

Perpetual Access to Electronic Journals

A Survey of One Academic Research Library's Licenses

Jim Stemper and Susan Barribeau

A perpetual access right to an electronic journal, defined as the right to permanently access licensed materials paid for during the period of a license agreement (not to be confused with the right to copy journal content solely for preservation purposes), is a concern of increasing importance to librarians as academic libraries discontinue paper subscriptions and retain electronic-only access. This paper explores the current environment for perpetual access to electronic journals. The authors report on analysis of the contracts between a large, research-level university library and 40 publishers of electronic journals, as well as ten large electronic journal aggregators. The authors seek to determine the frequency of contractual provisions for permanent access rights for the years of active subscription in the event an electronic journal contract is terminated for any cause other than breach by the licensee. Costs and formats of any granted perpetual access are considered. The paper concludes with an exploration of the potential impact of the perpetual access clauses libraries are accepting in licenses, the possible lack of continuing access, and options for addressing the situation.

Many, if not most, academic research libraries are engaged in canceling print journals for various reasons, including saving money and coping with escalating journal subscription prices, providing more immediate access to journal content, and alleviating shelving space problems.¹ This cancellation raises inevitable questions for the library: whether the print journal's online counterpart also will be canceled in the future to save money and whether ongoing access to subscribed content can be guaranteed.

Jim Stemper (stemp003@tc.umn.edu) is Electronic Resources Librarian, University of Minnesota Libraries, Minneapolis; **Susan Barribeau** (sbarribeau@library.wisc.edu) is Electronic Resources Librarian for Collection Development, University of Wisconsin Libraries, Madison.

The authors wish to thank the following colleagues for their comments on an early draft of this paper: Becky Albitz, Kate Flanagan, Aimee Glassel, Janice Jaguszewski, Kate McCready, Marcia Pankake, Kathy Robbins, Charles Spetland, and Cynthia Teague.

The authors wish to note that terms and conditions may have changed since they conducted their research.

Statement of the Problem

Faculty View

Faculty are taking note of the issue of long-term journal access. In a survey of 7,400 American university faculty members conducted in fall 2003 by the non-profit Ithaka, "three-fourths said a journal should ensure that its archives will be preserved indefinitely" and "Eighty-four percent of the survey respondents said that archiving of electronic resources was very important to them."² This finding suggests that faculty do care about the long-term availability of electronic journals (e-journals). The survey also echoes the findings of a study commissioned by the Journal Storage (JSTOR) Project in 2000, in which more than 4,000 faculty members at American universities were anonymously surveyed about their use of electronic resources.³ Seventy-six percent of the respondents agreed

that it is important “that electronic journals be preserved for the future.”⁴

Research Library Mission

Given the traditional stewardship mission of research libraries, one can understand why university faculty would look to librarians to preserve access to subscribed journals. In their collection development textbook *Building Library Collections*, Curley and Broderick emphasize the research library’s stewardship role.⁵ Several library authors have urged the profession to maintain this stewardship role in the Internet age.⁶

The Digital Library Federation (DLF) Electronic Resource Management Initiative (ERMI) defines a perpetual access right as “the right to permanently access the licensed materials paid for during the period of the license agreement”; this right is different than an archiving right, which is defined as “the right to permanently retain an electronic copy of the licensed materials.”⁷ The emphasis of the first term is on retaining access, not on how such access is achieved (through the publisher’s site, a locally retained copy, or a third-party site). A literature review shows that people define e-journal archiving differently. Librarians and publishers frequently use the term *archival access* when often meaning *perpetual access*. The focus of this paper is not on preservation of subscribed e-journals per se, but on contractually assuring ongoing access to them. The challenge of ensuring continued access to subscribed information resources for the future is at least partly in the hands of research-level academic institutions; therefore, research libraries should address the issue, make their policies clear for all to see, and hold to them.

Previous License Reviews

In 2001, Millett conducted a review of 61 publisher licenses for electronic content to ascertain whether *continued access* was addressed.⁸ If available, the exact license wording was quoted, labeled “Yes” if perpetual access upon termination was granted and “No” if not; any explicit mention of financial costs was noted as well. Out of 44 licenses with a “Yes” or “No” label (no reason was noted for the blanks on the other publishers), 22 were considered a “Yes” (half of the reviewed licenses) and 9 of those carried a charge (fewer than half of the “Yes” licenses).⁹ Hughes analyzed the Web sites of 15 e-journal providers and found “no agreement on how to provide access to journals after a subscription is lapsed,” though she predicted that “some sort of extra access fee so that lapsed users can access the volumes for which they had subscriptions may become the norm.”¹⁰ The authors of this paper sought to update and expand this research by determining whether e-journal providers were

willing to add perpetual access rights to an existing license if not already present, and to examine how issues of costs and format were addressed, if at all, in the license itself.

Print Retention Projects

Various consortia and national library organizations are pursuing print retention projects to ensure that someone somewhere still has a complete run of a journal’s print copy, available through interlibrary loan (ILL) for consortial members, should a library’s licensed copy no longer be available. The Committee on Institutional Cooperation (CIC) retains print copies of Academic Press, Springer, and Wiley titles in at least one member library; the University of California (UC) system stores print copies of Association for Computing Machinery (ACM) and Elsevier Science titles in a centralized, shared archive.¹¹ To identify which print archive holds the last copies of specific titles, the Center for Research Libraries is developing a national registry system.¹²

McDonald cited the important role that consortial membership plays in retention decisions as such, “Many libraries consider themselves or are considered by a consortia or regional group to be the archive of record for all or a portion of their collective print collection. It will continue to be their responsibility to maintain print issues for those items that are their archival responsibility.”¹³ However, there are several drawbacks to print archives that must be considered. Due to print subscription costs as well as attendant hosting, processing, and tracking commitments, print retention projects may entail a significant monetary investment. Also, the *Library Journal Academic Newswire* paraphrased one participant (Baker, chair of the CIC Library Directors Group) as cautioning that “at some point, major publishers might choose to abandon print altogether, posing yet another challenge.”¹⁴ Such print retention projects are in their infancy, and the academic library community does not yet know whether document delivery from such repositories (perhaps delayed, perhaps completely unavailable due to copyright clearance requirements) will be acceptable to users. Libraries determined to go e-only to save money may wish to allocate money for print retention projects and seek membership in a consortia that has such projects.

E-journal Archiving Projects

Simultaneous with these efforts to preserve a print journal archive, various projects have studied e-journal archive creation and maintenance. Extensive research efforts have assessed the scope of the e-journal archiving issue and proposed strategies for preservation of and long-term access to full-text content.¹⁵ The Task Force on Archiving of Digital Information, under the auspices of the Commission

on Preservation and Access and the Research Libraries Group, issued an influential 1996 report.¹⁶ Based on the findings of the task force's report, the commission's successor organization, the Council on Library and Information Resources (CLIR), along with DLF and the Coalition for Networked Information (CNI), issued "Minimum Criteria for an Archival Repository of Digital Scholarly Journals," the sixth of which has special implications for licensing librarians: "A repository will make preserved information available to libraries, under conditions negotiated with the publisher."¹⁷ What type of access a lapsed subscriber might have at such an archive and what license wording is specific enough to ensure such access are the critical issues. The authors' analysis of one institution's licenses explores how these access issues manifest themselves in contracts.

As part of its Archiving Electronic Journals project, the Mellon Foundation funded seven year-long studies that aimed to meet these repository criteria, six of which involved large academic research libraries working in tandem with major journal publishers.¹⁸ Most projects addressed issues related to technological infrastructure and workflow, as well as sustainable business and access models. Except for the publishers who worked with Stanford on the Lots Of Copies Keeps Stuff Safe (LOCKSS) project, none seemed open to the idea of access to the archive by lapsed subscribers. Users could have access to e-journal archives only under certain conditions usually called *trigger events*; conditions discussed between Harvard and Blackwell Publishing, the University of Chicago Press, and John Wiley and Sons typify those cited in the project reports:

1. When material is no longer accessible online from the publisher.
2. When the publisher sells or otherwise transfers the rights to publish a given title to another body.
3. When the material has been in the archive for "n" years ("n" being a time period to be agreed to by Harvard and the publisher on a title-by-title basis).
4. When the title ceases to be published.
5. When the content enters the public domain.¹⁹

Elsevier stipulated that its prototype archive at Yale University Library could not compete with the publisher's revenue stream.²⁰ This archive's trigger events were correspondingly limited: users not affiliated with Yale could only access the archive on-site at Yale or in the event of a natural disaster, as ILL was not part of the archive's mission.²¹ To a faculty member of an American university whose library was forced to cancel a needed ScienceDirect title for budgetary reasons, the prospect of making a trip to Yale University Library to photocopy an article is not an attractive or likely option. More practical alternatives for research libraries are needed. The University of Pennsylvania recommended,

among other things, that further research in this area "determine the relationship between events that would 'trigger' nonsubscriber access rights versus paid subscriptions."²² Short of each library setting up its own archive of a publisher's journals, and in the absence of traditional ILL service, how could a lapsed subscriber obtain access to content for which the library had once paid without adversely affecting the publisher's bottom line?

The Yale/Elsevier e-journal archiving project, while drawing no final conclusions about economic models pending further study, identified preservation metadata as one way to add value to journal content, thus justifying some type of setup or maintenance fee.²³ The project report also observed that "the ongoing [archiving] costs, at least for standard publisher's journals, could be relatively predictable and eventually stable over time."²⁴ This outlook of feasibility and stability is at least partially good news for library administrators.

