost-per-citation data to indicate a journal's value relative to others in its field.

8.9

As a general rule, institutional libraries prefer routine, predictable increases over large, discontinuous price jumps. A society that has increased its pricing erratically—for example, years of no increases punctuated by single-year increases of 20% or more—may want to increase its journal prices in modest, annual increments rather than in larger periodic adjustments.

8.10 Tiered Pricing Models

The pricing by distribution format (print, online, both), described above, assumes that all institution types pay the same subscription rate. However, society publishers also have the option of employing differential pricing. Institutional libraries have long acquiesced in differential pricing of subscriptions, recognizing that journals housed in libraries receive more intensive use than individual subscriptions. Indeed, differential pricing of print subscriptions may be considered the historical precedent to online site licenses.

There are two basic approaches to journal pricing: cost-plus and value-based. Cost-plus pricing bases a journal's price on a society's costs of producing it, plus a margin sufficient to sustain the journal's operation. Societies often apply this approach to print journals. Value-based pricing tries to determine the price that institutions would be willing and able to pay. Establishing a price for an online edition in this way can allow a society to tap the value created by the online version and increase the revenue available to sustain the service going forward.

Such value-based pricing for online journal services often takes the form of tiered price schedules. Tiered pricing can allow a publisher to generate more revenue while keeping journal prices moderate and equitable.

¹⁵See <http://www.journalprices.com/> (<<http://www.journalprices.com/>>). The database's Relative Cost Index is a journal's "Composite Price Index" (the geometric mean of the price per article and the price per citation) divided by the median CPI of nonprofit journals in a specific subject category. The calculation methodology is explained at <http://www.hss.caltech.edu/~mcafee/Journal/explanation.html> (<<http://www.hss.caltech.edu/~mcafee/Journal/explanation.html>>).

When demand is inelastic, as is the case for scholarly and scientific journals, the amount of unappropriated revenue—the revenue forgone from institutions that perceive either greater or lesser value in the journal relative to its price—is comparatively large. Tiered pricing allows a journal to capture some of the unappropriated surplus from larger institutions that realize more value in the journal, and some of the deadweight loss from smaller institutions that could not otherwise afford the journal. Capturing this value is possible with an online service, as the marginal cost of delivering the service to each additional subscriber is near zero.

Academic libraries typically tolerate differential pricing based on institution size and intensity of use. Pricing based on such buyer characteristics allows publishers to offer online information services at price points that help maximize both service reach (in terms of revenue) and end-user access. In North America, the U.K. and Western Europe, online information services, including online journals, are often offered via banded pricing schemes based on the type of institution,¹⁶ on the number of full-time equivalent students (FTE) at an institution, the number of sites included in the license, the number of concurrent users able to access the service, or some combination of these measures.¹⁷ Although such tiered pricing models are more prevalent among commercial publishers, nonprofit publishers also use them, with approximately 25% of nonprofits basing the price on the number of sites, 17% on FTEs, 17% on institution type, and 4% on simultaneous users.¹⁸

A society publishing a journal with a broad readership could develop tiered pricing, offering a journal at a higher price for MA/PhD-granting institutions than for baccalaureate institutions. However, for highly specialized journals, size-based price bands will not typically work well with North American institutions. Since the intensity of use of a specialized journal will not be a simple function of an institution's size, many large institutions without programs in the specific area might not find size-based pricing compelling. Conversely, lowering the price for smaller institutions might simply reduce the society's revenue from the journal without significantly increasing the journal's market size.

The cost of marketing and administering a tiered pricing model—even where suitable—might reduce the net incremental revenue benefit to the society. Unless a society outsources sales and fulfillment of its journal to a publishing services provider, it may find that pricing by distribution medium serves the society's needs without the added administrative cost of a tiered pricing model.

8.11 Pay-per-View Pricing

Online distribution makes sales of individual journal articles technically and economically viable. According to one survey of scholarly publishers, over 75% of nonprofit publishers, irrespective of size, offered pay-per-view (PpV) access, although less than 20% of small- and medium-sized nonprofit publishers that offer PpV consider it a significant source of revenue.¹⁹ PpV distribution requires that the journal has ecommerce functionality, either through its online publishing system or via an online fulfillment service (e.g., Ingenta or JSTOR).

Although pay-per-view pricing has the potential to cannibalize some marginal institutional subscriptions, the risk appears to be relatively low.²⁰ For a journal with an institutional subscription price of \$250, and

¹⁶The Carnegie Classification of higher education institutions is one of the most widely used ways of placing U.S. university customers within banded pricing schemes for publishers' journal site licenses. The updated classification can be found at <http://www.carnegiefoundation.org/classifications/index.asp> (<<http://www.carnegiefoundation.org/classifications/index.asp>>). A typology for European higher education institutions is also being developed (see <http://www.utwente.nl/cheps/research/projects/ceihe>) (<<http://www.utwente.nl/cheps/research/projects/ceihe>>). Projecting potential revenue under this pricing approach is more difficult in countries where no standard classification system is available.

¹⁷The *American Library Directory* and *The Europa World of Learning* provide information on budgets and populations served for libraries, universities, colleges, schools of art and music, research institutes, and museums.

¹⁸Cox and Cox (2008), 31.

¹⁹Cox and Cox (2008), 32-33.

²⁰Admittedly, both of these assertions are largely intuitive. There are no publicly available empirical studies that examine the effect of PpV sales on individual or institutional subscriptions. At the same time, current institutional library purchase behavior (described in the next paragraph) prefers fixed pricing.

a relatively low price of \$15 per article,²¹ institutions anticipating more than seventeen downloads per year would be better served by a subscription.

At this point, most academic librarians do not consider pay-per-view an attractive alternative to electronic site licenses, due to the unpredictability of cost and the burden imposed on end users. Also, libraries tend to reject models that might involve them policing usage or restricting access.²² A joint library-publisher study is currently evaluating potential usage-based pricing models that would allow a library to convert from PpV to a subscription model once it reaches a specified usage threshold. Under such a model, a publisher might set the price for such a converted subscription at a premium over the standard subscription price.²³

8.12 Open Access

The business approaches described in this guide allow a society to operate a subscription-based publishing program efficiently, thus allowing it to remain (or become) financially self-sustaining. At the same time, alternatives to traditional subscription models exist, and an overview of online journal pricing needs to include a discussion of “open access” distribution.

Although definitions of open access differ in relatively minor ways, an early definition promulgated by the Budapest Open Access Initiative (BOAI) remains prevalent.²⁴ The BOAI defines open access to scientific and scholarly literature to be:

*... its free availability on the public Internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of (peer reviewed or pre-print) articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the Internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited...*²⁵

It should be emphasized that open access is an access principle, not a business model. While the subscription pricing models described above are based on fees paid by readers—or their proxies, such as academic libraries—open-access publishing uses alternative funding models to make research content available free to the end user. The challenges of implementing a business model capable of supporting open-access distribution are exaggerated by some and minimized by others. In reality, implementing such business models is neither easy nor impossible.

In any event, issues relating to open access are becoming increasingly prevalent in the market environment for scholarly and scientific journals,²⁶ and these changes can affect a society in a variety of ways. These include:

- The need to accommodate member demand for open access by implementing publishing models capable of supporting it;²⁷

²¹A JSTOR survey in mid-2006 (cited in Guthrie, Griffiths, and Maron (2008), 26) indicated that PpV prices ranged from \$7 to \$39 per article.

²²See Rightscom, Ltd. (2005), 16-17.