After sifting through the lessons learned from the Archiving Electronic Journals projects, the two models the Mellon Foundation felt worthy of continued funding were LOCKSS and Ithaka's Electronic Archiving Initiative. The key issues that led to this decision to fund two different archiving options revolved around cost and control—no one project's means of financing an archive was identified as being the clear solution, and neither publishers nor libraries were willing to cede control of an archive to the other.²⁵

The innovation of the LOCKSS model is its decentralized nature—allowing libraries to create locally cached copies of subscribed e-journal content that they could deliver to authorized subscribers as needed with the sanction of participating publishers, with other institutions' peer-to-peer network of caches acting as backups.²⁶ With LOCKSS staff negotiating publisher participation, all the individual library needs to do is to get the publisher's blanket permission to cache the title, which LOCKSS's already-negotiated license wording facilitates.²⁷ The LOCKSS site claims that "more than 80 libraries and 50 publishers . . . are using the software."²⁸ Like many projects, LOCKSS now needs secure funding to remain viable, so the new LOCKSS Alliance is seeking participation from new libraries who would pay annual membership fees.²⁹

The second archiving model that Mellon is funding is Portico, a recently launched project of the nonprofit organization Ithaka (itself an outgrowth of JSTOR, the respected e-journal back-file archiving service).³⁰ Also called E-Archive, Portico argues for a centralized archive of electronic scholarly literature, with distributed costs shared by participating publishers and libraries. Portico justifies the centralized approach on the grounds that most publishers will not see a long-term business interest in maintaining and migrating e-journal data as the content gets older, and strained library acquisition budgets will not be able to cover

such costs.³¹ Portico's proposed funding model is similar to JSTOR's; participating libraries are asked to pay a one-time archive development fee and an annual archive support fee. Participating publishers are asked to pay a one-time setup fee and then an annual deposit fee for each journal.³² The funding model thus reflects the findings of Mellon journal archiving projects that journal archives have both initial setup and ongoing maintenance costs. The Portico site lacks specifics about the conditions under which one can obtain access to content. The mission page's statement that "access to the contents of the archive will be available under limited circumstances" may be cause for concern.³³ Exactly how limited are the circumstances? The JSTOR moving wall of content is mentioned on the Portico site, which apparently means that a library that has canceled a title may have to wait a publisher-specified number of years before the once-subscribed issues become available through Portico.³⁴ What remains to be seen is whether most or all of a library's desired savings from going e-only is simply transferred to such an archiving service, and whether the limited years of Portico access are of sufficient value to users.

If a critical mass of publishers joins the Portico project, the approach may offer a compelling alternative to LOCKSS. Publishers would not have to worry about losing control of their content in distributed LOCKSS caches; libraries would not have to setup and maintain local LOCKSS caches. However, LOCKSS co-founder Reich maintains that "only the largest publishers have sufficient resource to implement (or negotiate with third parties to provide) archives for content they publish," which makes LOCKSS's low cost a compelling option for smaller publishers.³⁵ Some publishers may opt for only one of the LOCKSS or Portico approaches (or neither), meaning that libraries might well end up with a hybrid approach to perpetual access, with implications for budgeting and presenting a coherent user interface:

- local or regional print archive (when the publisher offers no perpetual access rights);
- local data loading (e.g., LOCKSS cache);
- access through a central subscription archive (e.g., Portico); or
- access through the publisher's server, which may or may not entail a maintenance fee.

Individual Library Actions

Many individual university libraries and consortia are attempting to address this problem systematically through collection development policies governing the move to electronic-only collections.³⁶ Whether labeled criteria, checklist, model license, or principles, these policies show that libraries need guidelines so they can safely make the move to e-only journals without jeopardizing long-term access. Such

guidelines typically state the need for an explicit guarantee of perpetual access rights in the license should the library cancel a title in print or electronic format. Potential costs and hosting options for continued access also are frequently mentioned. Both the University of California (UC) and the United Kingdom's National Electronic Journals Licensing Initiative (NESLi2) for higher-education institutions state that perpetual access must be free, while the Canadian National Site Licensing Project states that members will have to pay a fee to the publisher. UC and NESLi2 also state that three hosting options are acceptable: access through the publisher's site, the library's site, or some type of central archive hosted by a third party.³⁷ Policies from several libraries and consortia stipulate that perpetual access should be guaranteed even when a journal title ceases publication or is transferred to another publisher.³⁸

The University of Maryland's policy document provide a useful example in terms of detail and context. The criteria provide three scenarios under which one might consider going e-only (no publisher commitment, an expressed commitment from the publisher, and actual planning by the publisher for perpetual access), giving the selector progressively more leeway to go e-only as the publisher's commitment and the core nature of the title allow. Such tiered decision-making acknowledges that no single answer fits all situations, even within one library system.³⁹

Guidelines are only as effective as the enforcement behind them. Are they ideals for which to strive, or required elements of any license? Some libraries have demonstrated the willingness to apply the guidelines in practice. The California Digital Library (CDL) publicly rejected the Nature Publishing Group's 2005 renewal terms because of the lack of guaranteed perpetual access and their belief that "Nature may change hands, or Nature may be archived by a third party, and UC does not expect to pay repeatedly for the same content."⁴⁰ Because consortia represent so many libraries and so much subscription income for publishers, they are well-positioned to exert market power and apply criteria for the granting of perpetual access rights.

Surveys of Current Practice

Anecdotal evidence from postings to the Electronic Resources in Libraries (ERIL-L) and Liblicense electronic discussion lists indicate that librarians are not taking publishers up on their offer of LOCKSS access.⁴¹ Shreeves, collection development officer (CDO) and associate director of the University of Iowa Libraries, said:

I suspect that the "perpetual access" and ownership rights that publishers like Elsevier often include in their contracts are in some measure convenient fictions we use to convince ourselves that the old

ownership, or stewardship, model still works in the digital age. . . . But in practice the tremendous uncertainties of digital preservation thwart our ability to make useful distinctions between nominal ownership and leasing of information. This is not to minimize the fundamental importance of this distinction in principle—I assume we all try to negotiate permanent or archival access to any product we license.⁴²

The authors tested the latter assumption in August 2004 by posting a brief survey to the Chief CDO's electronic discussion list, which includes the CDOs of the largest Association of Research Libraries (ARL) member institutions. The authors' institutions were not included in the survey, nor were national and public libraries, which left a survey population of 38 potential respondents out of 47 members. CDOs at 25 institutions responded (for a response rate of 65.8 percent, or two-thirds of the authors' peers). Members were asked whether, during e-journal license negotiation, they ask for perpetual access rights to subscribed years upon cancellation, and whether they consider the lack of perpetual access to be a deal breaker. While this was not a scientific sample, the results were still informative and clear—a majority of respondents (76 percent) consistently ask journal publishers for perpetual access, yet a majority (also 76 percent) would still sign an e-journal license without assurances of such access.

An ARL survey on e-journal licensing, conducted the previous year by Case, was published in the same month the authors' survey went out to the Chief CDOs list and found similar results.⁴³ The ARL survey documented a gradual but definite move towards e-only access. In 2002, only a few of the 40 respondents were going e-only; in 2003, 25 of 57 respondents (44 percent) were doing so for new packages, and "another six [respondents] indicated . . . they seemed to be moving in that direction."⁴⁴ Further, a minority of ARL institutions view "Archival Access/Perpetual Rights/'Own' the Content" as a deal breaker in license negotiations (14.6 percent of the respondents for ARL, where the Chief CDOs survey found 24 percent).⁴⁵ Put another way, using Case's survey, the remaining 85.4 percent of ARL institutions evidently do not view lack of perpetual access as a contractual deal breaker; most likely, many of this clear majority of the respondent institutions were among the 44 percent who were going e-only for new packages. One must take note that so many research level libraries are not assigning greater weight to perpetual access guarantees when making the big move to e-only collections. Taken together, both surveys suggest that fewer than 1 in 5 large research libraries say no to a license that does not provide perpetual access assurances.

A subsequent survey sent to the e-journals discussion list, to which primarily United Kingdom academic librar-

ies responded, echoes the previous findings.⁴⁶ A substantial number of the institutions (80 percent) had "already moved to e-only for at least part of their collections," but a lack of prior planning was occasionally reported: "Sometimes this [decision] is underpinned by a strategy or policy, but more often it seems to [be] happening as a reaction to other pressures," such as "shrinking bookfunds and lack of space."⁴⁷

With the large numbers of libraries going e-only, as demonstrated by these surveys, one cannot realistically expect many libraries to rely on a print copy as the primary means of perpetual access. For example, Bracke and Martin maintained that, for the University of Arizona's Science-Engineering Library, "shrinking budgets and space constraints make print retention an untenable and non-strategic plan of action."⁴⁸ At the University of Minnesota and University of Wisconsin, the move to e-only journal access is encouraged for the same reasons. In cases where a specific license does not permit perpetual access rights, retaining a print subscription for specific titles may be an affordable option, especially if the library belongs to a consortia that participates in a print retention project.

Access through the Publisher When the Journal Changes Hands

The transfer of journal title ownership from one publisher to another is an increasing problem. McDonald defined the problem thus:

Libraries must have a secure sense that the publisher or the project is reputable and likely to retain their electronic publishing program at a reasonable cost in future years. The purchase of Academic Press by Elsevier has laid a heavy economic burden on many libraries and future purchases of commercial publishers by others can wreak havoc on the information resources for any library. . . . Libraries that long ago canceled print issues of journals from Academic Press in favor of electronic only access [through the International Digital Electronic Access Library (IDEAL) service] are now faced with huge cost increases when renewing these licenses through Elsevier.⁴⁹

Eells noted that Elsevier did not honor some perpetual access commitments for former IDEAL customers, meaning that customers essentially had to pay for access to some years twice (once through IDEAL, then through ScienceDirect).⁵⁰ Bird and Waller examined the licenses for 6 publishers that offered what the authors termed "big deals" (Academic Press, American Chemical Society [ACS], Elsevier, Institute of Physics, Royal Society of Chemistry, and Springer), with particular attention to perpetual access

clauses for journals that these publishers sold and that were no longer part of the current package. All of the surveyed publishers except Springer offered perpetual access rights to the Canadian Research Knowledge Network as part of the license and delivered ongoing access upon the sale of ten randomly chosen titles.⁵¹

Access through Local Data Loading

During the last decade, academic libraries have been moving from locally loaded databases in favor of Web access through the publisher's site. The primary reason is the high infrastructure cost for librarians to network content stored on disc, but the user preference for the convenience of the Web and the potential lack of enhanced functionality, such as cross-links are factors as well.⁵² LOCKSS addresses many of these needs, but the lack of widespread adoption by librarians and publishers merits the consideration of other options. While the OhioLINK consortium has been able to secure perpetual access rights to locally loaded journal content in licenses from all publishers except ACS, Diedrichs noted that "the investment required in the archiving process is considerable and the question of who best should perform that function—the library, the publisher, some middleman—is yet to be resolved for most libraries."⁵³

Grudzien, head of collection development at Central Michigan University Libraries, illustrated that even if one is able to obtain perpetual access assurances, the option of local data loading is not to be taken lightly, citing late delivery of Elsevier journal content, and subsequently the need to both locate outdated tape drives for accessing the content stored on digital linear tape and to organize the content itself.⁵⁴ The fact that only 10 Elsevier customers worldwide have opted for the locally loaded version of ScienceDirect may be an indication of the preference for accessing e-journals at the publisher's site and thus avoiding the attendant infrastructure and staffing costs of local data loading.⁵⁵

Access through Third Party Solutions

The e-Depot at the Koninklijke Bibliotheek (the National Library of the Netherlands) acts as an archive for BioMedCentral, Blackwell Publishing, Elsevier Science, Oxford University Press (OUP), Sage, Springer, and Taylor and Francis journals.⁵⁶ However, for institutions outside the Netherlands who cancel any subscriptions to these journals, e-Depot is only an archive of last resort. The head of e-Depot has said that these depositing publishers allow three limited types of access:

- on-site access for registered users;
- ILL supply in the Netherlands; and

- access for any licensee in case publishers cannot meet obligations (calamities, bankruptcy).⁵⁷

Subscribers of major e-journal packages outside the Netherlands cannot cancel titles and expect to get free ILLs of articles for their users; they will need to make other arrangements. Still, the experiment may show promise as a model for other countries, such as the United States (perhaps in conjunction with consortial site-licensing projects at a regional or national level), and bears watching.

A research library's mandate to provide current access to journals for today's scholars can be at odds with the mandate to keep those journals available to be accessed by scholars in the future. Librarians still value their stewardship role in the digital realm, but they perhaps fear that pressing the issue contractually is commercially and financially unrealistic at this time. If the level of public support for higher education continues to erode, acquisition budgets continue to dwindle accordingly, and research libraries continue to go e-only, this practice will have major implications for the type of library collection scholars will see in the future. Research libraries will have to grapple with the way they now interpret their traditional stewardship role, and come to grips with the issue of perpetual access to subscribed e-journals.

Objectives and Methods

The goal of this paper is to determine the frequency of contractual provisions for perpetual access rights for the years of active subscription in the event an e-journal contract is terminated for any cause other than breach by the licensee. If a library asks for perpetual access rights in a license, how often will such access provided? Has the access-over-ownership model triumphed, or can libraries promise users that the electronic content for which the libraries have paid will still be available in the future? The authors' working hypothesis was that the majority of e-journal provider licenses do not provide explicit allowance for perpetual access rights.

Toward this end, the authors analyzed a representative set of journal publisher and aggregator licenses signed by the University of Minnesota as of the start of the fall 2005 semester (40, or about one-third, of the library's journal publishers), looking for perpetual access clauses. September 1 is the usual time the university's journal cancellation decisions are due to its serials agents. Separately, the authors analyzed the licenses for 10 major e-journal aggregators (defined as "a bibliographic service that provides online access to the digital full-text of periodicals published by different publishers").⁵⁸ A smaller number of aggregators was analyzed because there are not as many in the marketplace from which to choose, and a few of these

aggregators control a significant market share. Aggregators were included because selectors can be tempted to cancel print versions of journals covered in aggregated databases just as they would be for an individual journal publisher; aggregators were analyzed separately to see if they had any unique issues or findings. Thus a total of 50 e-journal licenses were analyzed.

There were three criteria for selecting the journal publisher set and the aggregator set:

- a mix of commercial and society or university press publishers;
- a mix of large and small publishers; and
- journal collections likely to be held by large libraries.

By examining collections likely to be subscribed to by most research libraries, the authors hoped to get a better sense of the implications for lost national access should libraries cancel the paper versions of these journals with no print backup or ensured contractual access upon termination. By examining equal numbers of commercial and society publishers, the authors hoped to ascertain whether one type of publisher was more or less likely to grant such access. The providers surveyed are listed in the appendix.

For each e-journal collection from these entities, the authors looked at the library's existing license and asked the following questions:

- In the event that the library terminates the license, is the publisher or aggregator willing to provide some form of perpetual access to the years licensed during the subscription?
- If the publisher or aggregator grants perpetual access rights, does the license specify an associated cost?
- If the publisher or aggregator grants perpetual access rights, does the license specify a format or access mode (e.g., continuing access through the provider's Web site, local data loading through a CD- or DVD-ROM or a LOCKSS cache, or access through a third party, such as Portico)?

At the University of Minnesota–Twin Cities and the University of Wisconsin–Madison, the practice is to ask for a contractual guarantee of perpetual access rights when licensing electronic access to journals. In some cases, the publisher or aggregator generic license did not offer such access, and the library had to ask for the right during the license negotiation process. Sometimes the library had to ask a publisher representative for clarification when the license wording did not clearly answer the perpetual access question. As any licensing librarian knows, this negotiation process is central to contract work. The University of Minnesota adapted language from a generic academic library single-institution license template recommended by ARL: “On termination

of this License, other than for cause, the Publisher shall provide continuing access for Authorized Users to that part of the Licensed Material that was published within the Subscription Period.”⁵⁹ Note that this language does not mention costs. Also, wording in the template related to choice of format (“either from the Server, or by supplying {electronic files} {CD-ROMs} {microfiche} to the Licensee”) was deleted, as the University of Minnesota did not want to invite the prospect of locally loading journal content.⁶⁰

Each final, signed license was examined for any clause related to perpetual access rights. If a provider's generic contract explicitly granted a perpetual access right (as earlier defined by DLF's ERMI), or if the university was successful in getting the provider to include this right during negotiations, this was counted as a “Yes.” Often, if included, the clause was under such a heading as “Termination,” “Usage Rights of Lapsed Subscribers,” or “Perpetual License.” The relevant clause was copied and pasted into a master document so all provider wording could be compared side by side. Decisions on availability of access rights for each provider were recorded in an Excel spreadsheet, as were any contractual mentions of cost or access format.

If a license was silent on the issue of perpetual access rights, this was counted as a “No.” The authors followed the ARL's Strategic and Practical Considerations for Signing Electronic Information Delivery Agreements, which advise the licensing librarian to get desired rights in writing: “If the language of a contract leaves you feeling unsure how users may use the materials, clarify the contract by writing in what you need.”⁶¹ Because every license has a specified term or period of performance, once that time has past, a university has no rights that the agreement does not expressly grant. This is why one sometimes sees contractual provisions stating that the rights and obligations of section X shall not be terminated upon the conclusion of the term of the agreement. So, if the license renews annually and a university wishes to have access to the material after the term's end date, then the license needs to include a provision granting the continued right of access. While a library could attempt to renegotiate an existing license that does not explicitly grant perpetual access rights in the future, the authors were only interested in the licenses that grant such access at the present time. This paper thus affords a glimpse of what the University of Minnesota would have perpetual access rights to the day after the library canceled its e-journal subscriptions with the surveyed publishers (through its serials agents or directly), barring any later renegotiation with these publishers.

Results

Overall, most publishers—by almost 2 to 1 (64 percent to 36 percent)—in the sample grant perpetual access (see table 1).

This initial finding makes the prospect of continued access sound realistic *if* librarians ask for the right and *if* librarians vote with their dollars. For years, librarians have been discussing the pros and cons of access versus ownership of material; however, in the electronic content delivery climate of today, that unembellished model is too simple to cope with the related complexities and ramifications in ongoing discussions of the current e-journal licensing environment. In the authors' perspective, perpetual access should be the clear objective. To that end, examining and defining *how* such access will be provided, to *what* content and by *whom*, and under what *cost* and *format* conditions, is necessary in library license negotiations.

Within the scope of the licenses examined, more of the commercial publishers' agreements allow or provide for perpetual access rights than do those of society publishers—72 percent of commercial publishers and aggregators, compared to 56 percent of society publishers and aggregators. Almost three-quarters of commercial publishers' licenses provide for perpetual access, while more than half of societies' licenses do not mention or explicitly decline to provide perpetual access. Libraries' past experiences with scholarly publishers versus commercial publishers (with regard to pricing issues and a general cooperative spirit) created an expectation that the society publisher agreements would naturally be more likely to provide for these access rights. The actual outcome was unexpected, considering the belief (from the perspective of the authors) that society publishers will be more responsive and responsible players in the scholarly communication realm. The publications of scholarly societies are essential components of academic and research library collections, and these publications present a balance to the commercial publications also relied upon to disseminate scholarly research.

Some of the declining publishers give their "No" answer right in the contract and did not rely on silence alone. For example, the following clauses seem to say "Don't even ask":

Walter de Gruyter does not warrant that the Licensed Materials will be made available permanently.⁶²

In the event of termination or expiration, the Subscriber may not retain any portion of the [Association of Computing Machinery Digital Library].⁶³

Some publishers with free online access with print subscription arrangements simply tell libraries that they lose online access when they cancel print subscriptions. More and more, though, these publishers are reversing the traditional cost base, making print an add-on to electronic access, rather than the other way around. In this new environment, perpetual access rights would then have to be negotiated as part of a renewal. Haworth Press goes even farther, advising librarians not to cancel print prematurely. Because Haworth Press considers "the electronic/print serial scene [as] still too volatile and too early in an infancy stage to allow [Haworth] to dismantle [its] entire in-house printing operation," they regard the print version as the "archival back-up" to the electronic version.⁶⁴ In the absence of an explicit contractual guarantee of perpetual access rights for the online version, or a collaborative print retention program for this publisher, one should weigh the issues carefully before canceling the print version of a Haworth journal.

The American Medical Association's representative, in an e-mail, explained her society's stance this way: "We do not allow perpetual access. A site license is like getting cable—you are paying for access to the programming, not the ownership of the actual programming."⁶⁵ This statement seems to preclude any possibility of entering into a discussion of the issues as part of a contractual negotiation.

Some publishers go so far as to require the licensee to destroy all copies of downloaded articles. For example, one commercial publisher says, "Licensee agrees to destroy, and will use reasonable endeavors to instruct Authorized Users to destroy all Licensed Material stored on any digital information storage media, including, but not limited to, system servers, hard discs, diskettes, and back up tapes."⁶⁶ Librarians try to negotiate the deletion or rewording of such clauses, due to privacy and enforceability concerns, but again the implication is that the library does not own this data and thus does not have a continuing right to access the data. Implicit in this clause is a major shift in the concept

of ownership that needs to be examined carefully, not adopted out of short-term expediency.

A handful of providers note specific expiration parameters for perpetual access in the licenses. Springer specifies two years, the Online Computer Library Center (OCLC) five years, and Karger ten years.⁶⁷ Perpetual access may not be

Table 1. Publisher's contractual position on perpetual access rights in some form (n=50)

Publisher type	Yes	% yes overall	% yes within this publisher type		% no within this publisher type		Total
			No	% no overall	No	% no overall	
Commercial	18	36	72	7	14	28	25
Society	14	28	56	11	22	44	25
Total	32	64	n/a	18	36	n/a	50

perpetual at all; the clock may be ticking. Along with cost and format, this is yet another aspect that must be considered by selectors when deciding whether to cancel a title. If nothing else, the selector may need to reconsider reinstating such a title or package, or renegotiating some form of “subscribed years” access, probably for a price.