²³For the initial report of the JISC-sponsored study, see Rightscom (2005). For a description of the subsequent field testing of the model, see Hardwood and Prior (2008.)

²⁴The Budapest Open Access Initiative (BOAI), promulgated February 14, 2002, aims to accelerate progress in the international effort to make research articles in all academic fields freely available on the Internet. The BOAI arises from a meeting convened in Budapest in December 2001 by the Open Society Institute (OSI). For the full text of the initiative, see: <http://www.soros.org/openaccess> (<<http://www.soros.org/openaccess>>). For an overview of other definitions of open access, see <http://www.earlham.edu/~peters/fos/newsletter/09-02-04.htm> (<<http://www.earlham.edu/~peters/fos/newsletter/09-02-04.htm>>).

²⁵See: <http://www.soros.org/openaccess> (<<http://www.soros.org/openaccess>>).

²⁶Rowlands and Nicholas (2006), 43-44, reports on the speed with which awareness of open access is increasing.

²⁷On author attitudes towards open access, see Rowlands and Nicholas (2006), 43-46; Rowlands, Nicholas, and Huntingdon (2004), 21ff; and Brown and Swan (2004).

- Funder policies that require authors to make electronic versions of their articles available in digital depositories, typically after an embargo period intended to protect the publisher of the journal in which the article originally appeared; and
- Institutional mandates that require a faculty member to deposit an article in an institution's online repository.

A full discussion of the opportunities and challenges of open access lie beyond the scope of this guide,²⁸ and guides to planning and implementing open-access business models are available.²⁹ However, we will briefly review the issues above as they may affect any society publisher.

8.12.1 Open-Access Publishing Models

A 2008 survey of scholarly publishers reported that 26% of nonprofit publishers offer either full or partial open-access journals. Funding models for open access in use by nonprofit publishers include a subsidy from the parent organization (35%), publication fees (17%), grants (13%), industry sponsors (10%), and advertising (1%).³⁰ The appropriateness of any given income model or combination of models will depend on the circumstances of a particular journal. As noted in Chapter Six, several providers offer free or low-cost online distribution services for open-access journals.

As defined above, open access is free (to the end user) Internet access to research literature. In practice, however, there is an access continuum that includes varying degrees of openness. For example, some publishers impose embargoes, making their content available online without charge at some specified period after publication. These embargoes range anywhere from two to thirty-six months, though lengths of six to twelve months seem most prevalent.³¹ The length of the embargo often depends on how fast research cycles within the discipline.

Another common form of partial open access is a hybrid approach that publishes both open-access and non-open-access articles in the same journal. This approach allows an author (or the author's proxy, such as a funding agency) to make an article available open access by paying a publication fee that covers (in full or in part) the cost of publishing the article. Theoretically, the publisher should make some provision for reducing the subscription price of the journal as the proportion of open-access articles to the journal increases. Such publication fees vary by publisher and range from around \$500 to \$3,000 per article.³² Some publishers use a hybrid model to accommodate funder self-archiving policies (see below).³³

8.12.2 Funder Online Archiving Mandates

Some government and private funders of scientific research have determined that maximizing their funding investments requires that the results of the funded research reach the widest possible audience. As a result, a number of research funders have implemented policies requiring deposit of funded research in an open-access repository³⁴ as a condition of the grant. Funders implementing such policies include the National Institutes of Health,³⁵ the Wellcome Trust, the Howard Hughes Medical Institute, and the European Research Council.

²⁸For an introduction to open access, see Peter Suber's "Open Access Overview" at <http://www.soros.org/openaccess> (<<http://www.earlham.edu/~peters/fos/overview.htm>>).

²⁹See Crow and Goldstein (2004), Velterop (2005), and Solomon (2008).

³⁰Cox and Cox (2008), 34-35. The Cox and Cox survey findings about funding type for nonprofit open-access journals are supported, in part, by the study by Kaufman-Wills (although the latter found display advertising to be the most prevalent source of income for open-access journals). Kaufman-Wills (2006), 17. On advertising and sponsorships, see Crow 2005. On publication fees, see Crow and Goldstein (2004), 15-21.

³¹A few society publishers apply a "reverse embargo," wherein content is available free online for the first month after publication, after which time it goes behind a subscription gate.

³²Cox and Cox (2008), 36.

³³Additionally, some publishers make a percentage of their articles available via open access without having a discretionary open access program.

³⁴For a directory of open-access repositories, see <http://www.opendoar.org/> (<<http://www.opendoar.org/>>).

³⁵For guides to complying with the NIH public access policy, see <http://publicaccess.nih.gov/> (<<http://publicaccess.nih.gov/>>) and Carroll (2008).

Additionally, other funders recommend such deposit or provide additional funds to cover publication fees in open-access or hybrid open-access journals. Several services provide clearinghouses of information on funder depository requirements.³⁶

8.12.3 Institutional Deposit Mandates

In addition to funder mandates, there has been a gradual increase in institutional deposit mandates. Although the specifics vary by institution, institutional mandates grant an author's host institution permission to make available the faculty member's scholarly articles and to exercise the copyright in those articles, effectively granting the institution a non-exclusive license to distribute the article online. The Harvard Faculty of Arts and Sciences recently became the first U.S. faculty to mandate online deposit in an institutional repository.³⁷ However, there are currently about a dozen such mandates worldwide.³⁸

8.13 Consortia Sales and Aggregations

Consortia sales, and participation in bundled collections and aggregations, raise a variety of issues pertaining to pricing, market coverage, primary subscription retention, and royalty or revenue allocations. The overview below should provide a society with perspective on the types of issues it is likely to confront. Other issues germane to participating in an online aggregation are described in Chapter Six.

8.13.1 Consortia and Aggregation Pricing

Participation in consortia sales programs and online journal aggregations can expand a journal's reach into institutions that did not subscribe to the journal previously. However, for such participation to increase the journal's net revenue it is necessary that the aggregator's pricing protects the journal's existing revenue base, and/or the incremental revenue generated offsets any revenue lost through discounting existing subscriptions (see "Online Access and Print Substitution," in Chapter Four).

While publishers price titles for consortia sales in a variety of ways, there are two basic approaches:

- Base-plus pricing, which prices a journal based on the consortium's previous (typically print) holdings. For example, if a journal currently generates \$20,000 in subscription revenue from consortium members, then the price for the entire consortium will represent an incremental percentage on top of the base amount.
- Bundle discount pricing, which prices the offer as a volume discount off the total price of the participating titles. In this case, an aggregator offers groups of titles—often by subject category—at a discount, based on the number of journals in the bundle. The bundles sometimes include both a publisher's own titles, as well as those licensed from other publishers, including societies.

Base-plus pricing is conservative in protecting a journal's existing revenue, although the approach may forgo incremental revenue in the interest of that protection. Further, as it is based on a consortium's holdings at a given time, such a pricing approach is inherently transitional and becomes unworkable as the collection or consortium grows.³⁹

A bundled discount approach, as it does not reference the consortium's previous holdings and spending level, may place a journal's existing institutional revenue base at some risk. The extent of that risk will

³⁶For a summary of policies given by various research funders as part of their grant awards, see the Registry of Open Access Repository Material Archiving Policies (ROARMAP) at <http://www.eprints.org/openaccess/policy/signup/> (<<http://www.eprints.org/openaccess/policy/signup/>>) and JULET at <http://www.sherpa.ac.uk/juliet/> (<<http://www.sherpa.ac.uk/juliet/>>).

³⁷See <http://www.news.harvard.edu/gazette/2008/02.14/99-fasvote.html> (<<http://www.news.harvard.edu/gazette/2008/02.14/99-fasvote.html>>).