Separately, the authors analyzed the licenses for 10 full-text database providers (as earlier defined), 5 of which are commercial providers and 5 of which are society providers. Several of these 10 are often referred to as aggregators, in that they provide journal content from publishers, but are not the publishers themselves and generally do not provide for continued access should the subscription be terminated. The commercial providers in this group are from EBSCO Industries, Gale, H. W. Wilson, Ovid, and ProQuest; the society providers are BioOne, Highwire Press, JSTOR, OCLC Electronic Collections Online (ECO), and Project Muse. Few offer any contractual guarantee of perpetual access. Canceling a print title included in such a package is risky. Their title lists and coverage frequently change, depending on their contracts with the publishers. If a library’s agreement is not renewed, one cannot count on any continued access to the journals therein.

Cost Issues

In a parallel finding that tempers the two-to-one result about perpetual access being available, the authors found that almost half of the providers that allow perpetual access specify that a charge will or may be associated with this access (14 of 32 granting providers, or 43.8 percent); see table 2. A roughly equal percentage of commercial and society providers who allow perpetual access charge for such access (44.4 percent versus 43 percent). As the Mellon Foundation’s journal archiving projects demonstrated, hosting and maintaining content comes with an attendant cost. Thus one can reasonably expect a cost to be associated with a perpetual access service, whether handled locally, by the publisher, or by a third party.

The licenses that mention cost do so in a variety of ways and at differing levels of specificity. In the majority of the licenses studied, the fee is to be paid to the publisher (75 percent of commercial publishers, 100 percent of society publishers). In a handful of cases, the license specifies a fee be paid to a third party or simply is not clear. The library’s own setup costs for loading data locally are implied in many cases and are not explicitly stated. More study is needed in this area for

purposes of budgeting for perpetual access. Examples of contract language about costs follow.

Some publishers distinguish between *content* costs and *access* or *setup* costs. The American Institute of Physics (AIP) exemplifies a situation where the library might be assuming both types of costs: one for the publisher and one for library technology infrastructure investments: “The Subscriber will be given the option to purchase a physical archive copy, for example a CD-ROM. . . . Any hardware or software required to distribute content from the archive copy will be the responsibility of the Subscriber.”⁶⁸

Most licenses are not as specific about a library’s internal costs but assume that the library knows about, can cope with, and will absorb such hardware, software, programming, interface design, connectivity, and staffing costs. Similarly, the American Psychological Association (APA) distinguishes between content fees and access fees: “Although [the customer] would not pay ongoing data fees, they would pay for the delivery of the content.”⁶⁹ Either way (whether a library is paying the publisher or library or technology vendor support staff), sometimes multiple and ongoing costs for perpetual access will exist.

Specific costs usually are not detailed in the license, even when the concept is mentioned and can be subject to change at the publisher’s discretion. Typical wording is:

There may be fees associated with these options.⁷⁰

Wiley will provide the Licensee with access to the full text of the Licensed Electronic Journals published during the Term of this License . . . at a cost-based fee agreed by both parties.⁷¹

Upon termination of this Agreement, Licensee may retain the right to use in archived form the content of the Database provided that Licensee . . . pays all costs associated with providing the Database content to Licensee on a mutually agreeable media type . . . Licensee acknowledges that the terms and conditions applicable to Licensee’s archiving rights under this paragraph including, but not limited to, the media type and annual fee or fee

Table 2. Granting publishers’ contractual position on cost for perpetual access rights (n=32)

Publisher type	Yes	% yes overall	% yes within this publisher type		% no within this publisher type		Total
			Yes	No	Yes	No	
Commercial	8	25.0	44.4	10	31.3	55.6	18
Society	6	18.8	43.0	8	25.0	57.0	14
Total	14	43.8	n/a	18	56.3	n/a	32

per year of archive material may be modified by [Institute of Electrical and Electronics Engineers] at its discretion.⁷²

Of the three previous examples, the likelihood of a fee increases with each succeeding quote. The first says there *may* be a fee; the second says that there *will* be a fee and the library has a *say* in what that fee might be; and the third says there *will* be a fee and the amount is *open-ended*. So the potential exists for perpetual access fees of undetermined amounts that may change from year to year. Because perpetual access is a relatively new and undefined service, this is not surprising, but libraries must be aware of the budgetary implications of open-ended financial commitments. One could plausibly argue that the uncertainty surrounding perpetual access fees may not be substantially different than the fluctuations in journal prices; still, this fluidity will make budget projections even more challenging to produce than they are now. The license negotiation process is the library's opportunity to participate actively and creatively in further definition of cost assessment, perhaps in consultation with colleagues at peer institutions.

Sometimes the cost is specified, at least with respect to existing subscription fees. For example, East View specifies a fee of 10 percent of the current annual subscription cost.⁷³ Sometimes the cost depends on the format, and the effort required to convert the journals to or deliver the content in that format.⁷⁴

In addition to LOCKSS access, the American Society for Microbiology (ASM) allows open access to its journals after a specified time, but ASM reserves the right to charge a fee (for current and back-file issues) in the future. This license serves to remind one of the unknown long-term potential of relatively new open access models.⁷⁵

The offering of separate back-file journal sets for years not covered in a current subscription is increasingly common (e.g., from ACS, Annual Reviews, Elsevier, Nature, Wiley). One might easily find oneself in the situation of having bought a journal back-file set, but being without access to current issues due to cancellation of a title for which perpetual access rights are not contractually guaranteed. In cases where perpetual access to a canceled journal is not allowed in the license, a library might opt to retain the subscription but would need to pay more to retain access to the back files. The American Association for the Advancement of Science (AAAS), publisher of the popular journal *Science*, says that "because AAAS cannot be certain of future technology, storage, or maintenance costs, AAAS cannot guarantee [back-file] access" and it "reserves the right to remove all or portions of the archive of past issues, or to institute a charge for access to it in the future."⁷⁶

JSTOR has been a unique scholarly project, embraced by many research libraries as a trusted repository of key

scholarly journals, as evidenced by their extensive list of participants that have licensed their journals. The expectation of the authors, based on JSTOR's good reputation in the library community, was that the JSTOR agreement would be an exemplar for perpetual access. However, the agreement at the time of this research does not allow for access to content after a JSTOR subscription termination.⁷⁷ JSTOR charges an archive capital fee; the authors would posit that the use of the term *capital* in reference to this fee implies a capital investment by the institution. Learning that the archive capital fee does not entitle one to permanent access to the collections as defined at the time of one's subscription is disconcerting. JSTOR's two-fold pricing model, reflecting the need to recoup up front and ongoing maintenance costs, is a common one. The expectation is that this is a trusted repository that a library can depend upon for continued access. While libraries might be surprised to learn that their initial capital investment alone does not guarantee them perpetual access rights to JSTOR content in the future, they should expect this separation of setup and maintenance costs from other publishers.

Format and Hosting Issues

When one looks at the types of formats and hosts that publishers offered for perpetual access, one finds that the option of continued access through the publisher's own server is offered just as often as the option of local data loading (i.e., at least one of these two options was offered in 53.1 percent of the studied licenses); see table 3. Also, the commercial publishers and society publishers studied are similar in the percentage that offer such access through their own server, with a slightly greater percentage of society publishers offering this option (57.1 percent to 50 percent).

Sometimes one finds a clear correlation between current access practice and perpetual access. Six of the 32 (18.8 percent) granting publishers that provide Web access will continue that access as the sole format. However, as noted earlier, Springer puts a time limit on perpetual access to its server, after which other options must be considered: "Access is granted for two years after cancellation; access and storage options are available for subsequent years."⁷⁸

By a large margin, more society publishers than commercial publishers allow the library to load data locally (71.4 percent to 38.9 percent), perhaps reflecting a greater concern among commercial publishers about retaining control of their data. AIP allows the library to copy data from a *physical archive copy* to the library's secure network.⁷⁹ Project Muse also allows this practice, on DVD, though the *non-searchable* format of their content does not sound very useful and may well imply significant, hidden setup costs for the library to make the dataset searchable (such as metadata tagging): "Approximately 90 days after the expiration of an

annual subscription term, Project Muse will provide, upon request, an archival (non-searchable) file on DVD-ROM or other appropriate media as determined by Muse, containing the content of all issues published online during the 12-month subscription term.”⁸⁰ Serving up this kind of data will not be plug-and-play for the library and, judging from the recent library literature, not enough institutional reporting on local experiences exists (beyond anecdotal electronic discussion list postings) to tell if this is a cheaper option than paying the publisher an annual maintenance fee.

Of the publishers included in this survey, 8 commercial publishers (Berkeley Electronic Press, Blackwell, British Medical Journal [BMJ] Publishing Group, Cold Spring Harbor Laboratory Press, Emerald, Lippincott Williams and Wilkins, Nature Publishing Group, Springer) and 8 society publishers (AAAS, ASM, BioOne, Cambridge University Press, HighWire Press, Massachusetts Medical Society, OUP, and Project Muse) are listed on the LOCKSS site as having agreed to make content available through LOCKSS.⁸¹ The LOCKSS option is not always stated in their licenses. However, just because a publisher does not mention LOCKSS in their license does not mean they will not consider the option or have not already done so. Silence is another reminder of the need for negotiation or for checking the current list of LOCKSS participating publishers. Overall, 16 of 50 (32 percent) of the studied publishers are represented as partners on the LOCKSS Web site. In addition, 6 of the studied publishers are listed as partners on the Portico site.⁸² Together with the LOCKSS partners, this adds up to 21 of the 50 studied publishers (42 percent) publicly opting for at least one of these perpetual access mechanisms. That is a respectable amount, considering that so many of these publishers’ journals are collected by research libraries. These two projects merit consideration as potential solutions to the perpetual access problem. Of these 21 publishers, only 1 (Blackwell) is a partner in both LOCKSS and Portico, indicating that publishers may opt for only one of these approaches. On the other hand, 2 major publishers included in this study, Elsevier and APA, are not LOCKSS or Portico partners, which shows the need to make sure such important publishers have perpetual access assurances in their standard licenses (as they do) or to negotiate their inclusion.