³⁸See <http://www.eprints.org/openaccess/policy/signup/> (<<http://www.eprints.org/openaccess/policy/signup/>>).

³⁹Dryburgh (2004) analyzes pricing approaches for journal aggregations based on interviews with eight publishers.

typically depend on the basis for the revenue allocation for the bundle (see below), as well as any protections or guarantees that the publisher offers to mitigate a journal's initial risk in order to encourage participation.

Publishers typically combine other pricing criteria—including the number of participating institutions, total FTEs, and institution type—with these two basic approaches. Most publishers offer multiple pricing options for aggregations, suggesting continuing experimentation with consortia pricing models.⁴⁰

8.13.2 Revenue Allocation

Revenue allocations to individual titles from bundled sales are often based on usage, volume of content, individual title price (decreasingly), or some combination.⁴¹ The approach used will reflect the particular composition of each bundle, as well as the policies and approach of each publisher or aggregator.

In the case of a mature or niche journal, any aggregator claims to generating revenue from new core market subscriptions should be treated cautiously. If the aggregation is being offered to a specific, well-defined market not previously reached by the journal (for example, corporate or public library sales), or if the consortial market comprises institutions of a type not previously reached by the journal (e.g., small colleges or international institutions), then the effect—and the implications—are largely the same as those for tiered pricing. If a journal is relatively new and does not need to protect an existing print subscription base, the society may be in a position to be more aggressive in reaching markets.

Although a society is not obligated to include its journal in consortial deals or aggregations, many commercial publishers will encourage such participation, as the institutional market continues to exhibit a preference for consortial purchases of online journal aggregations. Whether an aggregation arrangement represents an equitable deal for the society inevitably depends on a host of variables that can only be assessed on an individual basis.

⁴⁰For a breakdown of current consortium pricing practices by nonprofit publishers, see Cox and Cox (2008), 52-55.

⁴¹The volume of content a journal makes available to the bundle helps drive the perceived value of the bundle over all (for example, in terms of number of articles or volume years in the collection). Using individual title prices has become less prevalent; although it protects journals with high prices, it doesn't necessary align with the value-in-use perceived in the collection.

Chapter 9

Online Hosting Issues and Options¹

9.1 Online Publishing Options

Specialized guides are available that provide detailed information for societies seeking to outsource online journal publishing services,² or for societies migrating from one journal publishing service provider to another.³ Those guides cover a wide range of issues, including the relationship between the print and online editions of a journal,⁴ online submission guidelines, digital format options, hosting option selection, online editorial workflow, online search and navigation, citation linking, metadata, and other issues.

The information below supplements the more comprehensive guidance available from those sources, with a focus on relevant business issues.

9.1.1 Types of Online Publishing Service Providers

Several types of organizations provide online hosting services for peer-reviewed journals. They include university presses, commercial publishers, society-sponsored publishing service providers, university-library-based digital publishing offices, nonprofit and commercial publishing service firms (including some subscription agents and journal printers), and open source journal software federations.

The service offerings and business models vary by organization type. Some organizations (for example, university presses and commercial publishers) provide comprehensive publishing services—including editorial, production, marketing and sales, fulfillment, customer service, and financial management support—for both print and online publishing. Other organizations provide *à la carte* service options that allow a society to retain control over some publishing functions (for example, continuing to self-publish the print edition while outsourcing the online version). There are also low-cost solutions, such as open source software, that offer basic journal publishing functionality but with little or no supplemental services.

Unless a journal requires extensive non-standard features or functionality, it should be able to identify an existing online publishing platform capable of serving its needs. As a result, few small publishers will find it either cost effective or strategically important to develop and maintain their own online publishing systems.⁵

The online hosting services can be provided in a variety of ways:

¹This content is available online at <<http://cnx.org/content/m34283/1.1/>>.

²See Meyer (2004), Page (2000), Powell (2005), Bull and Hezlet (2000), and Ware (2008). For an overview of the issues relevant to online production and workflow, see Markwood (2006).

³See Morris and Clark (2009). A cross-sector working group has developed a code of practice to govern the transfer of a journal from one publisher to another. See <<http://www.uksg.org/transfer/papers> (<<http://www.uksg.org/transfer/information>>)>.

⁴For example, whether the print or online edition is the version of record. The National Information Standards Organization (NISO) has issued best practice guidance for describing the versions of scholarly journal articles that appear online before, during, and after formal journal publication. See NISO (2008b) and Morgan (2008).

⁵Ware (2007) describes the issues that publishers should weigh in evaluating whether to outsource online publication of a journal or to develop and host their own proprietary system.

Remote Hosting. Most typically, an online publishing service provider will handle all the digital production, uploading, and hosting of a journal, in coordination with the journal's editor and society staff.

Software License. For open source software, and for some commercial solutions, a society can license the online journal publishing software and host the journal itself. This approach may best be limited to societies that are extremely cost sensitive, or that have access to adequate technical resources (including systems, hardware, and communications network support).

Application Service Provider (ASP). Some online journal system providers offer access to their software on an ASP model, wherein the system provider manages the servers and hosts the journal at its location, but society staff (or contractors) upload digital files, exercise quality control, assemble issues, provide support, and handle all other management and administrative tasks for the journal.

The trade-offs between types of services and service providers include cost, available features and feature customization options, responsiveness to evolving technology and compliance standards, and levels of technical and user support. Depending on the type of provider and service chosen, a society may still need to dedicate significant in-house resources to manage and maintain the society's publishing program.

9.1.2 Online Publishing Services

As noted above, the range of publishing services available will depend on the type of provider. Services typically available include:

- Editorial services, including copyediting and proofreading;
- File conversion into conforming formats (e.g., XML/XHTML, PDF, etc.), from author or typesetting files;
- Digital production services, including file tagging and mark-up, and content quality control and uploading for online distribution;
- Digital backfile conversion;
- Online editorial manuscript tracking services;⁶
- Web site design services;
- Online hosting, including guaranteed performance standards and failsafe back-up systems;
- Subscription management and fulfillment services;
- Pay-per-view e-commerce support;
- User authentication and access, typically through IP address ranges for institutional users, ID and password for individual users, and/or proxy servers for society members;
- User and technical support for end users and society staff;
- Usage reporting;⁷
- Rights and permissions management;
- Marketing and sales support, including advertising sales; and
- Financial reporting.

Full-service publishers will typically provide print production support as well as online services, including typesetting/composition, design services, printing and binding, fulfillment, and inventory warehousing.

In addition to the conventional publishing services outlined above, visually oriented disciplines require online journal functionality capable of presenting multimedia content. This functionality includes tools that allow a user to pan images, zoom in on details, navigate 3D reconstructions of buildings, overlay states of a work of art or the construction stages of a building, model structural forces, map archaeological sites, and other capabilities that make it possible to illustrate and document an argument more thoroughly than is possible in print.⁸

⁷Most institutional libraries expect online services to be COUNTER compliant. The Counting Online Usage of Networked Electronic Resources (COUNTER) project is an international project to develop standards for the creation of online usage statistics for online content. COUNTER compliance allows libraries to compare usage statistics from multiple content providers. See <http://www.projectcounter.org/> (<<http://www.projectcounter.org/>>).