Of the publishers that allow perpetual access, 21.9 percent specify that a third party will provide the access and deal with format conversion issues. The

numbers for commercial publishers and society publishers are very close in this area. Blackwell’s wording is typical in this regard:

The Publisher shall . . . provide the Licensee with assistance in obtaining continuing access . . . from a third party’s server provided that the third party shall be responsible for any content conversion from the format in which the Publisher provides the material.⁸³

The American Geophysical Union’s stance is that any third party is solely “for the purposes of long-term preservation of the Licensed Materials,” and the publisher’s server and local data loading are the perpetual access options, thus making a distinction between *preservation of* versus *access to* the subscribed content.⁸⁴

Only 1 of the studied publishers names their chosen third party in the license; as noted earlier, Elsevier’s is the National Library of the Netherlands.⁸⁵ There are not enough specifics in the studied licenses or enough of a track record with third-party access to know if this is a valid alternative to paying the publisher an annual maintenance fee, or rather just an emergency mirror site for such paid access. Care must be taken in negotiation to clarify the exact role of the third party and whether the library would really get limited access only in an emergency situation, or true perpetual access based solely on one’s prior subscription history.

A minority of the publishers who grant some form of perpetual access rights present more than one future option for access (34.4 percent). Presumably this is at their discretion, not the library’s. For example, Wiley says that it will:

provide the Licensee with access to the full text of the Licensed Electronic Journals published during the Term of this License, *either* by continuing

Table 3. Granting publishers’ contractual options for perpetual access (n=32)

	Publisher	Library	Third party	Unclear	Multiple options
Commercial publishers	9.0	7.0	4.0	5.0	5.0
% of all granting publishers	28.1	21.9	12.5	15.6	15.6
% within this publisher type	50.0	38.9	22.2	27.8	27.8
Society publishers	8.0	10.0	3.0	1.0	6.0
% of all granting publishers	25.0	31.3	9.4	3.1	18.8
% within this publisher type	57.1	71.4	21.4	7.1	42.9
Total	17.0	17.0	7.0	6.0	11.0
% of all granting publishers	53.1	53.1	21.9	18.8	34.4

online access to the same material on Wiley's server or by means of an archival copy in the electronic medium selected by Wiley (emphasis added).⁸⁶

Sometimes the choice of format is at the library's discretion, as with APA:

APA is committed to providing customers options for delivery for site licenses. Currently, those options include customer loading, access through several vendors, or access directly from APA, and there is a separate cost for delivery. The customer who has stopped paying for an annual site license may also choose one of these options for the segment of content for which they retain rights.⁸⁷

Several publishers leave the format intentionally unclear. This is more publishers (18.8 percent) than offer a third party option. This uncertainty is understandable, given how quickly technology becomes obsolete. Slightly more commercial publishers than society publishers are unclear as to format (27.8 percent versus 7.1 percent). For example, the IEEE suggests "a mutually agreeable media type," while BMJ offers simply that its journals will be available to lapsed subscribers "in electronic form."⁸⁸

Full functionality is yet another concern, no matter which party is hosting the content. The Royal Society of Chemistry (RSC), despite having the most convincing assurance with regard to continuing access and multiple formats, remains troubling because access to the hypertext markup language (HTML) versions of its articles, with reference linking, is lost, and only portable document format (PDF) versions remain.⁸⁹

As with cost, this uncertainty as to format makes planning and thus budgeting difficult. Will any of these publishers decide that their own server is not an option and that the library must invest in its own infrastructure? Happily, for more than half of the studied publishers who allow perpetual access, the publisher's server may yet be an option.

Publisher Continuity Issues

Few publishers address what will happen if their business closes or if they are bought by another publisher—a concern of libraries in light of such recent events as Elsevier's purchase of Academic Press, Taylor and Francis's purchase of Dekker, and Springer's purchase of Kluwer. Elsevier guarantees that the National Library of the Netherlands testbed archive can be used by institutions in case the publisher is no longer able to provide ScienceDirect.⁹⁰ Elsevier is also the most explicit of the studied licenses regarding the potential transfer of ownership of specific titles to new publishers; in such a scenario, Elsevier will try to secure

access rights to subscribed issues for existing subscribers from the new publisher.⁹¹

RSC commits: "If rights in all or any part of Publisher Content are assigned to another publisher, Publisher shall use its best endeavours to ensure that the terms and conditions of this Agreement are maintained."⁹² This expression of good intentions is well-meaning, but a publisher who sells a title or is purchased outright has little power to compel the new owner to honor its previous agreements.

Vagueness of Wording

Librarians have rightly noted the vagueness and unenforceable nature of the contractual assurances in this area. Some illustrative cases:

Licensor and Licensee shall discuss a mechanism satisfactory to the Licensor and Licensee to enable the Licensee to have access . . . and the terms of such access.⁹³

AIP will use reasonable efforts to retain in an archive all electronic information published by the American Institute of Physics.⁹⁴

What constitutes a *discussion*? What is a *reasonable* effort to retain an archive? Just because an archive has been retained, is it *reasonable* for a past subscriber to expect access to the archive? In fairness, librarians take advantage of vague wording themselves to avoid unrealistic obligations or legal risk (e.g., the reliance on the word *reasonable* to characterize the extent of library efforts to inform users of license terms). Libraries need to take note when publishers use the same tactic in areas where libraries need rights that will stand up in court.

OUP's license has the most striking example of vague wording:

On expiry of the Subscription Period, the Licensee shall be entitled to continue to exercise the non-exclusive rights granted herein (subject to the terms and conditions hereof) but only in respect of Material published for the first time during the Subscription Period. Nothing in this subclause requires the Licensor to continue to host the Material on its servers after the expiry of the Subscription Period or to make the Material available in any other form to the Licensee.⁹⁵

To what are libraries legally entitled here? Arguably, nothing. The second sentence negates any entitlement in the first.

Ovid's contract language demonstrates that, while one may be able to obtain a general assurance about perpetual

access to a journal package, in cases where multiple publishers are part of an aggregator package a provider may be unable to consistently assure perpetual access at the journal title level:

Ovid's contracts with *nearly all* journal publishers state that when an institution subscribes to a journal through Journals@Ovid, the institution then has the right to perpetual access to that journal. The *majority* of the journals offered through Journals@Ovid include this provision. *We are optimistic that the few outstanding publishers will soon officially adopt this policy as well* (emphasis added).⁹⁶

Further down in the contract is the caveat that "Ovid's archival access may be subject to change without notice," which calls the whole issue of the enforceability of perpetual access guarantees into question.⁹⁷ At a minimum, one should negotiate the standard "this contract is amendable only in writing signed by both parties" clause, so that one's concerns have a chance to be adequately addressed.

While initially unsettling because the wording appears to favor the publisher, such vagueness in license agreements is understandable because of the flux in both the perpetual access arena (noted earlier in Haworth's license) and the technology. Such wording can also be favorable to the library. Open-ended wording can give the library an opportunity to negotiate more specific terms in the future, by which time issues of trust, costs for libraries and economic security for publishers, and technology standards may be closer to resolution.

Conclusion

To obtain useful contractual guarantees of ongoing access to purchased electronic content, librarians must work with content providers and communicate with peers to create and develop robust license language and stable options and procedures for perpetual access to subscribed material. The primary finding of this license survey is encouraging. The majority of individual publishers studied are willing to grant libraries perpetual access rights in some form, often continuing access through the publisher's server.

If libraries accept e-journal licenses in their generic form (often with no guaranteed perpetual access clause) and sign them without negotiation, libraries and their patrons risk losing access in the future should the online subscription be canceled. What seems unimaginable now might be very real a few budget cycles into the future. This conclusion may seem like 20/20 hindsight and not an option for those who have already signed restrictive licenses. Nevertheless,

annual renewals, changes in subscription levels (e.g., from a complete package to a limited, title-by-title package), entry into a new consortial deal, and publisher notifications that they have revised their license for subscribers present opportunities to renegotiate a license.

The experience of the authors' institutions shows that perpetual access rights can be gained by asking, and that the effort can pay dividends for users. The University of Minnesota has availed itself of Elsevier's perpetual access rights clause. When the university canceled some ScienceDirect titles in 2003, the library was left with 1998–2002 access to these titles according to its license. The titles are not just linked with specific coverage dates in the library's MNCAT catalog, but are also activated in its link resolver program for those dates, so users can get to the titles either directly through ScienceDirect, or indirectly through other databases that cite articles in them. This example shows the importance to users of perpetual access to a canceled title. Library users do not care at the moment of need whether a library has a current subscription to a title; their concern is whether they can access the article they need right at that moment.

Anecdotal evidence from licensing librarians, such as the postings to ERIL-L and Liblicense cited earlier, suggests that some publisher sales representatives decline license requests for perpetual access on the basis that the demand from other institutions does not exist. More institutions asking for perpetual access rights can only help libraries' collective case. But, as standard negotiation wisdom agrees, one has to be willing to walk away from a deal. Academic libraries proved the potential efficacy of this approach if employed in significant numbers when, in 2001, Nature Publishing Group proposed an embargo on current issues of *Nature* (and subsequently offered a revised license without the embargo).⁹⁸ After the license review for this paper was completed, *Nature* reversed itself and began offering perpetual access rights to lapsed subscribers for an annual access fee, in what may be in part a response to the UC's aforementioned unwillingness to sign its renewal without such assurances.⁹⁹

If libraries are successful in negotiating perpetual access clauses in e-journal licenses, they still may be faced with uncertain ongoing costs to maintain such access—perhaps substantial costs, even if they are not annual content subscription fees. Libraries also may be faced with the need to load and serve up the content locally, a practice most libraries have been trying to discontinue since at least the late 1990s. If libraries cancel print journals carried in large full-text aggregator databases, they risk losing online access in the future, as few of these databases analyzed here allow for perpetual access upon termination in their agreements. Due to the varying coverage between aggregators, switching between large e-journal databases, such as Expanded

Academic Index and Academic Search Premier, can result in a significant loss of full-text journal coverage.