⁸See Ballon and Westermann (2006), 57-58. An object demonstration of these multimedia features will be available starting with the 2010 volume of *JSAH Online*, published by the Society of Architectural Historians in partnership with the University

An online platform that supports such features would incorporate:

- *A suitable graphic user interface and online journal design.* Online publications in visually oriented disciplines require greater attention to design than text-intensive journals. Additionally, the user interface of a journal offering robust multimedia functionality must be simple and intuitive.
- *Support for managing digital objects through the editorial process.* Most publishers provide Web-based editorial and workflow management systems that allow editors to track manuscripts from submission through to publication.⁹ A journal that includes many images and other digital objects will want a workflow management system that checks the format of images and other digital objects to determine whether they comply with the journal's publication standards.
- *Support for 3D models.* In some disciplines, such as architectural history and archaeology, researchers are making increased use of three-dimensional reconstructions of altered or destroyed buildings, unexecuted designs, and archaeological ruins. As 3D models are incorporated into journal articles, a journal's online publishing platform will need to support viewers for these models.
- *Support for viewing zoomable images.* Allowing a user to zoom to magnify details of images requires the capacity to upload and store high-resolution images, as well as an appropriate image viewer integrated into the journal's online publishing platform.
- *Integration of GIS mapping.* GIS mapping (for example, via Google Earth),¹⁰ allows users to view images and models in geospatial context with the aid of satellite imagery and maps. For a journal making extensive use of GIS mapping, it may be important for the platform to support a spatial index, allowing users to search for content based on the physical location of a site.

The society and its online publishing partner will need to implement editorial policies and production processes—including metadata tagging and uploading protocols—to manage the various digital objects described above. Multimedia features also require that special attention be paid to technical format specifications for submitted content. These considerations are critical to ensure that the material is presented properly and to allow the society to make appropriate provisions for digital archiving and preservation. The submission standards and guidelines for multimedia material will typically need to be defined in collaboration with a society's publishing partner.¹¹

9.1.3 Business Models and Financial Terms

The nature of the financial terms for these publishing services will depend on the type of publishing services provider (for example, commercial publisher, university press, or other nonprofit service) and the type of business model selected. The appeal of a particular business model will depend on the society's willingness to share financial risk.

The three financial models described below represent common types of arrangements, although many variations occur in practice:

- *Fee-for-service.* The society pays the partner for the publishing services provided (including, potentially, editorial services; print and online production and hosting; and marketing, sales, and fulfillment). In such arrangements, the society bears the risk and retains any surplus the journal might generate. Fee-for-service arrangements are available from nonprofit and commercial publishing service providers, as well as some university presses.
- *Profit-sharing.* The society and its publishing partner share the risk, with the sharing arrangement reflecting the relative risk incurred by each partner. Such arrangements can be perfectly equitable. However, as a society's projected net income will depend on how a publisher handles some income and expense items, the society must carefully evaluate and compare all aspects of the financial terms of competing bids to ensure a meaningful comparison of like offers. The society should also determine

of California Press.

⁹See n125.

¹⁰<http://www.earth.google.com> (<<http://www.earth.google.com>>).

¹¹A society may also need to make provisions for image rights vetting. See "Image Copyright," below.

whether the projected revenue to the society represents a guarantee or a good faith estimate. Some online aggregations also use profit-sharing arrangements. In such cases, the aggregator may retain a specified portion of the revenue to cover its costs, and distribute the rest to the participating publishers through a pre-determined royalty allocation.

- *Revenue-sharing or royalty.* In some arrangements, the publishing partner assumes all the costs of publishing the journal and pays the society a royalty based on a percentage of sales revenue. The terms typically reflect the fact that the publishing partner incurs most of the financial risk in such arrangements. As with profit-sharing arrangements, the society needs to determine whether the royalty is guaranteed or an estimate.
- *Subsidized open access support.* Several nonprofit providers of online journal hosting provide free or very low cost hosting services for open-access journals (see “Open Access,” in Chapter Five). Some of these services are subsidized by academic institutions, and others offset some of their costs by selling advertising.

Again, the models above represent general types of financial arrangements for journal outsourcing agreements. In practice, many services blend elements of the above types, and they describe their arrangements in various ways.

9.2 Online Aggregations

Besides the online publishing services above, a society may make a journal available through an online aggregation, either in addition to, or in lieu of, standalone publication of the journal.¹² An aggregator licenses with publishers to assemble an online full-text database of journal content, typically on a non-exclusive basis.

Aggregations often appeal to libraries, as they provide a library’s patrons with a single interface to multiple journals, simplifying use and lowering user training and support costs. Aggregations can also allow a library to license access to content that it would not otherwise be able to afford on a title-by-title basis. For a society, participating in an aggregation can help increase market penetration and generate revenue by facilitating library consortia sales.

Large collections of journals from commercial publishers have captured a growing share of academic library acquisitions budgets, putting pressure on subscriptions from small publishers, including societies. In response, some small publishers participate in multiple-publisher aggregations. These cooperative aggregations recognize that small publishers require sufficient revenue to offset the loss of institutional subscriptions to the primary journal. Examples of such nonprofit aggregators include Project Muse from the Johns Hopkins University Press, the ALPSP Learned Journals Collection (in partnership with Swets), HighWire Press, JSTOR, and subject-specific collections, including *BioOne*, *GeoScienceWorld*, and *Scitation* from the American Institute of Physics. Some of these collections allow for the purchase of individual titles, in addition to bundled collections.

Besides the nonprofit aggregations listed above, commercial services provide online aggregations of peer-reviewed journals for the academic market, including EBSCO Online, Factiva, Ingenta, LexisNexis, Ovid, ProQuest, Thomson Gale, H.W. Wilson, and others. Most of the large commercial aggregations include magazines, newspapers, and other content besides peer-reviewed journals. As noted in Chapter Four, many of these aggregations impose embargoes intended to minimize the effect on primary journal subscriptions.

9.3 Key Online Licensing Terms and Provisions

Online journal publication raises a variety of issues pertaining to permitted use, especially for institutional subscribers, that did not arise in a print environment. Besides the ready propagation of online versions,

¹²For descriptions of aggregations and their implications for journal publishers, see Cox (2004); Dryburgh (2004); and Publishers Communication Group (2008).

the use of digital versions in library e-reserve systems and in learning management systems raise additional questions about permitted use. As a result, many publishers govern the online distribution of journals through licenses that establish explicit terms and conditions of use.¹³ According to one survey, both nonprofit and commercial publisher policies are trending towards allowing greater use of online material in e-reserves, course packs, and interlibrary loan.¹⁴

A variety of model licenses can serve as the basis for a society's online journal license.¹⁵ Many of the model licenses were developed cooperatively by publisher associations and library organizations, and thus represent the interests of both groups. Another approach is to use the license terms proposed in the Shared Electronic Resources Understanding (SERU), which can accommodate the needs of many publishers and academic libraries, including the expectation of perpetual access (see "Continuing Access," below).¹⁶

9.3.1 Retrospective Digitization and Backfile Availability

Many publishers provide online access to retrospective volumes as part of their online journal service. A significant number of small nonprofit publishers offer five or more years of back volume coverage. According to one survey, over 45% of small nonprofit publishers provide current subscribers with access to their online archive for no additional fee, and over 35% make their archives freely available to subscribers and non-subscribers alike.¹⁷

Besides providing retrospective coverage as part of a current online journal, some societies also make digital back volumes available through JSTOR, a nonprofit digital archive of journal content in the social sciences, humanities, and sciences.¹⁸ To minimize cancellations of current institutional library subscriptions, access to most of the journals available through JSTOR is subject to a rolling embargo of between three and five years.¹⁹ Digital archives also exist in specific fields, such as the Biodiversity Heritage Library (BHL), which provides an archiving option for journals in bioscience.²⁰

A society has several options for making its retrospective volumes available online. If the society does not participate in JSTOR, BHL, or a similar archive, it can pay to have its backfile digitized at the same time it moves its current volume online. Many providers of online publishing platforms will manage this process on the society's behalf.