A research library would be wise not to rely too much on the prospect of obtaining once-subscribed articles through ILL. As with perpetual access rights, many libraries do not negotiate or succeed in inserting language protecting their ILL rights in licenses, resulting in what some have termed the “death of ILL”—institutions unable to loan articles from licensed databases due to contractual restrictions.¹⁰⁰ If more institutions go e-only via licenses with ILL prohibitions, such restrictions on lending will affect access for peer institutions. A 2003 survey of ILL offices in CIC and their e-resource licenses found that most CIC member libraries agreed that ILL rights were “important but not the first consideration” and that most libraries encountered cases when “ILL was prohibited entirely [and] when the delivery mechanism was restricted, such as in electronic delivery.”¹⁰¹

The recent research report from CLIR, *The Non-subscription Side of Periodicals*, proposed that perpetual access can be paid for, at least in part, by the cancellation of print, and the resulting savings to be accrued from the nonsubscription side of periodical operations (e.g., the binding, shelving, and maintenance of print volumes).¹⁰² CLIR rightly warned, though, that “some provosts might argue that savings should be returned to the general fund rather than be redirected within the library,” so the library will need to educate administrators and funders about the real costs of continued electronic access, including setup and maintenance fees for the publisher or third party and local data loading costs.¹⁰³ Note, however, that CLIR did not mention the fact that many publishers do not offer perpetual access and, upon cancellation of the print copy from such a publisher, no guaranteed copy would be available.

The International Coalition of Library Consortia (ICOLC) declared that, as “permanent access and archiving are of paramount importance,” licenses “must include cost-effective provisions to purchase and not just to lease or provide temporary access” and recommends that libraries and consortia “explore new options,” such as working with publishers to create national and regional repositories.¹⁰⁴ The question is whether libraries and consortia adopting this statement will interpret *must* literally and refuse to sign agreements without such guarantees.

Publishers cannot be expected to solve the problem of perpetual access on their own, but they are participating in the definition of roles, however unclear those roles currently are. Blackwell representatives believe that “the ‘archival’ role of the publisher is ill-defined but shifting from finite to that of open-ended responsibility”; they define appropriate publisher roles as ensuring that content is available in the “short to medium-term,” protecting subscribers from “harmful changes,” and “[working] with key stakeholders” to

make content available in the long-term.¹⁰⁵ Libraries are one of these stakeholders and should partner with publishers as ICOLC recommends.

While institutional repositories are important developments, they alone cannot be expected to solve the problem either, at least in the short term. Even if faculty can be convinced to deposit their research output in such repositories (perhaps in addition to the versions available at commercial journal sites), these projects are still in their infancy and need to be tested. In a recent overview of Ohio State University’s (OSU) institutional repository project, the Knowledge Bank, OSU’s director of libraries Branin projected that the project “will likely be underway for five to ten years before it is mainstreamed or institutionalized at the University.”¹⁰⁶

Concluding Recommendations

Drawing on the results of this license analysis and on the review of the literature on perpetual access, the authors offer the following recommendations:

1. Libraries should not assume that they may safely cancel the print version of a journal published by a society publisher and retain online access to subscribed issues if the electronic version is later canceled. Based on the research reported in this paper, society publishers are not more likely to provide perpetual access to subscribed articles than are commercial publishers.
2. Libraries should not assume that they can safely cancel the print version of a journal included in a full-text aggregator database and retain access.
3. Libraries should consider making the lack of perpetual access rights a deal breaker (i.e., a valid justification for not signing an e-journal license). This is especially important if the library is also canceling a print version. The University of Maryland and the University of California–Berkeley (cited in the introduction to this paper) offer helpful precedents for large research libraries. The same access terms should apply during perpetual access as during subscription access (e.g., fair use, rights of walk-in users, remote access). This may be a difficult stance to take for journals that are considered so central to a collection that one would never cancel them. Holding firm for the inclusion of perpetual access rights is where consortia, which broker many of an academic library’s major e-journals, can bring their considerable economic leverage to bear.
4. Libraries should find a way to budget for perpetual access. These can be one-time purchase fees (e.g., back files from Annual Reviews or Wiley) or annual access or maintenance fees (e.g., established packages, such as the ACS Journal Archives and JSTOR), or might be

a combination of the two (e.g., third parties such as Portico). Care must be taken to ensure perpetual access rights to current issues in the future even if a back-file package is separately purchased. Many packages only go back to the mid- to late-1990s, and back files are not automatically added to one's package but must be licensed separately and are not always available as one-time purchases. Librarians must recognize that such fees are often justifiable requirements from publishers. As libraries give up the binding, shelving, and maintenance costs of print journals, publishers of e-journals have delivery costs that must be borne. Related to the cost issue, the profession should advocate for and participate in the development of standardized, affordable pricing models for such access. Here, too, consortial purchasing power can play a role.

5. Libraries should explore the potential for trusted third parties to host journals for libraries that have subscribed to them in the past.
6. Libraries should include wording about publisher mergers in perpetual access clauses.
7. Libraries should ask their legal counsel whether the publisher's perpetual access clause is clear and specific enough to stand up in court.

References

1. Mary M. Case, "A Snapshot in Time: ARL Libraries and Electronic Journal Resources," *ARL Bimonthly Report*, no. 235 (2004), www.arl.org/newsltr/235/snapshot.html (accessed Sept. 15, 2005). See also Michael Litchfield, "ATG Annual Survey Report," *Against the Grain* 15, no. 1 (2003): 53–55; Roger C. Schonfeld et al., *The Nonsubscription Side of Periodicals: Changes in Library Operations and Costs between Print and Electronic Formats*, CLIR Report No. 127 (Washington, D.C.: Council on Library and Information Resources, 2004), www.clir.org/pubs/reports/pub127/pub127.pdf (accessed Sept. 15, 2005).
2. Vincent Kiernan, "Professors Are Unhappy with Limitations of Online Resources, Survey Finds," *Chronicle of Higher Education* (Apr. 30, 2004), <http://chronicle.com> (accessed Sept. 15, 2005). See also Kevin Guthrie and Roger C. Schonfeld, "What Do Faculty Think of Electronic Resources?" (presentation, semiannual Task Force Meeting of the Coalition for Networked Information, Alexandria, Va., Apr. 16, 2004), www.cni.org/tfms/2004a.spring/presentations/CNI_Guthrie_What.ppt (accessed Sept. 15, 2005).
3. Kevin M. Guthrie, "Lessons from JSTOR: User Behavior and Faculty Attitudes," *Journal of Library Administration* 36, no. 3 (2002).
4. *Ibid.*, 118.
5. Arthur Curley and Dorothy Broderick, *Building Library Collections*, 6th ed. (Metuchen, N.J.: Scarecrow, 1985); See also Peter Graham, "Building Research & Action Agendas for Digital Archiving," in *Preservation of Digital Information: Association of Research Libraries Proceedings of the 131st Meeting*, ed. Gloria Werner, Jaia Barrett, and Karen A. Wetzel (Washington, D.C.: Association of Research Libraries, 1997), www.arl.org/arl/proceedings/131/graham.html (accessed Sept. 15, 2005).
6. Ross Harvey, "The Preservation of Electronic Records: What Shall We Do Next?" in *Collection Management for the 21st Century: A Handbook for Librarians*, ed. G. E. Gorman and Ruth H. Miller (Westport, Conn.: Greenwood, 1997), 181; Association of Research Libraries, *Strategic Plan 2005–2009* (Washington, D.C.: Association of Research Libraries, 2004), 8, www.arl.org/arl/strategic_taskforces/strategic_planning/ARLPlan.pdf (accessed Sept. 15, 2005).
7. Angela Riggio et al., *Report of the Digital Library Federation Electronic Resource Management Initiative*, Appendix D: Data Element Dictionary (Washington, D.C.: Digital Library Federation, 2004), 26, www.diglib.org/pubs/dlfermi0408/dlfermi0408appd.pdf (accessed Sept. 15, 2005).
8. Tony Millett, comp., "Survey of Database Providers' Policies Regarding Continued Access to Full-Text Databases for the Period Subscribed to Following Cancellation of Subscriptions" (working paper, Council of Australian University Librarians, Canberra, May 25, 2001), www.caul.edu.au/datasets/ElectronicJournalContinuedAccess.doc (accessed Sept. 15, 2005).
9. *Ibid.*
10. Janet A. Hughes, "Issues and Concerns with the Archiving of Electronic Journals," *Science & Technology Libraries* 22, no. 3/4 (2002): 131.
11. Thomas A. Peters, "Collaborative Print Retention Pilot Projects," *Against the Grain* 15, no. 2 (Apr. 2003): 18, 20; Francine Fialkoff, ed., "CIC Libraries in Deal with Wiley, Springer to Archive Print Journals," *Library Journal Academic Newswire: The Publishing Report* (May 5, 2005), www.libraryjournal.com (accessed Sept. 15, 2005) [subscription-based electronic news service]; Systemwide Operations and Planning Group (SOPAG), "SOPAG Meeting, October 25, 2002, Action Minutes," <http://libraries.universityofcalifornia.edu/sopag/min102502.html> (accessed Sept. 15, 2005).
12. Peters, "Collaborative Print Retention Pilot Projects."
13. John McDonald, "No One Uses Them So Why Should We Keep Them?" Scenarios for Print Issue Retention," *Against the Grain* 15, no. 2 (Apr. 2003): 24.
14. Fialkoff, "CIC Libraries in Deal with Wiley, Springer to Archive Print Journals."
15. Maggie Jones, *Archiving E-Journals Consultancy—Final Report* (London: Joint Information Systems Committee, 2003), www.jisc.ac.uk/uploaded_documents/ejournalsfinal.pdf (accessed Sept. 15, 2005); Christine Maher, David Groenewegen, and Gail James, "Preservation of Access to Subscription Electronic Journals in Australian University Libraries: A Discussion Paper for the CAUL Electronic Information Resources Committee" (Council of Australian University Librarians, Canberra, Australia, Nov. 2002), www.caul.edu.au/caul-doc/AccessPreservation_Nov2002.doc (accessed Sept. 15, 2005); Neil Beagrie, "The Continuing Access and Digital Preservation Strategy for the UK Joint Information Systems Committee (JISC)," *D-Lib Magazine* 10, no. 7/8 (July/Aug. 2004), www.dlib.org/dlib/july04/beagrie/07beagrie.html (accessed Sept. 15, 2005); Catherine Ayre