As noted above, almost two-thirds of society publishers include these backfile volumes as a component of their online service, at no additional charge. However, some societies that incur the expense of digitizing extensive back volumes of a journal charge a separate fee for access to the retrospective volumes online. Alternatively, some academic research libraries have demonstrated a willingness to pay for the cost of backfile digitization, as long as the back volumes are made freely available.

The cost of the backfile digitization will depend on several issues, including the number of volumes, the digital format(s) into which the content is converted (e.g., PDF, SGML/HTML, XML/XHTML, etc.), and the extent of metadata tagging and reference linking applied.

A society that participates in JSTOR will still need to provide online access to the recent back volumes that fall outside the journal's rolling embargo. The society can cover this back volume gap in several ways:

- 1) Amend its agreement with JSTOR to shorten or eliminate the access embargo.

¹³This is also true of open-access content, which is often governed by some form of Creative Commons license (see www.creativecommons.org (<<http://www.creativecommons.org>>)).

¹⁴Cox and Cox (2008), 67-71.

¹⁵See, for example: the generic licensing models Web site developed by John Cox Associates (<http://www.licensingmodels.com/> (<<http://www.licensingmodels.com/>>)), the Northeast Research Libraries Consortium (NERL) online licensing guidelines (<http://www.library.yale.edu/NERLpublic/licensingprinciples.html>) (<<http://www.library.yale.edu/NERLpublic/licensingprinciples.html>>)), and the National e-Journals Initiative (NESLI) license (<http://www.nesli2.ac.uk/model.htm>) (<<http://www.nesli2.ac.uk/model.htm>>)), as well as those of Creative Commons (<http://www.creativecommons.org> (<<http://www.creativecommons.org>>)).

¹⁶See Hahn (2007) and NISO (2008a).

¹⁷Cox and Cox (2008), 57.

¹⁸JSTOR currently comprises almost 2 million articles in 47 disciplines. See www.jstor.org (<<http://www.jstor.org>>).

¹⁹Societies participating in JSTOR can establish an embargo period of from zero to 15 years.

²⁰See <http://www.biodiversitylibrary.org> (<<http://www.biodiversitylibrary.org>>).

- 2) Retire the gap incrementally over several years—for example, assuming a three-year JSTOR embargo, over the first three years after launch, the online service will gradually fill in the missing years.
- 3) Digitize the gap years immediately and integrate the content—essentially the same approach as if the journal did not participate in JSTOR.

Options 1 and 2 would be the least expensive, as the society would not incur a cost for digitizing additional volume years. However, Option 1 has risks and limitations. Closing the JSTOR window entirely could put some marginal journal subscriptions at risk. Some academic institutions that have access to JSTOR, but have a relatively weak demand for the journal, might be under sufficient budget pressure to accept an effective one-year embargo and cancel their subscriptions. This risk will be greatest for disciplines in which articles retain currency over time, such as the social sciences, humanities, and many of the non-medical or technical sciences.²¹ As budget pressures on academic libraries increase, more libraries might cancel their separate subscriptions and rely entirely on JSTOR. Retiring the online coverage gap incrementally over several years would not incur any additional costs and would not put a journal's institutional subscriptions at risk.

9.3.2 Continuing Access

Under a print regime, an institutional library owns a copy of any journal to which it subscribes. With an online subscription hosted by the publisher or a third party, the library effectively leases the content, and continued access is a contractual issue between the library and the publisher.

Academic libraries now typically demand perpetual access to the journal content to which they subscribe online. This reflects the expectation that online subscriptions convey the same perpetual access rights as print subscriptions.²² Therefore, a journal's license terms should stipulate that, should a library cancel its online subscription, it will continue to have access to the content to which it subscribed at the time of cancellation.²³ Some publishers charge former subscribers a relatively modest annual access fee for ongoing access to un-subscribed content.

Given the uncertainty of future online access formats, many online licenses provide for the publisher, in the event of cancellation, to provide the library either with perpetual online access to the previously licensed material, or with a file of the content on some portable storage medium. (The latter approach is less elegant than online access, but it does provide an option of last resort.) Sometimes a society's online publishing partner will be able to provide ongoing online access to lapsed subscribers, either directly or through participation in Portico or LOCKSS, as described below.

The continuing access policy described above applies to libraries. In most instances, a society would not apply the same policy to individual members. Most societies have many more individual members than institutional subscribers, and individual membership turns over faster than library subscriptions. Therefore, not providing perpetual access to members will help the society retain members in the long run and avoid the expense (and liability) of administering perpetual access to hundreds, even thousands, of lapsed members.

9.3.3 Digital Preservation and Archiving

Perpetual access presupposes that provision has been made for the long-term digital preservation of a journal. Many publishers handle the digital preservation and archiving of online journals through services such as JSTOR (22%), Portico (40%),²⁴ Stanford University's LOCKSS (41%),²⁵ and (especially in Europe)

²¹ Reviewing article citation half-life reports will help a society determine the average point at which usage begins to drop off.

²² Approximately 75% of large publishers and medium-size publishers, and 50% of small publishers, offered continuing online access to former subscribers. Cox and Cox (2008), 57.

²³ Rather than develop its own license, a society might consider participating in the NISO Shared E-Resource Understanding (<http://www.niso.org/committees/SERU/> (<<http://www.niso.org/committees/SERU/>>)), which includes a clause addressing perpetual access and archiving.

²⁴ Portico is a Mellon-funded electronic archiving service that includes policies and procedures for post-cancellation access to online journal content. See <http://www.portico.org/> (<<http://www.portico.org/>>). For a breakdown of digital archiving arrangements, see Cox and Cox (2008), 66.

²⁵ LOCKSS provides ongoing online access in the event of a catastrophic loss of access, not a preservation and migration solution such as that provided by Portico. See <http://www.lockss.org> (<<http://www.lockss.org>>).

commercial firms that have made arrangements with national libraries.²⁶

Whether a society can offer guarantees about the preservation of a journal's online content will depend in part on the journal's submission policy for digital formats. A conservative approach would be to limit digital submissions to specified formats for which preservation practices and protocols exist. This would allow the journal's content to participate in existing digital preservation programs. A journal could still accept new, non-conforming digital formats; however, the society would not be able to guarantee the long-term preservation of such digital objects. A society's online publishing partner will be able to help identify the digital formats that have existing preservation standards.

9.4 Author Rights Issues

When journals were published primarily in print, author rights received relatively little attention. In a networked environment, however, where an individual article can easily be posted and propagated online, the issue receives greater attention from both authors and publishers.²⁷

Author rights comprise a number of issues, with copyright retention and self-archiving rights foremost among them. For a society-sponsored journal, whose author base is often coextensive with the society's membership, balancing author rights and publisher prerogatives is more than sound business practice: it is central to the society's identity as a membership organization. It makes sense, therefore, for a society's copyright and author rights policies to accommodate the needs of its members.

9.4.1 Self-Archiving

Increasingly, individual authors are asserting a right to self-archive a digital version of an article on their personal Web site, in a repository at their host institution, or in a subject-based repository.²⁸ Although self-archiving has been cited as a latent threat to journal subscriptions,²⁹ its effect on a journal's revenue will often be limited to a marginal loss of pay-per-view revenue.

Even the online availability of all of a journal's articles via self-archiving would not result in the inevitable loss of subscriptions. Most subscribers, both individual and institutional, will continue to demand the value added by online journals—in terms of convenience and speed of access, discovery and retrieval functionality, reference linking, personalization features, reliability, authenticity, and the other benefits a journal publisher or aggregator provides. Partly in recognition of this, many publishers have implemented policies that explicitly allow self-archiving.³⁰

9.4.2 Article Copyright

Some publishers argue that author transfer of copyright is essential to ensure the financial sustainability of journals, while some author-rights advocates assert that authors must retain copyright to protect their rights in the content they create, including the right to self-archive.³¹ In practice, author rights and publisher business requirements can be protected through well-constructed author agreements, regardless of which party holds the copyright.³²

²⁶The Dutch Royal Library has been especially active in this regard. See <http://www.kb.nl/dnp/e-depot/publishers-en.html> (<<http://www.kb.nl/dnp/e-depot/publishers-en.html>>).

²⁷For an overview of author rights issues, see Bailey (2008) and Morris (2009).

²⁸There are subject-based repositories in a number of disciplines. However, the largest and most active (for example, arXiv in high energy physics and RePEc in economics and mathematics) are those in fields where a tradition of exchanging print pre-prints was prevalent.

²⁹See Beckett and Inger (2006).

³⁰The SHERPA RoMEO service provides a list of publisher copyright and self-archiving policies. See <http://www.sherpa.ac.uk/romeo.php> (<<http://www.sherpa.ac.uk/romeo.php>>).

³¹If copyright is transferred to a society journal, the society typically holds the copyright, even if the society outsources publication to a third party, such as a university press or a commercial publisher.

³²For an example of a publishing license, see the Nature Publishing Group's license to publish at http://npg.nature.com/pdf/05_news.pdf (<http://npg.nature.com/pdf/05_news.pdf>).

A principal argument for publishers holding copyright has been that it allows a publisher to protect a journal's subscription and revenue base. In practice, a license to publish from an author—which grants a publisher an exclusive right to first publication and a perpetual, non-exclusive right to publish, distribute, and sublicense—can afford such protection while allowing the author to retain copyright.

Some publishers also assert that holding copyright is necessary to effectively guard the author's rights and manage permissions effectively. For many publishers who do not require the transfer of copyright, an author retaining copyright assumes responsibility for managing (or not managing) those rights. In practical terms, this can mean that a publisher may exclude the author's article from online aggregations, pay-per-view offerings, and other permissions programs in which the publisher participates. In such cases, a society might elect to retain copyright, while allowing authors to retain liberal use and republishing rights.³³

Insistence on copyright transfer appears to be decreasing, at least amongst small nonprofit publishers. According to one publisher survey, in 2003 over 80% of small publishers required authors to transfer copyright. By 2008, this figure had dropped to about 50%, with an additional 20% willing to accept a license to publish in the event an author was not willing to transfer copyright.³⁴

There are model author addenda and online author agreement tools available that allow a society publisher to balance author rights and practical publishing requirements.³⁵ Most of the addenda allow the author to retain copyright while granting the publisher a limited license to first publication, and permit the author to make the article available online for non-commercial purposes and to retain rights to use the article for teaching and other academic purposes.³⁶

9.4.3 Image Copyright

The terms for reproducing digital images are often more complex and fees to reproduce images in digital formats are often higher than is the case for reproduction in print publications.³⁷

The College Art Association's (CAA) "Guidelines for Copyrights and Permissions in Scholarly and Educational Publishing"³⁸ contends that the use of reproductive images for the purposes of art historical criticism qualifies as fair use under the provisions of the 1976 Copyright Revision Act.³⁹ Section 107 of the Act enumerates four factors to be considered in the determination of fair use:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purpose; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.

Based on these criteria, the doctrine does seem to provide protection for the use of images in online scholarly journals to which access is restricted by user authentication systems. In practice, however, the fair use doctrine defies precise definition and cannot be assumed to afford blanket protection on the use of images in online journals. Although the CAA guidelines assert that the fair use doctrine should apply to any scholarly work of criticism, they also acknowledge that, even though a permission request may result in a fee, "the safest course is to obtain permission."⁴⁰ Other authorities argue that excessive caution has its own

³³See Hill and Rossner (2008) for a brief account of how one small nonprofit academic publisher uses Creative Commons licenses to protect their publishing interests.

³⁴Cox and Cox (2008), 75.

³⁵See especially Creative Commons and Science Commons (<http://sciencecommons.org/projects/publishing/>) ([<http://sciencecommons.org/projects/publishing/>](http://sciencecommons.org/projects/publishing/)), BioOne (http://www.bioone.org/pdf/BioOne_Model_Pub_Info.pdf) (http://www.bioone.org/pdf/BioOne_Model_Pub_Info.pdf), and the toolkit sponsored by JISC and SURF (<http://copyrighttoolbox.surf.nl/copyrighttoolbox/>). The BioOne addendum is especially useful for publishers that must comply with the NIH deposit mandate.

³⁶Hirtle (2006) provides an overview of five author agreements.

³⁷See Ballon and Westermann (2006), 31-37.

³⁸<http://www.collegeart.org/guidelines/reprorights.html> (<http://www.collegeart.org/guidelines/reprorights.html>).

³⁹A similar case is made for the "fair dealing" provision in Sections 29 and 30 of the UK 1988 Copyright Act. See Sowden and Morris (2002).

⁴⁰<http://www.collegeart.org/guidelines/reprorights.html> (<http://www.collegeart.org/guidelines/reprorights.html>).

risks, and emphasize that each case of fair use is unique and must be judged on its own merits. As Susan Bielstein notes, “. . . courts—not publishers, authors, or copyright holders—decide what constitutes an act of fair use, and courts do this case by case.”⁴¹

In this context, a society publisher (or a group of society publishers) might provide services to assist authors in assessing whether it is necessary to seek permission and in securing permissions and/or negotiating fees where appropriate. For example, a publisher might negotiate scholarly license arrangements with museum collections, archives, and other image providers, as the ARTstor *Images for Academic Publishing* program has done with the Metropolitan Museum of Art.⁴²

9.5 Libel and Liability

Although a discussion of libel and publishers’ liability for libel claims falls beyond the scope of this guide, it should be noted that societies disseminating their publications via the Internet are more susceptible to defamation claims from distant locations.

A publisher’s risk in this regard is increased by “libel tourism,” in which a litigant files a libel suit in a plaintiff-friendly jurisdiction where a court is more likely to issue a favorable judgment. Libel tourism refers, in particular, to the practice of suing an author or publisher in the U.K. for a work not published or distributed in that country, and where neither the plaintiff nor defendant is a citizen of the U.K.

Under the constitutional protections of the First Amendment, the libel laws of the United States protect speech to a greater extent than the defamation laws of other countries. In the U.S., libel plaintiffs must prove that the offending speech is both false and published with a reckless disregard for the truth. In the U.K. (the libel tourism destination of preference), common law assumes that the speech is false and defamatory, and the burden falls on the defendant to prove that a published statement is true.