- and Adrienne Muir, *Copyright and Licensing for Digital Preservation—Final Report of the Copyright and Licensing for Digital Preservation Project* (Leicestershire, England: Loughborough University, 2004), www.lboro.ac.uk/departments/ls/disresearch/CLDP/Project_reports.htm (accessed Sept. 15, 2005).
16. John Garrett and Donald Waters, *Preserving Digital Information: Report of the Task Force on Archiving of Digital Information* (Mountain View, Calif.: Commission on Preservation and Access, Research Libraries Group, May 1, 1996), www.rlg.org/legacy/ftpd/pub/archtf/final-report.pdf (accessed Sept. 15, 2005).
 17. Linda Cantara, ed., *Minimum Criteria for an Archival Repository of Digital Scholarly Journals, Version 1.2* (Washington, D.C.: Digital Library Federation/Council on Library and Information Resources, May 15, 2000), www.diglib.org/preserve/criteria.pdf (accessed Sept. 15, 2005).
 18. Linda Cantara, introduction to *Archiving Electronic Journals: Research Funded by the Andrew W. Mellon Foundation* (Washington, D.C.: Digital Library Federation/Council on Library and Information Resources, 2003), 4, www.diglib.org/preserve/introduction.pdf (accessed Sept. 15, 2005).
 19. Harvard University Library Mellon Project Steering Committee, Harvard University Library Mellon Project Technical Team, *Report on the Planning Year Grant for the Design of an E-journal Archive* (Washington, D.C.: Digital Library Federation/Council on Library and Information Resources, Apr. 1, 2002), 11–12, www.diglib.org/preserve/harvardfinal.pdf (accessed Sept. 15, 2005).
 20. Yale University Library and Elsevier Science, *YEA: The Yale Electronic Archive: One Year of Progress* (Washington, D.C.: Digital Library Federation/Council on Library and Information Resources, Feb. 2002), 13, www.diglib.org/preserve/yalefinal.pdf (accessed Sept. 15, 2005).
 21. *Ibid.*, 61.
 22. John Mark Ockerbloom, *Report on a Mellon-Funded Planning Project for Archiving Scholarly Journals* (Washington, D.C.: Digital Library Federation/Council on Library and Information Resources, Sept. 16, 2002), 19, www.diglib.org/preserve/upennfinal.pdf (accessed Sept. 15, 2005).
 23. Yale University Library and Elsevier Science, *YEA*.
 24. *Ibid.*, 29.
 25. Cantara, *Archiving Electronic Journals*.
 26. Stanford University Libraries, *LOCKSS: A Distributed Digital Archiving System* (Washington, D.C.: Digital Library Federation/Council on Library and Information Resources, Oct. 8, 2002), www.diglib.org/preserve/stanfordfinal.html (accessed Sept. 15, 2005).
 27. Victoria Reich, “Lots of Copies Keep Stuff Safe As a Cooperative Archiving Solution for E-journals,” *Issues in Science & Technology Librarianship* 36 (Fall 2002), www.isl.org/02-fall/article1.html (accessed Sept. 15, 2005).
 28. LOCKSS Program, “About LOCKSS,” Stanford University, <http://lockss.stanford.edu/about/about.htm> (accessed Sept. 15, 2005).
 29. LOCKSS Program, “LOCKSS Alliance,” Stanford University, <http://lockss.stanford.edu/alliance/alliance.htm> (accessed Sept. 15, 2005).
 30. Portico, www.portico.org (accessed Feb. 10, 2006); Ithaka, www.ithaka.org (accessed Feb. 10, 2006).
 31. Ithaka Harbors, “The Archiving Problem,” www.ithaka.org/e-archive/problems.htm (accessed Sept. 15, 2005).
 32. Ithaka Harbors, “Sustaining the Archive,” www.portico.org/about/sustain.html (accessed Sept. 15, 2005).
 33. Ithaka Harbors, “E-Archive Approach,” www.ithaka.org/e-archive/approach.htm (accessed Sept. 15, 2005).
 34. Ithaka Harbors, “Key Archival Terms,” www.portico.org/terms.html (accessed Sept. 15, 2005).
 35. Reich, “Lots of Copies Keep Stuff Safe As a Cooperative Archiving Solution for E-journals.”
 36. University of York, Information Committee, Library Committee, “Electronic Only Access to Journals Trial Final Report” (Jan. 2005), 6, www.york.ac.uk/services/library/lib-docs/e-journalfinalreport0502.pdf (accessed Sept. 15, 2005); William H. Walters, “Criteria for Replacing Print Journals with Online Journal Resources: The Importance of Sustainable Access,” *Library Resources & Technical Services* 48, no. 4 (Oct. 2004): 300–4; Marianne Stowell Bracke and Jim Martin, “Developing Criteria for the Withdrawal of Print Content Available Online,” *Collection Building* 24, no. 2 (2005): 61–64; University of Maryland, University Libraries, “Policy on Collecting Only Electronic Versions of Journals,” www.lib.umd.edu/CLMD/e-verpol.html (accessed Sept. 15, 2005); Joan Emmet, NorthEast Regional Libraries Consortium, “NERL Principles for Electronic Journal Licenses” (Nov. 30, 2004), www.library.yale.edu/NERLpublic/EJrnlPrinciples.html (accessed Sept. 15, 2005); Regents of the University of California, “Checklist of Points to be Addressed in a California Digital Library License Agreement,” California Digital Library, www.cdlib.org/vendors/checklist.html (accessed Sept. 15, 2005); NESLi2, “Model NESLi2 Licence for Journals” (2005), www.nesli2.ac.uk/NESLi2Licence_new_final280405.htm (accessed Sept. 15, 2005); Canadian National Site Licensing Project, “Canadian National Site Licensing Project License Agreement,” Canadian Research Knowledge Network (Feb. 12, 2001), 10–11, www.crkn.ca/pr/achievements/CNSLP-License-12Feb01.pdf (accessed Sept. 15, 2005).
 37. Regents of the University of California, “Checklist of Points to be Addressed”; NESLi2, “Model NESLi2 Licence for Journals”; Canadian National Site Licensing Project, “Canadian National Site Licensing Project License Agreement.”
 38. University of York, Information Committee, Library Committee, “Electronic Only Access to Journals Trial Final Report,” 6; NESLi2, “Model NESLi2 Licence for Journals”; Joan Emmet, “NERL Principles for Electronic Journal Licenses.”
 39. University of Maryland, University Libraries, “Policy on Collecting Only Electronic Versions of Journals.”
 40. Regents of the University of California, “Challenges to Licensing from Some Publishers,” California Digital Library, www.cdlib.org/news/barriers.html (accessed Sept. 15, 2005).
 41. Elizabeth Winters, “Perpetual Access,” e-mail to the eril-l@listserv.binghamton.edu mailing list, Sept. 9, 2004, <http://listserv.binghamton.edu/archives/eril-l.html> [list archives] (accessed Sept. 15, 2005); Eric Lease Morgan, “Encourage

- Publishers to Make Their Content 'LOCKSS-able,'" e-mail to the liblicense-l@lists.yale.edu mailing list, June 9, 2005, www.library.yale.edu/~llicense/ListArchives/ [list archives] (accessed Sept. 15, 2005).
42. Edward Shreeves, "Selectors, Subject Knowledge, and Digital Collections," in *Improved Access to Information: Portals, Content Selection, and Digital Information*, ed. Sul H. Lee (Binghamton, N.Y.: Haworth, 2003), 69–70.
 43. Case, "A Snapshot in Time." See also Lynn N. Wiley, "License to Deny? Publisher Restrictions on Document Delivery from E-licensed Journals," *Interlending & Document Supply* 32, no. 2 (2004): 96.
 44. Case, "A Snapshot in Time."
 45. Ibid.
 46. Nicholas Lewis, "'Are We Burning Our Boats?' Survey on Moving to Electronic-only," *SCONUL Newsletter* 31 (Spring 2004), www.sconul.ac.uk/pubs_stats/newsletter/31/19.pdf (accessed Sept. 15, 2005).
 47. Ibid., 61.
 48. Bracke and Martin, "Developing Criteria for the Withdrawal of Print," 61.
 49. McDonald, "No One Uses Them," 24.
 50. Linda L. Eells, "For Better or for Worse: The Joys and Woes of E-Journals," *Science & Technology Libraries* 25, no. 1/2 (2004): 33–53.
 51. Gwen Bird and Andrew Waller, "'We Own It': Dealing with Perpetual Access in Big Deals" (presentation, North American Serials Interest Group Annual Conference, Minneapolis, Minn., May 20, 2005).
 52. Maggie Jones, "Continuing Access and Long-term Preservation" (presentation, Association of Learned and Professional Society Publishers Seminar: Is It Time to Drop Print? Oxford, England, Feb. 2, 2005), www.alpsp.org/events/previous/jon020205.ppt (accessed Sept. 15, 2005); Timothy D. Jewell, *Selection and Presentation of Commercially Available Electronic Resources: Issues and Practices*, CLIR Report no. 99 (Washington, D.C.: Council on Library and Information Resources, 2001), www.clir.org/pubs/reports/pub99/pub99.pdf (accessed Sept. 15, 2005).
 53. Carol Pitts Diedrichs, "E-journals: The OhioLINK Experience," *Library Collections, Acquisitions & Technical Services* 25, no. 2 (2001): 196.
 54. Pamela Grudzien, "CDL: DLT Tapes from Elsevier," e-mail to the colldv-l@usc.edu mailing list, July 29, 2004, www.infomotions.com/serials/colldv-l/04/0169.shtml (accessed Sept. 15, 2005).
 55. Joep Verheggen, "Digital Archiving at Elsevier" (presentation, International Council for Scientific and Technical Information Public Conference: Technical and Economic Challenges of Scientific Information [STM Content Access, Linking and Archiving], London, May 17, 2004), www.icsti.org/forum/46/Joep_Verheggen.ppt (accessed Sept. 15, 2005).
 56. Erik Oltmans, "The e-Depot at the Koninklijke Bibliotheek: Building a Digital Depository to Meet the Needs of a National Library" (Research Libraries Group Forum: To Have and to Hold: Metadata & Institutional Repositories, The Hague, NL, May 18 2004), 4, www.rlg.org/en/pdfs/2004membforum2/oltmans.pdf (accessed Sept. 15, 2005); also see Maggie Jones, "Continuing Access and Long-term Preservation"; Valerie Johns, "SAGE Publications Partners with KB, the National Library of the Netherlands, for Permanent Digital Archiving," e-mail to the liblicense-l mailing list, Apr. 30, 2005, www.library.yale.edu/~llicense/ListArchives/0505/msg00017.html (accessed Sept. 15, 2005).
 57. Oltmans, "The e-Depot at the Koninklijke Bibliotheek."
 58. *ODLIS Online Dictionary for Library and Information Science*, s.v. "aggregator" (by Joan M. Reitz), Libraries Unlimited, <http://lu.com/odlis> (accessed Sept. 15, 2005).
 59. Trisha Davis, "Terms and Conditions," in *License Review and Negotiation: Building a Team-Based Institutional Process* (Atlanta, Ga.: Association of Research Libraries Office of Scholarly Communication, 2001), 32.
 60. Ibid.
 61. Patricia Brennan, Karen Hersey, and Georgia Harper, "Strategic and Practical Considerations for Signing Electronic Information Delivery Agreements," Association of Research Libraries, <http://arlcni.org/scomm/licensing/licbooklet.html> (accessed Sept. 15, 2005). See also Riggio et al., *Report of the Digital Library Federation Electronic Resource Management Initiative*, 26; Karen Coyle, "Digital Rights Management—Part 4," Writings on the Digital Age, www.kcoyle.net/drm_basics4.html (accessed Sept. 15, 2005).
 62. Walter de Gruyter, "Terms and Conditions of Use for Online Access to Walter de Gruyter Journals," Accessed Sept. 15, 2005, www.degruyter.de/journals/terms_e.html.
 63. Association for Computing Machinery, "Terms and Conditions for Institutional Use of ACM Digital Library," www.minitex.lib.umn.edu/cpers/ACM/license.pdf (accessed Sept. 15, 2005).
 64. The Haworth Press, "The Haworth Press Online Terms," www.haworthpress.com/pdfs/Single-SiteLicense.pdf (accessed Sept. 15, 2005).
 65. Saskia Volkers, "Re: License for AMA E-journals," e-mail to Jim Stemper, Dec. 5, 2003.
 66. Nature Publishing Group, "Nature Academic Licence Agreement Schedule," http://npg.nature.com/npg/servlet/Content?data=xml/07_lic.xml&style=xml/07_lic.xml#site (accessed Sept. 15, 2005).
 67. Springer, "SpringerLink Licensing Options for Library Administrators 2005," www.springeronline.com/sgw/cda/frontpage/0,11855,4-117-2-128726-0,00.html (accessed Sept. 15, 2005); Online Computer Library Center, "Archival rights," www.oclc.org/electroniccollections/archiving/rights (accessed Sept. 15, 2005); S. Karger AG, "Terms and Conditions for Use of Karger Online Publications by Academic Subscribers," http://content.karger.com/copy/sitelicense_4.asp (accessed Sept. 15, 2005).
 68. American Institute of Physics, "Scitation Institutional Single-Site User License," http://scitation.aip.org/jhtml/scitation/UserLic_Inst_2004-01.pdf (accessed Sept. 15, 2005).
 69. American Psychological Association, "APA Archiving and Access Policy For PsycARTICLES," www.apa.org/psycarticles/archiving.html (accessed Sept. 15, 2005).
 70. Ovid Technologies, "Journals@Ovid Electronic Archive Policy," www.ovid.com/site/products/journals_archive_policy.jsp (accessed Sept. 15, 2005).