Given the expansive nature of scholarly exchange, defamation suits against scholarly publishers appear to be uncommon.⁴³ However, in 2008, the College Art Association had the unwelcome distinction of being the first scholarly society in the U.S. to confront forum shopping, when an Israeli professor of art history who considered a review of her book in the CAA’s *Art Journal* to be defamatory, threatened a suit in the U.K.⁴⁴ Although the CAA settled out of court, the case illustrates the risk that scholarly publishers may face in other jurisdictions. As a result of its experience, the CAA sponsored an editorial workshop to discuss the legal risks of publishing in an international environment.⁴⁵

High-profile libel tourism cases have provoked legislative responses in the U.S. The New York Libel Tourism Protection Act, enacted in 2008, blocks enforcement of a non-U.S. libel judgment in a New York court unless the judgment is consistent with New York law and U.S. constitutional protections. Similar bills have been introduced, although not yet passed, in both houses of Congress.⁴⁶

Notwithstanding whatever protection legislative remedies might provide, the CAA workshop identified several precautions that publishers might take to reduce their risk in libel cases. These include: carefully reviewing any *ad hominem* criticism; checking facts independently when the topic warrants; documenting all relevant interactions between a journal’s editors and an author; seeking legal counsel immediately upon the threat of a suit; providing feedback channels (such as letters) that allow authors to respond to critical

⁴¹Bielstein (2006), 80.

⁴²See <http://www.artstor.org/what-is-artstor/w-html/services-publishing.shtml> (<<http://www.artstor.org/what-is-artstor/w-html/services-publishing.shtml>>).

⁴³After a suit against the CAA (see n166), the American Council of Learned Societies polled its membership, but found no other instances of forum shopping to date. Howard (2008b). There are, however, several recent examples of publishers of scholarly monographs confronting libel tourism suits. See Carvajal (2008).

⁴⁴For an account of the incident, see Howard (2008a) and Howard (2008b).

⁴⁵College Art Association (2008).

⁴⁶A bill introduced in the Senate would preclude U.S. courts from enforcing libel judgments awarded by foreign courts if the speech would not be deemed defamatory under U.S. law. Further, the bill provides for authors and publishers to countersue and collect treble damages if the foreign suit suppressed their free speech rights. For text of the Senate bill, “The Free Speech Protection Act of 2008,” see <<http://www.govtrack.us/congress/billtext.xpd?bill=s110-2977>> (<<http://www.govtrack.us/congress/billtext.xpd?bill=s110-2977>>).

reviews; and training editors and editorial staff on potential legal issues, and on the appropriate policies and procedures in the event a problem arises.⁴⁷

In addition to such training, a publisher may want to consider Errors and Omissions (E&O) insurance, a type of malpractice insurance that provides the publisher with coverage against claims for alleged professional negligence, including libel, copyright or trademark infringement, obscenity, and false advertising. A publisher who already has such insurance should review its policy to ensure that it covers the publisher's online publications and any other online activities, such as moderated discussion forums, for which the publisher might be liable.⁴⁸

⁴⁷College Art Association (2008).

⁴⁸Page, Campbell, and Meadows (1997), 267-269.

Chapter 10

Financial Analyses¹

10.1 Establishing a Financial Performance Baseline

To evaluate the financial implications of offering an online edition, a society should establish a financial baseline against which to compare the journal's projected future performance. This baseline analysis should include:

- Revenue sources and trends, including institutional subscription fees, allocated member dues income, and other income sources;
- Expense sources and trends for the journal's print edition, including both variable costs (including printing, binding, and fulfillment) and fixed costs (including first copy costs, marketing, and administration);
- Membership dues trends for individual members and pricing trends for institutional subscribers; and
- Operating margins and surpluses or deficits for the journal.

The baseline analysis provides a basis for assessing the financial risk that a society might incur, and the benefits that it might enjoy, in moving to online distribution of its journal, whether via outsourcing or self-publishing. Most of the elements of a journal's financial history are straightforward, and many societies monitor this data as a matter of course. Below, we have provided some observations on additional revenue and cost analyses that a society may want to take into consideration. Some of this data will be necessary to support the analyses described in the previous sections.

10.2 Member and Subscriber Analyses

10.2.1 Individual Member Information

Detailed and reliable data on its membership will allow a society to evaluate the potential effect of an online edition on its membership. Much of this data the society may already have at hand, including individual membership data by:

- Member type (for example, regular, student, life, emeritus, etc.), including membership trends over time. Understanding the composition of the member base will often help a society anticipate the prevalence of member behavior and preferences.
- Institutional affiliation (for example, four-year college or university, two-year college, commercial firm, private practitioner, etc.). Developing a membership profile by institution type will help the society to determine the extent of its exposure to online site licenses (see "Assessing Exposure to Online

¹This content is available online at <<http://cnx.org/content/m35232/1.1/>>.

Licenses,” in Chapter Three). Ideally, a society will be able to correlate the institutional affiliations of its individual members with its institutional subscriber base.

- Geographical region (for example, North America, OECD developed countries, LDCs). Analyzing member geographical distribution can allow a society to estimate the potential cost savings from online-only distribution options, as well as the potential effects of different prices by region.

Sometimes this member data will need to be mined, cleaned, and normalized. The amount of effort that a society should expend on this effort will depend on its ability to tolerate risk in projecting member behavior.

Besides the basic member data, more detailed behavioral and preference information may prove valuable in assessing the effect of online availability on membership. This information includes:

- Whether membership in the society is a member’s primary professional affiliation, or a secondary or tertiary membership;
- Member profession (for example, faculty, student, practitioner);
- Member preference for a personal print subscription; and
- Overall perception of the society’s benefits.

To gather this information, a society will often need to supplement membership registration data with data gathered through member surveys.²

10.2.2 Institutional Subscription Analysis

It is important to analyze institutional subscription trends in as much historical depth as possible. Over time, institutional price increases can mask the effect of gradual declines in institutional subscriptions. Therefore, a society must carefully monitor the trend in its institutional subscription units, as well as in revenue.³

In addition to historical institutional subscription trends, understanding the complexion of a journal’s institutional subscribers by institution type allows a society to:

- *Estimate the institutional demand for the online edition.* Not all types of institutions will exhibit the same demand for the online edition of a journal. While institutional libraries exhibit considerable demand for online journals, the demand may not be as prevalent for other institution types that may be represented in the journal’s subscriber base. An understanding of the journal’s subscriber base will help the society estimate the potential uptake of an online edition.
- *Establish appropriate prices for an online journal.* The value perceived in online and print editions can also differ by institution type. Most libraries accept tiered pricing for online services that take into account the size of the institution’s user base. Detail on a journal’s institutional subscriber base allows a society to develop online pricing that aligns with the value the institution perceives in the service (see “Institutional Subscription Pricing,” in Chapter Five).
- *Identify under-represented market segments for future marketing efforts.* Most small societies have limited and passive sales activities. A detailed profile of a journal’s institutional subscriber base might suggest market segments that a society might penetrate more deeply through increased marketing and sales programs. The potential of such campaigns will be affected by several variables, including the age of the journal and the nature of the target markets.

10.3 Allocated Member Dues

Some societies only show institutional subscription revenue on their journal financial statements. Other societies determine the cost of fulfilling individual member print subscriptions and explicitly allocate a

²For an overview of conducting a membership survey, see Dalton and Dignam (2007), 98-102.

³There are few empirical sources on subscription trends for society journals. Anecdotal evidence, and the publicly available studies, suggest that subscriptions to individual titles have been decreasing by about 3- 4% per year. See, for example, Watkinson (1999), which analyses UK journals.

commensurate portion of individual member dues to the operation of the journal. Whether it is captured on the journal's financial statement or not, an explicit understanding of the dues required to provide the member publication benefit is of practical importance, as it allows a society to:

- Determine the journal's actual financial performance;
- Evaluate the financial implications of various member publication benefit options; and
- Allocate resources rationally across all society programs.

Allocating member dues to a journal's income statement based on the variable cost of goods sold (COGS)—that is, the marginal cost of delivering each incremental member print subscription—will provide many societies with the most meaningful basis for making business decisions (see “Variable Costs of Goods Sold,” below).