71. Wiley Subscription Services, "Basic Access License for Wiley InterScience," http://www3.interscience.wiley.com/spreadsheet_documents/sample_ballicense.pdf (accessed Sept. 15, 2005).
72. Institute of Electrical and Electronics Engineers, "IEEE Online Products License Agreement," www.ieee.org/products/onlinepubs/licenses/OnlineLicenseAgrmtAcademic.doc (accessed Sept. 15, 2005).
73. "License Agreement, China Academic Journals Web Database," East View Publications, signed by Cindy Clennon, Committee on Institutional Cooperation, July 1, 2002.
74. Blackwell Publishing, "Blackwell Publishing Site License Agreement," www.blackwellpublishing.com/license/license.pdf (accessed Sept. 15, 2005); American Geophysical Union, "Academic: Single Institution License (Exclusive of 2-year Colleges)," www.agu.org/pubs/institution_forms/Academic_non_2-year.pdf (accessed Sept. 15, 2005).
75. American Society for Microbiology, "Institutional Online Site License Agreement for Full-Text Access," www.journals.asm.org/subscriptions/sitelicense.shtml (accessed Sept. 15, 2005).
76. American Association for the Advancement of Science, "Science Online Publications Institutional Site-Wide Subscription Agreement," www.sciencemag.org/subscriptions/terms-unlim.dtl (accessed Sept. 15, 2005).
77. JSTOR, "JSTOR Archive License Agreement," www.jstor.org/about/license.DV.9.1.05.pdf (accessed Sept. 15, 2005).
78. Springer, "SpringerLink Licensing Options for Library Administrators 2005."
79. American Institute of Physics, "Scitation Institutional Single-Site User License."
80. Project Muse, "Terms and Conditions of Project MUSE Subscriptions," <http://muse.jhu.edu/about/muse/terms.html> (accessed Sept. 15, 2005).
81. LOCKSS Program, "About: Current LOCKSS Publishers and Titles," Stanford University, <http://lockss.stanford.edu/about/titles.htm> (accessed Sept. 15, 2005).
82. Ithaka Harbors, "E-Archive in the Community," www.ithaka.org/e-archive/community.htm#Publishers (accessed Sept. 15, 2005).
83. Blackwell Publishing, "Blackwell Publishing Site License Agreement," www.blackwellpublishing.com/license/license.pdf (accessed Sept. 15, 2005).
84. American Geophysical Union, "Academic: Single Institution License (Exclusive of 2-year Colleges)."
85. "Elsevier License Agreement," Elsevier B.V., signed by Wendy Pradt Lougee, Univ. of Minnesota, Dec. 13, 2004.
86. Wiley Subscription Services, "Basic Access License for Wiley InterScience." See also Internet-Journals, "Berkeley Electronic Press Journals Order Form," www.bepress.com/bepress_order_form.pdf (accessed Sept. 15, 2005); BioOne, "BioOne Subscriber License," www.bioone.org/images/sub-license.pdf (accessed Sept. 15, 2005); Ovid Technologies, "Journals@Ovid Electronic Archive Policy."
87. American Psychological Association, "APA Archiving and Access Policy For PsycARTICLES."
88. Institute of Electrical and Electronics Engineers, "IEEE Online Products License Agreement"; BMJ Publishing Group, "Online Journal Single Site Licence Agreement," www.bmjournals.com/subscriptions/sslicense.shtml (accessed Sept. 15, 2005).
89. Royal Society of Chemistry, "Electronic Access Licence Agreement," <http://chemistry.rsc.org/Publishing/librarians/LicensingRegulations.asp> (accessed Sept. 15, 2005).
90. "Elsevier License Agreement."
91. Daviess Menefee, "Elsevier Science Archiving Policy When Journals Are Sold or Transferred," e-mail to the liblicense-l@lists.yale.edu mailing list, July 18, 2002, www.library.yale.edu/~llicense/ListArchives/0207/msg00079.html (accessed Sept. 15, 2005).
92. Royal Society of Chemistry, "Electronic Access Licence Agreement."
93. The publisher is not named because of a confidentiality requirement in the negotiated agreement.
94. American Institute of Physics, "Scitation Institutional Single-Site User License."
95. Oxford University Press, "Oxford University Press Online Journals: Institutional Online Agreement," www.oxfordjournals.org/help/institelicense.pdf (accessed Sept. 15, 2005).
96. Ovid Technologies, "Journals@Ovid Electronic Archive Policy."
97. Ibid.
98. Bernd-Christoph Kämper, "Nature—What Other Libraries Say," Stuttgart University Library, www.ub.uni-stuttgart.de/ejournals/Nature_andere_Univ.html (accessed Sept. 15, 2005).
99. Nature Publishing Group, "NPG Introduces Post-cancellation Rights to Licensed Web Content," e-mail to Jim Stemper, Sept. 28, 2005.
100. Kenneth Frazier, "Collection Development and Professional Ethics," *Journal of Library Administration* 28, no. 1 (1999): 43.
101. Wiley, "License to Deny?" 95–96. See also Jeffrey C. Carrico and Kathleen L. Smalldon, "Licensed to ILL: A Beginning Guide to Negotiating E-Resources Licenses to Permit Resource Sharing," *Journal of Library Administration* 40, no. 1/2 (2004): 41–54; Mary E. Jackson, "Research Collections and Digital Information: Will There Be a Role for Interlibrary Loan and Document Delivery Services?" *Journal of Library Administration* 31, no. 2 (2000): 15–25.
102. Schonfeld et al., "The Nonsubscription Side of Periodicals."
103. Ibid., 39.
104. International Coalition of Library Consortia, *Statement of Current Perspective and Preferred Practices for Selection and Purchase of Electronic Information (Update No. 2, Pricing and Economics, October, 2004)* (New Haven, Conn.: Yale Univ., 2004), www.library.yale.edu/consortia/2004currentpractices.htm (accessed Sept. 15, 2005).
105. Paul Calow and Ian Bannerman, "A Publisher's Perspective" (presentation, Association of Learned and Professional Society Publishers Seminar: Archiving—Whose Problem Is It? [West Sussex, England, Nov. 29, 2002]) www.alpsp.org/events/previous/cal291102.ppt (accessed Sept. 15, 2005).
106. Joseph Branin, "Portals, Access, and Research Libraries," in *Improved Access to Information: Portals, Content Selection, and Digital Information*, ed. Sul H. Lee (Binghamton, N.Y.: Haworth, 2003), 53.

Appendix. Publishers and Aggregators Whose Licenses Were Analyzed

Commercial Publishers

Berkeley Electronic Press
 Blackwell
 BMJ Publishing Group
 Cold Spring Harbor Laboratory Press
 De Gruyter
 East View Information Services (China Academic Journals)
 Elsevier
 Emerald
 Haworth Press
 Hindawi Publishing Corporation
 Karger
 Lippincott Williams and Wilkins
 Mary Ann Liebert
 National Journal
 Nature Publishing Group
 Palgrave Macmillan
 SAGE Publications
 Springer (includes Kluwer)
 Taylor & Francis Group (includes Dekker)
 Wiley

Society Publishers

American Association for the Advancement of Science (AAAS)
 American Chemical Society
 American Geophysical Union
 American Institute of Physics*
 American Mathematical Society
 American Medical Association
 American Psychological Association
 American Society for Microbiology

American Society of Civil Engineers
 American Society of Mechanical Engineers
 Association for Computing Machinery
 CAB International
 Cambridge University Press
 IEEE
 Massachusetts Medical Society (New England Journal of Medicine)
 Oxford University Press
 Royal Society
 Royal Society of Chemistry
 University of California Press
 University of Chicago Press

Commercial Aggregators

EBSCO Industries
 Gale
 H. W. Wilson
 Ovid
 ProQuest

Society Aggregators

BioOne
 Highwire Press
 JSTOR
 OCLC (Electronic Collections Online)
 Project Muse

*American Institute of Physics (AIP) Scitation; the authors included AIP as an *individual* publisher (not an aggregator) because its hosted publishers have their own licenses (e.g., American Society of Mechanical Engineers)