Determining the COGS serves several purposes. First, it provides a society with the accurate marginal cost of providing the member publication benefit. Second, segregating the marginal cost of providing the print edition will allow the society to compare the financial effects of various print and online distribution scenarios, and will inform its pricing of an online edition of its journal (see “Member Publication Benefits” and “Institutional Subscription Pricing,” in Chapter Five).

10.4 Variable Costs

A thorough understanding of its publication program costs will allow a society to make well-considered decisions about the print and online editions of a journal, and will also inform decisions about resource allocations across other society activities.⁴ Therefore, we have described below some of the basic cost elements relevant to managing a society journal.

As we have noted previously, publishing costs fall into two broad categories: variable costs and fixed costs. Variable costs are volume-driven and fluctuate depending on the number of subscriptions. Variable costs for a print edition of a journal include:

- *Printing and Manufacturing*, including paper, printing, binding, and typesetting-composition.
- *Print Distribution and Fulfillment*, including postage, handling, and fulfillment charges for print subscriptions.

Identifying variable costs allows the society to determine its print cost of goods sold, as well as the revenue contribution for various journal format options.

10.4.1 Variable Cost of Goods Sold

Example Print Cost of Goods Sold	
Total Variable Print Costs*	\$50,000
Total Subscriptions	3,000
Variable Cost of Print	\$ 16.70

*Including paper, printing, binding, and fulfillment

Figure 10.1

⁴Colby and Rubin (2003) provide an excellent summary of the benefits of explicit cost allocations across nonprofit programs. King (2007) provides an overview of the costs of journal publishing.

The table provides an example of per-unit variable “cost of goods sold” (COGS) for a journal. The variable cost of goods sold is the cost that a society incurs for printing, manufacturing, and delivering each incremental subscription. For the print edition, it is determined by dividing total print and fulfillment expenses by the total number of subscribers (both individual members and institutional subscribers). A society should calculate a journal’s COGS for the three most recent years, to minimize the effect of year-to-year cost fluctuations.

10.4.2 Revenue Contribution

Revenue contribution provides a metric that can help a society compare potential member publication benefit options (for example, journal media options at various dues levels) and establish institutional prices for the journal.

The table below illustrates hypothetical revenue contributions per unit (in dollars and as a percentage) that member and institution types would make towards covering a society’s costs. In other words, the revenue contribution (that is, unit price less unit variable cost) reveals how much income remains to cover a society’s fixed costs and contribute to a journal’s operating income after the society pays for the cost of providing the journal.

In the example, which uses a COGS of \$17.00, 83 cents of each regular member dues dollar is available to cover the journal’s fixed costs and contribute to an operating surplus to help cover the society’s overhead.

Example Revenue Contribution by Subscriber Type

Member/Subscriber Type	Dues/Price	Revenue Contribution	
		\$	%
Regular Member (Dual Media)	\$100	\$83	83%
Student Member (Dual Media)	\$45	\$28	62%
Institutional, Print-only	\$220	\$203	92%
Institutional, Online-only	\$200	\$183	92%
Institutional, Dual Media	\$240	\$223	93%

Figure 10.2

Typically, as in the example, the revenue contribution for student members will be lower than other member types. This discounted dues strategy makes sense for student members, many of whom become regular members over time.

A society may also have multiple member levels and/or dues levels (for example, dues based on the member’s annual income). The society will need to assess whether such complexity will have a material difference on its analysis.

10.5 Fixed Costs

Fixed costs are those costs that the society incurs regardless of the size of the journal’s subscriber base. They are sometimes referred to as “first copy” costs, as they represent the costs required to create the first copy of the journal. A detailed understanding of the society’s costs for these categories will provide a basis for monitoring operating efficiency over time, as well as for evaluating possible outsourcing arrangements.

10.5.1 Direct Costs

Fixed costs can be separated into content creation and publishing support activities. Content creation costs include the costs of acquiring, certifying, and creating the journal's content, including editorial office costs, editor stipends, copyediting, proofing, and composition costs. Publishing service costs include direct or allocated staff costs, journal marketing, advertising sales, and management costs. The category also includes copyright fees, print inventory storage, and any other fixed non-editorial costs.

10.5.2 Indirect Costs

In addition to the direct fixed and variable costs described above, the society may want to estimate indirect costs, including the average amount of staff time directed towards journal publishing activities. This might include salary and benefits for management and administration; accounting and financial management; advertising tracking, offprint provision, administrative support; and subscription fulfillment.

Tracking these staff costs allows the society to manage and improve the operating efficiency of its journal program. It also allows the society to identify potential cost savings that might be realized by outsourcing some or all of the publishing functions. In some instances, the society would realize cost savings by being able to reduce staff costs; in others, the savings would derive from freeing staff resources to pursue other activities, thus lowering the society's opportunity costs.

10.6 Financial Sensitivity Analyses and Stress Tests

Projecting the financial performance of a new online edition of a journal will be subject to multiple cost and income variables. These variables, and the inherent nature of projections, render precise financial estimates impossible, even when reliable market information is available.

The best a society can do is to test the sensitivity of its financial projections to ensure that the society is not unduly exposed in the event that the society's costs and/or income projections vary more than anticipated. To better understand the risk caused by this uncertainty, a society can test the sensitivity of the financial projection for several key variables—including operating costs, institutional subscription adoption rate, and individual member retention—to identify critical performance benchmarks that the society should monitor.

10.6.1 Operating Cost Sensitivity

A society can test its cost scenarios—for both development and ongoing operating costs—to determine the cost over-runs that the society could sustain before the journal's net income would drop below an acceptable level. (The financial baseline described in "Establishing a Financial Performance Baseline," above, provides a basis for determining an acceptable performance threshold.)

If such a stress test indicates that a society could incur one-time development and/or annual operating costs substantially higher than those estimated for an online edition before falling below an acceptable financial performance threshold, then the society should have a sufficient margin of error from a cost perspective. On the other hand, if a relatively slight cost overrun would lead to an unacceptable financial result, the society may need to reduce its development or operating costs, or adjust its pricing to provide a greater operating cushion.

10.6.2 Institutional Subscription Adoption Rate Sensitivity

While it is safe to predict that academic libraries will continue to prefer online-only subscription options, it is far more difficult to determine specific uptake rates by medium for any given field or discipline, let alone for a specific title. It follows, therefore, that projecting revenue by format option after the launch of an online edition will be inherently imprecise.

If a society adopts a pricing approach (such as those described in Chapter Five’s “Member Publication Benefits” and “Institutional Subscription Format Options”) that renders it largely indifferent to the adoption rate of an online edition, even substantial fluctuations in uptake scenarios should have little effect on net income from subscriptions. However, a simple way to test income sensitivity by medium would be to run the journal’s financial projection assuming a worst-case scenario wherein all institutional subscribers opt for the version of the service providing the lowest revenue contribution (see “Revenue Contribution,” above).

10.6.3 Individual Member Retention Sensitivity

Chapter Three’s “Assessing Exposure to Online Licenses” describes how a society can estimate its exposure to potential risk posed by institutional online site licenses. Once a society has assessed the approximate risk to individual memberships it might face, it would be prudent to determine the potential effect on net dues income were the society’s members to demonstrate less-than-anticipated commitment to the organization.

A society can project the net dues income that it would forgo (that is, member dues less the cost of providing all member benefits) were its membership base to decline n percent more than anticipated. The loss threshold that the society tests will depend on its confidence in its risk analysis. If the society is confident in its estimate, it might use a lower percentage. Obviously, for most societies, any significant loss of membership would be more important than the foregone dues income.

Chapter 11

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